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IN THE CHANGING BUSINESS ENVIRONMENT

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in the Changing Business Environment

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

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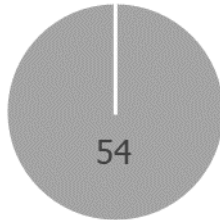Martin WINKLER, Department of Business Law, University of Economics in Bratislava

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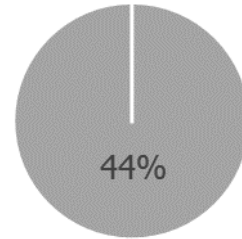Štefan ŽÁK, Department of Marketing, University of Economics in Bratislava

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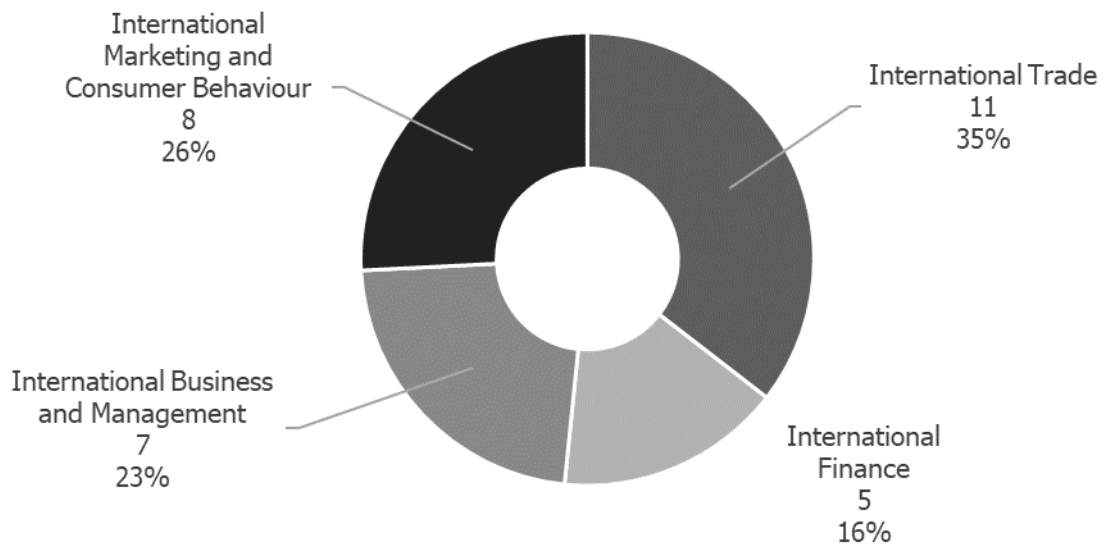
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Non-Financial Information – Sources of Imperfections in the Opinion of Polish Accounting Practitioners

Jacek Adamek – Melania Bąk – Joanna Kogut

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Abstract: The purpose of the article is to present the opinions of Polish accounting practitioners regarding the imperfections of non-financial information. The adopted research hypothesis states that the acceptance of the statutory obligation to disclose and present non-financial information by the domestic accounting practitioners is accompanied by the parallel concern for the manipulation possibility related to this type of data, which results from the difficulty of their practical verification. The structure of the study was conformed to the implementation of the defined goal and the verification of the adopted hypothesis. In the first part, based on the subject literature studies, the essence, placement and meaning of non-financial information for an economic entity and its stakeholders was discussed. The second part was focused on the presentation of the respondents' opinions regarding the imperfections of financial information. Two types of research procedures were applied to solve the research problem: description (descriptive method) and explanation based on deduction as a logical inference method.

Keywords: accounting, corporate report, non-financial information

JEL Classification codes: M41, G14

INTRODUCTION

The dynamics of changes occurring both inside and in the environment of an economic entity, being the consequence of contemporary challenges perceived through the prism of such categories as: sustainable development, knowledge-based economy and corporate social responsibility, imposes the acquisition and application of useful information sets, including the financial and non-financial ones, which support stakeholders in the process of their decisions optimization. In the "information age/era", on the one hand they are approached as the most valuable asset and on the other we are forced to seek and separate their sources as well as analyse and interpret their content. Such activities have to be carried out in full awareness of the benefits resulting from using useful information sets, but also the risks associated with their subject, object, scope or content.

The purpose of the article is to present the opinions of Polish accounting practitioners regarding the imperfections of non-financial information, being a part of the set of disclosures meeting the information needs of a wide range of stakeholders. The adopted research hypothesis states that the acceptance of the statutory obligation to disclose and present non-financial information by the domestic accounting practitioners is accompanied by the parallel concern for the manipulation possibility related this type of data, which is a function of the difficulty of their practical verification.

1 LITERATURE REVIEW

1.1 Non-financial information in corporate reporting.

The 21st century is a period of significant transformation in the reporting of large economic entities, the direction of which is determined by two correlated formulas: from financial information to non-financial information, from a financial statement to an integrated report. The first disclosures of non-financial information in the annual corporation reports appeared at the beginning of the 20th century. They referred to corporate activities for human resources (e.g. employee safety) and social involvement (Nehme, Koon Ghee Wee, 2008), gradually expanding to include environmental and sustainable development issues. The currently observed increasing interest in non-financial information is primarily due to the growing information needs of various stakeholder groups.

H. Gernon and G.K. Meek claim that non-financial information takes the form of "(...) *narrative descriptions, facts, opinions that are not easy to express as a monetary measure and information that is presented using a different measure than money"* (Gernon, Meek, 2001). Nowadays, non-financial information is also associated with knowledge and intangible assets which contribute to achieving a competitive advantage and above-average economic benefits. A similar standpoint is represented by K. Gazdar who believes that non-financial information refers to the resources of significant value and can rarely be expressed as a monetary measure (e.g. good management practices, balance of goals) (Gazdar, 2007). According to J. Samelak (2013), non-financial information is disclosed in an annual report alongside financial information and covers, among others, economic risk, the impact of performed activities on the natural environment and intellectual capital.

Defining non-financial information in an accounting environment requires analysing its perception in different arrangements. Non-financial information can be classified e.g. in terms of its: a/form (e.g. descriptive/narrative, numerical, quota, percentage), b/scope (e.g. social, environmental), c/features (e.g. time range – retrospectiveness and/or prospectiveness, type of achievements) – operational and/or strategic, availability, specificity, usability, confidentiality) or d/placement of disclosures. The domain of non-financial information is its descriptive/narrative form and focus on prospectiveness, although retrospective information is also important. They mostly concern strategic accomplishments which are supplemented with operational achievements. Approaching the essence of non-financial information through the prism of its scope criterion is represented e.g. by a narrow definition of non-financial information presented by the European Commission and the Association of Chartered Certified Accountants (ACCA), according to which non-financial information refers only to sustainable development, environmental, social and corporate governance issues (ACCA, 2014). In terms of the disclosures' placement, the information disclosed in financial statements is referred to as financial information, even though there are certain inaccuracies in such interpretation, namely descriptive and non-financial information is included in the additional notes being a part of the financial statement (e.g. information about employment status and structure broken down by occupational groups), whereas the information disclosed outside the financial statement is treated as non-financial information. Such a division is confirmed by J. Krasodomska, frequently referred to in Polish subject literature. The aforementioned author interprets non-financial information as (Krasodomska, 2014) *"(...) all information (descriptive or numerical, not necessarily expressed as a monetary measure) published (obligatory or voluntary) as part of the corporate annual report, except for the financial statement and the auditor's opinion and report".* Such approach is consistent with the business report structure suggested in the Jenkins Report (Seidler, 1995) consisting of e.g. financial information (disclosed in a financial statement) and non-financial information (operational data and business performance measures used by managers for management purposes).

Non-financial information is primarily supposed to inform about the creation of value, develop competitive advantage and, in particular, the corporate image and reputation and also inform about its achievements, support its business model understanding, present key resources affecting corporate strategic and operational activities (Morros, 2016). The existing research on disclosing non-financial information confirms that it mainly covers information about corporate activities in the field of social responsibility and sustainable development. In addition, it has been shown that there is a positive relationship between these disclosures and the market reaction, which is manifested e.g. in the impact of such disclosures on corporate performance and value (Godfrey, Merrill, Hansen, 2009). The information on social issues and corporate governance has become the basis in estimating future benefits for investors.

Non-financial information has one important advantage, it presents/characterizes problems and resources which, for various reasons, cannot be disclosed formally (e.g. due to the existing limitations in legal regulations). The disclosure of such information can, therefore, be approached as the "opening" of reporting/accounting to the areas which were previously excluded from disclosure. The main characteristics of corporate non-financial information disclosure process are: voluntarity, creativity and individualism. Some stakeholders consider these qualities as strengths whereas others as shortcomings. Ultimately, the decision to disclose non-financial information is taken up by the management and the board, after an initial analysis of the benefits and threats resulting for an enterprise.

When analysing the development of non-financial reporting in the context of accounting evolution as applied science (Szychta, 2015), which is co-created by science, policy and practice, it can be assumed that non-financial reporting emerged from the accounting practice (Eccles, Serafeim, 2014) and was partially adapted by the accounting policy (legal regulations). In accounting theory, to explain the scope extension of the disclosed information the following theories are applied (Łada, Kozarkiewicz, 2013; Freeman, 2010; Gray, Owen, Adams, 1996; Dreegan, Unerman, 2011): a/stakeholders theory – based on maintaining permanently positive relationships with stakeholders, i.e. a group or an individual influencing an enterprise or being under its influence; b/open-systems theory – assuming that an enterprise and a society/environment are system-oriented and therefore experience mutual relationships; c/the theory of information asymmetry – based on unequal access of specific stakeholder groups to information; d/agency theory – describing the relationships between the parties of the contract (i.e. the parties representing specific attitudes/benefits). In the accounting practice, both the increased demand for non-financial information and the increased supply of such information (disclosures) created by the interested companies are observed (Arvidsson, 2011). Therefore, it can be adopted that both accounting practice and theory are "working" for the benefit of non-financial information. In the opinion of the study authors, it should be emphasized that the effects of such efforts are still unsatisfactory and unfinished.

Preparing a non-financial report is, to a great extent, characterized by individualization, which consists of the following activities: analysing the reasons for preparing reports, identifying the main stakeholder groups, highlighting the relevant issues/topics, formulating goals and actions in the area of disclosed problems, selecting and developing measurement indicators and the choice of disclosure form (contact with stakeholders). The following statements/reports are considered the source of non-financial information: activity report, social report and integrated report (Bek-Gaik&Krasodomska, 2018). The scope of disclosed non-financial information depends on the type and purpose of the prepared statement/report. The activity report should play a special role in influencing mutual relations between the financial statement and other corporate reports as well as provide supplementary and explanatory information about the activities, strategies, resources and events having impact on the corporate situation. Social

reporting is focused on corporate social responsibility, informing about the carried out activities and their results in economic, social and environmental areas.

The observed evolution of corporate reporting from a financial statement to an integrated report allows making "space for the disclosure of non-financial information". Currently, the information disclosed by large enterprises in their reporting is both financial and non-financial. This fact results from Directive 2014/65/EU implementation in Polish legal regulations (Act, 1994), which extends the scope of mandatory financial information disclosure on social and environmental aspects in the area of corporate social responsibility (*Directive of the European Parliament*, 2014). Pursuant to Art. 49b of the Accounting Act, the obligation to extend reporting by non-financial information was introduced. It should be included in the statement on non-financial information as part of the activity report or in a separate report on non-financial information, e.g. in a corporate social responsibility report, sustainable development report, integrated report. The scope of non-financial information should include, e.g. a concise description of the entity's business model, key non-financial performance indicators related to its operations, a description of the strategies applied in social, employment, environmental issues or the respect for human rights and anti-corruption actions.

The disclosure of non-financial information is largely voluntary, whereas the undertaken activities within the framework of accounting macro-policy (e.g. through the Directive 2014/65/EU) prove the initiated process of adapting non-financial information to the accounting system. The mandatory inclusion of non-financial information among the disclosed ones refers to large public interest entities, which are few in number, therefore most enterprises will follow their internal decisions and needs in this respect. The enterprises disclosing non-financial information can use many standards, guidelines and recommendations developed by various international organizations and bodies. They include e.g. as follows: *Social Accountability 8000, AccountAbility AA1000, Global Reporting Initiative (GRI G1-G4), ISO 26000 and 14001*. When preparing non-financial statements, enterprises can choose the applicable standards, norms or reporting guidelines (national, EU, international, internal rules or a combination of different standards), provided that the information on their decision is included in such report. The guidelines developed by *the Global Reporting Initiative* (GRI) are the most popular ones. GRI Guidelines set out the basic principles and measures to be used in measuring and compiling information on business performance regarding economic, environmental and social aspects. They are used in social reporting and integrated reporting, and their popularity results from indicators adjusted to the specificity of enterprises operating in various sectors of the economy.

In the opinion of the authors, particular attention should be drawn to an integrated report developed by *the International Integrated Reporting Council* – IIRC) according to which an integrated report (*The International <IR> Framework,* 2013) is a "(…) *concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term".* The main components of an integrated report (in accordance with IIRC) include: characteristics of an enterprise and its external environment, corporate governance, business model (resources, activities, results, effects), opportunities and threats/risks, the strategy and location of resources, achievements, perspectives, the basis for developing and presenting information.

Integrated reporting, despite continuous improvement of its structure (included in various proposals of standards and norms), is still a new/unfinished form of corporate reporting, characterized by its voluntary application. The existing studies in the area of integrated reporting refer mainly to: its concepts (Eccles, Krzus, Tapscott, 2010) and its application practices, and the ongoing search for the universally accepted standard of integrated reporting

may contribute towards identifying a new area in accounting, open to knowledge and intangible assets. An integrated report, in the first phase of its development, was recognized as an excellent form of information disclosure, which by its assumption is intended to integrate financial information with non-financial information to meet stakeholders' needs and reduce the information gap between the book value and the market value of an enterprise (*The International <IR> Framework*, 2013). However, several years of practice in preparing an integrated report does not confirm this enthusiasm (Flower, 2015). The main allegations refer to large freedom in creating non-financial information and the absence of its integration with financial information. This thesis is confirmed, for example, by the results of a study conducted by E. Walińska, B. Bek-Gai and J. Gad (2018) among the companies listed on the Warsaw Stock Exchange in 2013-2016, which analysed integrated reports of 12 capital groups, in particular, their scope and form as well as their relation to the financial statement and the activity report (in 2013 integrated reports were prepared by 3 companies only, whereas in 2016 their number increased to 11). The analysis results show that the dominating report is an integrated one with prevailing non-financial information, whereas financial information includes only the fragments copied from the financial statements. The information prepared on the basis of a financial statement is a nonessential part of an integrated report or is not presented at all. Three companies were selected in the course of the study, in which the share of non-financial information reached approx. 90% of the total integrated report since 2015. Hence, in Polish practice an integrated report is a non-financial report. The analysis of the relationship between an integrated report and financial statements allows concluding that the information presented by organizations in an integrated report is copied from a separate and a consolidated financial statement in a small part (not more than 10% on average) and reduced to its basic elements, without providing explanatory notes. In turn, the reports integrated only to a small extent (2-10%) contain the same information as the activity reports. The information copied from an activity report refers to, e.g.: shareholders structure, capital group composition, supervisory board composition, organizational structure, general financial situation, corporate governance structure, risk management, company strategy, investment expenditure. Based on the above, it can be concluded that the idea of integrated reporting was distorted and, therefore, it did not meet certain expectations.

The emergence of social reporting and later integrated reporting is the consequence of including social responsibility, sustainable development and environmental protection aspects in reporting. It should, however, be emphasized that their essence and goals are not synonymous. Social and environmental aspects are not the most important in integrated reporting, they can constitute a component of its structure. At the same time, certain joint elements can be noticed in an integrated reporting and an activity report, i.e. a business model, using key performance indicators and a reference to corporate governance. Mutual interpenetration of the highlighted problems results in a certain interpretative chaos in the circles of practical application, because the prepared reports are interchangeably referred to as non-financial reports or social reports or sustainability reports as well as integrated reports. Chaos is also present in the content of prepared statements/reports, which is manifested e.g. in repeating some information in various disclosure forms or in too much information causing difficulty in identifying relevant information by the interested stakeholders.

1.2 The importance of non-financial information for stakeholders.

In accordance with the Non-Financial Information Standard (2017), the term "stakeholder" refers to individuals and groups that affect organization's performance and its results, and/or who are influenced by an organization through its decisions, actions and their effects. Examples of stakeholders include employees, suppliers, clients, investors, residents of the local community, media, public administration, natural environment, universities, research centres

and other entities from the broadly approached environment of an organization. R.E. Freeman (2010) divides stakeholders into two groups – internal and external ones. Internal stakeholders are primarily represented by: owners, clients, employees and suppliers. External stakeholders mainly include: state governments, competition, consumer ombudsmen, environmentalists, special interest groups and the media.

Nowadays, in general terms, a stakeholder is a person who (de Bussy & Kelly, 2010) *"(...) has an interest in a given, considered area".* From the accounting perspective, two major groups of stakeholders can be identified (Krasodomska, 2014): "classic", i.e. capital donors (such as banks, shareholders, lenders, creditors) and "new" (employees, contractors, trade unions, clients, government agencies or the society). Each of them will have their own goals and the related information needs, the satisfaction of which requires a wide range of disclosures.

Stakeholders affect overall operations of an economic entity, including the implementation of its strategy as well as the products and services it provides. Importantly, the nature of the relationship between an organization and the stakeholders does not have to be formal, nor do they have to be aware of such a relationship. Managing these relationships is a fundamental practice in managing enterprises that care about quality and operate in accordance with the principles of corporate social responsibility (CSR). The basic activities in the area of stakeholder relationship management include:

- the identification of stakeholders and the importance assessment of their particular groups,
- the identification of essential issues and expectations raised by stakeholders, primarily the crucial ones for the organization functioning,
- analysing issues and expectations raised by stakeholders in terms of their impact on the organization operations, including the opportunities and risks they generate,
- providing answers to issues and expectations important for stakeholders in the presented reporting.

It should be noted that since the economic goal is to multiply value of an enterprise, its most important stakeholder is the capital donor, i.e. an investor and a lender.

The need to meet stakeholders' expectations by providing them with high quality and reliable information forces enterprises to present a wider range of disclosures, also covering the non-financial aspects of their operations. Already in 1997, the research conducted by Ernst & Young Centre for Business Innovation (*Measures that Matter*, 1997) confirmed the significant and increasing role of non-financial information in the assessment of enterprises by investors and analysts. The results of these studies indicated that approx. 70% of all investors admitted using such information (approx. 35% of their decisions were made taking them into account). They particularly valued the information allowing to assess: the implementation and quality of strategy, management board credibility, innovation, the ability to attract talented people, market share, management experience, management board remuneration, the quality of major processes, leadership in research and development. Analysts, in turn, were most interested in the information about products and clients, such as e.g. market share, customer retention or marketing. To a lesser extent, they pointed to employment and innovation data. An important result of the conducted research was the conclusion that the presentation of non-financial data allowed achieving more accurate forecasts of future corporate profits and, at the same time, a more effective reduction of investment risk.

In response to the demands voiced by investors, continuously requiring more extensive disclosures regarding non-financial information, both *the American Institute of Certified Public Accountants* (AICPA) and *the Canadian Institute of Chartered Accountants* (CICA) publish reports encouraging the listed companies to present reports extended by the non-financial information focused on the future (Tan & Zeng, 2015).

According to the research carried out by S. Arvidsson (2011), the three most common motives for the disclosure of non-financial information by organizations were as follows: a/the desire to improve the understanding of an enterprise by stakeholders, b/the disclosure of complete and reliable information (understood as the broadening of knowledge beyond the financial information only) and c/the intention to include intangible assets affecting the organization's market value in the report. The research respondents, while assessing particular categories of non-financial information, considered the information about the organizational structure of an entity to be the most important (including corporate culture and technology and also production efficiency) to be followed by the information on human resources (related to employment, but also to employee programmes). Next on the list was information about the relations with strategic partners, about the carried out research (R&D) and the information on CSR (approached as social and environmental policies, as well as ISO standards). The results of the aforementioned studies confirm the opinion that the traditional measurement methods of corporate effectiveness, based on financial analysis, are insufficient to determine its value on a competitive market.

The analysis of stakeholders' needs proves that they value prospective information the most. This condition is met by non-financial information, as it allows assessing the effectiveness of implementing strategic corporate goals and evaluating the realisation of crucial internal processes. Non-financial information can also significantly facilitate the estimation of future financial results, thus reducing the risk of making incorrect estimates when developing prospective data. Therefore the disclosure of non-financial information by an enterprise reduces its investment risk, facilitating access to the funding sources. Investors are primarily interested in the data characterizing the company competitive position, which allow assessing its strategy and market position. They also find important the information related to corporate effectiveness and its development opportunities, which indicates its potential ensuring a long-term increase in its value (Kazirod, 2002).

2 METHODOLOGY

The survey research, constituting the basis for the below presented analyses, was carried out in March-April 2018. It covered 108. accounting practitioners (96 completed questionnaires were returned), expanding their knowledge and skills at various levels of courses run by the Association of Accountants in Poland, Jelenia Góra Division, i.e. the largest and the oldest national professional organization, bringing together the professional environment representatives functioning in accounting and finance. The survey, apart from the data identifying the respondents (see Tab. 1), covered seven groups of problems related to the disclosure of non-financial information, which included: a/ the scope and content of information, which in the opinion of the respondents should be disclosed in a modern financial report, b/ subjective importance of the reasons underlying the interest in non-financial and financial information, c/advantages and threats resulting from the disclosure of non-financial information and their ranking, d/personal preferences regarding the form (location) of such information disclosure, e/components which in the respondents' opinion should be included in the report presenting non-financial information and f/obligatory nature of such data disclosure.

Tab. 1 Population characteristics*

Feature	Category	[%]
Professional status	Accountant	47
	accounting specialist	28

Feature	Category	[%]
	chief accountant	6
	certified auditors	3
	Other	14
Work experience	>21	15
	11-20	28
	5-10	16
	<5	41
Workplace	capital company	53
	state-owned enterprise	19
	Partnerships	14
	natural person enterprise	14
Type of business activity	manufacturing	44
	services	34
	trade	16
	construction	6

* The number of people who returned the completed questionnaire (96 persons) was adopted as 100% of the respondents

Source: Authors' compilation based on the conducted surveys.

Based on the collected statistical material, the article, in its further part, focuses on the compilation and interpretation of the surveyed accounting practitioners' opinions regarding the sources of non-financial information imperfections and the risks created by the process of their disclosure. The results of pilot analyses, presented in this study, are part of the problems being the subject of broader analyses conducted by its authors, who are aware that the obligation to disclose non-financial information still refers to a small group of Polish enterprises and people involved in their preparation.

3 RESULTS AND DISCUSSION

In the opinion of the authors, the articulation and assessment of threats associated with the disclosure of financial information should be preceded by the presentation of the position taken by the surveyed accounting practitioners regarding the reasons underlying such perspective of an economic entity description (see Tab. 2). Hence, in the group of the most frequently indicated reasons (out of 13 reasons to choose 5 had to be indicated) the respondents listed: heterogeneity of information needs expressed by diverse groups of stakeholders (19,7% indications), the need to support financial and business decisions of a strategic nature (16,4% indications)) and information gap between an enterprise book value and market value (13,1% indications). In turn, the least frequently mentioned reasons for the interest in this group of disclosures were as follows: human curiosity, the consequence of accounting evolution from retrospective to prospective accounting, as well as awareness and promotion of behaviours aimed at natural environment protection (respectively – 1,3%, 2,9% and 3,9% indications) .

The study also included subjective assessment of the importance assigned to the reasons for disclosing non-financial information indicated in the survey. In this case, only partial coincidence of opinions regarding the prevalence of particular causes' selection with the subjective assessment of their importance (weight) for the surveyed person was observed. (see Tab. 2)

Tab. 2 Reasons for the interest in non-financial information in accounting – percentage of indications* and importance**

Category	Position - percentage of indications [%]	Position - [number of points]
Diverse information needs of the stakeholders	**I** (19,7)	**I** (1,9)
Support for financial and business decisions of strategic nature	**II** (16,4)	**II** (2,3)
Information gap between an enterprise book value and market value	**III** (13,1)	IX (3,6)
Allegations of limited and retrospective financial information	**IV** (9,8)	VIII (3,3)
The challenges and expectations of a knowledge-based economy	**V** (7,9)	VII (3,2)
Strong market competition	VI (6,2)	VI (2,8)
The regulatory requirement	VII (5,4)	**IV** (2,6)
Globalization of the economy and its social, economic and environmental consequences	VIII (4,7)	**V** (2,7)
Limited legal provisions regarding non-financial information	IX (4,6)	VII (3,2)
Support for corporate social responsibility	X (4,1)	IX (3,6)
Awareness and promotion of pro-environmental behaviours	XI (3,9)	X (4,5)
Changing the accounting orientation from retrospective to prospective	XII (2,9)	**III** (2,5)
Human curiosity	XIII (1,3)	XI (5,0)

* the total of 456 indications

** the ranking consisted in assigning points to selected reasons, according to the assumption: 1 point - the most important reason .... 5 points - the least important reason

Source: Authors' compilation based on the conducted surveys

The above situation can be interpreted in three ways. Firstly, the respondents present high awareness of the variety of reasons for the interest in non-financial information. This proves their knowledge of both determinants and challenges which they have to face while performing their professional duties. Secondly, they point to high importance of this type of information in the decision-making processes of all stakeholder groups and, thirdly, they do perceive the natural need for introducing changes and the development of traditional accounting, focused on the retrospective description of monetary categories towards the prospective description, covering also other than presenting just monetary value events and their consequences. It seems that the expressed opinions are rational and justified, especially when they are interpreted through the prism of such factors and differentiators influencing the contemporary

conditions of economic activity as: sustainable development, globalization, knowledge-based economy, the age (era) of information.

Focusing on the main purpose of the article, i.e. the presentation of opinions expressed by the surveyed accounting practitioners on the problem of imperfections in the non-financial information, the data characterizing both the prevalence of indications regarding individual threats and their subjective importance should be interpreted (in the group of 22. threats the respondents indicated 10 and then ranked their subjective importance) (see Tab. 3).

Tab. 3 Threats resulting from non-financial information disclosure − percentage of indications* and importance**

Category	Position - percentage of indications [%]	Position - [number of points]
Deliberate manipulation of information	**I** (9,3)	**IV** (2,6)
Difficulty in verifying information	**II** (7,8)	IX (3,5)
The risk of disclosing trade secrets	**III** (7,5)	**V** (2,7)
High cost of generating and disseminating information	**IV** (6,9)	VIII (3,4)
Possibility of being used by the competition in a manner non-compliant with business ethics	**IV** (6,9)	**IV** (2,6)
The requirement for interdisciplinary knowledge of people preparing information	**V** (6,6)	VIII (3,4)
The risk of reduced competitive advantage	VI (5,6)	**IV** (2,6)
The risk of liability for inaccurate forecasts	VII (5,3)	VI (2,9)
Discretion, subjecting information to stakeholders' expectations	VIII (5,0)	VII (3,0)
Loss of competitiveness	VIII (5,0)	VI (2,9)
Selectivity of disclosures, no details	IX (4,7)	**V** (2,7)
Wakened bargaining power in contacts with clients and suppliers	X (4,0)	VIII (3,4)
Valuation ambiguity of the selected intangible assets	XII (3,7)	**I** (2,2)
The selection of measures and methods for intangible assets valuation	XIII (3,7)	**III** (2,5)
Incorrect and ineffective allocation of capital	XV (2,1)	**II** (2,3)

* the total of 960 indications

** the ranking consisted in assigning points to selected reasons, according to the assumption: 1 point - the most important threat .... 5 points - the least important threat

Source: Authors' compilation based on the conducted surveys

The analysis of the above presented choices allows presenting several comments. As in the case of assessing reasons for the interest in non-financial information, also here the differences in opinions related to the prevalence of indications of the selected threats and the assigned importance can be observed. For example, the highest percentage of indications refers to the possibility of manipulating non-financial information in order to achieve particular benefits

(9,3%), along with ranking this threat at the sixth position in terms of its assessment importance. In turn, the highest importance was attributed to the threat of subjectivity in selecting methods for the valuation of organization's intangible assets along with disregarding and/or the absence of information support from traditional accounting (2,2 points). This threat was placed on the twelfth position regarding the percentage of indications (3,7%). In the authors' opinion, this specific difference in the prevalence of indications and their importance is the consequence of respondents' conviction about: a/imperfections in non-financial information determined by its essence and the conditions for collecting it and b/subjective possibility for influencing the consequences of including such information in the decision-making processes.

Referring to the detailed data presented in Table 2, it is worth emphasizing that the respondents attract particular attention to the broad spectrum of threats related to the disclosure of non-financial information. Their assessments prove that they are highly aware of the diversified risks implied by non-financial information for both the entity and other stakeholder groups. Such conclusion is of particular importance when it applies to the individuals directly involved in creating accounting descriptions of the operations performed by economic entities.

Comparing these shortcomings against the advantages resulting from presenting disclosures is important in identifying opinions about the non-financial information (see Figure 1).

Fig. 1 Ten most frequently indicated opportunities* related to the disclosure of non-financial information (%)
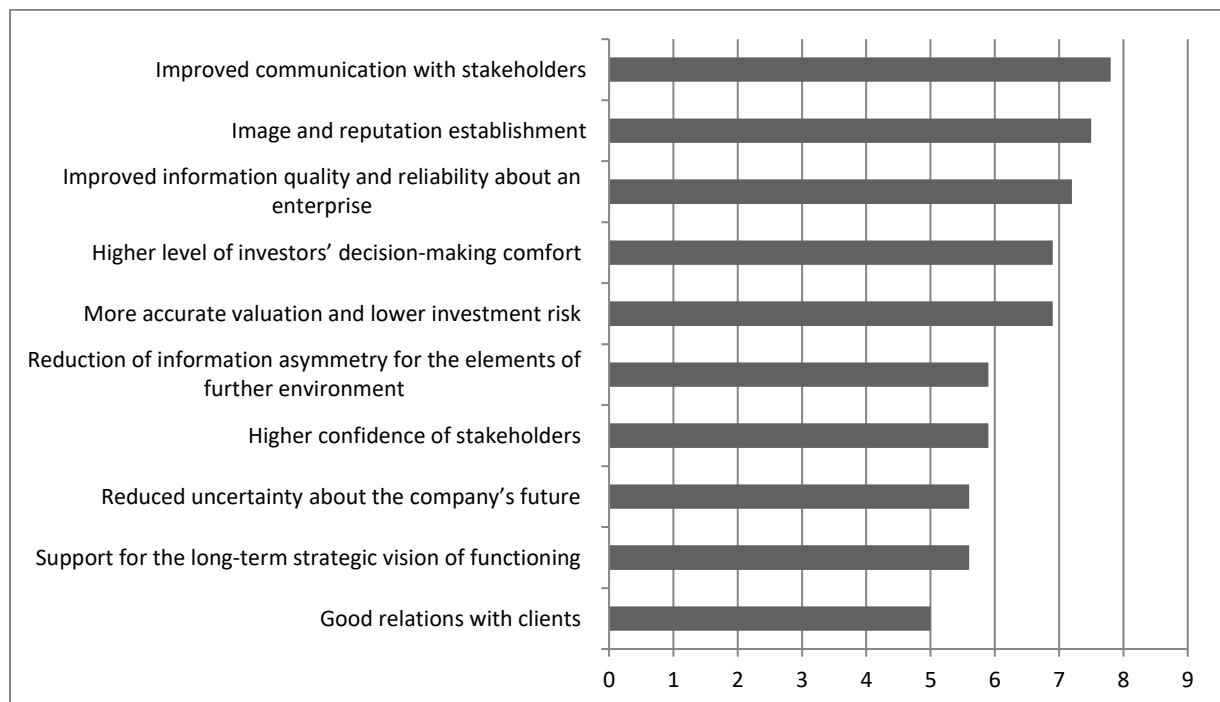
* the total of 957 indications

Source: Authors' compilation based on the conducted surveys.

In the opinion of the surveyed accounting practitioners, the most important positive consequences of disclosing non-financial information are as follows: improved communication, better image and reputation, higher quality and reliability of information also illustrated by the reduced information asymmetry resulting in higher confidence of stakeholders and reduced

investment risk. As a consequence of such a choice it seems natural that they express concern (the most frequently indicated threat) about the above-mentioned advantages, which remain a function of the quality of tools and activities aimed at limiting the possibility for conscious manipulation of non-financial information and the threats determined by the difficulty of its verification.

CONCLUSION

Presenting non-financial information in corporate reporting has become a fact. Its further development depends on solving many problems/challenges, e.g. developing a uniform method of non-financial information disclosure, elimination of information chaos caused by the multiplicity and diversity of non-financial reports, preparing some stakeholder groups for proper reading/understanding of non-financial information for the functioning of an organization and developing a relationship with financial information. The future of non-financial reporting will depend on the demand for such information voiced by stakeholders and the approach of management boards to the merits underlying the disclosure of non-financial information which, if used correctly, can e.g. contribute to the positive image and reputation as well as business and financial success of an organization. The increasing recognition and commitment of the accounting practice and the interest of accounting science are also important in the evolution of non-financial reporting. According to the authors of the study, it is important to leave a margin of creativity for non-financial information in reporting, which results from the diversity of problems it covers.

Reporting non-financial information results from two basic reasons: a/an economic entity identifies non-financial events as significantly affecting its operations and its financial situation and b/an economic entity implements the concept of social responsibility. Emphasizing the importance of non-financial information results from five major advantages of non-financial information reporting and, therefore, also from monitoring the non-financial data. They are as follows: developing confidence of various stakeholder groups, improving internal processes, progress in implementing the vision and strategy of operations including their integration with the idea of sustainable development, optimization and reduction of compliance costs, competitive advantage. The realisation of the aforementioned advantages is closely correlated with the awareness of both shortcomings and threats implied by the process of creating such descriptions (their object, subject or scope) as well as the manner and place of their application. The above conclusion was based on the results of the conducted research indicating that the surveyed accounting practitioners are aware of various threats implied by non-financial information and also emphasize that the imperfections attributed to such information result predominantly from their essence and determinants for collecting them as well as the subjective possibility of influencing the consequences of including such descriptions in the decision-making processes.

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The Effect of Real Effective Exchange Rate on Bilateral Trade between China and the EU

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Abstract: In order to maintain its pace of economic and export growth, China has the ability to influence the development of the domestic currency, supporting its own international trade positions and making significant changes to its structure. Thanks to its absorption capacity, China is safeguarded against such changes and can effectively react to the trade policy of the US. These processes have more severe impact on countries whose foreign trade exposure is high. Our article aims to describe the current trends in the bilateral trade between the PRC and the EU and test how it's influenced by the real effective exchange rate of China. This analysis utilized ARDL bounds testing procedure and ECM model where the trade balance is a function of exchange rate and domestic and foreign income. We suggest that the decrease in China's international price competitiveness is a reflection of its rising non-price competitiveness and that the latter currently plays a more dominant role in shaping China's trade flows.

INTRODUCTION

Developments in the world economy have been taking on a new dimension since the end of the millennium. The very nature of international business is rapidly changing, but the emergence of new countries in international competition is outstanding. With the onset of the 21st century, the Chinese economy expanded massively, and even though several experts have already shifted the focus on the prospects of the Indian economy, China's dominance will be even stronger and will have far-reaching implications not only for Asia, but all other parts of the world economy as well, and this fact is increasingly reinforced. Indeed, views on the Chinese economy vary, but the facts remain. After reserving the spot as the world's largest trader, and together with the rest of the Greater China (Hong Kong, Singapore, Taiwan and Macau) the largest foreign investor, it's taking over even more leadership positions and is becoming a decisive economic element of the globe. As far as the production of consumer goods and lower technologies is concerned, it seemed that multinational corporations active in China's territory served only a temporary role by using its comparative advantages to strengthen their imminent positions on international markets. However, China has, in a relatively short period of time, capitalized on a long-term development strategy mainly concentrated on infrastructure development and investment in science and education, and dynamically transformed its industrial output towards the expansion of high technology and services. It turns out that its overall focus on modern technology and the conceptual formation of strong intellectual and technical background is internally so precise and so consistent that, if major nationwide economic reforms in other countries won't occur, China will become a world leader in this area as well. The country's enormous stock of potential domestic demand resulting from the growth of the still low GDP per capita (only 14.8 per cent of the US in PPP

terms) and the huge supply of cheap and productive labor, create not only significant reserves for potential economic growth for decades ahead, but also increase its strategic attractiveness for foreign investors and traders. With a population of approximately 1.41 billion, China accounts for about 18.5% of humanity (World Bank, 2019).

The deepening of the integration processes in Asia, which is also a factor in the increasing use of the yuan in international trade settlements, has rightfully caused "wrinkles" on the faces of the most prominent European and American politicians. Former US president, Barrack Obama, aware of what the rise of the Chinese yuan meant to the US and the stability of international trade denominated in $, tried to mitigate the risks arising from such trade promotion in Asia. He decided to counteract with the Asia-Pacific Economic Cooperation (APEC) which would put long-term trade deal in place. He also proposed the Trans-Pacific Partnership (TPP), which would become the world's largest trade agreement and counterweight China's economic dominance in Asia. The new president, Donald Trump, halted this project in 2017, and decided to use the economic power of the US to promote its potential in bilateral negotiations with each country. This decision, on the other hand, has relaxed the decision-making process in the countries that originally wanted to defy China's expansion with the original TPP, further linking them not only with China's economy, but also with the Chinese Yuan.

China's influence on overall direction as well as the speed of globalization of the world economy is not only immense, but now takes on a completely new dimension. Since 2009, it has been the world's largest exporter and the world's second largest importer of goods and one of the largest foreign investment recipients. Since 2016, when the international trade growth began to decline, Greater China has become the world's largest trader, while attacking the top position in case of FDI inflows and outflows. The increasing use of the Chinese yuan (¥) in international trade settlements has become an accompanying phenomenon in the emergence of China (note: Since October 1, 2016, Chinese renminbi was included in SDR basket as fifth currency). Since 2018, most of the international trade transactions with more than 20 Asian countries (as well as Australia) have been settled in this currency, and this holds true even in case of oil and natural gas trade with Russia. This tendency may increase stability in bilateral trade operations and reduce the risks resulting from currency pair volatility. While the share of Chinese yuan in the volume of global international settlements is still not so significant, this trend is stable and its possible impact on the so far unshakeable position of the $ is considerable.

Fig. 1 USD/CNY exchange rate (weekly frequency - W1)

Source: Investing.com (2018)

Yuan (¥), unlike the US dollar ($) with its global position, has the advantage that the ¥ exchange rate is under full control of the national bank, the People's Bank of China, and therefore the development of the exchange rate is driven not only by the state of the domestic economy, but effectively by the business interests of the country abroad. This is evidenced by the fact that since 2005, the exchange rate of ¥ against $ and even against other currencies of developed market economies steadily strengthened. However, since Q2 of 2018, due to the decline in its foreign trade and problems arising from changes in trade policy of the US, the exchange rate of ¥/$ continually declined. By the end of 2018, its exchange rate has fallen to its lowest level in the last ten years, attacking a politically sensitive level of 7 ¥/$. A weak currency helps Chinese exporters compensate for the losses due to the protectionist tariffs imposed by the US administration and eliminates its efforts to reduce its extremely high bilateral trade deficit (AP Agency, 2018).

Although the $ is the world's leading trade currency (used in about 80% of world's cross-border transactions) which helps the US to influence global trade, the rise of yuan's importance is unique. This also applies to its relationship to the euro. In the context of increasing problems in bilateral trade of the EU and the PRC with the US, the mutual EU-China trade is naturally on the rise and hence the ¥/€ exchange rate and the financial policy in general can have a significant impact on the intensification of not only economic, but also political ties between the partners. Against this background, the increasingly complicated developments in international trade relations naturally have strong implications for the financial security and for the development of exchange rates. Powerful economies try to influence these currencies and their monetary policy in order to promote their exports. It's clear not only in case of the weakening yuan against the $, but it is also noticeable for the ¥/€ currency pair. On the other hand, this "aid" reduces the level of the competitiveness of third countries and they are quite rightly trying to revise such a trade policy.

1 LITERATURE REVIEW

Despite some rejecting studies (J. Yang et al., 2006), among the American politicians but also among distinguished researchers, undervaluation of ¥ is considered to be a matter of fact for several years. Nevertheless, different researches tried to answer the question to what extent this undervaluation has been helping the Chinese companies to boost their export competitiveness and discourage part of the import volumes. The numbers within China´s external payments suggests that the currency is undervalued. According to several authors (P. Garton, J. Chang, 2017), hence, the role of undervaluation in case of external imbalances is often exaggerated and Chinese RMB is undervalued somewhere between 7% and 30% (B. Bernanke, E. Prasad, P. Garton, IMF 2010), unlike earlier pessimistic studies reaching up to 40%.

Until the end of 2016, this topic was rather "frozen". Nevertheless, since 2017, political decisions of the US president as well as other US authorities, consider this issue to be a problematic solution-seeking topic due to following factors (P. Garton, J. Chang, 2017):

- the widening of the United States current account deficit to over 6 % of US GDP;
- depreciation of the $ (and hence, the RMB) against most other currencies from early 2002;
- China's rapid economic growth and increasing role in the world economy;
- the scale of China's accumulation of foreign reserves, reflecting strong capital inflow and the authorities' efforts to hold the RMB stable against the $.

A new need to determine the objectivity of the RMB exchange rate has been stemming from the growing pressure from US manufacturing interests and elements within US Congress and potential threat in the form of retaliatory tariffs on imported Chinese goods in case of

unchanged approach. According to authors' observation and theoretical framework used by economists within several central banks, using nominal exchange rates (NEER) to reveal the extent of undervaluation is rather obsolete and vague. The more comprehensive indicator determining export competitiveness, predominantly used in international trade theory is real exchange rate (REER). Based on this, the study tries to investigate possible effects of Chinese REER dynamics on the external trade of the EU.

The objective of the article is to identify the effects of Chinese REER development on the export competitiveness of the European trade balance (measured as EXP/IMP) using ARDL and ECM models.

2 METHODOLOGY

The data used for the estimation has quarterly frequency from Q1 2005 until Q1 2018, providing enough observations - 53. Time series data has been transformed into natural logarithms for a number of practical reasons. In the first place, it allows to interpret the resulting coefficients directly as percentage changes of the variables. The transformation transforms the exponential growth pattern into a linear growth pattern, and at the same time converts proportional variance into constant variance, thereby minimizing the risk of heteroscedasticity.

The data for our dependent variable, bilateral trade balance, was drawn from the Eurostat database. We used bilateral EU exports to bilateral EU imports ratio to avoid negative values which would impede the subsequent logarithmic transformation. The growth in this variable suggests improving bilateral trade balance of the EU. The real effective exchange rate (REER) of the PRC is calculated as the weighted average of the bilateral exchange rates adjusted by the relative consumer prices. We transformed monthly data to quarterly data using arithmetic mean. We drew it from the Bank for International Settlements Database. Growth of this variable suggests strengthening of Chinese yuan against China's trading partners' currencies in combination with growth of China's domestic prices in comparison with its trading partners' prices. Growth of REER therefore practically means a drop in the price competitiveness of China's products at the international markets. To express foreign income, we used China's seasonally adjusted GDP at current prices from the OECD's Main Economic Indicators database. For domestic income, we used chain linked volumes of EU-28's final consumption component of GDP at market prices from Eurostat database.

ARDL bounds testing approach (Pesaran, M.H. et al. 2001) is well suited for testing the existence of a long-term relationship between economic time series, while also allowing for evaluation of time series with lower number of observations (usually, this is tolerated when using annual data). The ARDL specification of the function identified by T. Singh (2002) and A. K. Rose (1991) is as follows:

$$
\Delta logTB_t = \alpha_0 + \sum_{i=1}^{n_0} \sigma_i \Delta logTB_{t-i} + \sum_{i=0}^{n_1} \tau_i \Delta logREER_{t-i} \\
+ \sum_{i=0}^{n_2} \varphi_i \Delta logCN_{t-i} + \sum_{i=0}^{n_3} \omega_i \Delta logEU_{t-i} + \lambda_1 logTB_{t-1} \\
+ \lambda_2 logREER_{t-1} + \lambda_3 logCN_{t-1} + \lambda_4 logEU_{t-1} + \epsilon_t
$$

(2)

The first part of the equation with the coefficients σ_i, τ_i, φ_i and ω_i expresses the short-term dynamics of the model and the parameters λ_1, λ_2, λ_3 and λ_4 express the long-term equilibrium relationship. The null hypothesis of the model is as follows:

$$H_0: \qquad \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = 0 \text{ (no long-term relationship)} \qquad (3)$$

$$H_1: \qquad \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq 0 \text{ (long-term relationship)} \qquad (4)$$

If there is evidence of a long-term relationship (cointegration) between variables, following long-term model is estimated:

$$logTB_t = \alpha_1 + \sum_{i=1}^{n} \sigma_i logTB_{t-i} + \sum_{i=0}^{n} \tau_i logREER_{t-i} + \sum_{i=0}^{n} \varphi_i logCN_{t-i}$$
$$+ \sum_{i=0}^{n} \omega_i logEU_{t-i} + \epsilon_t \qquad (5)$$

After estimation of a long-term relationship, author will estimate the Error Correction Model (ECM), which shows the rate of return to the long-term equilibrium after a short-term imbalance. The standard ECM model includes an estimate of the following equation:

$$\Delta logTB_t = \mu_1 + \sum_{i=1}^{n_0} \zeta_i \Delta logTB_{t-i} + \sum_{i=0}^{n_1} \eta_i \Delta logREER_{t-i}$$
$$+ \sum_{i=0}^{n_2} \theta_j \Delta logCN_{t-i} + \sum_{i=0}^{n_3} \iota_j \Delta logEU_{t-i} + \gamma ECM_{t-1} + \epsilon_t \qquad (6)$$

3 RESULTS AND DISCUSSION

This section attempts to apply the model suggested by Singh (2002) and Rose (1991) where the trade balance (TB) is a function of real effective exchange rate (REER) and domestic (Y) and foreign real income (Y^*). Logarithmically transformed model specification can be expressed as follows:

$$lnTB_t = \beta_0 + \beta_1 lnREER_t + \beta_2 lnY_t + \beta_3 lnY_t^* + \varepsilon_t \qquad (1)$$

where:

β_0 is a constant

$\beta_1, \beta_2, \beta_3$ are coefficients of independent variables

ε_t is white noise

2.1   Unit root test

One of the first steps in econometric analysis is the testing of time series for unit roots. For the purpose of this study, a standard version of the ADF test (Dickey and Fuller, 1979) is used to verify the assumption of non-stationarity. Authors performed ADF test on both original and first-differenced variables to determine whether they are *I(0), I(1),* or differenced of higher

order. Trend was also included in the test statistics. The choice of optimal lag was determined automatically by the Schwarz information criterion. The results are shown in Table 2. Since all variables are either $I(0)$ or $I(1)$, it is appropriate to use them for ARDL model testing.

Tab. 2 Unit root tests

Original variable	p-value	t-statistics	First-differenced variable	p-value for first-differenced variable	t-statistics for first-differenced variable	Type
LOGTB	0,8920	-1.2321	**D(LOGTB)**	0,0201	-3.8933	I(1)
LOGREER	0,1055	-3.1530	**D(LOGREER)**	0,0002	-5.5323	I(1)
LOGEU	0,0018	-4.7700	**D(LOGEU)**	0,0060	-4.3668	I(0)
LOGCN	0,8420	-1,4202	**D(LOGCN)**	0,0138	-4,0406	I(1)

Source: Author's calculations

3.1 Bounds test

The choice of optimal lags in explanatory variables was tested and determined by the Akaike information criterion. Granger causality test results enabled us to analyze bilateral trade balance between the EU and the PRC as an endogenous variable. The number of regressors in the model is three, therefore K = 3. All critical values of the lower and upper bounds are obtained from the publication of Pesaran et al. (2001). The calculated Wald F-statistic is 7.453535 and is greater than the critical value of the lower bound of 4.29 and the critical value of the upper bound of 5.61 at the 1% level of significance. Author rejects the null hypothesis of no long-term relationship. Therefore, this model contains a cointegration or a long-term relationship among the variables. It is possible to continue to estimate the long-term relationship among the variables.

3.2 Long-run and short-run estimates

Table 3 summarizes the results of the long-term form of ARDL model of bilateral trade balance. Real effective exchange rate is statistically significant in the model at 5% level of significance. The coefficient is -1.98, therefore a 1% increase in China's REER is associated with a 1.98% deterioration of EU's bilateral trade balance with China over the long term. On the contrary, a drop in China's prices relative to international prices has a positive impact on EU's trade balance. This outcome portrays a possible positive elasticity of EU's imports. European importers are therefore constantly increasing imports from China despite price rises in China. China's inflationary pressure boosts the value of EU's imports, which worsens its trade balance with the PRC. EU's GDP has a statistically significant and highly elastic long-term impact on its trade balance with China. 1% GDP gain worsens its bilateral trade balance by 6.87% at 1% significance level. EU's imports from China are therefore likely to be highly dependent on domestic economic growth. In line with our expectations, China's GDP has an opposite effect on EU's trade balance. 1% growth of China's GDP is associated with a 1.87% improvement in EU's bilateral trade balance with China at 1% significance level, foreshadowing a possible occurrence of productivity-based import demand boost in China.

Tab. 3 Long run coefficients

Variable	Coefficient	Standard deviation	t-statistics	p-value
LOGREER	-1.975978	0.954157	-2.070916	0.0460
LOGEU	-6.867246	2.306687	-2.977103	0.0053
LOGCN	1.868127	0.511700	3.650821	0.0009
C	21.618920	8.024750	2.694030	0.0109

Source: Author's calculations

Table 4 shows the short-term coefficients of error correction model for the bilateral trade balance between the EU and the PRC. In the short term, increases in the lagged values of EU's trade balance have a negative impact on the current value of trade balance. 1% REER increase in China is associated with 0.77% short-term decrease in bilateral export to import ratio of the EU at the 1% level of significance. EU's GDP has no measurable impact on its trade balance with China in the short run. 1% increase in China's GDP in the previous quarter is expected to worsen EU's current bilateral trade balance by 0.68% in the short run at the 1% significance level. We therefore expect that the changes in China's imports as a reaction to its economic development appear in one quarter. The error correction term is negative and significant (-0.38971), confirming the long-term relationship between the variables. Hence, after each short-term shock in the model, there is a 39% quarter-on-quarter correction towards the long-term equilibrium. The shocks are therefore corrected after approximately two and a half quarters (which is an inverted absolute value of the error correction term).

Tab. 4 ECM estimation results

Variable	Coefficient	Standard deviation	t-statistics	p-value
D(LOGTB(-1))	-0.373209	0.142296	-2.622769	0.0130
D(LOGTB(-2))	-0.483812	0.154189	-3.137780	0.0035
D(LOGTB(-3))	-0.414784	0.150839	-2.749851	0.0095
D(LOGTB(-4))	-0.259524	0.142324	-1.823481	0.0770
D(LOGTB(-5))	-0.341025	0.113645	-3.000800	0.0050
D(LOGREER)	-0.770059	0.243637	-3.160683	0.0033
D(LOGEU)	-0.934680	0.709841	-1.316746	0.1967
D(LOGCN)	-0.075352	0.240822	-0.312897	0.7563
D(LOGCN(-1))	-0.682820	0.147670	-4.623950	0.0001
CointEq(-1)	-0.389710	0.127800	-3.049370	0.0044

Source: Author's calculations.

3.3 Diagnostic and stability tests

The validity of these econometric findings depends on the suitability and the stability of the model used. Therefore, the results of the diagnostic tests necessary for ARDL modelling are summarized in this section: stability tests (CUSUM and CUSUMSQ), heteroscedasticity test (Breusch-Pagan-Godfrey test), autocorrelation test (Breusch-Godfrey LM test), model misspecification test (Ramsey's Reset test) and normal distribution test (Jarque-Bera test).The model was first tested by CUSUM and CUSUMSQ. These indicate that the residuals do not deviate significantly from the mean values and thus do not cross the two critical lines at the 5% significance level. Therefore, the null hypothesis of the stability of all coefficients in this regression cannot be rejected.

The Ramsey's Reset Test shows an F-statistic of 0.644 and a p-value of 0.598. The resulting nonlinear combinations of fitted endogenous variable values (in this case $\hat{y}_t^2$ and $\hat{y}_t^3$) in the modified econometric model are not statistically significant when describing a dependent variable. Therefore, the null hypothesis of no model misspecification cannot be rejected. The Breusch-Pagan-Godfrey test of heteroscedasticity calculated the value of F-statistic at 0.655 and a p-value at 0.78. Therefore, the test cannot reject the null hypothesis of homoscedasticity. Therefore, the model does not suffer from heteroscedasticity of residuals, which was additionally confirmed by White's test. The Breusch-Godfrey LM autocorrelation test calculated the F-statistic of 1.157 and the p-value of 0.327. Residual covariance is therefore zero for all lags. Since residuals with different latencies do not correlate with each other, the null hypothesis that the model does not contain autocorrelation cannot be rejected. Author also tested the presence of autocorrelation with the Ljung-Box test (Q-statistics) with the number of lags set at 24. Since all of the resulting p-values are above the 5% level of significance, it is also not possible to reject the null hypothesis of no autocorrelation. Finally, author determined whether the model has a normal residual distribution using Jarque-Bera test. The resulting p-value is above 5% significance level, thus the null hypothesis that the residuals have a normal distribution cannot be rejected.

CONCLUSION

Largely undervaluation of Chinese RMB supported export price competitiveness of Chinese companies abroad till 2014. Despite general opinion regarding devaluing of the Chinese currency, the results of our study investigating data of EU balance of trade and Chinese REER are rather ambiguous.
According to our empirical analysis, inflationary periods in China's economic development serve as a deteriorative factor in EU's trade balance. A 1% increase in China's REER worsens EU's bilateral trade balance by 1.98%. This was proven in 2009 when higher inflation in China associated with huge trade deficit of the EU with the country. Nevertheless, the model does not sufficiently explain record high EU trade deficits between 2012 – 2014. Hence, we suggest that decrease in China's international price competitiveness is a reflection of its rising non-price competitiveness and that the latter plays a more dominant role in shaping China's trade flows. The expansion of the Chinese hi-tech companies incorporating higher value-added exports (Huawei, Tencent, ZTE, etc.) to the EU are also partial explanation of the finding.
National incomes of both economies are highly relevant in bilateral trade flows. EU's GDP growth is negatively associated with its bilateral trade balance with China and China's GDP growth has a positive relationship with EU's bilateral trade balance with China. Partial explanation on EU side lies in the mechanism of REER increase, since EU GDP growth brings euro appreciation as well what hampers price competitiveness of the euro area exporters. Both of these results are in line with economic theory. Interestingly, we have discovered that EU's

trade balance is highly elastic to EU's GDP changes (-6.87 in comparison to 1.87 in case of China's GDP).

Based on above-mentioned econometric findings and its interpretation, authors strongly recommend to boost industries with high export potential (especially the "offspring" industries of Industry 4.0) to heal the trade deficit between EU and China. Monetary measures will probably not bring the desirable effect for the European industrial exporters. Moreover, based on monetary union imperfections, we identify higher threat of asymmetric shocks in case of monetary instruments usage. At present, China's economy is increasingly focused on the use of yuan in the trade settlement with the countries of Southeast Asia, Japan and Australia. The use of domestic currency helps to reduce exchange rate losses and risks resulting from high volatility between the $ and other national currencies in which these transactions are being settled.

Experts point out that such a trend has a rather significant impact on the development of the domestic industrial and production structure of both partners. Hence their national comparative advantages play an important role, as their scarcity cannot be compensated by monetary policy (Baláž, P. et al, 2012). In case of China's bilateral cooperation, which has been using the $ as the main cross-border settlement currency (complemented ¥ and €), the Chinese currency will probably have a higher share in the near future. Indirectly, this is foreshadowed by a number of recent events, mainly the implementation of the Silk Road project and the EU-Japan Free Trade Agreement. China's companies form a significant part of Japan's suppliers who are therefore heavily dependent on China's national currency. The question remains: what consequences will the trade war, which is constantly escalating and affecting the bulk of foreign trade between China and the US, have. The natural outcome could be the redirection of China's exports and FDI outflows to the EU, which logically implies increasing pressure on the use of the yuan and the resulting re-shaping of its trade strategy. It is obvious that the situation that will occur in the global economy will have far-reaching consequences on the political stability of the whole European region and its economic independence, too.

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Iran's International Position and Its Relations with the EU (SR) in the Context of the Awakening New Silk Road

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Abstract: Changes in international trade, for which the US's particularly aggressive foreign trade policy, have adverse effects on the Iranian economy. On the basis of ratification of the nuclear agreement, Iran was showing that it would quickly restore its international positions. This situation has changed sharply. In recent years, Iran has strengthened its trade relations with the EU and China and has resulted in participation in the New Silk Road. This contribution will examine the development of Iran's trade relations with the EU (SR) and the possible impacts that current political situation will have on them. It will then focus on the impact of a new rail link between Europe and China, and on the intensity of their foreign trade. The development of these relations will be examined by mathematical-statistical methods. The results will then be evaluated, and conclusions drawn up to help to objectively diagnose future developments and its impact on the promotion of Iran's economic interests.

Keywords: globalisation, Iranian economy, international trade, silk road, U.S. Business Policy

JEL Classification codes: F20, F40, O11

INTRODUCTION

of the current US president, D. Trump. The US withdrawal from JCPOA agreement sent a clear signal to US foreign policy and its goal to isolate not only Iran, but to a certain extent also the European Union, which, after disobeying sanctions, would be penalized. It is important to note that the current deglobalization tendencies, particularly from the US, have a huge impact on the realization of the economic interests of other countries. The recent opening of the Iranian economy has made it necessary to adapt and modernize in a world of global competition (Financial Tribune, 2018). US banking restrictions block Iranian access to foreign capital to which the country is dependent. By moderating US policy towards Iran, space would be created for the mutual negotiation of its demands, which would lead to the revitalization of the current world economy. But so far, Iran would have to turn to its loyal partners, such as European Union or China. Iran, China and the European Union are a triad whose functioning is conditional on a common denominator called New Silk Road. China's efforts to intensify China-European trade relations are particularly grounded in the current New Silk Road project, which aims to link China and Europe. The deepening of trade relations between the EU and its Chinese trading partners is a good basis for involving the Iranian economy in this equation. Iran is an indispensable part of the New Silk Road project, which in the coming years will significantly affect the structure and intensity of the trade of the participating countries. The aim of the contribution will therefore be to examine the development of Iran's relations with the EU (SR) and focus on a new rail link between Europe and China, and on the intensity of their foreign trade.

1 LITERATURE REVIEW

Iran-EU relations were examined in several studies. The signing of the Joint Comprehensive Plan of Action between Iran and global powers on 14 July 2015 was a major turning point in the emerging strategic landscape of the Middle East. European Union should keep universal values and the rule of law at the core of the emerging bilateral relationship (Blockmans et al., 2016). According to Adebahr (2018), that Europe and Iran had begun to invest in a closer commercial relationship just when the United States withdrew from the nuclear deal in May 2018. Since then, Washington has reimposed its stringent economic sanctions, targeting Iran's oil exports as a major source of government revenue but also banning financial transactions with the country. Smeets (2018) pointed out that it is reasonable to claim that political developments in Iran over the past years and the emergence of a change in the leadership have played an important role in the changing policies. President Hassan Rouhani, who was elected in 2013 showed readiness to engage in a dialogue, and pursue a policy geared towards engaging and connecting to the world economy.

Regarding the dependency of GDP and other selected macroeconomic indicators, accordint to experts such as Acemoglu et al. (2004) and Easterly (2005) who stated, that correlation between macroeconomic volatility and growth variables, become insignificant once on controls for the institution. Philippe and Loana (2007) found in their study that an increase in financial development, a decrease in openness to trades, and the adoption of an inflation targeting regime move countries towards a more counter cyclical budget deficit and the more counter cyclical budget deficit has a positive and significant effect on economic growth. Faraji and Kenai (2013) studied the impact of inflation of economic growth, their case study in Tanzania, the data series covering period of (1990-2011), correlation coefficients and co integrating technique were used to establish the linkage relationship between inflation and economic growth. Results suggest that inflation rates have a negative impact on the economic growth.

Several models have been developed by scholars targeting different relations between oil prices and GDP growth, from its effects on stock markets to its effect to unemployment. The authors extended the model of Mork and Olson (1994) since it focuses on the consequences that an oil shock effect on GDP growth. The model is extended from 1993 to the third quarter of the year 2008 in order to draw conclusions and test crude oil prices fluctuations affect GDP growth in the modern economy. The existence of a negative relationship between oil prices and macroeconomic activity has become widely accepted since Hamilton's work indicating that oil prices increases reduced US output growth between 1948 – 1980. Hamilton (1983) reported a robust link between the oil crisis if the 1970s and the U.S. recession. Mork (1989) confirms Hamilton's results finding a strong negative correlation between oil prices increases and the growth, the relation based on oil price increases persist in a sample extended beyond the 1985-1986 oil price decline. It has been demonstrated by Backus and Crucini (2000) that oil shocks are a major force driving changes in international trade and has been attributed to the transfer of wealth between oil importers and oil importers.

2 METHODOLOGY

The objective of the present paper is to highlight and explore relationship structure between the EU, Iran and China. In order to examine the development and the current structure of mutual relations, authors used methods of analysis and synthesis.

While examining dependence of European Union internal environment, oil prices and Iranian economy, authors used a regression analysis. Regression analysis is a way of mathematically sorting out which of those variables does indeed have an impact. By choosing different independent variables, such as EU GDP p.c., oil prices, EU current account balance and

inflation, author tried to point out their potential impact and relationship with the Iranian economy. The studied dependent variable, which is the Iranian GDP p.c., has sought to bring it closer to its behaviour in the reference period from 1980 to 2017. By examining the model, we used the indicators R2 and adjusted R2, by which we tested how many % of our variables are explained. The statistical significance of the model was determined by F stat and P-value. Using t-stat we explained the statistical significance of the parameters. In addition, the Durbin-Watson test, a two-tailed residual autocorrelation test, was used in the model to test compliance with the assumption of random error in the model. It should be noted that at the beginning of the modelling, the authors transformed the selected variables into logarithms and thus achieved a higher statistical significance of the model and variables.

The source of data for the EU's current account balance was the UNCTAD database, measured in mil. of $, the authors drew data on crude oil prices from Statista, measured in $ per barrel. Data on GDP p.c. of Iran and the European Union were used from World Bank database. Those data are expressed in current $. In the case of Iranian GDP p.c., it is important to mention, that the time shift was taken into account. European Union inflation data were drawn from UNCTAD database as well (measured by Index Base 2005).

Editing those data required the use of Microsoft Excel software and its math functions and filters. By using Gretl, econometric software, we have created an OLS model to examine the selected variables. By examining the regression analysis, author has economically interpreted statistically significant results.

3 RESULTS AND DISCUSSION

In this part of the contribution, we decided to address trade relations between Iran and the EU (SR) as well as their non-trade relations examined by regression analysis of selected European and Iranian indicators and oil prices. The paper is then focused on the new rail link between Europe and China and on the intensity of their foreign trade.

3.1 Trade relations between the EU and Iran

The EU is currently very vital political partner of the Islamic Republic of Iran. Following the withdrawal of the US from the nuclear agreement, it is the EU that is trying to mitigate these consequences. Its efforts are not based on altruism, but because is trying to gain and maintain its trade position with Iran, which has been losing for several years.

Fig. 1   EU − Iran Total goods trade flows and balance (2007 − 2017, € mil.)

Source: European Commission, 2018

Fig.1 shows the development of trade flows of the EU and Iran. It can be said that EU imports from Iran increased by 2011 and then saw a sharp decline of € 11.677 million. The reason for the reduction in EU imports in 2012 EU was particularly strong sanctions on the Iranian economy and the weakening of the Iranian international trading position. EU imports increased again in 2016 when the JCPOA nuclear agreement was implemented. The European Union imported most of the goods from Iran in 2011 (€ 17.329 million), and this year saw the largest negative balance of goods trade balance with Iran worth € - 6,833 million.

EU exports to Iran from 2007 to 2011 were more volatile, the highest in the period under review recorded in 2008, worth € 11 341 million. Since 2010, exports of EU goods have declined year-on-year. The smallest goods exported to Iran in 2014 (€ 643 million).

From 2016, we are witnessing a significant increase in EU and Iran's mutual trade in goods. The positive development of trade relations is due to the positive attitude of European officials towards the Iranian economy as well as to the fact that the EU countries, unlike the US, have not withdrawn from the JCPOA and are fulfilling their obligations under the agreement. In 2017, imports of EU goods amounted to € 10,148 million and exports of € 10,825 million, which for the European Union means a positive balance of trade, € 678 million.

Tab. 1 EU - Iran Trade flows by HS sections (2014-2017, € mil.)

HS Sections	Imports				Exports			
	2014	2015	2016	2017	2014	2015	2016	2017
Total	1,158	1,254	5,516	10,148	6,430	6,471	8,233	10,825
I	50	45	37	44	30	37	53	72
II	303	366	386	342	985	432	313	198
III	0	0	0	0	14	14	26	19
IV	21	15	20	25	193	239	316	333
V	200	49	4,284	9,024	23	30	38	311
VI	108	129	67	106	1,239	1,514	1,713	1,798
VII	32	79	132	205	163	170	267	352
VIII	26	24	22	16	2	4	5	7
IX	0	0	0	0	18	21	24	29
X	0	1	1	1	88	100	150	169
XI	59	57	54	49	93	104	129	169
XII	0	0	0	0	4	7	11	12
XIII	3	5	9	18	94	114	140	158
XIV	1	1	3	12	1	1	3	1
XV	306	436	415	230	166	202	317	477
XVI	18	23	59	43	2,315	2,317	3,059	4,007
XVII	10	7	8	9	271	317	614	1 421
XVIII	4	4	3	3	460	613	765	847
XIX	0	0	0	0	1	0	1	1
XX	1	0	1	2	55	77	132	126

HS Sections	Imports				Exports			
	2014	2015	2016	2017	2014	2015	2016	2017
XXI	2	1	1	1	2	1	1	1
XXII	13	11	16	17	123	157	157	315
XXII	13	11	16	17	123	157	157	315

Source: European Commission, 2018

With regard to the commodity structure of mutual trade, it is important to point to the increasing trend of its volume (Tab.1). The EU imported the most mineral products in the year 2017 (€ 9,024 million), the volume of which grew year-on-year by (16/17) € 4,740 million. In addition, the EU imported vegetable products the largest (€ 342 million), basic metals and articles of base metals (€ 230 million) and plastics, rubber and its products (€ 205 million).

The European Union exported to Iran in 2017 mainly machinery, apparatus and mechanical equipment; electrical equipment; parts thereof (€ 4,007 million), products of the chemical or allied industries (€ 1,798 million) and vehicles, for the production and distribution of goods and services, aircraft, vessels and associated transport equipment (€ 1,421 million).

Tab. 2 SR - Iran Trade flows by HS4 (2015-2017, € thousands)

HS	2015	2016	2017	HS	2015	2016	2017
Import				Export			
Total	5,546	10,288	10,315	Total	18,456	21,102	18,264
HS 0802	3,042	7,027	4,555	HS 8426	0	0	3,699
HS 7202	0	869	1,753	HS 9032	740	108	2,144
HS 3901	32	421	985	HS 8433	253	620	1,170
HS 3004	0	0	491	HS 2921	0	402	888
HS 2008	386	403	420	HS 2519	185	559	843
HS 4007	307	377	419	HS 8803	4,529	3,659	639
HS 0806	835	133	319	HS 8436	0	0	634
HS 0804	180	193	304	HS 8708	1	1	612
HS 1302	0	0	220	HS 2106	0	0	609
HS 5503	0	0	0	HS 9018	162	504	539

Source: ITC, 2019

As far as the Slovak Republic is concerned, its import from Iran amounted to € 10,315 thousands in 2017 and exports to € 18,264 thousands, representing a positive trade balance for Slovakia of € 7 949 thousands. Based on the data in Tab. 2, we can see that good imports from Iran to EU are growing every year. The current year-on-year increase (16/17) was € 27 thousands. However, European Union exports recorded a year-on-year (16/17) decline of € 2,838 thousand.

In 2017, the European Union imported from Iran products of HS 0802 (Other nuts, fresh or dried, whether or not shelled or shelled), in particular almonds, in the total value of € 4,555 thousands, plus ferro-alloys (€ 1,752 thousand) and polymers of ethylene in primary forms (€ 985 thousand).

EU exports to Iran in 2017 consisted in particular goods of HS 8426 (ship rotary crane cranes, towing cranes, including cable cranes, mobile lifting frames, lift trucks, portal pallet trucks and crane trucks) worth € 3,699 thousand. We note that export of this group of goods must have been an exceptional opportunity for the Slovak exporter, as the export of HS 8426 was zero in 2015 and 2016. The second most important commodity group is automatic control or control devices and instruments, which include thermostats and manostats (€ 1,170 thousand).

The current political situation, which largely determines the international position of Iran, is dependent on several factors. For the purpose of the contribution, we can divide them into four groups: the US factor (D. Trump's protectionist policy, JCPOA withdrawal and sanctions), the EU factor as part of the JCPOA agreement, efforts to resume trade with Iran, prepare SPVs, BRI), factor China (BRI) and the last factor Middle East (relations with Israel, Saudi Arabia and Turkey).

3.2 Correlation between European Union and Iran

In order to understand the development of Iran's trade relations with the EU, it is important to mention economic factors that have an impact on the environment of these countries as well. We have chosen to examine the impact of economic indicators on the Iranian economy. These indicators are based on the EU's environment as well as on commodity prices, in our case oil prices.

Using the OLS model, we have sought to find a response to the scientific question of what factors are affecting the Iranian GDP p.c. development. Therefore, the chosen dependent variable was Iranian GDP p.c. and the independent variables were represented by EU GDP p.c., oil prices, EU inflation and the current account balance of the EU.

Tab. 3 OLS model, using observations 1980-2017; Dependent variable: Iran GDP p.c.

```
Model 1: OLS, using observations 1980-2017 (T = 38)
Dependent variable: l_Iran_GDP_pc

                      coefficient   std. error   t-ratio   p-value
     ---------------------------------------------------------------------
     const             5,94399       1,70683       3,482     0,0014    ***
     l_EU_GDP_pc       0,0761984     0,311846      0,2443    0,8085
     l_Oil_Prices      0,723018      0,0916684     7,887     4,29e-09  ***
     l_EU_inflation   -0,294743      0,308482     -0,9555    0,3463
     EU_Current_Accou~ 9,80499e-07   3,47345e-07   2,823     0,0080    ***

Mean dependent var   7,988065    S.D. dependent var    0,544640
Sum squared resid    2,387555    S.E. of regression    0,268980
R-squared            0,782463    Adjusted R-squared    0,756095
F(4, 33)             29,67463    P-value(F)            1,63e-10
Log-likelihood      -1,340652    Akaike criterion     12,68130
Schwarz criterion    20,86923    Hannan-Quinn         15,59451
rho                  0,587646    Durbin-Watson         0,740190

Log-likelihood for Iran_GDP_pc = -304,887

Excluding the constant, p-value was highest for variable 9 (l_EU_GDP_pc)
```

Source: Author's calculations

At at the beginning of the modelling, the selected variables in the models were transformed into logarithmic forms (Tab. 3). We used this specification for those variables that do not have negative values and are not expressed in%, thus achieving higher statistical significance of the model and variables.

OLS results interpretation:

Our R-squared value is 78.25%, which indicates, that 78.25% variability of variables is explained by this model. Adjusted R-squared is 75.61% (this statistic penalizes adding other variables to the model). It has also a higher informative value than only R-squared. F statistics is 29.67%. The critical value for F statistics is 2.66, therefore F stat is higher than critical value (CV) and our model is statistically significant. We can also monitor the statistical significance of the model using the P-value model. In our case, the P-value is 1.63e-10 and to compare this number with degrees of freedom, defined as 0.05, the P-value is less than the number of degrees of freedom (DF). We've decided to test the statistical significance of t-stat parameters. CV is by statistical tables 2.03 and was compared again with t -ratio parameter values. In order for this OLS model to be statistically significant, the t-ratio for each variable must be greater than CV. This criterion fulfils only the constant, oil prices, and the EU current account balance, the same results are achieved by monitoring p-value variables. The model says that in terms of chosen EU parameters, statistically significant is only EU current account balance.

We've wanted to test the fulfilment of the assumption of random error in the model, therefore we used Durbin-Watson's statistics on the problem of autocorrelation of residues. Our model showed signs of autocorrelation. First, we tried to remove autocorrelation, but in our case, it was not removable. Also, by removing statistically insignificant variables from the model and using lag - time delays for statistically significant variables, we were also unable to remove autocorrelation of residues. Nevertheless, we tried the second option while working with autocorrelation. We used autocorrelation resistance estimator, which was designed by Newey and West. For model specifications, we only selected the Robust standard errors option (Lukáčik, 2011).

Fig. 2 Actual and predicted values of Iranian GDP p.c. ($ mil.)
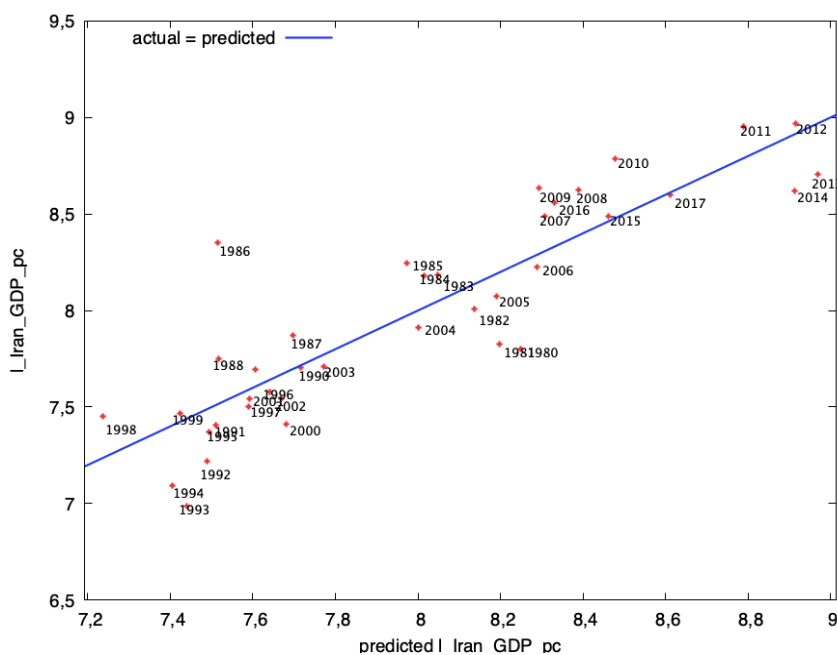
Source: Author's calculations

With the existence of autocorrelation of residues in the model, it is necessary to consider that the interpretation of the parameters will be rather distorted, despite the fact that the model is still statistically significant.

Fig. 2 shows the actual and predicted values of Iranian GDP p.c. resulting from the model. The blue curve predominates the measured values of Iranian GDP p.c. and the red dots represent the actual values obtained and processed from the available databases.

We can observe years that are out of statistical measurement and can be considered abnormal in this respect. For example, year 1986 can be explained by this model. That year was characterized by a sudden fall in oil prices. The world price of oil, which had peaked in 1980 at over $ 35 per barrel, fell in 1986 from $ 27 to below $ 10. The glut began in the early 1980s as a result slowed economic activity in industrial countries (due to the crises of the 1970s, especially in 1973 and 1979) (Forbes, 2018). During 1986, Iran was still in war with Iraq, which lasted for two more years. All these factors affected the state of the Iranian economy during the observed period. In terms of EU factors that have affected Iran's economic growth, we have to mention sanctions. Taking into account the year 2014 for example, when Iran faced stronger sanctions on the part of the EU, that year is moving away from the predicted data as well.

Tab. 4 Statistically significant indicators and their parameters in OLS model

const	5.94399
Log_Oil_Prices ($/barrel)	0.723018
EU Current Account Balance ($ mil.)	9.80499e-07

Source: Author's calculations

With our model, we came to the results that specify the impact of oil prices and the EU current account balance on the Iranian economy:

- If the oil price increases by 1%, GDP is p.c. Iran will increase by 0.72%, ceteris paribus.
- If the current account balance of the EU's balance of payments increases by $ 1 mil., so GDP is p.c. Iran will increase by $ 0.000000980499 ceteris paribus.

3.3 New Silk Road and rail link between Europe and China

Over two thousand years, technology and politics have shaped trade through the Eurasian continent. A great shift was made at the end of the fifteenth century, when large naval vessels and navigation methods were used for the first time to increase the competitiveness of maritime trade. Mercantilism and competition between colonial powers helped coastal trade, and this created the premise for newly discovered rail services between China and Europe. Ten years ago, there were no regular direct freight services from China to Europe. Today, around 35 Chinese cities with 34 European cities connect (CSIS, 2018).

It is China that is the driving force of these routes. Through the Belt and Road project (BRI), China wants to connect the world with Beijing. One of the most visible Chinese railway projects, within the OBOR, was the interconnection of China's Yiwu and London. London thus became the 15th European city with a direct rail link to China. The London-Yiwu train is crossing over to France via the Channel Tunnel and winding through Belgium, Germany, Poland, Belarus, Russia, and Kazakhstan before crossing into China and ending its journey in the country's east (The Diplomat, 2017).

China-Europe rail has grown not only in terms of origins and destinations but also in terms of cargo volume, cargo type and overall competitiveness. Driving these trends are several political, technical, and technological factors, chief among them subsidies and improvements in logistics processes (CSIC, 2018). Improving railway infrastructure and its associated services is a base for the expansion of mutual Chinese-European rail cooperation and represents a number of possibilities for Europe to strengthen its international position. Railway manufacturers, owners, operators, logistics firms and freight forwarders can highly benefit from these logistics projects. However, these changes do not reflect the economic and political impact of the countries involved. Maritime trade will remain dominant. The vast majority of the geographic space the railways pass through will experience no difference. The railways are not roads. They are not as accessible to the general public, and opportunities to provide services around them are limited. Of course, the public can benefit indirectly from these services, whether through taxes captured by tariffs or through benefits passed to consumers. But the emergence of China-Europe railways does not signal the return of a world in which overland trade dominates. The railways have found speed, but their scale remains limited (CSIC, 2018).

European Union is China's biggest trading partner, while China is the EU's second largest trading partner. Trade in goods between these two is worth well over € 1.5 billion a day. In 2017, EU exported to China €198 billion and imported € 375 billion worth of goods (European Commission, 2018). Given the current state of the world economy, which is now subject to strong US protectionism, it is important for the EU to focus on its Chinese trading partners. An opportunity for the EU to provide rail link with China creates the conditions for deepening mutual relations and creating an even stronger Chinese-European partnership as a counterweight to the aggressive US economy.

CONCLUSION

The deterioration of economic and political relations with Iran after the arrival of D. Trump has considerably complicated its international position. It is also striking in relation to key US allies in the Middle East, mainly Saudi Arabia and Israel. By contrast, other world powers, mainly Russia and China, with Iran, are expanding their economic relations and thus helping to stabilize their international positions. The natural outcome of this process is also extensive investment in the domestic industry and infrastructure to activate its mineral wealth but also considerable intellectual potential. It turns out that most of the EU countries have succumbed to US pressure on the embargo against the country. But it is confirmed that they are simultaneously losing potential development space through which they could compensate to a certain extent the losses from the collapse of their markets in Russia and Ukraine.

An important element of Iran's overall position will be the new elections to be held in 2019. As far as the current President Hassan Rouhani is concerned, it can be expected that the process of liberalization and recovery of economic growth will continue, and the country will grow stronger. Although economic reforms do not yet have a sufficient pace and volume of investment from abroad, but inflation is also low, while unemployment is considerable (12%), these economic factors indicate the considerable development potential of the country as a whole and the ever-available business space for the realization of the economic interests of European companies. Large infrastructure and logistics projects such as the OBOR or BRI, the construction of the Trans-Asian Highway and the fact that by activating its unique reserves of energy and other raw materials, Iran could restore its position as a strong business partner to its effective use. This signal could be important and, to some extent, alternative to the ongoing distortion of US-EU economic relations, if it were to redirect existing trade flows originally destined for US markets.

Iran and the European Union face a number of challenges today. The country's internal problems and the current global economic climate reflect the efforts to improve their economic positions and focus on foreign trade. China is constantly looking for new sales and investment opportunities to consolidate its position on European markets. The European Union is looking for ways to stabilize mutual trade and political relations with Iran. The EU, China and Iran relation triangle today combines the Chinese ambition of the New Silk Road, which largely determines the future development of the countries involved. In the contribution, we have addressed these relations and also explained the EU-Iran relation part with regression analysis. By examining the impact of the EU's economic environment and oil prices on the economy of Iran, we have reached a few conclusions. The OLS model explained the impact of the change in the current account balance of the EU on the change in Iranian GDP p.c. – increasing the EU current account balance will increase Iran's GDP p.c. in values, more specifically explained in results above. Despite the statistical significance of the model, this research opens up new possibilities for exploration. By altering independent variables and using them in the model, autocorrelation could be removed and economically interpreted more precisely by the examined factors.

In this context, there are a number of issues related to the benefits of implementing a New Silk Road project to deepen Iran's economic relations with EU member states. We may see them in linking the national comparative advantages of both subjects. For the rapid economic growth of Iran, apart from the existing political discrepancies regarding US trade barriers, it is essential to get a new shipping route to most of the unitary countries and to ensure the sale of raw materials and finished products that have not yet been exported because of unavailable logistics. It is also about the production of new Chinese and Korean investments, or the supply of components for Turkey and other countries located on this traffic lane, which are then re-exported to the EU. Similarly, on the other hand, European countries have an interest in exporting equipment for capital goods, engineering products and other goods, for supplies that are not efficient or fast shipping. One cannot lose sight of the fact that the existence of this project can greatly help to overcome the international economic isolation of Iran, and by linking it to other international corridors, increase the competitiveness of domestic production.

The current situation in the world economy limits Iran's trade and investment capabilities and thus the EU as its trading partner. Explaining the relationship between the EU and Iran economies, there is a secondary explanation of mutual trade relations. By understanding the dependence of the Iranian economy on the EU's environment, authors are creating space for future sales opportunities for European companies and their correct use of this knowledge. The importance of the contribution lies in understanding the EU and Iranian dependence and the possibility of alternating selected variables, proving the dependence of the Iranian economy on the EU environment or the commodity markets. In our case, it would be interesting to prove the dependence of natural gas prices and the state of the Iranian economy through GDP p.c.

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Parallels in the Information Search Behaviour among Young Consumers from Poland and Ukraine: Qualitative Analysis

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Abstract: One of the essential areas of consumer behaviour is searching for information. Previous studies clearly highlight the importance of information search within the buying process and most of the research so far is quantitative. Using the BBT (Bulletin Board Discussion) technique, this study aimed to compare the information search behaviour of young consumers from Poland and Ukraine. It concentrated mainly on the preferences of sources information. The findings show similarities in responders preferences regarding information sources – they mainly rely on informal online sources. However, taking into consideration cultural differences, there are a lot of similarities on a general level, at the same time there are particular differences like for example language of information, or the observed influencer. In addition, the process of sharing information was analysed. Respondents have a positive attitude towards information sharing. Regardless of the country of origin, they exchange information primarily with close relatives and when they perceive interest on the other side.

Keywords: consumer information search behaviour, sources of information, sharing information, cultural differences, young consumers, BBT, Bulletin Board Discussion

JEL Classification codes: M31

INTRODUCTION

The search for and use of information is a subject of interest for representatives of many scientific disciplines. This is a significant issue not only from the perspective of consumer behaviour, but also in regard to information technology, psychology and organizational decision-making. Wilson (1997), in an attempt to integrate the achievements of the different disciplines, pointed out that the main elements of the process are: the situation within which a need for information arises (the person), barriers/conditions (related to getting involved in the process), and information-seeking behaviour itself.

The specific context of seeking information is making purchasing decisions, that are the subject of research in the area of marketing and consumer behaviour. Searching for the answer to the question about differences of individuals' information search behaviour give valuable insight for both academics and marketing practitioners. This is one of the longest current research topics in marketing literature, however, it still has not lost its relevance (Schmidt & Spreng, 1996). First and foremost, the spread of the Internet contributed to this. It has become a popular place where consumers seek information, but also make it available to others without time and space restrictions. Therefore, another premise indicating the need to update knowledge in this area is the demand to conduct intercultural consumer research, resulting from the development of international marketing (Salciuviene, Auruskeviciene, & Lydeka, 2005), because most aspects of consumer behaviour are culture-bound, including the consumer information search behaviour (Craig & Douglas, 2006; De Mooij & Hofstede, 2014). Most of the analyses carried out in the area of intercultural comparisons concern countries

with a distinctly different culture and are implemented using quantitative methods (Salciuviene et al., 2005).

The authors of the study used the qualitative approach – BBT technique (Bulletin Board Discussion technique) – in an attempt to compare the information search behaviour of young consumers from Poland and Ukraine. The comparisons concerned two aspects: the preferences of information sources and the commitment to sharing information.

1 LITERATURE REVIEW

On the basis of consumer behaviour, the majority of consumer information search behaviour research focuses on seeking information essential to make specific decisions before making a purchase (pre-purchase search). It results from the traditional, staged approach to the purchasing decision-making process, according to which it is necessary to search for information about the market offer to make a purchasing decision. However, it should be noted, that in addition to searching for information prior to purchase, which is aimed at solving a problem related to a specific purchasing decision, consumers may engage in an ongoing search, which may concern both the general broadening of their knowledge and the purchase decision (Bloch, Sherrell, & Ridgway, 1986; Hoffman & Novak, 1996).

The search for information consists of a series of behaviours and interactions between them, related to the acquisition, processing, storage and transmission of information, aiming at satisfying information needs, together with the preceding factors and consequences (Shenton & Hay-Gibson, 2011).

Analysing the information search process involves the essence of the search – the nature and scope of the information sought (e.g. type and number of sources, type and amount of information) or time spent searching by the consumer. The next area of analysis is the process conditions (e.g. socio-demographic characteristics of the information seeker). Consumers behaviour in this respect may also vary depending on the context of the search (e.g. the type of product the search is for). Researchers are reaching for different product categorizations showing differences in the process of seeking information, especially in relation to the type of information sources and the extent of information search. The subject of the research so far were: experiential (intangible goods) and material purchases (tangible objects) (Aydin & Selcuk, 2014), hedonic and utilitarian goods (Dhar & Wertenbroch, 2000; Micu, Sciandra, & Micu, 2019; Nakayama & Wan, 2019), or search and experience goods (Bei et al., 2004; Wan, Nakayama, & Sutcliffe, 2010; Lepkowska-White, 2013; Tsao & Hsieh, 2015).

Consumers, while gathering information, can reach different type of sources. The basic categorization concerns their division into internal sources (own experience of the individual) and external (Schmidt & Spreng, 1996). In the literature on the subject, a number of categorizations of external sources can be found. Traditionally, their division concerns two dimensions of impersonal/personal and independent/seller-dominated sources. This allows classification of external sources into three basic types: commercial (marketing) sources, neutral (public) sources and informal (personal) sources. The development of the Internet has made it necessary to take into account an additional dimension – whether the source is offline or online (Klein & Ford, 2003). The universality of such categorization confirms its wide use in research in the field of consumer behaviour (Bei et al., 2004).

Increasingly, researchers emphasize the importance of seeking information using online sources in the process of making purchasing decisions, although only a few studies concern the holistic approach of the Internet's impact to the entire process (Mohd Suki, Ramayah, & Mohd Suki, 2008). The research shows that the scope of searching for and reaching for particular types of online sources may depend, inter alia, on the ability to search for information

online (Maity, George, & Hyukjin, 2002), previous purchase experience et al., 2004) and the type of product purchased (Bei et al., 2004; Lepkowska-White, 2013).

The online sources of information that particularly attracts researchers' attention are informal sources. Among the various information sources, interpersonal non-commercial sources seem to play an important role in consumers' choice decisions. Consumer-to-consumer communication about products and services, often known as 'word of mouth' (WOM), is an important source of marketplace information. The Internet is becoming an increasingly active medium for this type of communication (Schindler & Bickart, 2005), named electronic word-of-mouth (eWOM). The influence of eWOM varies with the source (Tsao & Hsieh, 2015). The research concerned, among others, discussion forums (i.e. Bickart & Schindler, 2001), blogs (i.e. Yilmaz & Ozdogan, 2010), and social networking sites (SNS) or product reviews. Online consumer reviews have become an increasingly important source of information for both consumers and marketers (i.e. about brand weaknesses and strengths) (Robson, Farshid, Bredican, & Humphrey, 2013). Despite the relatively rich literature of the subject, the multitude of platforms enabling the search for informal information online may be one of the reasons for fragmentation and the difficulty in systematizing knowledge.

Consumers in the digital era, thanks to the development of the Internet, have access to a range of information also from culturally different markets. However, it should be remembered, that cultural differences that are observed in the physical world also exist in the virtual world (Pfeil, Zaphiris, & Ang, 2006). Therefore, the search for information by consumers can also be linked to culture. For example, research carried out among respondents from three countries regarding the style of consumer information processing confirmed differences in the extent of using intrinsic vs. extrinsic information to make choices (Liefeld, Wall, & Heslop, 2000). Other studies have shown differences in the assessment of the usefulness of reviews online between Japanese and Western consumers (Nakayama & Wan, 2019).

Differences highlighted by researchers often do not concern general categories and require a deeper analysis of the issue. For example, the major motives for using social network sites (seeking friends, social support, entertainment, information, and convenience) by Korean and American students are similar, however the weights placed on these motives are different which may reflect the cultural difference between the two countries (Kim, Sohn, & Choi, 2011).

Much research on cross-cultural consumer behaviour has used the Hall high- or low-context cultures or Hofstede dimensional model of national culture. According to Hofstede, six dimensions differentiate national cultures. These dimensions can be quantified as indexes: power distance index, individualism vs. collectivism, masculinity vs. femininity uncertainty avoidance index, long-term orientation vs. short-term normative orientation, and indulgence vs. restraint.

These models can be referred to the process of searching and processing information. For instance, people from high-context cultures used symbols, signs, and indirect communication, from low-context cultures, are more verbally oriented and used to explanations or persuasive copy.

Members of individualistic, low power distance cultures will actively acquire information via the media and friends to prepare for purchases, in collectivistic and/or high power distance cultures, people will acquire information more via implicit, interpersonal communication and base their buying decisions on feelings and trust in the company (De Mooij & Hofstede, 2014).

The cultural configuration of individualism, low power distance and low uncertainty avoidance, which is the North-West of Europe and the Anglo-Saxon world, causes that people consciously search for information (De Mooij & Hofstede, 2014).

2 METHODOLOGY

Review of scientific publications in cross-cultural consumer research studies shows that researchers prefer collecting data using quantitative methods rather than qualitative ones (Salciuviene et al., 2005). They are dominated by survey-based quantitative approaches, although there are discussions about their validity (Watkins, 2010). Criticism applies not only to the methods itself, but also to the paradigm adopted in intercultural studies (Craig & Douglas, 2006; Bjerregaard, Lauring, & Klitmøller, 2009). The need to exchange functionalist paradigm, relying on static and decontextualized culture views, for more dynamic and contextual approach, is underlined. One of the arguments is that culture is becoming increasingly deterritorialized and penetrated by elements from other cultures (Craig & Douglas, 2006). Nevertheless, most researchers will use the dimensions proposed by Hofstede to describe general cultural differences.

In marketing literature, research focuses on three elements of culture: values and belief systems, material aspects of culture, and language and the communication systems (Sojka & Tansuhaj, 1995; Craig & Douglas, 2006). They are often examined separately. However, due to the attempt to reach for the interpretive paradigm, these components constitute a framework for the interpretation of the results of the study.

The study is exploratory in nature. The search for information of young consumers' from Poland and Ukraine is investigated.

Because of geographic proximity, Poland is an attractive country for Ukrainians who are becoming an important consumer group in Poland (ARC Rynek i Opinia, 2018). For example, Ukrainians are the most numerous of all nationalities group purchasing educational services provided by Polish higher education institutions. The number of foreign students in Polish higher education institutions in the 2017/18 academic year stood at 72.7 thousand. The students from Ukraine were most numerous – 37.8 thousand students (Central Statistical Office, 2018).

The cultures of both countries may seem similar to each other, although describing them with the six dimensions of the Hofstede culture shows significant differences (Fig. 1).

Fig. 1 Poland and Ukraine according to Hofstede model
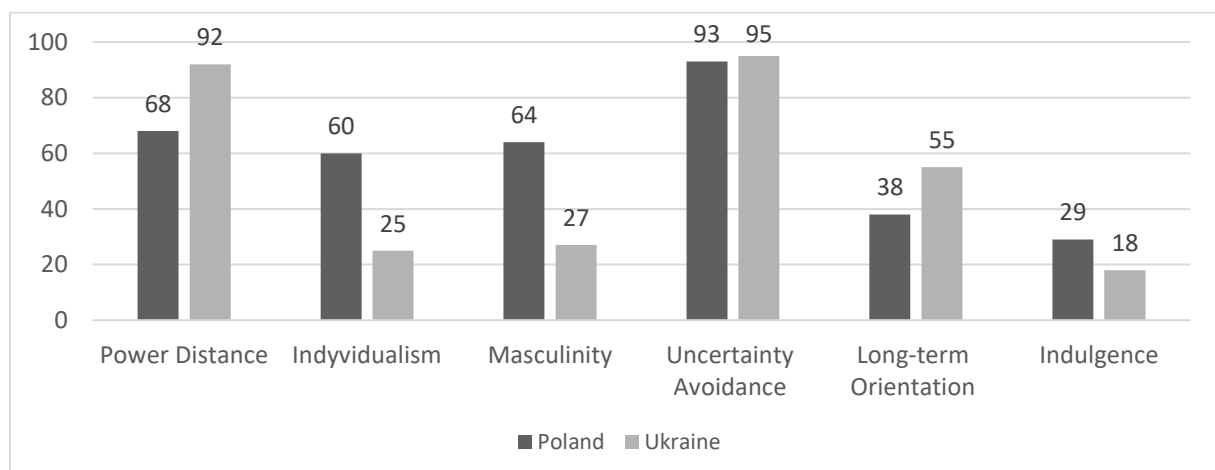
Source: Hofstede Insights, 2019.

The goal of the study is to compare the information search process and commitment to sharing information of young consumers from the two mentioned above countries. Therefore, the basic research question was formulated:

- Where do respondents from Poland and Ukraine search for information?

As a result of the process of comparing the emerging themes from the data to the theoretical concepts found in the literature, the aforementioned division of external sources was adopted (Klein & Ford, 2003) trying to categorize the basic types of information sources preferred by respondents from both countries. The justifications behind the preferences of the respondents in this area were also analysed.

The literature review shows consumers' interest in information posted on social media, which requires not only searching, but also sharing information. That is why an additional question was formulated:

- What is the attitude of respondents from Poland and Ukraine to information sharing?

Potential differences and similarities regarding selected aspects of the information seeking process have been attempted to embed in the context of cultural conditions.

In the collection of data, an online qualitative research method was used – Bulletin Board Discussion technique (BBD, bulletin board focus groups, BBFG).

Qualitative research has become one of the many beneficiaries of the electronic revolution and evolution, specifically in the development of online focus groups (Sweet, 2001).

BBD is a technique emerged at the end of the 1990s and is becoming more and more used (Rolland & Parmentier, 2014). It is perceived as a specific variety of online focus group, which can be conducted synchronously (in real-time) or asynchronously (Hewson, 2015). BBD is a private or public asynchronous online discussion space. It takes place usually on the platform dedicated to this kind of research, where each participant logs in with a username and password. BBD allows a group of even up to 25 (10 to 25) participants for a relatively long period (average 3 to 14 days) to answer questions. During this time, they exchange points of view continuously and progressively, overseen by a moderator. Participants have access at a distance to a secure discussion space and the moderator regularly posts a series of questions/tasks.

The key benefits of BBD are convenience and flexibility, thanks to the asynchronous time – respondents can answer the questions when it's convenient for them (Rolland & Parmentier, 2014). Collecting data in this way provides rich and varied types of data, and positive participant experiences (Cook, Jack, Siden, Thabane, & Browne, 2014). In addition to the mentioned features, the online technique was chosen considering the popularity of the Internet as a communication tool for young people. However, this technique is not often used in scientific research, which makes it difficult to determine the validity and reliability.

Data was collected via the platform Revelation in December 2018. The study was attended by students from Poland (9 people) and Ukraine (8 people – studying in Poland). Each of them had free access to the Internet (which was a condition for participation in the online survey). Most of the respondents were women. They performed tasks using laptops and/or smartphones. All participants were volunteers. They were invited to the project and informed about the rules of BBD research. The study purpose as portrayed to participants was different from the purpose of the research.

The respondents answered questions about where they obtain information about not just specific products, but categories related to health, beauty and nutrition. In addition to investigating the sources of information, it was also interesting whether they passed recommendations and information on to others (information sharing).

Respondents were asked to write, present photographic material and give recommendations of specific sources (e.g. websites, etc.).

The statements were collected in Polish. Despite the fact that students joining the study should have mastered the ability to use this language (study requirements), there has been a significant variation in the length of communication. Some of the opinions presented by students from Ukraine were shorter.

Data analysis consisted of developing codes corresponding to two groups of factors – information sources and of information sharing. Independently, both researchers carried out data reduction. They were then compared during an iterative process. They were verified by analysis and confrontation with the available literature on the subject. The findings were considered in their cultural context (contextualization of data) and then the differences within them were explained (coherence among findings).

3 RESULTS AND DISCUSSION

The research allowed to identify preferences regarding sources of information and sharing them, in the context of the cultural differences. The comparison and interpretation of the statements confirmed the analogies in the course of the search for information but also allowed to indicate differences related to culture.

3.1 Sources of information used by respondents from Poland and Ukraine

Analysis of respondents' opinions from both countries indicates a high similarity in the preferences of information sources. The respondents referred to:

- the dimension of impersonal/personal sources – only personal sources, such as close friends and family members (mainly mothers),
- the dimension of independent/seller-dominated sources – mainly sources independent of the producer (e.g. influencers, magazines), although the statements of some respondents indicate that they were aware of the influencers' links with producers,
- the dimension of online/offline sources – both categories, although the Internet has appeared in every speech.

Friends and the Internet seem to be the sources from which respondents most often start their search – regardless of the country of origin. It is worth noting, however, that respondents from Ukraine often emphasized their previous experience as a sufficient source of information. If they were also confirmed by the opinions of friends, they often limited the use of other external sources of information. It is different in the case of Polish respondents, although they rely on their own experience as well – limiting the search or using it as a filter to assess the suitability of the information found.

(...) No one advised me, I was in the shop and wanted to try something new.

(...) I try to look at all the information found through my prism and consider whether something is available to me, needed, within the range of time and financial possibilities.

(...) But to find out if it's good for me, I try it myself, if I'm happy I buy it again.

This indicates small differences in the extent of using intrinsic vs. extrinsic information to make choices between respondents from Poland and Ukraine.

Despite the fact that all participants of the study declared searching on the Internet (which is not surprising in the light of the literature on the subject and the characteristics of the group), specific sources for which the respondents choose are different. In the first place are social

networking sites, less frequently forums or websites are used (the last two appeared only in statements of respondents from Poland).

Some of the respondents had a problem with indicating specific search locations, which may indicate the randomness of the actions. This is proved by the statement:

(…) I do not browse specific pages, if I want to find something I just jump from page to page.

Regardless of the country of origin, the respondents reach primarily for social media – especially those operating with the image. The Polish respondents mentioned mainly Instagram and Pinterest, while the respondents from Ukraine focused on YouTube and Instagram.

The respondents also reach – albeit to a lesser extent – information from thematic blogs related to the product category. Interestingly, regardless of the type of social media, they prefer pages in their native language. Particular respondents reach for content in English. Although some of the respondents declared knowledge of other languages, there was no mention of using these competencies to search for information.

Another difference concerns the tracked influencers. These are characters often associated with a specific national culture, recognizable, participating in pop culture. However, in the case of Polish respondents, they were more often people who could show certain achievements (e.g. athletes), in the case of respondents from Ukraine, for example, models.

The popularity of social media among the respondents may be due to their age and the ability to use new technologies, which is emphasized in the literature on the subject. An additional explanation comes from the declaration of one of the respondents:

(…) You can look for inspiration in social media because usually, we find the latest trends there.

Therefore, young buyers not only treat this source of information as easily accessible but also current. In addition, it gives them a chance to watch others and satisfy their curiosity.

In spite of frequent reference to the usefulness of online sources, many statements suggested reaching for information to offline sources, mainly informal and personal ones. It is worth noting that among offline sources, no traditional ones were indicated, such as advertisements, brochures, etc. Only Ukrainian respondents accented 'paper' publications: books and magazines.

Beyond close friends, people who are the main source of information in the opinion of the respondents are mothers and experts (doctors, trainers, nutritionists).

The mothers, as persons who could advise in making decisions, appeared in the case of statements of respondents from both countries, however, the consultation of their choices with experts was only mentioned by Polish people.

Analysis of respondents' statements from both countries indicates that they are looking for information primarily among people they know. Further, the credibility of the person, from whom the information comes from, was important to Poles. On the one hand, the authority figures for them are individuals with experience (e.g. resulting from their profession), on the other, formal authority is often not enough – experts also have life experience, which is appreciated by the persons asked.

(…) I get all the information from my mother and doctors. My mother has been fascinated with this subject for many years, so I can get some information from her without any problem.

(…) They are mainly athletes or personal trainers, but also my mother.

The obtained findings confirm the importance of informal sources of information, mainly on the Internet, which is not a surprise for the case of young buyers. They perceive the benefits of Internet access, emphasizing the ease and speed of accessing the information sought. At the same time, they are aware that not all contents are absolutely reliable (hence the need to compare them with previous experiences).

Respondents reach for the informal sources on the Internet not only when they need to buy a specific product, but rather they make ongoing explorations. It allows for the continuous updating of knowledge (e.g. by observing influencers' websites), not necessarily gaining expert knowledge in a given area.

The differences in the preferred sources of information can be related to the dimensions of Hofstede culture. Poland is a country with a higher level of individualism and a lower level of power distance compared to Ukraine. It may explain the more active search for information from friends or from social media. In contrast, Ukrainians seemingly limit their search by relying on interpersonal communication and their experiences. This interpretation is consistent with the results obtained by (De Mooij & Hofstede, 2014).

3.2 Information sharing by respondents from Poland and Ukraine

Reaching for information to friends – online or offline – is based on interpersonal communication, exchange of opinions and experiences, that is information sharing. In order to confirm the observations, it was decided to further analyse statements related to the involvement of respondents from both countries in this process.

The statements show that respondents have a positive attitude towards information sharing.

Regardless of the country of origin, respondents exchange information primarily with close relatives (friends, people with whom they are in a relationship):

(…) I give advice to my friends most often

(…) Generally, I give this advice to my boyfriend.

Furthermore, one of the respondents described such a person as:

(…) Someone who seems to be like me or have similar problems.

Interestingly, the information provided to individuals is of a different nature. According to one of the participants of the study from Ukraine:

(…) I advise my female friends what to buy or what to wear. As for my mother, I advise her where to buy flowers or find new cooking recipes.

One Polish woman mentioned that she also exchanged opinions on the Internet with other users, trying to reach strangers by running a Beauty Blog. However, due to time constraints, she resigned from it.

Disregarding the nationality, the respondents mentioned that they share information when they perceive interest on the other side. Also, some statements indicate that the exchange of information allows satisfying the need to help others.

However, there were slight differences in the substantiation of respondents from both countries regarding engaging in information exchange. Poles stressed that it is worth sharing information, but if they are to act like a person who shares information, they try to provide thoughtful advice:

(…) If I give advice to anyone, it is only when I'm 100% sure that what I know about the subject is true and I do not have the wrong information.

(...) As I know that something helps me and I am convinced, then I can give advice, but everyone is different.

(...) If a person is interested, I toss out materials, websites and everything else that I managed to gather in this topic to facilitate someone's start.

The answers show, that there is also a reference to the information itself, its reliability and accuracy. Contrarily, the declarations of Ukrainians emphasize the social nature of information exchange, focusing on the accompanying emotions:

(...) I think that it is worth it because the exchange of experience is very beneficial.

(...) I often exchange information with friends, and then they are very satisfied.

(...) Such an exchange is valuable because we can learn different things that we did not know before.

The interpretation of information as a recommendation emerges from the statements. Respondents did not indicate the informativeness of the statements. Rather, they share opinions that guarantee secure social choices (especially respondents from Ukraine).

CONCLUSION

It is commonly believed that cultures of Poland and Ukraine are similar (similarities concern language, cultural heritage, common religious roots), so it might be assumed that there are no significant differences in the information search behaviour of young consumers from Poland and Ukraine. However, even if the cultures of both countries seem analogous to each other, describing them with the six dimensions of the Hofstede culture shows significant differences while comparing Poland and Ukraine, i.e. Poles are characterized by a higher level of individualism, masculinity and indulgence, while Ukrainians are described by a higher level of power distance and long-term orientation. In the case of both nationalities, only the power distance index remains at a similar level.

The adopted cultural framework for describing the behaviour of consumers from Poland and Ukraine allowed observing, despite considerable analogies in the preferences regarding sources of information, certain differences. With regard to values, they can be combined with functions of social communication that are different for individualist and collectivist countries (information transfer or relationship building, respectively). The statements also confirmed the differences in the material aspects of culture (in relation primarily to the observed influencers) and the attachment to communication in the native language.

The comparison of preferences of information sources, used by respondents from Poland and Ukraine, has made it possible to identify similarities among both nationalities. The most significant ones include:

- friends and the Internet seem to be sources from which respondents most often start their search,
- all participants of the study declared searching on the Internet, they reach primarily for social media – especially those operating with an image and they prefer pages in their native language,
- respondents reach for information also to offline sources (mainly informal and personal ones) and mothers are perceived as persons who could advise in making decisions.
- when it comes to differences, it can be observed that:
- respondents from Ukraine more often emphasized their previous experience as a sufficient source of information and accented 'paper' publications (offline sources),

- only Poles mentioned the consultation of their choices with experts (face to face) and highlighted the importance of the credibility of the person, from whom the information comes from,
- respondents from Ukraine and Poland tracked the dissimilar type of influencers, what is not surprising, as these persons are often associated with a specific national culture, recognizable, participating in pop culture.

Respondents from both countries have a positive attitude towards sharing information. They exchange information primarily with close relatives and they share information when they perceive interest on the other side. There were slight differences in the substantiation of respondents regarding engaging in information exchange. Poles stressed that it is worth sharing information and they try to provide thoughtful advice. The declarations of Ukrainians emphasize the social nature of information exchange.

The authors are aware of the limitations of the research.

Firstly, in regards to the research method used. However, there are still few published academic papers devoted to this technique (Rolland & Parmentier, 2014), hence there is a difficulty in clearly defining the conditions for its implementation. In the literature on the subject, the comparisons of synchronous versions of online focus groups with their traditional face-to-face counterparts (e.g. Fox, Morris, & Rumsey, 2007) are present, but making similar comparisons between BBD (asynchronous research) and traditional focus group would be less helpful (Williams, Clausen, Robertson, Peacock, & McPherson, 2012). In one study, Graffigna and Bosio (2006) compared offline and online (synchronous and asynchronous) formats for collecting data (in a specific context – research about AIDS). They point out that online qualitative research should not be considered as the equivalent of the traditional techniques on the Internet. Rather as an independent technique with its own special advantages and limitations (Graffigna & Bosio, 2006). Starting from such a premise, a broader discussion is necessary regarding the conditions for carrying out such a study, especially its limitations (for instance keeping the participants of the research involved or influence of the moderator). From this point of view, the study is rather pilot in a character.

Secondly, limitations connected with the participant selection. The research was carried out among students (mostly aged form 17 to 21). To confirm the trustworthiness of the findings, especially in the area of fidelity to the subject matter, it is worth expanding the research group (collect data from young people (not only students) that can shed light upon variations in the phenomenon).

Resuming, it is worth to highlight, that the study has two aspects – theoretical and practical. First of all, it contributes to intercultural research in the field of consumers' information search behaviour, and secondly, it points similarities and differences in information search behaviour between Polish and Ukrainian young consumers, which might be used by organizations to analyse their purchasing decisions.

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The Impact of Integration into International Trade on the Welfare of the Population of Georgia

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Abstract: Georgia integration into international trade is growing and strengthening every year. The geography of trade and the range of products of import and export are expanding. The nominal and real gross domestic product is growing steadily. Despite positive economic growth, the country's trade deficit is still significant. This is due to three one-time excess of imports over exports. Despite the positive dynamics of both economic growth and international trade, the level of absolute poverty of the population is still at the level of 20-21% over the past years. For Georgia, there is no clear link between the growth of the country's involvement in international trade and the growth of incomes of the population as a determining factor in the welfare of the entire people. The extremely uneven distribution of income and overall welfare is indicated by the GINI coefficient. Its value practically does not change during the last 12 years and is about 0.4.

INTRODUCTION

At the United Nations Conference on Trade and Development it was decided to develop Sustainable Development Goals to replace the Millennium Development Goals (SDGs), which expired in 2015, WTO Director-General Robert Azevedo called trade "an integral factor" of the post-2015 development agenda. He said that "the role of trade in the post-2015 agenda process not be reduced simply to trade liberalization. Rather, trade should be recognized more broadly as a development policy instrument". (UNCTAD, 2014).

"Transforming our World: the 2030 Agenda for Sustainable Development" was adopted on 25 September 2015 by Heads of State and Government at the special UN summit. This document including 17 Sustainable Development Goals (SDGs) and 169 targets. For our aims it is important declaration: "We resolve, between now and 2030, to end poverty and hunger everywhere; to combat inequalities within and among countries…" (UN Resolution, 2015).

"Agenda for Sustainable Development" has been recognized trade as an engine for inclusive economic growth and poverty reduction. The document assumes an increase in assistance to developing countries from developed countries, eliminate and prevent the imposition of trade restrictions and the emergence of distortions in world markets for agricultural products, implement the principle of special and differential treatment for developing countries, providing duty-free and quota-free access to all least developed countries to the markets.

The global trend of reducing poverty through international trade has driven this study. Over the past 12 years, the level of poverty in Georgia has not decreased. Nevertheless, the country every year deepens international trade and expands the geography of the countries - trading partners.

In this study, trends in the development of international trade in Georgia are outlined, conditions for the liberalization of international trade from both Georgia and its partners are given, and indicators of import, export, and trade geography are analyzed. In addition, indicators of the level of poverty, as well as the relationship between the level of income of the population and the scale of international trade are presented and analyzed.

1 LITERATURE REVIEW

Starting from the moment of gaining independence, in the foreign trade policy of developing countries one can observe a certain kind of pattern of transition from one economic model to another. The foreign trade policies of developing countries depend on many factors: for example, on the specific economic goals of the countries themselves, seeking to change their policies, also on the general trends of liberalization of world trade. The liberalization of world trade and the deepening of integration led to an acceleration of economic growth and an increase in living standards. Although this description is more applicable to rich countries at the stage of their industrial development, nevertheless some developing countries (for example, South Korea, China, Taiwan, India) significantly reduced tariffs in the course of reforms, which contributed to their rapid economic growth. Their average growth rates were almost twice as high as the growth rates of developed countries, which significantly increased the growth of GDP per capita.

In carrying out foreign trade activities, the government faces a difficult task, which is to choose the type of growth that can ensure the greatest economic efficiency and the highest level of well-being. This problem is most relevant for developing countries whose main export items are mineral raw materials and agricultural products. The main feature of developed countries is the tendency to import substitution (that is, the development of various kinds of synthetic substitutes for natural raw materials), while developing countries tend to export the mineral and other raw materials. According to some scientists, the consequences of such export-expansion growth worsen the terms of trade for developing countries due to the fact that they are exporting an increasing volume of cheapening goods. Falling prices on the world market can completely absorb the positive effect of the growth in export volumes. Such development corresponds to the model of "ruinous growth" (Bhagwati, 1958). On the other hand, a necessary condition for the export of goods is saturated domestic demand, only under this condition the goods can enter the world market. However, the optimal result from exports can be achieved in trade with a country that has the same or comparable demand structure. (Samuelson, 1975).

The economic benefits of international trade are evidenced by the increase in GDP and revenues, and the reduction in the level of poverty, although this is not true for all developing countries. There is no stable correlation between international trade and poverty reduction, due to the specifics of the economy and management. (Wiig, Tøndel, Villanger 2007; Winters, McCullock and McKay 2004).

The relationship between trade liberalization and poverty is analyzed in detail in (Mcculloch et al, 2001), which identifies three channels through which changes in trade policy affect the level of poverty in a country. These are, first of all, enterprises in which a change in trade policy affects households at the expense of profits, wages and employment, distribution, through the transfer of changes in border prices to consumers, and the government in which trade reform affects government revenues and, consequently, the potential for spending in favor of the poor.

Some researches shows that the relationship between international trade and poverty reduction is ambiguous. While trade increases incomes, and economic growth reduces poverty, at the same time, Cross-country regression results linking trade and poverty reduction lose

their significance when time effects are taken into account (Mitra, 2016). Similar conclusions were made about the benefits of international trade, which the state receives, without reducing the level of poverty. (Cain, Hasan, Mitra, 2012; Krishna, Mitra, Sundaram, 2010).

2 METHODOLOGY

The methodology of research depends upon the nature of the problem selected and the kind of data necessary for its objectives. There are some research methods used in this paper.

The first method is exploratory research to develop insights and to provide direction for any future research. This kind of research was done for formulating a problem for more precise investigation.

The second method is Descriptive studies. The aim is a clear statement of the decision problem, specific research objectives and detailed information needs.

The third method is Experimental studies, which tests the relationships between variables, investigates the cause and effect relationship between two or more variables.

The fourth method is case study, when this case implies a description of real economic and social situations in a single country. Study of the situation, the concept of the essence of the problems, suggestions of possible solutions and the selection of the best of them This case are based on real factual material or they are close to real situation.

In addition, the study used such scientific research methods as observation, analysis and synthesis, induction and deduction, historical and logical methods.

3 RESULTS AND DISCUSSION

All conditions have been created for Georgia for efficient international trade, especially for the development of its export potential. Georgia became a member of the WTO in 2000. Hence, trade with WTO member countries is carried out in a Most-Favored-Nation mode (MFN). Country is the beneficiary of GSP (Generalized System of Preferences) of the following countries: EU, USA, Japan, Canada, Switzerland and Norway. Georgia has free trade regime with all CIS countries, Turkey, European Union, Peoples Republic of China and European Free Trade Association (EFTA). In 2014, an agreement was concluded between the European Union and Georgia on the creation of a Deep and Comprehensive Free Trade Areas – DCFTA. (Ministry of Economy and Sustainable Development of Georgia, 2017; Ministry of Foreign Affairs of Georgia, 2017).

One of the main components of the economic policy of Georgia is liberal trade policy, which creates the most favorable conditions for importers and exporters. Trade policy implies the facilitated foreign trade regimes and customs procedures, low import tariffs and minimal non-tariff regulations. Tariff policy on import includes three tariff rates (0%, 5% and 12%) for 85% of goods, there are no seasonal tariffs. Tariff policy on export and re-export from Georgia are free from customs duties. Value Added Tax (VAT) depends on the country of destination, exports from Georgia are exempt from VAT. Value added tax and excise duty rates are equal for local and imported goods.

International Trade Center realizes some projects for Georgia to develop country export potential. These are: Georgia - Capacity building in market analysis and trade information; Needs assessment and project design: Piloting the methodology and boosting the project pipeline; Georgia Enhancing SME competiveness through capacity building and assistance to the herbs sector to facilitate integration into the EU market. (International Trade Center, 2014).

Special strategies have been developed for Georgia in 2003-2010: Georgia: An Integrated Trade Development Strategy (by The World Bank, 2003); Economic Development and Poverty Reduction Programme in Georgia (by The International Monetary Fund, 2005); Georgia National Tourism Strategy (by SW Associates, LLC, 2010); UNDAF Georgia 2011-2015 (by The United Nations Development Group, 2010).

3.1 International Trade of Georgia

Georgia's involvement in international trade tends to grow steadily. The geography of the countries with which Georgia has close trade relations is expanding every year. Georgia has trade relations with most countries of the world. Georgia's trade partners are European Union countries, Commonwealth of Independent States countries, Black Sea Economic Cooperation Organization countries, Organization of Economic Cooperation and Development countries and GUAM countries. The largest trading partners are Turkey, Russia, China, Azerbaijan, Ukraine.

Fig. 1 Total Exports, Imports and Trade Deficit in 2006-2017 Years
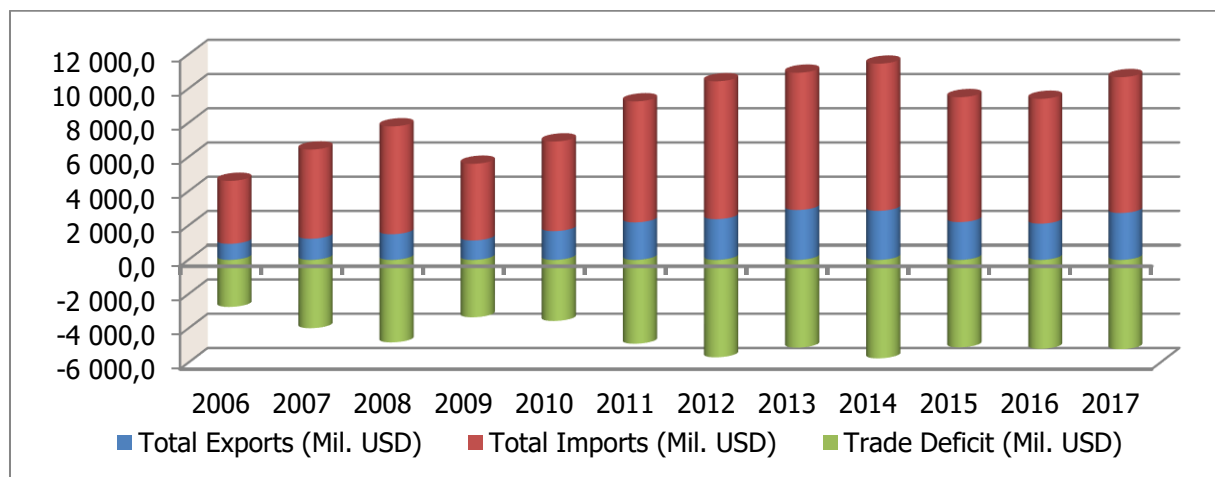
Source: National Statistics Office of Georgia, External Trade Statistics, 2017, own elaboration

Since 2006, the volume of international trade in Georgia has a general growth trend. The Figure 1 shoes Georgia's export, import and trade deficit. Over the past decade, there has been a double drop in trade intensity. These were the years 2009-2010, when a banking crisis broke out in Georgia due to an armed confrontation with the Russian Federation. And the second period of 2015-2016, when the currency crisis was triggered by the outflow of capital from the country. During these periods, consumption plummeted, which reduced imports. The reduction in the export volume was facilitated by the complication of access of export-oriented industries to a bank loan.

Georgia top exports in 2018 (January-November) was copper ores (461,5 mil. USD), motor cars (356,6 mil. USD), Ferro-alloys (318,8 mil. USD), Wine of fresh grapes (178,9 mil. USD), cigarettes (133,4 mil. USD), medicaments (131,4 mil. USD), ethyl alcohol (119,3 mil. USD), mineral waters (100,2) mil. USD), fertilizers (85,7 mil. USD), unwrought gold (65,6 mil. USD), hazelnuts (62,5 mil. USD). As can be seen, exports consist mainly of natural resources, such as copper ores, ferroalloys, mineral water and gold ores. The export of cars, represents the re-export of mainly used cars to neighboring countries. Cigarettes and medicaments are also the subject of re-export.

The top imports in 2018 (January-November) was petroleum and petroleum oils (794,4 mil. USD), motor cars (533,1 mil. USD), copper ores (378,7 mil. USD), medicaments (300,0 mil. USD), petroleum gases (247,2 mil. USD), telephone sets (174,6 mil. USD), cigarettes (165,4 mil. USD).

The export and import of Georgia in relative and absolute values is given in Table 1. In the overall trade turnover over the years, exports account for an average of 20-25%. The country is not able to keep a steadily growing export trend due to serious economic problems caused by the decline in production.

Tab. 1 Absolute and Relative Exports and Imports in 2006-2017 Years

	Total exports (Mil. USD)	Total Imports (Mil. USD)	Trade Deficit (mil. USD)	Exports in Total Trade (%)	Export to GDP (%)	Imports to GDP (%)
2006	936,4	3 674,8	-2 738,5	20	12	47
2007	1 232,1	5 212,2	-3 980,0	19	12	51
2008	1 495,3	6 301,5	-4 806,2	19	12	49
2009	1 133,6	4 475,7	-3 342,1	20	11	42
2010	1 677,3	5 236,0	-3 558,7	24	14	45
2011	2 186,4	7 072,3	-4 885,8	24	15	49
2012	2 376,6	8 056,4	-5 679,7	23	15	51
2013	2 910,3	8 022,5	-5 112,2	27	18	50
2014	2 861,0	8 601,8	-5 740,8	25	17	52
2015	2 204,7	7 300,3	-5 095,6	23	16	52
2016	2 112,9	7 294,0	-5 181,1	22	15	51
2017	2 735,5	7 939,2	-5 203,7	26	18	53

Source: National Statistics Office of Georgia, International Trade Statistics, 2017, own elaboration

The economy of Georgia is mainly focused on the provision of services and consumption. GDP growth is mainly due to the development of service industries such as energy, telecommunications, trade, etc. At the same time, consumption growth has a weakly pronounced tendency, since from 2006 to 2017 the volume of imports in relation to GDP grew by only 6 percentage points. This situation is a natural consequence of the decline of local production, and low incomes of the population.

3.2 Poverty Indicators

Over the past decade, the growth of the monetary income of the population of Georgia is presented in Table 2. In 2017, compared with 2006, the growth in average daily income per capita was 121%. This indicator looks impressive, but in monetary terms, growth was only $2.3 per day. In annual terms, average daily incomes per capita in 2006 was $694, and in 2017 - $1,533. Approximately the same trend is observed in household incomes.

It should be noted that throughout the study period there is a steady trend of spending exceeding revenues. This is not due to the financing of expenses from previously accumulated

assets. The excess of expenditures over incomes is due to the heavy burden of the loan, which eats most of the population's income. For the population of Georgia, living on credit means giving up certain goods in favor of other goods. Often, the benefits of which are abandoned, affect health, life expectancy, fertility, productivity.

Tab. 2 Average Daily Incomes and Expenditures per Capita and per Household in 2006-2017 Years

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Average Daily Incomes per Capita, USD	1,9	2,3	3,3	3,2	3,4	3,9	4,5	5,0	5,3	4,3	4,3	4,2
Average Daily Expenditures per Capita, USD	2,1	2,5	3,4	3,1	3,2	3,8	4,4	5,0	5,1	4,2	4,2	4,1
Average Daily Incomes per Household, USD	6,3	7,4	10,5	10,4	10,6	12,0	13,7	15,7	16,4	13,4	13,3	12,7
Average Daily Expenditures per Household, USD	7,9	9,0	12,3	11,3	11,7	13,7	15,6	17,7	18,3	14,9	14,7	14,5

Source: National Statistics Office of Georgia, Standard of Living Statistics, 2017, own processing

Share of population of Georgia under absolute poverty line in 2006 was almost 37%. Despite the uneven decline in the number of people living below the absolute poverty line, this ratio is still very high. As shown in Table 3, in 2007 it was almost 22%. Despite this tendency, the share of population under 40 percent of the median consumption changed upwards, but compared to 2006, the rest was almost at the same level in 2017.

Tab. 3 Share of Population of Georgia Under Absolute Poverty Line and Under 40 Percent of the Median Consumption in 2006-2017 Years

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Share of Population Under Absolute Poverty Line (%)	36,9	38,8	34,9	34,9	37,3	34,1	30,0	26,2	23,5	21,6	22,0	21,9
Share of population under 40 percent of the median consumption (%)	8,8	9,1	9,7	9,1	10,0	10,4	9,4	8,5	8,1	7,2	7,2	8,5

Source: National Statistics Office of Georgia, Poverty Indicators, 2017, own processing

The GINI Coefficients, calculated by the National Statistics Office of Georgia, over the past 12 years has remained almost unchanged, which means that incomes and other parameters

distribution among a population is very inequality. Table 4 shows that this coefficient practically does not change over time and remains at the same level.

Tab. 4 GINI Coefficients for Georgia in 2006-2017 Years

	By total incomes	By total cash inflows	By total inflows	By total consumption expenditures	By total cash expenditures	By total expenditures
2006	0,43	0,49	0,44	0,38	0,45	0,40
2007	0,44	0,49	0,45	0,40	0,46	0,42
2008	0,43	0,50	0,46	0,40	0,47	0,43
2009	0,43	0,50	0,45	0,40	0,47	0,43
2010	0,44	0,49	0,45	0,42	0,48	0,44
2011	0,43	0,49	0,46	0,42	0,49	0,46
2012	0,42	0,47	0,44	0,41	0,48	0,44
2013	0,40	0,43	0,41	0,39	0,45	0,42
2014	0,40	0,43	0,41	0,39	0,47	0,44
2015	0,40	0,43	0,41	0,38	0,45	0,43
2016	0,40	0,43	0,41	0,39	0,46	0,43
2017	0,41	0,45	0,43	0,40	0,47	0,45

Source: National Statistics Office of Georgia, Poverty Indicators, 2017.

3.3 Correlation Between Imports, Exports and Income

And finally, Figure 2 is clearly shown that the income level of the Georgian population is not correlated either with export nor import indicators. In fact, the income indicator of a country's population does not depend on the influence of international trade on economic development and growth of the population's well-being.

Fig. 2 Growth in Total Exports, Total Imports and Total Income of Population in 2007-2017 Years
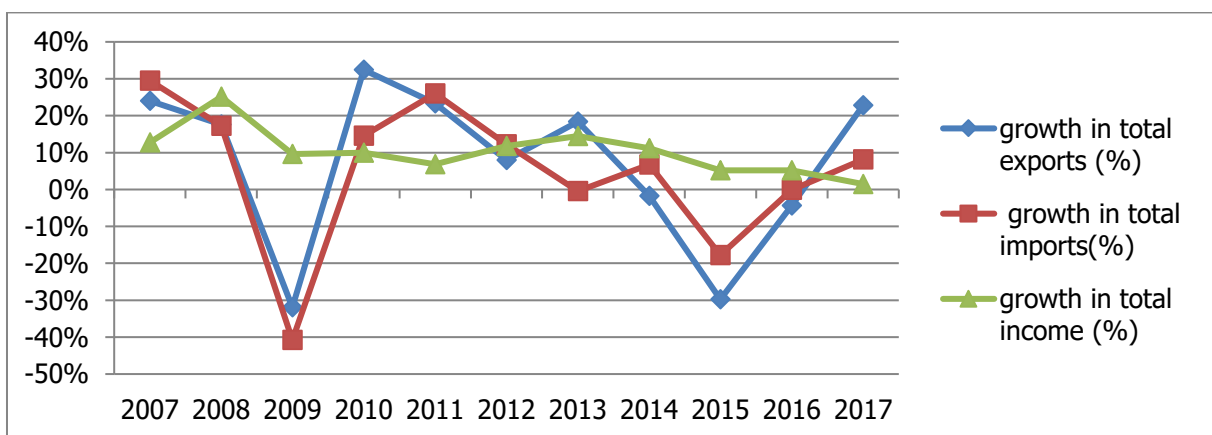
Source: National Statistics Office of Georgia, Living Conditions, 2017, own processing

The economic theory and experience of many countries show that international trade can indeed contribute to poverty reduction. First of all, trade helps countries obtain additional financial resources, develop technologies, reduce unemployment, raise the standard of living of the population, and as a result, reduce poverty in the country.

Despite such obvious advantages, international trade for Georgia has not become the main driver of poverty reduction. The growth of the volume of international trade, the expansion of the geography of trading partners certainly contributed to the growth of GDP and a number of other macroeconomic indicators. But, as has been shown, poverty statistics still leaves a lot to be desired.

The statement that only international trade can reduce the level of poverty in the country does not work for Georgia. Growth in exports from natural resources, low-tech products and re-exports over the past decade has proven to be an insufficient factor in reducing poverty. Although Georgia has maximally liberalized the terms of trade for other countries, and despite a number of declared trade preferences from developed countries, there are still serious barriers to the standards of the products being traded. For a technologically backward country in which investment in production is invested in a minimal amount, such standards of traded products become an insurmountable barrier to increasing international trade and obtaining not only financial but also social benefits.

CONCLUSION

The purpose of the study was to identify the impact of the growth of international trade on poverty reduction in Georgia. As shown in the study, the growth of international trade in Georgia contributes to the support of international organizations and the developed countries of the world. The successful development of international trade also contributes to domestic law that is attractive for importers and exporters.

The study analyzed the dynamics of international trade and poverty levels for 2006–2017. It was revealed that the growth rate of imports and exports are not correlated with the rate of income growth. GINI coefficients in the past 10 years, almost did not change for the better.

According to the results of the study, it can be concluded that the poverty indicators of the population have a weak tendency to improve and are not directly dependent on the growth in international trade.

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Poland in 2019: 0 Years in Eurozone, 15 Years in EU. Poland's-Eurozone-Accession (PEA) From the Perspective of Policy Arrangement Approach (PAA)

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Abstract: 2019 – a year of 15th anniversary of Poland's EU membership – is an occasion to reflect upon the fact the country has so far not joined the eurozone (EZ). This paper focuses on Poland's preparation and attitude towards becoming the full member of the Eurozone and discusses it by reference to the policy arrangement approach (PAA). We seek to shed light on landmark economic and political development by critically reviewing four components of this project: actors, resources, rules and the discourse. Our findings show that PEA seen from the PAA perspective is dominated by the discourse, whereas little can be said about actually missing resources or continuously evolving rules.

Keywords: euro, Eurozone/area (EZ), Poland, policy, discourse

JEL Classification codes: E60, F02

INTRODUCTION

2019 – a year of 15th anniversary of Poland's EU membership – is an occasion to reflect upon the fact the country has so far not joined the eurozone (EZ). In fact, it is tough to define Poland's Eurozone Accession (PEA) as a clear policy arrangement. It does not seem a perfect campaign, rather an operation, an action, initiative, grand project and certainly a landmark development which for now (late 2018) resembles more an elusive remote task.

1 LITERATURE REVIEW

Conceptual framework of policy arrangement approach (PAA)

For our analysis we employ the policy arrangement approach PAA (Arts, & Leroy, 2006) which seeks to explain policy dynamics using a concept of 'policy arrangement', the way in which a certain policy domain is shaped in terms of organization and substance (Niedziałkowski et al., 2012). A policy arrangement has four analytical dimensions: 'discourses', 'rules', 'actors' and 'resources'. This concept is under a constant pressure coming from various sources such as: daily interactions and policymaking, structural changes and relations between state, markets and civil society, or external events that affect the context of policymaking (Arts, & Leroy, 2006). We decided to base our research on purposeful, directed and critical review of reports, dossiers, papers and other documents by Polish and international bodies (e.g. Gorzelak et al 2017), as well as analysis of economists' opinions and intelligence gathered from experts attending the conference "Euro a sprawa polska" organised by Vistula University, Warsaw on 16th April 2018. This paper may be classified as a general review providing an overview and view-point, with a content which is dependent on author's opinion and interpretation. In a

sense, it clearly demonstrates a case study type of article, as it is devoted to concrete phenomena happening in a given country – Poland's process of becoming EZ member.

Discussion

In this section, we seek to outline the main aspects of PEA by framing our discussion and critical evaluation in PAA. We focus on each dimension separately trying to highlight their respective idiosyncrasies. Among others we draw on the result of survey conducted among invited experts gathered at the conference "Euro a sprawa polska" (Vistula University, Warsaw, 16.04.2018 – scheme 1). This survey builds upon PAA and tackles the Euro adoption process with multiple-choice answers. Responsiveness rate obtained equals as much as 48% (22 out of 46). We believe that our sample, although, obviously not representative provides crucial insight into the explored problem. Majority of surveyed economists tend to see PEA as a challenge for the economy, society and political elites but also as an opportunity for faster socio-economic development and chance for geopolitical and civilization advancement. On a positive note should be stated that relatively few have considered it as a difficult project. In the next sections we move on to discussing one by one all four dimensions of PAA characterising Poland's euro area accession process.

1. Resources

Resource being one of the structural dimensions is intrinsically related to power (Arts & Van Tatenhove 2004). Power has to be understood, as the ability of actors to mobilise resources in order to achieve desired outcome but also as some dispositional / structural aspect of socio-political systems. For the moment being, as it seems there are no special resources which may assist the EZ accession process. However, recently some proposal has been tabled by the European Commission President J.C. Juncker in form of a reform delivery tool / a pre-accession incentive for "pre-ins". This possible euro-accession Instrument will be, nevertheless, unlikely to impact the decisions of 'outs' on whether to join EMU (Dąbrowski, 2017). It might be, however, seen as a change in the attitude of the European Commission (and hopefully also the 'ins') about EMU enlargement, and hence might encourage 'outs' that are willing to adopt the euro to set a concrete accession timetable and move forward with its implementation. Poland also has not set up any fund earmarked for facilitating the EZ accession process. This might suggest that the whole PEA is supposed to be (or is considered?) as a free process, presumably generating no costs. Most respondents among experts gathered at the conference "Euro a sprawa polska" (Warsaw, 2018) argue that key resources being involved in the PEA are crucial for organizing an information campaign and carrying out the preparations themselves. Though, for the moment being they are in fact, not existing, because there are no funds dedicated to the process of joining the Eurozone at the level of the government and the central bank; what remains are mainly EU funds available so far, supporting the whole economy. Only few experts argue that such funds are actually not needed. Resources as one of the dimensions of PAA seem to be least pronounced aspect and hence difficult to evaluate.

2. Actors

As argued by Arts, & Van Tatenhove (2004), actors exercise power but are always embedded in some constructed constraining structures such as institutions and discourses. In policy making, processes actors struggle to achieve some desirable outcomes (Arts, & Van Tatenhove, 2004). When it comes to Poland's process (preparation) of joining EZ the main actors involved are Polish elites, policy-makers, other authorities as well as economic experts, EU officials, serving and former civil servants. The once established and then discarded office of the plenipotentiary for Eurozone in Ministry of Finance or the Office of Integration with Eurozone in Central Bank may illuminate the scepticism of current government, if not a negative attitude towards the EZ membership. Actors involved - politicians and economists - seems rather to stick to own opinions and tend usually to reaffirm their statements and polarised, if not petrified, views (Polskie Radio 2017). Riedel (2017) clearly proved the

evolution of thinking of National Central Bank in Poland as inferred from the official reports regarding the possibility of Polish participation in EZ - the declining enthusiasm over time. At the beginning of 2018 a group of prominent Polish economist signed a letter to new prime minister M. Morawiecki calling for quick euro adoption (Open Letter, Rzeczpospolita, 2018). They advocate establishing a Council tasked with designing and conducting public opinion campaign, assuring the right convergence exchange rate before joining ERM II and supervising the legal amendments necessary for joining EZ. Although, these high-ranking officials and experts are the most heard voice in the debate on euro adoption, the default key actor is in fact the society as such and the business. Polish entrepreneurs, CEOs of small and large firms in general support the idea of euro adoption. For most of them it would have positive consequences mainly due to transaction costs reduction. As much as 74% of large and medium-sized companies in Poland want a single currency (Siemionczyk, 2018). In Polish companies, the conviction is growing that the risk of adopting the euro is getting smaller. Meanwhile, potential benefits, e.g. lower interest rates, no transaction costs or zero volatility, remain unchanged - he explains. The balance of pluses and minuses of resigning from their own currency has thus become beneficial in the eyes of the companies' CEOs. As it seems the public opinion does not support euro adoption and besides the legal obligation as such does not generate any urgency. Poles are rather sceptical about the possibility of joining the eurozone in the coming years (Woźniak, 2018). Majority of experts gathered at the conference "Euro a sprawa polska" (Warsaw, 2018) tend to see Polish politicians and Parliament members, Government and NBP as major actors involved in PEA – in fact circles of Poland's highest authorities. Nevertheless, they admit the importance of active involvement of scholars and experts. The opinions differ among economists and policymakers which makes the whole debate even more perplex. As it seems, the actors' landscape seems to be under evolution. Actors change over time in terms of the number as well as their opinion and stance towards Poland's Accession to the Eurozone. The range of actors involved has been modified; some of the institutions have been abolished. Though, the success of "euro operation" requires more. There must be a nation-wide approval for the decision to join EZ. Not only experts, or policymakers and business, but the whole society – currently pretty sceptical - needs to be well informed so, that on the basis of the reliable evidence, it could support the accession.

3. Discourse

Crucial for PAA dimension - the substantive one - is the discourse which refers to the interpretative schemes the actors can use (Arts, & Van Tatenhove, 2004). As it seems the campaign information on PEA is, if not missing, then clearly limited. What comes as a puzzle is the fact that Poles belong to the most proEUropean nations, but they very sceptical towards EURO (Riedel, 2017). The debate is being mainly conducted by experts (Rzeczpospolita 2017) in form of columns by leading economists. Many policy makers seem to have hibernated the debate, by adopting the "wait and see" approach. If any the discourse has being carried out on Polish political scene, to some extent at the EU level, in media, and by other organisations and Foundations. In the EU, the discourse focuses recently on EZ reform, new governance and architecture. It revolves around new hybrid models of integration and takes place in Brussels based think-tanks and other international institutions. In Poland, the debate so far has been held among economist experts who seem to concentrate on old problems, costs and benefits of Eurozone membership, convergence criteria, whereas discussion among policymakers is either almost non-existent, negligible on the side-lines, or heavily loaded with emotions (see also European Central Bank, Convergence Report, May 2018). Those experts involved (Debata „Euro a Sprawa Polska" 2017) stress that staying outside EZ does not make much sense since Poland did not utilise recently the theoretically available and seemingly so important tool such as the flexible exchange rate enabling competitive devaluation or cushioning shocks. As argued by Dabrowski (2017), in the long run, exchange-rate flexibility cannot substitute the microeconomic flexibility and structural reforms. Besides, the most

important decisions are currently undertaken within the euro group (Tomkiewicz, 2017; Dąbrowski, 2017). Economists, opponents of PEA stress the advantages of monetary independence and autonomy to pursue autonomously currency policy pointing to the risk associated with the cage of one- size-fits all policy of ECB in the light of EZ divergences, particularly in the light of recently voiced proposals of integration by differentiation assuming some common for all "bare-bone skeleton of the EU" with accompanying "clubs" among others - the club of euro (Demertzis et al., 2018). Proponents underline that common fears are misplaced and call the government and policy-makers for swift actions towards the fast adoption of euro. Experts call for a broader campaign for PEA (Balcer&Gromadzki, 2018). This should be built around following facts: firstly, that the EZ would soon after Brexit constitute the core of European integration and in order to "have say" Poland needs to be part of EZ, secondly the wider acceptance among current EZ members and their societies need to be stressed, as well as good economic outlook (demystify the permanent crisis situation). The positive cases of recently joining countries should be highlighted as well and last but not least, the negative consequences of staying outside need to be made visible and illuminated (Balcer & Gromadzki, 2018). The discussion initiated by the joint letter (Rzeczpospolita) evokes the need of the right sequence of preparation stressing that Poland must conducts structural reforms prior to joining the EZ (Cieślak-Wróblewska, 2018). The suggested steps encompass deregulation of labour market, improving of fiscal stance and boosting competitiveness by measures aiming at reducing the red tape, streamlining the establishment of new business, easing the administrative burden for SMEs, encouraging start-ups or incentivising the shift into more value added activities and sectors (Strategy for Responsible Development 2017, Country Report Poland 2018). These reforms are regarded as prerequisite for successful adoption of euro and in consequence effective functioning within common currency area. In general, as it seems the Polish government unwillingness to join EZ is mainly justified with associated risk and costs outweighing the benefits. As it is argued, the economic divergence and differences in GDP p.c. levels among EZ members and Poland and the fact the euro area is still being reformed and it is undergoing fundamental reorganisation explains the reasons for temporarily abstaining from the membership (MF: Członkostwo Polski w EMU źródłem zaburzeń, 2018). Summing up, it might be argued, that the discourse has included political, economic and to some much lesser extent also security issues, as euro adoption used to be and is sometimes still regarded as an insurance reducing uncertainty and risks, and as a guarantee of geopolitical security. Nevertheless, the political and economic perspective seem to dominate the discussion. Most respondents among experts gathered at the conference "Euro a sprawa polska" (Warsaw, 2018) see the discourse as dominated by short-term policy and ideological perspective reflecting polarisation of views - supporters versus opponents of the euro; and subject to modification in the face of recent crisis-like processes, wave of Eurosceptic populism, Brexit, tightening of monetary integration and two-speed Europe. Thought, there has been recently growing scepticisms towards the project euro even among so far liberal euro-friendly media as it seems (Morawski, 2018; Wójcik, 2018). Drawing among others on the case of Nordic countries particularly strongly integrated yet having their own currencies and referring to the book by A. Moody „Euro Tragedy", who claims that euro has in fact contributed to the recent misfortune of the EU it is an outcome of years of utopian thinking lacking any sound economic fundamentals, they claim that Poland should stay away as long as the eurozone would not become a new EU (Morawski, 2018). In other words, this new perspective sees if any the reason for joining the eurozone only when this block of common currency replaced the current EU. Hence, the questions the Polish policy-makers and experts should deal with is rather would the EZ indeed proceed with further deeper integration and if yes is it really necessary for Poland to become a member of such zone? It has been also argued that recent upheavals of the EZ are emblematic of the wrong enforced sequence - instead of regarding common currency as the ultimate goal of integration the natural outcome of previous steps, it has been treated as an instrument imposed to force countries to integrate (Wójcik, 2018). The

insufficient convergence and persisting differences act as disincentive for joining EZ. For now, euro is the main brake for smooth integration not its facilitator. In recent (mid-2018) official statements, press interviews, government attitude as expressed by Prime minister Morawiecki can be described as cautionary, which should be interpreted as pragmatic (not ideological or doctrinal) approach. This "abstention" – staying away should continue as long as the convergence level is not satisfactory and monetary policy remains valuable policy option cushioning the likely crisis. Although, the benefits deriving from reduced transaction costs are undisputable, they seem not to offset the consequences of losing independent monetary policy.

4. Rules

The third structural dimension of PAA are rules which delineate a policy domain (Arts, & Van Tatenhove, 2004). The quick response from the government that followed the "euro appeal" of leading economist (2018), clearly denounces fast euro adoption in Poland among others on some "rules" grounds. Reasons for this included the fact that EZ does not fulfil he criteria of optimal currency area, the real convergence between Poland and the rest of the EZ has not been achieved and hence the rhetoric would not change any time soon (Balawender 2018). When one analyses the PEA one inevitably faces the most obvious rules which are the famous Maastricht criteria, or Stability and Growth Pact. There is, however, a growing awareness that any criteria should be met with the long-term perspective, it is a challenge to assure not only short-term ongoing adjustment but think strategically and safeguard lasting observance of criteria, like fiscal policy discipline (Niewiadomski, 2018). The discourse must take into account recent reforms and most likely would be guided by rules and recommendations worked out during other 'pre-ins' earlier accessions like the one expected to happen as first by Bulgaria (Lehmann, 2018). New entrants should follow the guidelines of banking union but also come to terms with problems of financial system and its supervision, and non-banking sectors – insurance, pension funds, need to govern properly the functioning of SOEs as well as put in order the insolvency framework. This all shows clearly that also Poland would in the end of the day join very much different eurozone from one might have expected some years ago. Hence, PEA is governed by multiple rules and regulations such as fiscal compact, ESM rules, banking union. There is more and more new law, a proliferation of new legislation can be observed. Poland has been always willing to join, and during acute crisis phase such readiness being a proof of good governance, market discipline. Currently legally it is still under the derogation requiring two years participation ERM II, and some institutional and legal amendments. Most respondents from experts gathered at the conference "Euro a sprawa polska" (Warsaw, 2018) argue that major rules defining the debate are compatibility of legislation - the need to amend the Constitution of the Republic of Poland and previous economic legislation. With regard to the rules – the final dimension of PAA – actually the obligation of fulfilling Maastricht criteria and the need to change legal provisions on functioning the Central Bank and related paragraphs of Polish constitution seem to make the headlines.

2 METHODOLOGY

The aim of this paper is to asses Poland's-Eurozone-Accession (PEA) according to policy arrangement approach (PAA) framework, to identify weaknesses and put forward proposals of how to redesign or reshape the "process of preparing and joining the Eurozone by Poland". PAA organises our critical review of available literature on the subject and structures the assessment of current Poland's "euro-operation". It integrates four main aspects of the ongoing euro-project: actors involved, discourse being held, resources available and governing rules. Findings obtained may be leveraged to adjust the debate and adopt the adequate campaign, so it can address the fears expressed by public opinion or help avoid the mistakes of previous other EU MS' accessions such as the possibility of price rise. Normative character

of our paper allows us also outlining better design of euro-policymaking. It should be emphasised that is not our intention to evaluate current proposals of Eurozone reforms, to describe in detail the history of Poland's relation with the EU or to elaborate upon the risks and benefits of euro-area accession. We believe that the novelty of this paper derives from the exploration of PEA by referring to conceptual framework which goes beyond the simple description. This paper is structured as follows: first we introduce the fundaments of PAA methodology and in next subchapters we discuss one by one the major PAA dimensions i.e. actors, rules, resources and discourses of Poland's Eurozone Accession. The final part summarises conclusions and also offers some tentative suggestions of how the PEA might be better designed and shaped.

3 RESULTS AND DISCUSSION

Summing up, the discourse – i.e. the major substantive dimension of PAA - tends to dominate (or is mostly developed and covered) over the other PAA aspects. Hence as it seems, the PEA examined by the lenses of PAA is clearly biased as little can be said about actors /coalitions, actually missing resources or evolving rules. There is a growing acknowledgement that adopting euro in Poland is more a matter of willingness and proactive engagement than overcoming real obstacles, reforming fundamentally economy and admitting that "to have the euro we need just to want to" (Siemionczyk, 2018). As expressed in June 2018 Convergence Report by the Ministry of Finance, the Poland's convergence with the EMU remains unsatisfactory (Monitor Konwergencji, 2018). Differences in the economic structures between Poland and the euro area have not, however, been an obstacle to the high level of similarity of business cycles in both areas. Current estimates regarding Poland's compliance with the nominal convergence criteria indicate that two criteria have been met (price stability and fiscal criterion). The criterion of exchange rate stability (due to the fact that the zloty was not included in the ERM II mechanism) and interest rates remain unmet. With the current degree of similarity between the economies of Poland and the euro area - in particular as regards the level of development (measured by GDP per capita) - Poland's membership in the euro area might be a source of some distortion in the economy. Pretty vague perspective remains still the completion of the institutional reform aiming at higher stability in the euro area, which is a necessary condition for Poland's possible accession to the single currency area. For this reason, as we read in the Report, the priority of Polish economic policy is currently to increase the potential and competitiveness of the economy. It seems, however, that the conflicting views and opinion might be reconciled as both the euro-adoption opponents and supporters differ obviously in their narrative and way of conducting the discourse, but not that much in evaluation the underpinning economic considerations. Reasonable proponents encourage the membership, though, being fully aware of the time needed and reforms required, opponents on the other hand stress firstly the reforms and convergence needed before any euro-adoption decision can be made. Hence, it seems they differ more in terms of accentuating some aspects or timeline of euro-operation, than in general assessment.

CONCLUSION

In this paper we tried to analyse the process of joining the EZ by Poland by drawing on: actors involved, discourse conducted, resources available and governing rules. Although the underlying PAA framework allows for such neatly and ordered exploration, in practice the mutual relations and interdependences make it harder to clearly dissect these dimensions form each other (to look at actors and abstaining from the argumentation/discourse they use; to investigate the rules while ignoring the debate, etc). it As our paper is of normative character also we seek to go beyond simply describing and assessing the Poland's Eurozone Accession

(PEA) by formulating some tentative recommendations as to how the initiative – this grand project should look like in order to minimise the fears expressed by public opinion, to address the insufficient knowledge, to learn from lessons of previous EZ accessions and leverage the ongoing reform in EZ governance. The obtained results of experts' survey show that most respondents see the euro-adoption process as the challenge for the economy, society and political elites, the chance for geopolitical and civilization advancement and opportunity for faster socio-economic development. Drawing on PAA framework the remaining structural components of policy arrangement approach i.e. main actors, resources, discourse and rules of this project can be also diagnosed (fig. 1).

Fig. 1   PEA in PAA – results of pilot experts' survey
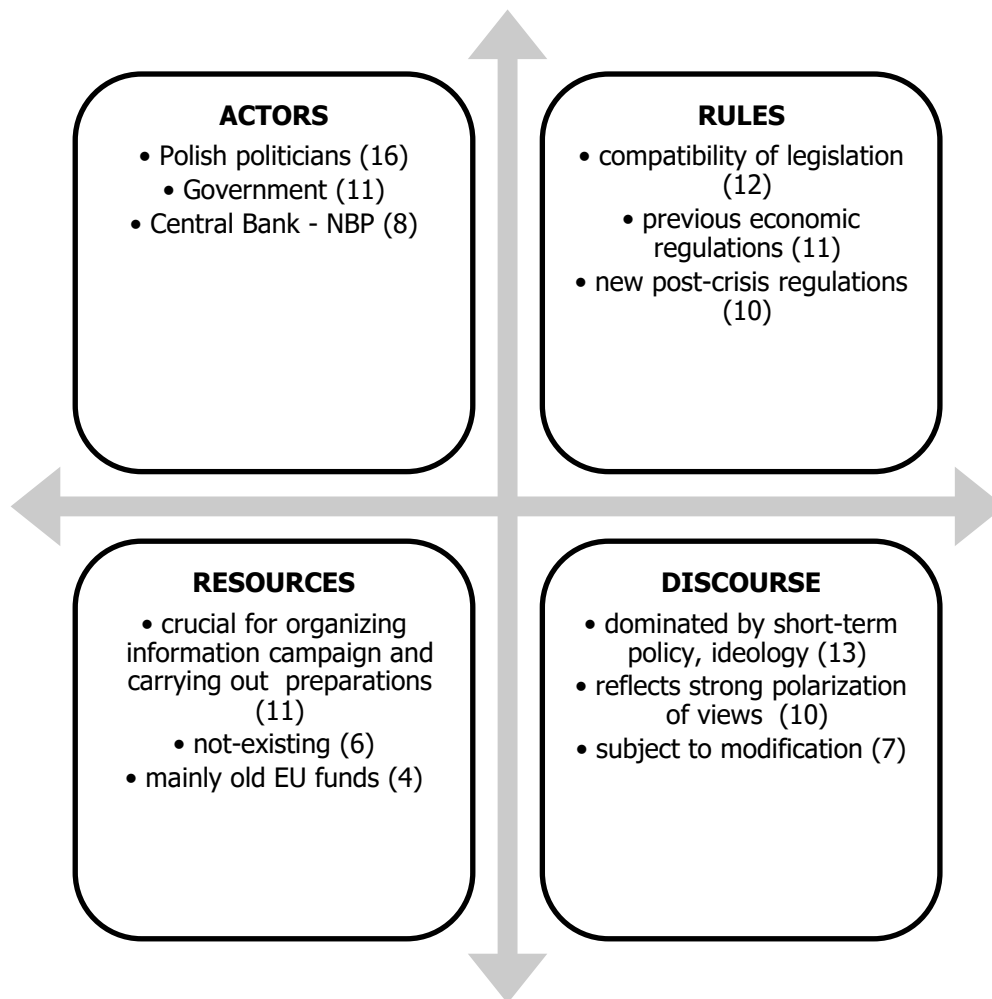
Source: Authors' elaboration based on the results of experts'(N-22) survey (the conference "Euro a sprawa polska", Vistula University, Warsaw, 16.04.2018)

Actors encompass by default three major groups: policymakers/politicians, economists /business community and wider society. Summing up their dominant attitudes i.e. sceptical of currently ruling party and government, rather pro-euro by economists and business circles and the unconvinced approach of public opinion, the resulting outcome of actors' attitude can be described as negative. Discourse, although this most heard is being held mainly by politicians, is pretty economic in its nature as it draws on convergence criteria, harmonisation of macro-indices etc. Resources, actually not available, certainly do not facilitate the whole process and the Juncker pledge of possible tool / support for "pre-ins" countries might in this light act as

interesting incentive, though, of limited impact. Rules are going to be more complex, most likely to some extent more political (policy induced – idea of clubs) yet also richer in terms of economic-fiscal and financial requirements, what in the end can yield the PEA even more difficult; perhaps discouraging euro accession. More resources, or proper funds should be earmarked for an informative campaign. The general public opinion on this matter should be hence improved and awareness of PEA consequences raised. It would be wise to think about unborn problems and "outsiders" of successful transformation (potential losers?), and to assure inclusiveness. Discourse should be more about illuminating how complex the ongoing integration is, advancing the knowledge on current Eurozone debate, highlighting the costs of non-euro, and stressing the unsustainability of staying outside – i.e. pointing out the fragile situation of a country tightly linked with euro area, yet still with own -emerging market – currency and exposed to possible speculations. Concerning the rules of PEA, a much broader package of new provisions and legal amendments to the EU acquis communiatore needs to be considered.

In our opinion, the discussion on PEA needs to be more nuanced. The Eurozone accession and adoption of single currency would not be a remedy for various socio-economic or political troubles as some may expect. It would not guarantee economic growth and welfare improvements or socioeconomic development. It is a chance and opportunity but certainly not a guarantee of faster or more inclusive growth. This is particularly the case under the planed Eurozone governance amendments including debt restructuring possibility, putting conditionality on any financial assistance, monitoring and close surveillance of the development of national budget policies, stipulating more sovereign states responsibility for own fiscal policies and not foreseeing any debt mutualisation or euro-wide transfer. It will be still in hands the national capitals and the responsibility of their authorities to assure safe financial policies and sustainable public finances. Hence, the euro adoption is not guarantee of welfare and fast economic progress. That being said, the opponents should be reminded that staying outside the euro-area and having own currency per se does not solve the lasting competitiveness problems. Building competitive advantages on exchange rates modifications (manipulation in fact?) does not seem an appropriate long-term strategy for any advanced country. Some initiatives within the governmental Strategy for Responsible Development (2017) have been adopted with the aim to reshape the structure of Polish economy, to advance the position of Polish manufacturing along the global value chains and to improve the innovativeness, sophistication of business ecosystems, nevertheless, they all miss the joint currency aspect. In fact, own monetary policy is seen as necessary cushion in case of unexpected market turbulences and a tool for addressing possible crises. Polish economists tend to remain spilt; whereas some argue that zloty is critical for country's international competitiveness, others reckon that this should derive from other sources than autonomous exchange rate's movements. Likewise, the international experts tend to remain unconvinced (Darvas 2018) with some like Stiglitz (2017) or Mody (2018) stressing the challenges if not direct risk of EMU membership. It seems tricky, though, to believe that certain finalite in the Eurozone will be declared one day when all the restructuring, reconstruction, modernisation or other governance reforms are accomplished and when hesitating countries can finally state their willingness to join such crystallised group. Recent developments show all very clearly that hoping for and expecting the ultimate steady state – the end, the crown or final of Eurozone architecture is just premature or too optimistic. Besides it does not seem feasible to expect a point of satisfactory fulfilment of clearly defined set of conditions or concrete situation when countries such as Poland would be indeed 100% ready and willing to join. It is more likely that given current hesitation there will be difficult to arrive at the situation when all interested parties would claim their readiness and approval for euro.

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Establishing and Financing Joint Ventures Abroad - The Czech Perspective

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Abstract: The joint venture gives partner companies the opportunity to effectively link activities they would otherwise compete with and to put them into an independent enterprise with its legal personality. These activities may not be limited only to the production area but they can include also trade activities, market survey, promotion, investments into other enterprises etc. Since joint venture is a partner relationship, the companies involved must in addition to property interests agree on representation in the company's management, the managerial style of leadership and the form of production and business processes, the ownership of patents and brands and marketing strategy in relation to customers, suppliers, media, general public and government administration. This paper analyses possible strategies of managing joint ventures in international markets and brings useful examples and views of financing it from the perspective of Czech companies expanding abroad.

Keywords: joint venture, strategy, Czech, financing

JEL Classification codes: L24, M16, G32

INTRODUCTION

The establishment of a joint venture has the character of an green-field investment, which generally means the establishment of a brand new enterprise, which starts usually with the choice of a legal form (Joint Stock Company, Limited Liability Company etc.), registration in the Commercial Register, distribution of shares, filling the functions in statutory bodies, acquiring capital and financial resources, creating jobs and commencement of operation. On the other hand, there is an investment called brown-field investment when the enterprise enters into another, already existing company through the merger or acquisition. This form of an takeover is not usually considered a joint venture, as it implies a continuation of the business established in the past. A typical joint venture, on the contrary, represents establishing of the original form of entrepreneurship without any back worth ties. The advantage of a direct joint venture investment consists in the immediate presence on the target market, proximity to suppliers, customers and media (Synek, 2000). The disadvantage can be high cost, the need to pay the local taxes and to comply with the local regulations and public notices. The joint ventures are established especially in the construction of industrial buildings (e.g. Goodman and WTORRE in Brazil), in the mining business (e.g. Gorgon Gas Project of Chevron, ExxonMobil, Royal Dutch Shell, Osaka Gas, Tokyo Gas and Chubu Electric Power in Australia) (Shell Australia, 2019), in car production (eg. TPCA – Toyota Peugeot Citroën Automobile produces in Kolín) (TPCA, 2019), in the production of cell phones (e.g. SONY Ericson) etc. The undestanding how to establish, manage and finance such an undertaking is crucial for its success. The paper fucuses on distinguishing between two major forms of managing joint venture and on ways in which the partner companies will participate in financing a joint venture. Its original research contribution consists in analysing and

overviewing different approaches of managing and financing joint ventures schemes as well as bringing actual examples from the Central and Eastern European regions.

1 LITERATURE REVIEW

There is a lot of different views and definitions on what a joint venture actually is.

For example, in the book of professor Peter Baláž from the University of Economics in Bratislava Medzinárodné podnikanie (Baláž a kol., 2005), professor Soňa Ferenčíková defines joint venture as a non-merger / acquisition long-term relation in which two or more entities own a sufficiently large equity to guarantee control or influence in key areas of decision making. According to this statement, a number of different actors can participate in a joint venture: public sector companies, international organizations and agencies, charities and individuals.

Kathryn Rudie Harrigan, the American professor of the Columbia University focusing her research on the role of technological synergies in corporate strategy, defines a joint venture in her book Managing for Joint Venture Success (Harrigan, 1986)   as a unit created by two or more business entities to combine their own resources and capabilities in the form of finance or technology, business experience, manpower, managerial skills, and distribution channels.

Other definitions highlight the economic, financial or legal aspects of the partnership. According to the French financial specialist Josette Peyrard (Peyrard, 1998), who wrote the book International Financial Management , the link between a foreign and a local partner can be established outside their mother countries because financial interconnections have become international.

The Czech professor Leo Vodáček from the University of Economics in Prague and his co-author Oľga Vodáčková in their Synergie Book in Modern Management (Vodáček, 2015) explain that the joint venture can be legally and organisationally identifiable, it is created on the basis of a legally valid contract, and over some time it converts into a separate organizational arrangement of a new business unit, thanks to the synergistic effects of the multilateral cooperation.

In the book of the professor of Comenius Univerzity in Bratislava, Eva Smolkova, published under the name Strategic Partnerships as a Phenomenon of the Global Economy (Smolková, 2009), it is said that strategic partnerships like joint ventures are becoming the most used tool of business cooperation in the current stage of the global economy and affecting the sectoral characteristics of many industries.

Japanese professor Zenichi Shishido of the Hitotsubashi University in Tokyo describes in his book Joint Venture Strategies - The Design, Bargaining, and the Law (Shishido, 2015) a joint venture as a strategic alliance in which each partner contributes not only a substantial amount of monetary capital but also a relation-specific human capital, that plays an important role in the management decision process.

Surely there are many other views on various business forms of joint ventures. The author of this article intends to bring a couple of new views and ideas into a broad international debate on how to manage joint ventures and what are the causes of success of joint ventures in Eastern European countries.

2 RESULTS AND DISCUSSION

The joint venture gives partner companies the opportunity to effectively link activities they would otherwise compete with and to put them into an independent enterprise with its legal personality. These activities may not be limited only to the production area but they can include

also trade activities, market survey, promotion, investments into other enterprises etc. Joint venture is sometimes defined as a foreign branch, which is not fully owned by the parent company. This is because the shares in the subsidiary are shared with other parent companies and even with the state. Joint venture is a partner relationship. The companies involved therefore must in addition to property interests agree on representation in the company's management, the managerial style of leadership and the form of production and business processes, the ownership of patents and brands and marketing strategy in relation to customers, suppliers, media, general public and government administration. By registering and placing joint venture in a host country, it must observe the local laws and reflect local customs. There are two forms of joint venture. Joint venture based on the principle of sharing ownership interests and joint venture operating under a management contract. In practise, this division occurs in pure form only rarely, a joint venture mostly contain both elements – share and managerial at once. For the sake of clarity of interpretation, we will consider these elements separated in the following text.

2.1 Joint venture based on the principle of sharing ownership interests

This form of joint venture has a few variants depending on how large ownership interests fall on each participant. If private companies are the participants, they agree very often on the interests 50: 50. However, an interest in the ownership of a company does not mean that both parties finance joint venture with equal finding. E.g., it is possible that one company provides only license rights to use the brand or production technologies, the second company takes a loan and finances the entire operation. If a joint venture is opened in a developing country where there is a threat of inflation, lack of credit capital, a stock exchange failure etc., then the foreign corporate group is expected to take over control over the overall funding. However, based on the internal accounts mechanism with the parent company, it can directly influence the operating results of the joint venture and overdraw the resources for its own benefit. For this reason, if the state is a member of a joint venture, it usually requires a majority proportion of 51 % (e.g. in China and in some African countries). In addition to taking the funding out of the country (e.g. in the form of transfer prices or non-reinvesting dividends), the state can prevent through majority control the occurrence of dominant position of a foreign company on the local market and gaining a dangerous political and media influence. A foreign partner entering into a joint venture in another country on the principle of sharing ownership interests generally pursues these objectives. The possibility to produce to a greater volume while decreasing the production costs (Fotr, 2005), gaining access to the existing supplier-customer networks in the target country, the possibility to use the partner's contacts in the media and in dealing with the state, the form of a joint venture is many times the only way how to reach the local market, to use the tax and other incentives of a local state which lures investors to the country, introducing its own branch on the market of a host country, to persuade the local people that the joint venture is their domestic company and to gain a positive relationship to the company and their products.

2.2 Joint venture operating under management contract

In this case, the control over a joint venture does not consist only in ownership interests but in controlling the senior management positions by "their" people. A so-called management contract is concluded, within which the complete management of the joint venture is handed over to the agreed managerial team, usually for a period of 5–10 years. The team is given all the powers of the company's executives, it can decide on all issues from the top strategy through organizational matters to operational management of procurement, production, sales, human resources, marketing and finances. Its work is controlled by the managing and

supervisory board, which can include, based on an agreement of the contractual parties, also members and representatives of the senior management (Harrigan, 1986). Senior management team can be composed of the employees of one partner, both partners or even of the people from a hired managerial company providing its services for these purposes. If joint venture entrusts its management to an external managerial company, then either it pays a fee agreed upon in advance or it motivates the managerial company by paying a certain amount of the enterprise's net profit. Both is paid against invoice for services provided. Management contract has therefore the character of purchase contract in this respect. In some cases, the managerial company may obtain a right to purchase a certain share in a joint venture at a fixed price up to a certain percentage of registered capital. It has good assumptions for it due to running the company for a long time. The partners can especially appreciate the benefit of a managerial company in terms of knowing the local conditions, the ability to gain contacts in both the commercial and public sector, orientation to local legislation and also the manifestation of managerial skills in local conditions. The share is obtained either by handing over the company's stocks or based on a contract on the transfer of business share. In both cases, the managerial company as well as the co-owner shall be entitled to an aliquot part when dividing the profit.

2.3 Financing a joint venture

The way in which the partner companies will participate in financing a joint venture belongs to the most important decisions. The volume of funding and their forms depend on a number of factors. There are two basic approaches to financing – using local resources such as the sale of stocks and bonds to local entities, local banks' credits and state investment incentives and funding from abroad which are, on the one hand, similar resources as the local ones whereas the provider/investor is a foreign entity and on the other hand capital made available by the parent company or loans from international banks a organizations.

Financing from local resources

A company can obtain financial resources by selling securities, mostly in the form of stocks, bonds or promissory notes/cheques. These resources differ in the nature of monetary incomes for their providers. Stocks bring variable monetary incomes depending on the operating results of the joint venture, bonds bring constant monetary incomes on the basis of an agreed interest and promissory notes/cheques are not interest bearing but they are transferable, imposing an obligation on the drawee to pay at a certain time and at a certain place, regardless its solvability (the principle of unconditionality). The problem of this way of funding may consists in the lack of capital in the particular country where only a few entities can buy the securities and a possible atmosphere of distrust in the particular joint venture projects as well as small political and promotional support in the target country. The first fact can be only hardly influenced by the company. In the second case, it can use the marketing and media means or to get political connections by means of lobbying. Also using references from companies which have been already operating on the target market is quite often. After starting the business itself, the companies are recommended to behave in a transparent manner, to push through the position of good husbandry and to present itself as an entity bringing new jobs and sparing the environment. For these reasons, joint-stock company is the most common form of joint venture. Ordinary sale of stocks may be sometimes uncertain due to the increase of the capital required. Therefore, the companies grasp an operation called Security Underwriting, whereby the investment bank takes over a certain amount of stocks and provides the joint venture with a nominal amount of their value. The operation has a hedging character since the company can invest the gained money before the bank sells the shares to interested persons from other companies, banks, individuals etc. The decision in which moment the bank sells the stocks is purely at its sole discretion. It is usually at the moment when the company shows good

operating results due to an investment, the prices of market stocks are rising and the bank collects a higher income than it has paid for the stocks. The role of the underwriter can be adopted also by the state which can sell the joint venture stocks to private investors through its financial institutions and thereby, in the event of a successful sale, to save the state budget funds allocated for investment incentives. The increase of the investors' interest in a newly established joint venture can be also stimulated by issuing so called Preferred Stock (priority or preferred stock – PA) that provide the preferential payment of dividends before the shareholders holding common stocks. However, their share in the registered capital must not be higher than the share of common stocks. Some PAs can be "cumulative", which means that if the company cannot pay off any dividends over a certain period, PAs get cumulated and must be paid off in the future, again preferentially. The issuance of bonds is suitable in the countries where the local market participants have enough "surplus" capital and look for ways how to invest it. Unlike stocks, a newly established joint venture must return the borrowed amount at the agreed time, including paying interest. Short-term forms of bonds, e.g. high-yield short-term security with a yield determined in the form of discount, reduced by issue (expenditure) rate due to the nominal value. It is a flexible instrument allowing the issuer to gain repeatedly financial resources under advantageous conditions. For the investor, it represents a highly liquid instrument with a good yield and low risk. The obligation of the issuer to pay the interest agreed upon at set dates and to give back the originally deposited amount to the investor at the end of maturity. Fixed-income bonds are usually used (so called Plain Vanilla Bond). The credits in local banks are provided according to the General Terms and Conditions of the particular bank and in accordance with the laws of the host country. The companies establishing joint venture will decide for them only if the fees, interests and administrative difficulty are lower than those in their own country are. In the event the local government supports the establishment of a joint venture, mostly because of the creation of new jobs and transfer of know-how and technologies, the company is provided with so-called investment incentives. The most common form is a partial or complete income tax remission for the period of 5–10 years. In addition, it may be transfers of land at a preferential price, material support when creating jobs (e.g. financial compensations for each created job), material support for retraining employees (e.g. financial support for educational and retraining programs for employees). Financial support by the state can be provided also in the form of financing export credits and their subsequent insurance with state guarantee. The entities carrying out this activity are collectively referred to Export Credit Agencies – ECAs. Examples can include the Czech Export Bank and EGAP in the Czech Republic, Natexix Banque and COFACE in France, Japan Bank for International Cooperation and METI in Japan, AKA Ausfuhrkredit GmbH a Euler Hermes in Germany, The Export-Import Bank of the United States and The Overseas Private Investment Corporation in the United States of America etc. The essence of this way of funding consists in providing preferential conditions for drawing medium and long-term credits to build up tangible investment units, the financing of construction works, the deliveries of machinery and covering the expenses related to it. Export credit may take the form of Delivery Credit , provided by the joint venture to a foreign trade partner or the form of so called export Buyer's Credit, released by the importers abroad either directly or through his home bank. Both credit types can effectively help in the stage of building a joint venture, since they relieve the company of financial burden at the moment of growth.

Financing from abroad

Financing from abroad depends on the riskiness of obtaining resources locally and on the overall strategy of the founders of the joint venture. The form of joint venture is mostly temporary, meaning that the financial resources must be calculated for a limited period of time. Thereby, the financing differs from the usual one, which expects the company to operate for an unlimited period of time. The first group of funding are actually the same resources, which were described as the local ones, with the difference that they are provided by a foreign

entity. The stocks and bonds can be sold abroad, a credit can be obtained from a foreign bank and investment incentives can be provided e.g. by the state within its pro-export policy. The only thing that matters are the differences in the price and the riskiness of these transactions at home and abroad. Many times, they provide registered capital and investment means for the development of a company of the parent company of joint venture funders. These means act as a contribution to the joint venture, increasing its assets and adjusting the amount of shares of individual members. It may happen that one of the participants will not be able to match the increase in company's registered capital. In this case, his share and decision-making rights will decrease and its influence on the management of the company and profit distribution will be lower. Parent companies optimize the financial flows of their joint venture, in terms of price, costs, taxes, administration and trade policy. It is quite common that the financial administration is assumed by an offshore company which can either be own or hired. Recently, there have been also established so called Business Services Centers – BSC) that will be mentioned later. Not only the governments of the cooperating countries but also international organizations, banks and different fond types are concerned with the development of direct investments abroad, whether in the form of a joint venture form or another form. These institutions see in a potential of future development in the investment activities and their incomes in the investment activities. The company can take advantage of this effort and obtain credits under more advantageous conditions. International Union of Credit and Investment Insurers – shortly Berne Union is a significant international organization which associates around 80 guarantee and export insurance companies from all over the world. On behalf of the Czech Republic, the state-owned Export Guarantee and Insurance Corporation – EGAP , is a member of this Union and the exporters can effect insurance of short-term, middle-term and long-term export supplier credits, insurance of confirmed letters of credit, insurance of the investments of Czech legal persons abroad, insurance against the risk of impossibility to perform an export contract, insurance of bank guarantees issued in connection with obtaining or performing an export contract etc.. Insurance against short-term commercial risks of not paying due to the insolvency or payment unwillingness of the buyer is provided by credit insurance company KUPEG úvěrová pojišťovna, a.s.co-owned by EGAP and the Belgian credit insurance company Ducroire – Delcredere SA. N.V. In the Agreement establishing The World Trade Organization (WTO) in 1994, the WTO undertakes to remove export subsidies for export of any product if this subvention results in selling the product for export at a price lower than the comparable price of the like product for the buyer on the domestic market. However, export credit practice, which is in accordance with the international obligation from January 1, 1979, related to official export credits, so called OECD Consensus (Arrangement on Officially Supported Export Credits from 2005) is not considered to be the credit subvention prohibited by the Agreement on Subsidies and Countervailing Measures. OECD Consensus provides an institutional framework for the export credit markets and is to prevent the speculations of states of who will provide more advantageous conditions of financing for their exporters . State financial support can take the form of direct financing, refinancing, guarantees, interest rates subsidies, financial aid (e.g. cheap credits and grants) and insurance of export credits and guarantees. In line with other rules for the exports supported by the state, OECD Consensus regularly sets Commercial Interest Reference Rates and the maximum maturity of credits. Within the European Union, the OECD Consensus was enacted by the EU Council Decision. The state can support exporters of all kinds of goods except military facilities and agricultural products. Special rules apply to the provision of credits for ships, nuclear power plants, civil airplanes, renewable energy sources and water projects. Another way of financing the expansion of domestic enterprises abroad, whether in the form of joint venture or in another form of direct foreign investment is to use their state's membership in international financial institutions. In addition to the World Bank , other regionally competent banks taking care for the local development of the particular country are involved in the financing of pro-export

projects. If a joint venture arises in such a country, it can turn to the bank for a financial assistance. The following overview shows the most known ones of them:

European Bank for Reconstruction and Development – EBRD was founded in 1991, having it registered office in London, has 61 member countries, supports privatization projects and strengthens financial institutions and legal system, infrastructure development, corporate management projects and environmental projects, operates in the region of Central and Eastern Europe (EBRD, 2019).

Council for Europe Development Bank, CEB has been operating since 1999, having its registered office in Paris, has 41 members and provides financial aid for the development of social programs related to refugees, immigrants, victims of natural or ecological disasters, creating jobs, the development of social housing, environmental protection, education support, health, modernization of agriculture, cultural sights protection. It operates throughout the European continent (CEB, 2019).

International Investment Bank (Международный инвестиционный банк, IIB) was founded already in 1970 to help the economics of the member states of the Council of Mutual Economic Assistance – the then Soviet Union, Czechoslovakia, Hungary, Bulgaria, Rumania, Cuba, Mongolia and Vietnam. MIB has it seat in Moscow, a controlling share of 55% in the bank is owned by Russia, the Czech Republic having over 12 %, is the third largest shareholder of MIB. The Bank's main activity includes providing commercially oriented medium-term and long-term credits for the implementation of joint investment projects in the member countries. MIB supports small and medium-size enterprises through credit lines through partner institutions or the participation in syndicated credits. Since 2015, it has been providing Trade Finance services, whose most frequent users are Czech export companies. ČSOB is the main partner on behalf of the Czech Republic in this area (IIB, 2019).

Nordic Investment Bank (NIB) was founded in 1975 by Denmark, Finland, Island, Norway and Sweden. In 2005, the NIB was extended by Estonia, Lithuania and Latvia. The bank resides in Helsinki and supports the Nordic economics by financing long-term projects in the private and public sector, both on their own territories and in developing countries. The Czech Republic concluded a framework contract with NIB in 1997, but it does not have any capital share or personnel representation in it. Nevertheless, the Czech companies can get financial and advisory support for their projects from the NIB (NIB, 2019).

International Bank of Economic Cooperation (Международный банк экономического сотрудничества, IBEC) was founded by the member states of CMEA in 1963 for the purpose of multilateral cleaning of mutual supplies of goods and services. The current owners of the bank include Russian Federation (52 %), the Czech Republic (13 %), the Slovak Republic, Bulgaria, Rumania, Cuba, Mongolia, Vietnam and Poland. The seat is in Moscow. Since 2015, IBEC has been a clearing centre for foreign trade among the member states' entities or in a freely convertible currency. Lately, it has been also focusing on the Far East area and has been promoting "green energy" (IBEC, 2019).

Inter-American Development Bank (IADB) was founded in 1959 in order to support the economic and social development of Latin America and the Caribbean, to build modern institutions, to decrease the poverty rate, to develop the private sector, to increase the mutual trade, investments and mutual integration. The Bank has 47 members, resides in Washington and supports SMEs through the Inter-America Investment Corporation and through Multilateral Investment Fund invests into the private sector and grants (IADB, 2018).

Asian Development Bank (ADB) was founded in 1966; it has 67 members today and resides in Manila, having its branches in Frankfurt, Tokyo and Washington. ADB provides governments as well as private entities in developing member countries with credits, investments, technical assistance, grants and guarantees, especially in the field of agriculture, natural resources,

education, finances, health and social care, transport and communications. The most supported countries include China, Indonesia, Pakistan, Vietnam and Bangladesh (ADB, 2019).

Islamic Development Bank (IDB) has been existing since 1975, it has 56 members consisting of the states confessing Islamic religion, its mission is to support the economic and social development of its members and Muslim communities in non-members states. The seat is in Jeddah, Saudi Arabia and direct capital inputs into investment projects are the main instrument (IDB, 2019).

African Development Bank (AFDB) was established in 1964, the goal of its activity is to accelerate the economic development and integration process of the African countries into the global economy. It has 78 members and is made up of three institutions: The African Development Bank (ADB), The African Development Fund (ADF) and The Nigeria Trust Fund (NTF). It provides credits, technical assistance and assistance when designing projects in the area of social projects, interferes with the development of education and health care, improvement of infrastructure and providing access to safe water (AFDB, 2019).

The last source of joint venture funding from abroad may be involvement into international *projects of United Nations Specialised Agencies*, falling under the United Nations Economic and Social Council. These entities organize and finance development projects in different countries throughout the world, providing audit, credit and information services. These include, in particular, United Nations Development Program, having seat in New York, UNIDO – United Nations Industrial Development Organization, having its seat in Vienna, and UNEP – United Nations Environmental Program, having its seat in Nairobi.

Summing up, the level of involvement of particular investors in a JV - investment funds, insurance companies, venture capital funds, private individuals, or international banks – shall depend on the aims, risk assessment and long-term sustainability of a particular JV project. The frequency and extent of financing from local sources compared to foreign ones is rather individual, and cannot be easily transfered neither among particular cases, not among different countries.

2.4 The Czech perspective of a joint venture business form

The Czech Republic has become an attractive destination for foreign investors seeking manufacturing and assembly operations. They either bring a green field investment or acquire existing Czech firms while bringing innovative technologies and capital resources to them.

The joint venture form of running business has no specific legislation in the Czech Republic, however the commercial code (New Civil Code) allows setting up of various joint venture schemes and structures such, e.g. contractual joint ventures and equity joint ventures. In such a partnership agreement the rights and obligations are been determined, while the shareholders' agreement defines corporate governance and rules of managing the particular joint venture company. In many cases, domestic and foreign partners conclude a licensing agreement on technology (patents, trademarks) and an agreement determining payments of royalties. They form a new company or acquire shares of an existing company. It is recommended to establish a new joint venture in a form of a corporation, in accordance with local legislation - Act No. 89/2012 Coll. (New Civil Code) and Act No. 90/2012 Coll. (Low on Business Corporations). Corporate joint venture set up in the Czech Republic typically takes the form of limited liability company (společnost s ručením omezeným) and joint stock company (akciová společnost). Before a corporate joint venture is founded, the articles of association (stanovy), shareholders' agreement (společenská smlouva), and/or foundation deed (zakladatelská listina) have to be concluded. After all the company has to be recorded into the Czech Commercial Register. Both corporate and contractual joint ventures can be

subject to untitrust approval that must be obtained in proceedings before the Anti-trust Office (Úřad pro ochranu hospodářské soutěže) according to Act No. 143/2001 Coll., on the Protection of Competition. In a newly established joint venture, the net turnover achieved by at least one of the partner companies establishing the JV should not exceed CZK1.5 billion, otherwise it will become subject to proceedings before the Anti-trust Office as an agreement distorting competition. Unlike a corporate joint venture, a contractual one is not subject to any prior concentration approval by the Anti-trust Office because it is not connected with any merger or acquisition. However, it might be investigated by the Office for the Protection of Competition (Úřad pro ochranu hospodářské soutěže) if necessary.

Joint venture businss form can generally be used in every field of the Czech economy. It is recommended, however, to examine the conditions for doing business according to specific industries, as banking, energy industry or pharmaceutical industry.

The participations (contributions) into the share capital of a corporate joint venture in the Czech Republic can be monetary or non-monetary. There are no limits applicable to monetary contributions, but with non-monetary they can only consist of assets that have an ascertainable economic value and that can be used in line of the JV registered business activities. They might have a form of movable property, real estates, specific know-how, corporate shares, financial interests in other companies, and royalty from intellectual property rights. The amount for one contribution into a corporate joint venture formed as a limited liability company, must be at least 1 CZK. The minimum value of a share in a joint stock company is not limited by law. The value of the share capital registered in the Commercial Register must always be expressed in the local Czech currency.

There are no limits on the duration of a corporate or a contractual joint venture in the Czech Republic. The Czech law neither sets maximum number of members in a joint venture, minimum is at least two.

It has been popular in recent years to create a joint venture together with a public sector body, so called public private partnerships (PPP). It has been formed typically for the purpose of providing public services or the construction of a facility for public use or infrastructure development. The example can be .A.S.A. Liberec s.r.o. that was established as a joint venture of .A.S.A. International Holding GmbH and the City of Liberec, and provides complex waste management services not only for the city of Liberec but also for a further 14 towns and municipalities within its surrounding region. The applicable law for PPP projects are the Act No. 134/2016 Coll., on Public Procurement, the Act No. 13/1997 Coll. on Ground Communications, and the Act No. 128/2000 Coll. on Municipalities. The conditions for each PPP are specified in the respective tenders, publictly announced (Businessinfo, 2004).

Beside the PPP projects, there is a possibility to receive a certain economic or financial incentives from the Czech government. In spite of the fact that these incentives are not specifically ascribed for the joint venture business form, a new company can get access to general foreign direct investment packages set under the Act No. 72/2000 Coll., on Investment Incentives. They include tax allowance for the period of ten years, the transfer of a technically equipped area (industrial zone) at a preferential price, financial support for the creation of new jobs (up to CZK200,000 per one employee), financial support for the training and re-training of personnel (up to 35% of training costs), and financial support for acquiring long-term tangible and intangible assets. These incentives have been primarily provided in the areas of mining, production and distribution of water, electricity and heat, construction industry, repair of motor vehicles, trade, transportation, and farming. The joint venture must invest at least 100 million CZK, from which at least 50 million CZK from his own capital. For example, the larges receivers of investment incentives over last two decades were: Volkswagen, Hyundai and TPCA (automotive), ABB (electronic components), Caterpillar Solar Turbines (machinery), Siemens (engineering), DHL (IT data centre, strategic services), Red Hat (IT software

development), IBM (IT strategic services), Honeywell (aerospace, strategic services), Denso (automotive), Panasonic (electronic), and many others.

CONCLUSION

The joint venture business form allows companies establishing effective links based on creation an independent enterprise with its legal personality. They usually occur in the production area, trade, communication, and finance. The major contribution of this article consists in making a comprehensive overview on establishing and financing joint ventures in international markets, and pointing out how this form can be successful on the territory of the Czech Republic. Major advantage of the joint venture based on the principle of sharing ownership interests is the possibility to decrease production costs, gain access to the existing supplier-customer networks in the target country, contacts to the media, and dealing with the local government. These joint ventures are often granted by different tax and investment incentives as they contribute to domestic employment and technology transfer. Joint ventures operating under management contract, on the other way, enjoy the advantage of knowing the local conditions, ability to gain contacts in both the commercial and public sectors, and exploiting local legislation and managerial skills. The analysis of forms of financing the joint ventures showed that both, financing from local resources and financing from abroad has been acceptable. While local resources provide more security and direct involvement, the former allows companies uprising the amount of capital and disperse the risks. The article provides the reader with numerous names of banks and institutions acting as current or potential investors. In the last part, a comprehensive overview on establishing and financing joint ventures in the Czech Republic has been performed. The conclusion is that the country offers very favourable conditions for this business form, as politically, legally, financially as well as culturally. The visible result is that the Czech Republic is a sought-after marketplace for companies all over the world.

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Causes of the Butter Crisis in Europe – The Perspective of Poland

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Abstract: This article presents the problem of butter prices increase in 2016-2018.According to the data of the Polish Agricultural Market Agency, the price of butter in Poland increased by nearly 69%, in Germany by 80.6%, and in the Netherlands by 88%.Therefore, one can ask: What is the reason for fluctuations in butter prices in the world and in a given country? What are the effects? This article presents the causes and manifestations of the crisis related to butter prices and shows answers to some problems. The aim of the article is to determine the main reasons for the increase in butter prices on retail markets in Europe. Growing demand for butter in countries such as the US and China is analysed, and production restrictions in New Zealand and Australia, caused, inter alia, by bad weather conditions. Speculative factors are also considered. The conducted analysis shows that increase in butter prices is due to butter demand in the US and China, as well as to weather fluctuations in New Zealand, the largest butter exporter in the world.

Keywords: agriculture, butter production, prices, agricultural policy

JEL Classification codes: F20, F40, Q17

INTRODUCTION

Butter was already known by the Sumerians, who in 3500 BC used it for sacred purposes, to anoint the body, and also as sacred food. In Ancient India, butter was similarly used both for culinary and ritual purposes (Short story of butter, 2012). Till today in many countries, including European ones, butter is one of the basic food products (Fig. 1). In 2016, the average Pole consumed 4.5 kg of butter, more than the average EU citizen (3.8 kg). France remains the biggest consumer of butter, with the average consumption of 8 kg a year per citizen.

Despite a wide selection of cheaper fat products (margarines, vegetable and animal fat mixes) and numerous scientific research suggesting negative impact of saturated animal fats on human health (in particular, they lead to hypercholesterolemia, atherosclerosis and other metabolic and cardiovascular diseases), the number of people preferring butter seems to be growing over time. In Poland, in the years 2012-2017 the consumption of butter per capita increased by 15% (compared with 6% for the entire EU, or 36% for New Zealand).

Since 2016, on numerous markets the change in the price of butter can be observed, which in the period 2016-2017 increased in different countries from 70 to 100% (Increases in butter

prices, 2017). The aim of the following article is to determine the main reasons for the price increase of this product in Europe in 2016-2018.

Fig. 1 Consumption of butter per capita in selected European countries in 2016 (in kg)
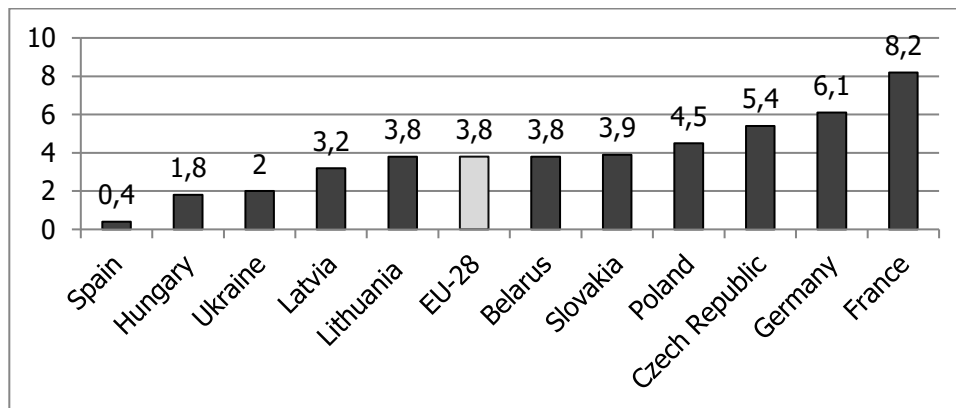
Source: Butter consumption per capita by country

1 LITERATURE REVIEW

Problems regarding the price of butter seem to be cyclical, that is evidenced by publications from, for example, the 1970s (The butter mountain that vanished, 1972; Baert, 1979). At that time New Zealand, the largest producer of butter, New Zealand, has raised its price by about 60 per cent. For many consumers, this price was unacceptable which deepened the market perturbations (Wickström, 1973). In the period of price increase a promotion and quality of products become more important, as the Greek market, for example, illustrates (Oustapassidis, 1998). The situation on a given market is a result of many factors, as claimed by Bakucs, Fertő, and Szabó (2013). It depends, for instance, on the size of farms, on opportunistic behavior of farmers and on connections in distribution channels, as well as on consumer habits. Despite various opinions, milk and butter in many countries are, however, the basic foodstuff. Nevertheless it is noteworthy, that consumers buy dairy products because it is not expensive and it is possible to buy it in the supermarket, so the price and product availability are the main determinants of purchasing (Lanfranchi, et al., 2017).

2 METHODOLOGY

In Poland, the wholesale price of block butter reached its maximum in September 2017 – EUR 5.4 (PLN 22) per kilogram, which is 72% more than the year before. The purpose of this article is to determine the main reasons for the price increase. For this purpose, the statistical data available in the CLAL database – Italian Dairy Economic Consulting Company, data and industry publications from various markets, as well as publications of the European Commission, Eurostat and the Central Statistical Office were analyzed. The analysis of secondary data and comparative analysis method were used in the study.

3 RESULTS AND DISCUSSION

3.1 Butter characteristics and production

Milk, the basic raw material in the production of butter, in many cultures is the basis of nutrition, in particular of children. It contains protein, lipids, unsaturated fatty acids, lactic acid, calcium and vitamins, which are all ingredients necessary for the functioning of the human body. Thus, the consumption of milk and butter is an important supplement to the daily diet (Mleko, n.d.).

One liter of cow's milk contains an average of 4 % fat. This amount can be used for the production of 3.2% drinking milk, however, little fat will be left and the producer will actually earn only on the sale of milk. Therefore, it is more profitable to collect all the fat and sell butter, cream, and skimmed milk or milk powder. Consequently, the dairy industry relies on the processing of milk for other, more profitable products.

One of the milk-derived products is butter, which is made of cream obtained from the centrifuged milk. The cream has 30-35% fat and needs to be cooled at first so that it crystallizes and solidifies. Next, the cream is mixed and as a result the butter is separated from the buttermilk. The final step is kneading the butter to remove water and get the right percentage of fat in the product (above 80%). At this stage, salt can also be added (How butter is made?, n.d.). The basic products made from milk are shown in Figure 2.

Dairy products made in Europe are sold all over the world, mainly in the US and China. In 2017, China was also one of the world's largest importers of dairy products, in particular butter (92 thousand tons) and milk powder (717 thousand tons). In recent years, the export of dairy from the EU in China increased by over 174%.

Fig. 2 Basic products made with the use of processed milk
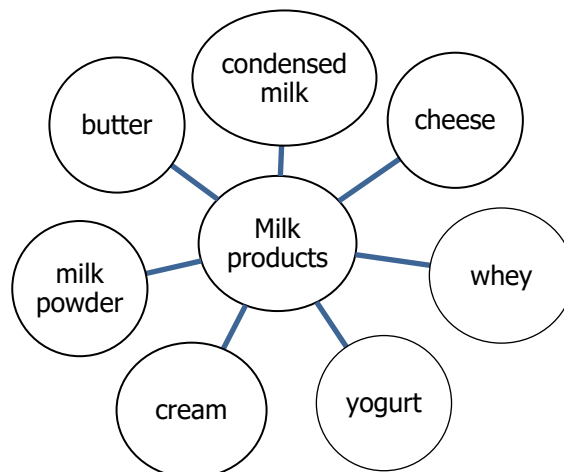
Source: own study

Chinese dairy import kept growing fast in the first part of 2018:+15.3% in quantity and +24.2% in value y-o-y. Import is over 758,000 tons of milk and derivatives, for a total value of 2.58 billion dollars (China increases its imports, 2018). New Zealand is still a privileged partner of China, especially for whole milk powder, whose export increased by 12% in the first quarter of 2018, y-o-y. New Zealand accounts for 96% of whole milk powder export to China,

leaving the remainder to Australia, France, the US, and the Netherlands. China is also one of the largest importers of Polish dairy products from outside the EU, and the main export product is whey (How butter is made?, n.d.). The most butter in Europe is produced in Germany – approximately 500,000 tons per year. Then in France, Ireland, and Poland (Fig. 3).

One of the large producers of milk and milk products, next to the US and the EU, is New Zealand. Although the EU – or even Germany alone, or the US – produces more milk, it is New Zealand that is the biggest exporter, as shown in Figure 4. It is worth noting that China (producing 35 450 000 tonnes of milk annually, compared to 21 460 000 tonnes produced in New Zealand), produces and exports butter in trace amounts (Produzioni burro, n.d.).

Fig. 3 The largest butter producers in Europe (in tonnes)
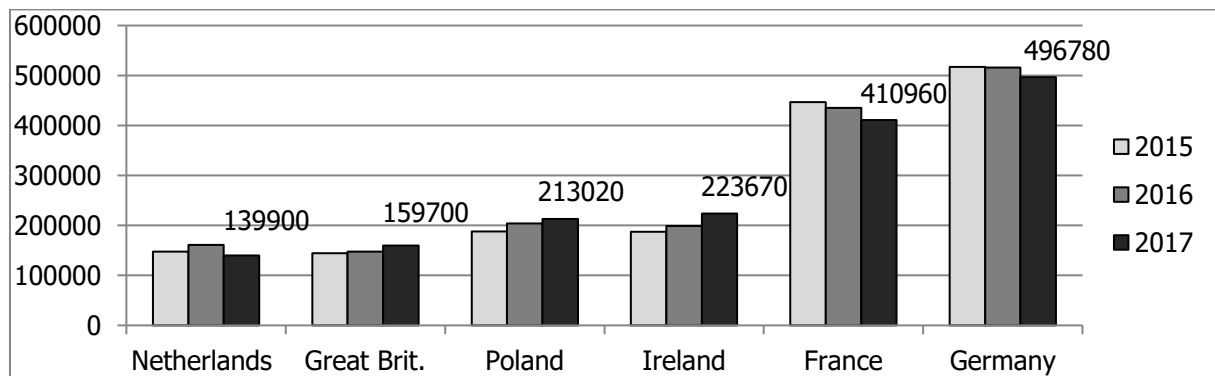
Source: Produzioni burro

Fig. 4 Production and export of butter in the UE, USA, and New Zealand in 2017 (in thousands of tonnes)
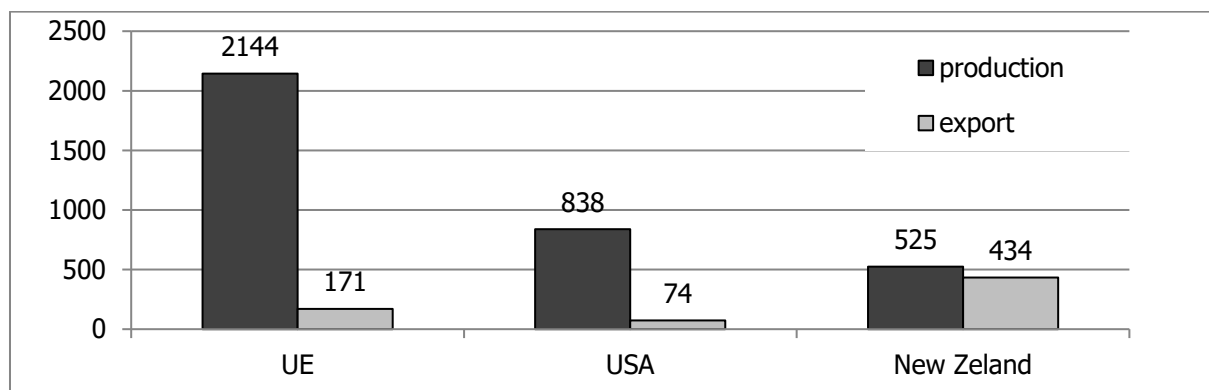
Source: Produzioni burro

As data in Figure 4 show, the EU and USA produce much more butter than New Zealand, but it is consumed on internal markets. On the other hand, New Zealand exports 83% (434,000 tonnes) of the butter it produces. Therefore, this country's production influences the demand on international markets to a much larger degree than production in other countries. However, it should be noted that production volume in this region is largely dependent on seasonality and weather conditions. The peak of the season is September – October and it is during this period that the price growth of butter on international markets is forecast. The production of milk and butter in New Zealand in the years 2014-2018 is presented in Figure 5.

Fig. 5 Production of milk and butter in New Zealand (in thousands of tonnes)
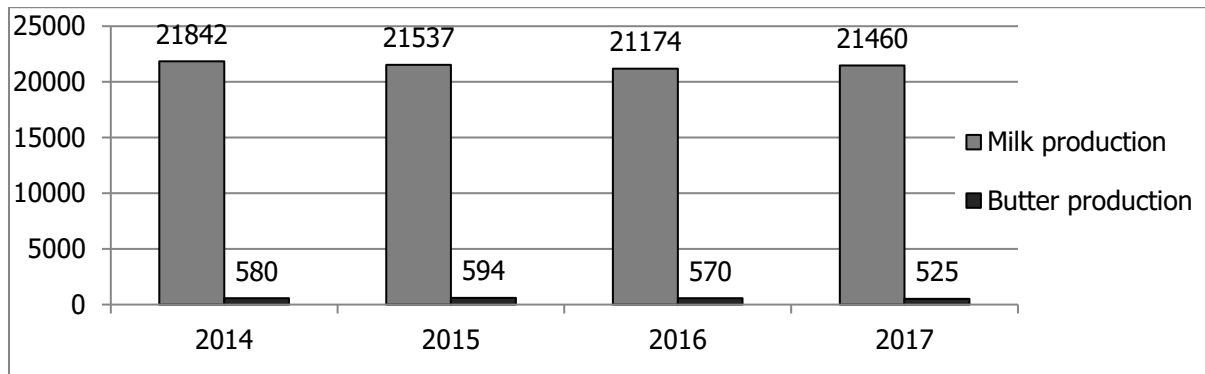
Source: Produzioni burro

An increase in demand on some markets and decrease in production in others can result in a crisis. In the case of general economic crises, the first symptoms are visible on the stock exchanges, where declines in indexes predict the upcoming bear market. A similar situation occurs on the industry markets, when the crisis does not impact the whole economy, but only a part of it; changes in indexes are then observed on wholesale markets. The common feature of both crises is how they cause the downfall of those companies which had not been sufficiently prepared for a change, which finds its reflection in the level of prices and also on the job market. Such a situation could be observed in the years 2016-2018 on the international market of dairy products, and especially on the butter market (Figure 6).

Crisis, understood as a difficult situation threatening the functioning of a given economic sphere, may occur for various reasons. These can be internal reasons, such as an industry's failure to adjust to the changes in the market structure or the expectations of consumers. There can also be external reasons, such as the weather or speculative activity, which is discussed in further parts of the article.

Fig. 6 The dynamics of butter prices on selected markets in the years 2013 - 2018
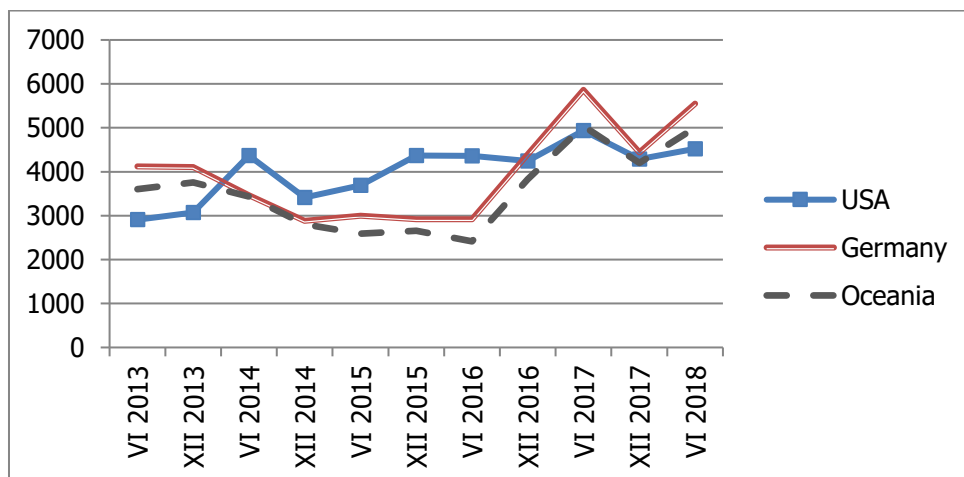
Source: Produzioni burro

3.2 Fluctuations in butter prices – analysis

According to the research of the Polish Institute of Agricultural and Food Economics, the price of butter cubes (200 g) in the period from May 2016 to November 2017 increased by approximately 72%. At the end of 2016, we could buy it for about PLN 4.70, and a year later we paid about PLN 7 for the same product (Promotion of Polish dairy products, 2018). Since October 2016, a continuous increase in butter prices has also been recorded in other EU states. In April 2017, the average price of butter was EUR 4.27/kg – 66.3% more than in the previous year. According to data from April 2017, in Germany for 200 g of butter one had to pay EUR 0.89, similarly in the Netherlands: EUR 0.9. In comparison with the data from May 2016 in Germany, the price of butter increased by 80.6%, and in the Netherlands by 88%. In Polish stores at the beginning of this year (2019), a cube of butter is still expensive: in Tesco we will pay EUR 1.64 (PLN 6.99) for 200 g, in Carrefour: EUR 1.99 (PLN 8.49), in Netto the price is EUR 1 with a discount (PLN 4.29) – on average the price of butter is EUR 1.54 (PLN 6.59). It is worth adding that in May 2016, a cube of butter was EUR 0.71 (PLN 3.03; calculated according to the NBP rate from 01/02/2019: 1 PLN = 0,234 EUR). The dynamics of wholesale prices for a cube of butter in Poland is presented in Figure 7.

Price fluctuations on national or regional markets are a reflection of global prices. Therefore, what was happening with the prices in Poland and other European countries results from the behaviors of consumers and sellers on international markets.

Fig. 7 The dynamics of wholesale butter prices in Poland in the years 2015-2018 (EURO/200 g)
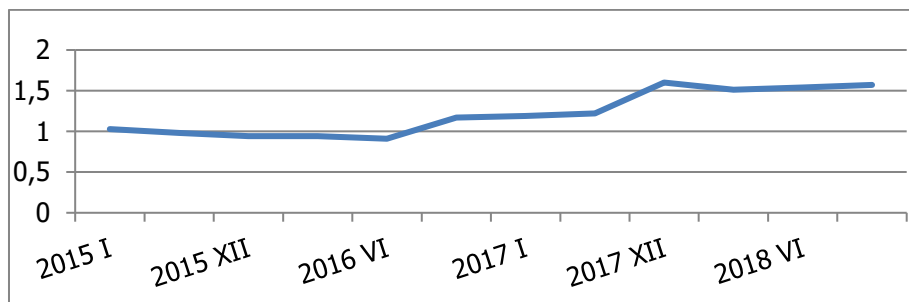
Source: Butter consumption per capita by country, Poland

Not all countries reacted in the same way to the changes on international markets. As Figure 8 shows, countries such as Portugal, Greece, or Spain, where the main cooking fat is olive oil, maintained a relative stability of butter prices. Moreover, it can be noticed that small countries, such as Latvia, which are largely dependent on export, reacted with higher price increases than large countries. Thus, the uncertainty of the market and the fear of insufficient supply were more significant here.

The production of butter is inextricably linked to the production of skimmed milk and milk powder. Therefore, as far as profitability of production is concerned, it is not only the price of butter that is important, but also the price of milk powder, which is produced from the raw material remaining after the removal of fat. If the prices of milk powder continue to fall and the producers limit its production, it will impact the supply of butter. The best example of such a situation was 2017, when, despite quite high sale prices of butter, its production was 5.5% lower than in the corresponding period of the previous year, because it was more profitable for producers to produce cheese than butter and powdered milk. It is presented in Figure 9, which shows the changes of prices of butter and milk powder.

Fig. 8 The dynamics of butter prices in selected countries (previous year = 100)
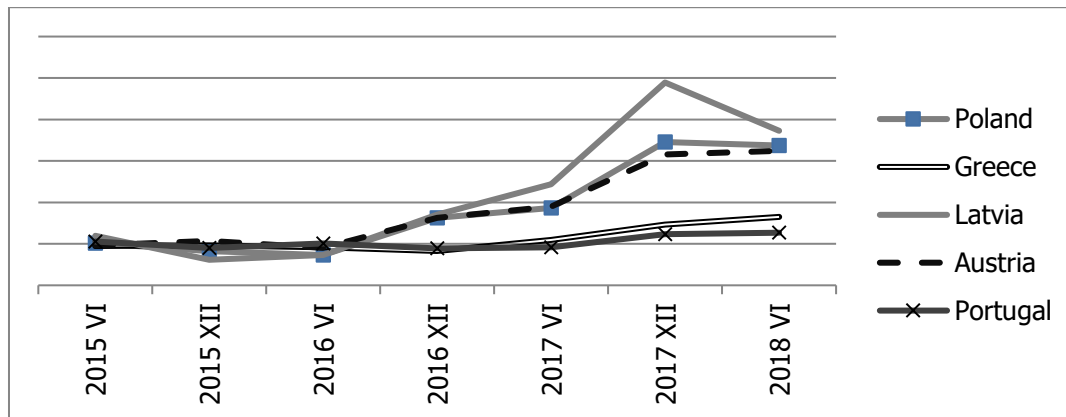
Source: https://www.clal.it/en/index.php?section=quadro_europa&country=PL

As Figure 9 shows, until 2016, the price of milk powder and the price of butter would change in parallel, i.e. the fall in the price of milk powder corresponded to a proportional drop in the price of butter, and vice versa.

Fig. 9 World prices of milk powder and butter (EUR/per tonne)
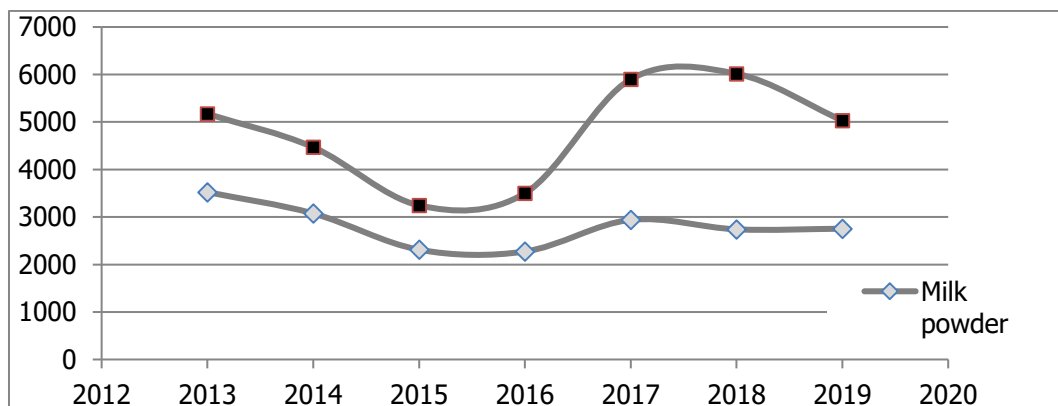
Source: Produzioni burro

The statistical calculation of dependencies indicates that there is a positive correlation here, and the correlation coefficient is 0.596 (significant, moderate relation). However, something disturbed this relation in 2016, as the prices of milk powder went slightly up and then down, while the prices of butter suddenly increased a lot. The following part of the article will be devoted to the analysis of the causes of this phenomenon.

3.3 Determinants of price changes – discussion

The EU policy

In 1984, as part of the Common Agricultural Policy, the European Union introduced a system for limiting the production of milk and derived products among member countries, called the milk quota system. The premise of the program was to protect the EU market from oversupply, thanks to which the prices of dairy products would be protected against excessive drops (Grant, 1995). The quotas, negotiated annually for the period April-March by each member

state, were enforced by imposing penalties on producers for exceeding the assigned quotas. On the other hand, within the quotas they could count on purchase of milk and its derivatives at guaranteed prices (however, dependent on factors unrelated to the system, such as global dairy prices, changes in foreign exchange rates, or specific quality and/or supply requirements for specific dairy products). And although various variables influence the supply of milk, the level of milk and dairy products production in the European Union was usually almost equal to the assigned quotas. There were also opinions that price interventionism and interfering with production efficiency under the Common Agricultural Policy weakened the EU's position on the global market of milk and milk products, making the European dairy unattractive for emerging markets, especially when compared to the offer of South American markets. From 1 April 2015, it was decided to abolish the milk quotas in the European Union, which resulted in an increase in its supply on the market. This issue is addressed in Figure 10.

Fig. 10 Milk production in the EU (in thousands of tonnes)
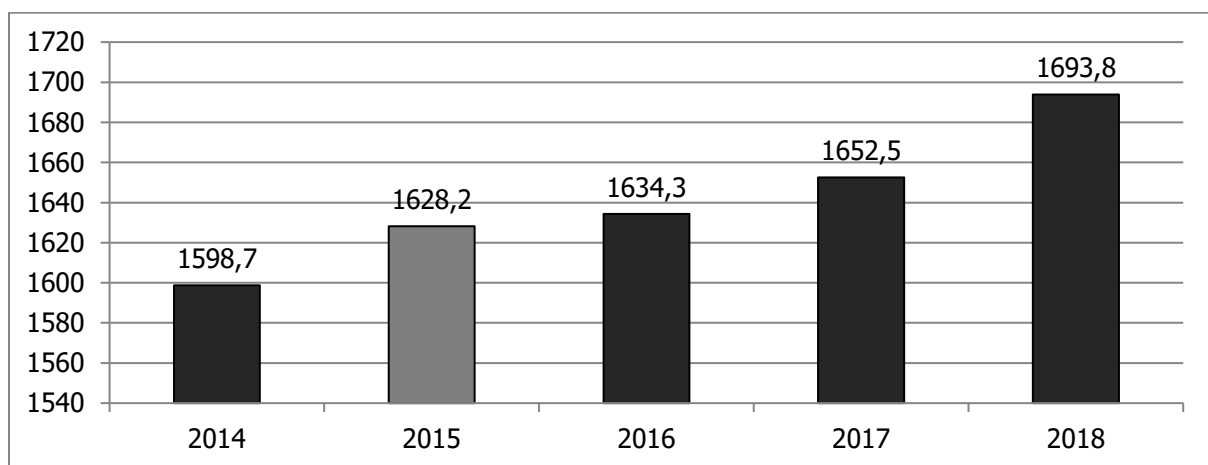
Source: Produzioni burro

It can be noticed that the production of milk in the EU also increased before 2015, but entrepreneurs processed milk into milk powder and butter, and European countries used the method of intervention buying. And although in 2015 the milk quotas were abolished, the opponents of those changes feared a rapid surge in production and a sudden drop of milk product prices. In response to these fears, EC Regulation 2016/1613 of 8 September 2016 introduced the so-called Hogan's package, also known as the milk package, aimed at providing "adjustment aid" (in the total amount of EUR 350 million) for dairy farmers as well as goat, pig, and sheep breeders. Already at that time, the market imbalance between milk supply and demand was noticeable – however, the issue back then was the production surplus over the outlets for dairy products.

Problems with the sale of milk and its products are the reason for introducing intervention buying. Nonetheless, precisely because of the intervention buying of skimmed milk powder in the years 2015-2017, EU warehouses store record amounts of this product. According to the European Commission, at the end of October 382.2 thousand tonnes of milk powder were subject to storage. In Poland, there were 38 thousand tonnes stored in intervention warehouses (Rynek mleka, 2018). The EU butter stocks, under the mechanism of subsidies for private storage amounted to only 66 tonnes at the end of 2017. This means that despite the abolition of milk quotas in 2015, the EU member states still provided help for milk producers by buying and storing milk powder. As part of intervention buying, the producers sold powder milk at the prices established by the state, while butter prices could be shaped by the market.

In this way, the producers were supplying more butter to the market, but despite the increased demand its price did not drop. This might result from the fact that in the discussed period the EU countries began to export more milk, especially to the US and China (Figure 11), which will be discussed in the next section. It is worth adding that in January 2018, the EU Council decided to stop purchasing skimmed milk powder, so the difficulties in selling milk powder will automatically impact the volume of butter production.

It might seem that an increase in milk production will cause a drop in the prices of butter and other products, but the surplus of milk powder influenced its low prices and the unprofitability of butter production. And – as has already been mentioned – the limitations of milk powder production automatically mean restrictions on butter production. Therefore, one of the main reasons for the increase in butter prices in Europe is the abolition of the milk quota system and intervention buying of milk powder (Zuławinski, 2018).

Fig. 11 Selected variables characterizing the situation on the milk and butter market in the years 2015-2018

Source: https://news.clal.it/en/chinas-butter-import-double-volume-triple-value/

http://maxumfoods.com/china-increases-its-imports-of-butter-and-milk-powders-cheese-slowed-down/
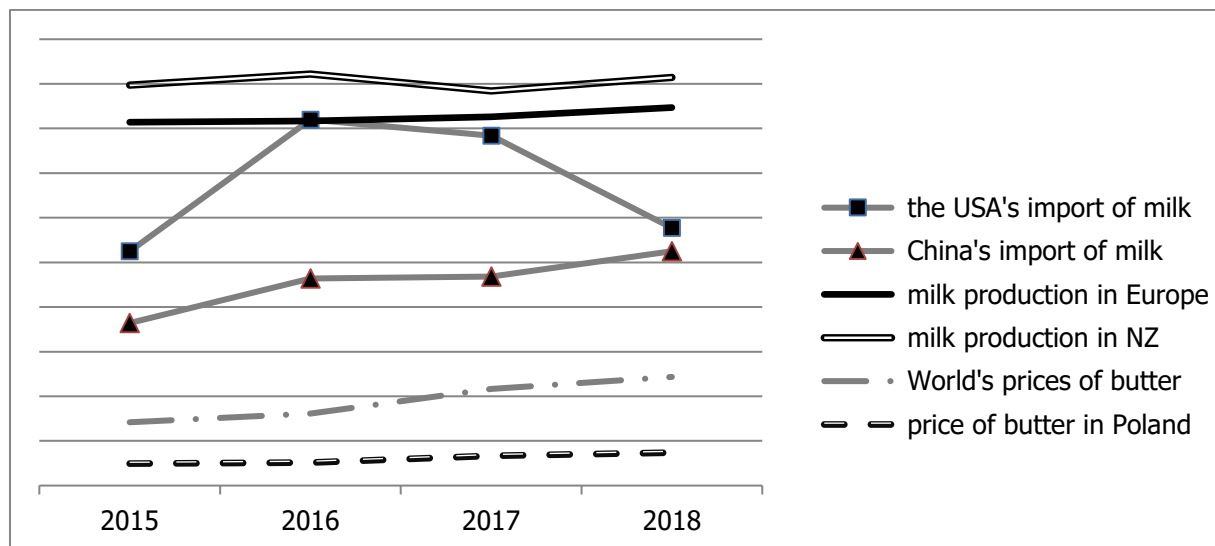
https://ec.europa.eu/agriculture/market-observatory/milk/latest-updates_en

https://usda.library.cornell.edu/concern/publications/fn106x926?locale=en#release-items

A change in the consumers' lifestyle

The export of butter from the EU to the US in the period 2015/2016 rose by nearly 50%. This is mainly connected with the increasing awareness of the American society, who begins to appreciate natural and full-value products, with butter undeniably being one of them. New trends of healthy lifestyles and warnings against factors that cause a number of diseases have contributed to this. One of these factors are, among others, are trans fats, which are largely found in margarine – a substitute for the natural and healthy butter. The US as one of the most developed countries are struggling with a plague of civilization diseases such as obesity and cardiovascular diseases. Many publications in the American mass media in recent years emphasized the benefits of natural fats, and so the consumers began to expect healthier food. In response to the new trend, in 2015 McDonald's announced that they were introducing real butter into their breakfast products such as muffins, cookies, and bagels, and also into their

grilled foods (Shah, 2015). What is more, in 2016 Pimpin et al. (2016) published in the scientific journal PLoS ONE the results of meta-analysis and systematic review of research and publications on the impact of butter consumption on the risk of cardiovascular diseases, diabetes, and general mortality. The analyzed data of more than 600,000 patients allowed the authors to conclude that butter has a low or neutral effect on diseases traditionally attributed to saturated animal fats. This publication echoed widely, somehow rehabilitating butter and at the same time confirming the arguments of animal fat proponents in the debate against margarine. The American internal market initially was not able to satisfy the increasing demand, so the US began to import milk and butter from Europe. The situation lasted two years, after which time the internal market adjusted and the import of butter significantly decreased.

For years, there has also been an increase in interest in Western products in Asia, especially in China and Japan. In recent years, an increased interest of Asian markets in European dairy products has been especially visible. The United States Department of Agriculture in 2017 predicted a 38% increase in imports of milk and milk products to China, with a global increase in butter consumption of 3%. Adding to this the growing popularity of bakery products (e.g. croissants) in Asia, it is understandable that with the Chinese population being three times the size of the European Union, even a small increase in demand in China may disturb the market balance in Europe (Wang, Parsons, Zhang, 2010). As shown in Fig. 11, in recent years the demand for milk and butter and China has been growing. This is accompanied by a lower production of milk in New Zealand in 2017 (bad weather); in relation to that, in 2017 the export of butter from New Zealand was 470,000 tonnes compared to 554,000 tonnes exported in 2016.Thus despite the US having decreased its import and Europe producing more milk, lower production in New Zealand and high demand in China destabilized the prices of butter.

Russian sanctions

In August 2014, as a response to the Western sanctions imposed as a result of causing war in Ukraine, Russia introduced an embargo on commerce with the EU, USA, Australia, Norway, Ukraine, Albania, Montenegro, Iceland, and Liechtenstein (Russia has updated the list of goods, 2018). The embargo remains in force until the end of 2019 and includes such milk products as milk, whey, cottage cheese, butter, and pastes based on milk products. Expert opinions on the results of the embargo are divided – some believe that producers started selling on other markets and came out unscathed, while others claim that everyone loses on the embargo. It can be illustrated by the fact that if on a given market a perishable product, such as milk, cannot be sold, then the producers switch to cheese production, as cheese is easier to store. And so despite the increased milk production, there is more cheese than butter and milk powder on the market. In addition, milk powder had previously been stored, so the stocks are sufficient to satisfy the demand. Butter, on the other hand, cannot be stored this long, and consequently its stocks are smaller.

Speculative factors

There are rumors in the expert circles that the "butter crisis" has long passed and the prices should stabilize. The largest retail chains in Poland are accused of price fixing, which is typical of cartels. Since 2018, the Office of Competition and Consumer Protection has been conducting proceedings to clarify whether the largest corporations impose too high margins. Their high level allows to significantly lower the prices of butter periodically, attracting customers tempted by the bargain, and are an ideal tool in the hands of retail chains, which achieve higher profits. In February 2019, the prices of butter in Poland are at the level of EUR 1.52 – 1.64 (PLN 6.50 – 7.00), so they are still almost twice as high as compared to 2015 and the beginning of 2016.

Analysts particularly pay attention to a disproportionate increase in butter prices relative to the price increase of other products, such as cheese or powdered milk. Hence the assumption that trade has benefited from periodic price fluctuations on wholesale markets, has increased

retail prices and maintains them at a high level, although the price of butter has dropped on international markets. If we look at butter prices in 2018, it is clear that the average price for the entire year was EUR 5,200/tonne. Even if the retail sphere bought the product for the highest price of EUR 6129 per tonne, the price for 200 g (one cube of butter) could be EUR 1.22 (no margin). Currently the price of butter in stores is as much as EUR 1.63 (PLN 6.99), so calculations show that taking into account the highest purchase prices in the wholesale sector, the retail sphere imposes a margin of 33%.

It should be added that this concerns international markets. Poland, on the other hand, is a large producer of butter, and retailers can buy it on the national market, where the costs of transportation and additional costs such as storage or insurance are lower. Thus, retailers are buying the product cheaper, and yet the prices of butter do not go down. This means that retail chain stores artificially maintain high prices, probably because in Poland a large part of consumers consider butter part of the daily diet, and buys it at any price (Yoon, Kijewski, 1997).

CONCLUSION

The purpose of this study was to determine the main reasons for the increase in the prices of butter on European markets, particularly in Poland. This was achieved through analyzing data concerning the supply and demand of milk and butter, and also through searching for dependencies between other variables, such as intervention buying of milk powder.

The conducted analyzes show that the increase in butter prices is caused by:

- the EU states' interventionism on the milk market (purchasing milk powder at predetermined prices, which limited the profits, hence the increasing prices of butter);
- weather fluctuations in New Zealand, influencing the volume of butter export;
- increased demand for butter in the US and China.

The difficulties with the export of milk and its products to Russia, as well as probable price collusion between large retailers maintaining high prices in Poland may also be of some importance. The problem is extremely complex and more indirect causes could probably be pointed (as, for example, speculative activities). An interesting issue is whether governments can prevent such crises - it seems that due to the open market and many conflicting interests, they cannot. Although, it seems to be important to know and understand the factors influencing butter prices in order to be able to predict the scenarios of future development.

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Analysis of Swedish Socio-Economic Model in the Context of International Development

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Abstract: Decision making and buying behavior of consumers are affected by perception as well as socio-economic, cultural, geopolitical aspects. Consumer behavior is often seen as dynamic interaction of humans in a specific environment. It contains emotions, knowledge and actions through which people carry out the exchange in order to meet their needs. Moreover, it involves thinking, feeling and actions of people that execute in the context of the consumption process. The aim of the article is to establish a complex ground of knowledge based on the analysis of the socioeconomic development of Sweden. Part of the aim of the article is to asses certain risks of the current development of the swedish socioeconomic model in the context of international development and to propose precautionary actions in order to decrease them.

INTRODUCTION

Each consumer has their own distinct and specific features which are transformed into behavior and decision-making, thus directly linked to the consumption of tangible and intangible goods, that is to say, useful objects of the outside world, based on resource constraints. Consumer buying behavior is a sum of conscious, unconscious and emotional factors determined by consumer decision-making (Schiffman, 2014). This complex course consists of a pre-purchasing, purchasing and sub-purchasing level. Consumer behavior itself involves human activities linked to the search, comparison, acquisition, use and storage of consumer products (Kotler, 2017). It is a number of processes that involve not only the individual consumption of products and services, the actual purchasing process and the use, but from a contextual point of view, they also include the end of product use and storage for future use (Koudelka, 2010). Consumer behavior reflects customer preferences, impacts and decisions, partially conditioned by genetics, environment, and social interactions throughout life. Understanding the decision-making of consumers is of the utmost importance in the context of a proper understanding of customer needs on a long-term base.

1 LITERATURE REVIEW

In practice, there are several models or approaches to understanding the essence of consumer behavior, which have become widespread in the sixties of the twentieth century in the form of new concepts drawn mainly from the social sciences. The first group consists of rational models that approach consumers as rational operators, making their decisions as a result of calculating direct economic benefits of their potential decisions. In a rational way, consumers have all the necessary information necessary for their decisions with the ultimate solution

being the choice of the best possible alternative. It is based on the assumption of non-concern with psychological and other negative sociological influences, where the choice is based on a perfect understanding of choice, borderline benefits, and income and budget constraints (individuals, households). Logically, however, it is necessary to oppose and note the fact of reality associated with homo economicus, because perfect information does not exist. From the perspective of economics, it is necessary to look for a meaningful boundary between the terms optimality and rationality, while homo economicus represents a rationality not influenced by external influences. Maximization of satisfaction as an impulse contrast seems more realistic (Riegel, 2003).

The second approach is psychological (behavioral and psychoanalytic) models that approach consumer behavior as a series of conditional processes, in the form of internal and often unconscious motives of decision making. Behavioral models rely on continuous learning, different attitudes and types of consumers, analyzing consumer behavior and responses to impulses associated with internal conviction and responsiveness, including marketing and advertising. The psychoanalytic approach focuses on interpreting the depth of internal motivation and consumer behavior patterns in the form of internal stimuli that lead to a particular behavior. The third group consists of sociological models that focus on the belonging of consumers based on social groups, their status and perception by other members of the group. On the basis of these aspects, they are then trying to explain their behavior, as it is assumed that the social environment and its unwritten rules affects consumers. The primary group is the family and the environment in which the individuals are brought up, as the basic habits and integrity are transferred from the perspective of behavioral patterns.

Behavioral patterns are one of the most important factors that affect individuals and transfer them to their surroundings. Similarly, we can also speak in the context of reference groups whose members an individual may not be, but they are identified on the positive basis and would like to become a member. Aspiration therefore means adapting and transforming current behavior based on a reference group. From the point of view of the social class to which the individual belongs, the issue of the tangible and intangible means manipulated by the individual comes to the fore.

The last approach is a two-factor model of a stimulus-response that differs from the above-mentioned models in terms of consumer behavior, as it does not look exclusively from one point of view - but it represents a complex connection of the response scale in a framework form. In its essence, the reactions to the external stimuli of the environment as well as the marketing are examined. The second step is the analysis of internal reactions in the context of the consumer black box. The combination of these steps is the model of market behavior of consumers, taking into account the interconnection of predispositions that tend to influence to a large extent behavioral and purchasing decisions, in combination with the situational impacts. In this case, the environment is represented primarily by the social and cultural aspects and by the inner individuality of the consumer (Koudelka, 2010).

Analysis of the current state of research on key aspects of the welfare state issue

Socio-economic models can be defined as original systems of institutions and regulations that display a long lasting efficiency and support in regard of the objective (and the means) that are valued by the majority of the population.

To explore the Swedish socio-economic model, often referred to as the "Swedish social experiment" or "the Swedish social state", we need to draw attention to and characterize the historical development of the social state phenomenon. To begin with, it is necessary to define the concept of welfare state, developmental tendencies and the content of this term. Subsequently, it is necessary to analyze the current position of the concept of welfare state in the reality of today's turbulent global economy. Last but not least, it is important to define and

characterize the specifics of the Swedish concept and to apply the principles of the functioning of the welfare state within the Swedish socio-economic model of functioning and development of the state. In addition to the theoretical classification of social state models, we focus our attention on the content and scope of the welfare state, its sustainability or unsustainability in the current conditions of the globalizing world economy.

In defining the concept of welfare state, it is important to take into account the developmental dynamics of the views, content and function of the welfare state not only as a theoretical concept of governance and management of a particular territorial or national or civic society. It is also important to take into account the real content of this term which reflects the basic sociafunctions and goals of the state's existence in everyday reality. In the literature, we can encounter several forms and labels of the phenomenon of the welfare state. The most common form indicating this phenomenon in Anglo-American tradition is the so-called "Welfare state". Despite some differences in content definition of these two concepts, which can be found in various professional sources, the majority of the authors recognize these terms as same.

Initial application of the partial features of the "welfare state" in the framework of state administration, according to some sources, can already be linked to the 11th century since: "The first roots of what is now called the social state began to appear in the 11th century in China during the Song Dynasty. At that time, Prime Minister Wang Anshi was convinced that the state was responsible for providing decent living conditions for its citizens. His reforms were named xin fa meaning "new laws" (Bláha, 2008).

"The European roots of the welfare state can be traced back to a Christian charity whose function has been gradually taken over by the state and the state has subsequently created a comprehensive and universal instrument of social assistance from the original random and local assistance of the poor." This process has been going on for hundreds of years and its modern form began to emerge in the 19th century (Bláha, 2008).

In general, Germany is considered to be the first welfare state in the reign of Chancellor Otto von Bismarck, who began his social reforms in 1871. Later in 1889, in response to the increasing pressure from the socialist movement, the German government introduced a wide-ranging social insurance system (sickness, accident, health and pension insurance) (Bláha, 2008).

Another important moment and at the same time the most extensive stage in the implementation and development of the welfare state was the so-called F. D. Roosevelt's New Deal since "The New Deal as a National Economic Recovery Plan was a summary of the US government's legislative and institutional measures in response to the financial and economic crisis of the 1930s. It was supposed to prevent the poverty of the population, heal the economy, the financial market and, in particular, give young people hope for the future (Heywood, 1994).

H. L. Wilensky characterizes the essence of the welfare state as a government-protected minimum level of income, nutrition, health, housing and education for every citizen. This level is achieved by the redistribution of social income. Other authors add that this is done in order to gain political support and maintain social peace in the country. Unlike Hobbes' initial vision of Leviathan as a state - a guardian who already had an obligation to look after those who "become unwillingly unable to work and feed themselves" (Hobes, 1988), today's welfare state is bound to the conditions of a liberal economy, pluralist democracy and decentralization of state power (Krajčiová, 2007)

According to Briggs, the welfare state is a state in which power is purposely used to change or influence the outcome of market forces at least in three ways: by guaranteeing minimum income, reducing uncertainty and offering social services to citizens (International Labour Conference, 1951).

Potůček (2005) claims: "Social state is a state in which in the laws, leadership and attitudes of people, in the activities of institutions and in practical policy, the idea is enforced that the social conditions in which people live are not things of individuals or families, but also public."

Liberal definition: "The welfare state softens the risks of modern life, implements measures to ensure the security of all citizens, increases equal opportunities, thereby damping class conflict and promoting social justice" (Potůček, 2005).

It is clear from the outlined definitions that the content of the state issue is linked to the problem of defining the underlying objectives and functions of the existence of a particular state. It is, therefore, a state that promotes and ensures an adequate extent of fulfilling its socio-economic function in relation to the needs of its citizens. It achieves these goals in a way that can provide and guarantee citizens the minimum social and economic standards. It also uses support mechanisms to achieve its goals which can effectively act in terms of preventing the emergence and resolution of social crises and their implications, whether at the level of individuals, social groups, or the entire society within the country.

Thus, the content and scope of the welfare state are now problematic. The content of the welfare state could be the content of the state's economic policy, namely its social part i.e. social policy.

The extent of the welfare state is the degree of guaranteed minimum socio-economic standards and preventive-reactive socio-economic measures aimed at bringing about socio-economic stability and development as an individual, social group and society as a whole.

2 METHODOLOGY

Measuring and assessing consumer behavior means an effort to gain knowledge and partial understanding of the reasons for implementing decision-making and behavioral processes as they are under the influence of external and internal factors which affect particular buying situations. The power of these stimuli and influences is indisputable, reflecting on the issue of the current and future consumption of savings and indebtedness. The aim of the article is to establish a complex ground of knowledge based on the analysis of the socioeconomic development of Sweden. Part of the aim of the article is also to asses certain risks of the current development of the swedish socioeconomic model in the context of international development and to propose precautionary actions in order to decrease them. Methods of analysis, comparison and synthesis were used to solve the problem.

3 RESULTS AND DISCUSSION

3.1 Analysis of the swedish economy

In order to assess the risks of current and future developments in the Swedish economy, it is necessary to examine all significant periods, especially in the current development of the Swedish economy. An analysis of the current socio-economic development of Sweden is needed to successfully assess the risks of the current functioning and prospects for the future development of the Swedish socio-economic model. This will help us to identify the key success factors and future development of the Swedish socio-economic model, but will in particular serve to identify the risks to the functioning and development of the current socio-economic model of the Kingdom of Sweden. As a starting point for comparative analysis, the characteristics of Sweden in the European Union, where Sweden is characterized as the third largest country in the European Union in terms of area, can serve as a starting point. The most

important sectors of Sweden's economy are public administration, defense, education, health and social work (which accounted for 23.9% of GDP in 2012), wholesale and retail trade (19.9% of GDP in 2012), transport, accommodation and catering services (17.6% of GDP, 2012). Sweden's main export partners are Norway, Germany and the United Kingdom, while its main import partners are Germany, Norway and Denmark. Sweden can be characterized as an export-oriented economy, with a high degree of innovation and a high level of taxation as well as tax discipline (www.europa.eu).

Development of GDP growth in selected economies

As already mentioned, the key indicator for assessing the economic development of any country is the growth rate of nominal domestic product. To illustrate the context of the functioning and development of the Swedish economy, we decided to show the development of the indicators in the other selected countries of the Nordic region and namely Denmark, Finland and Norway, which as the only one of these states is not a member of the European Union. In addition to the above mentioned, we consider it useful to show a comparison of selected indicators also within the development of the German economy as a representative of the key economic power within the European Union. The analysis in question could also be enriched by an analysis of selected indicators of socio-economic development of the United Kingdom or the United States, which Sweden has significant links with, according to the IMF report from 2013 (Kolodziejski, 2013).

In the context of this, the development of the Swedish economy and other economies of the Nordic region can also be perceived. The GDP indicator in question in the reference period under review shows trend instability, mainly due to the aforementioned enlargement of the European Union in 2004 and 2007 as well as the outbreak and impact of the global financial and economic crisis in 2007-2010 (despite the officially labeled start of the global financial crisis, i.e. in2008, the negative effects of economic problems in the global economy started to materialize already in 2007) and the EU debt crisis since 2011. It can therefore be stated that the growth rate of Sweden's gross domestic product decreased from 4.3% in 2004 to 1.3% in 2013 (www.europa.eu).

Development of inflation rate in selected economies

Another important indicator that substantially complements the economic characteristics is the rate of inflation. For our analysis, we chose the inflation rate measured by the consumer price index, which reflects, but also characterizes the selected economic policy of the state in a particular period, but especially significantly affects the performance of the economy and the degree of real welfare of the population of the particular economy.

Considering the importance of inflation in relation to its economic slowdown potential as well as the fact that the stabilization of the price level is one of the basic political-economic goals and the inflation rate is one of the key indicators used for the evaluation of economic development, we decided to analyze this indicator in the next analysis. As with the previous analysis of the evolution of gross domestic product growth in the economies under review as well as in inflation, we maintained the same reference period and territorial focus of our analysis based on the presented significance of international and economic relations among the economies under review.

In examining the evolution of the inflation rate, it is necessary to take into account all significant facts that have influenced also the development of the growth rate of gross domestic product. In relation to the assessment of the causes and effects of the specific development of inflation rates, other important factors need to be taken into account, e.g. price of labor, price of energy and other raw materials, development of interest rate, rate of unemployment and other.

At the European Union level, the monitored inflation rate indicator changed overall from 2.3% in 2004 to 0.6% in 2014. In the period under review, several points of the change in the trend of development can be identified reflecting fluctuations in the Union's economic growth (www.europa.eu).

Development of unemployment rate growth in selected economies

Another important indicator, which fundamentally characterizes the economic development of the state and its economic policy and has a direct and key impact on the fulfillment of basic functions of the welfare state, is the indicator of unemployment rate.

This indicator represents part of the unused human resources in the economy. It can also be seen as a direct reason for the reduced level of the real product of the economy compared to its potential. In addition, the individual and societal costs of unemployment, as well as the costs of preventing and addressing the negative, socio-pathogenic phenomena arising from unemployment, must also be taken into account. The level of unemployment has a direct impact on the individual and societal level of well-being as a key factor that is at the heart of social welfare theory. It is precisely the increase of the welfare of citizens of the state in a democratic and socially economically and ecologically sustainable way that can be seen as the main objective of the existence, functioning and development of the welfare state in the practice of everyday socio-economic and political reality.

When analyzing unemployment, it is necessary to take into account not only its aggregate characteristics. It is also important to take into account the correlations of the development of unemployment with the development of other macroeconomic indicators, which is important for drawing the socio-economic situation and development in a particular economy. Indeed, several indicators of socio-economic development in a country can directly influence growth or decline in unemployment. It can be, in particular, links between the unemployment rate and the development of gross domestic product, inflation or, where appropriate, the level of public revenue and expenditure. To illustrate the socio-economic development in the economies under review, we decided to analyze the evolution of the unemployment rate in selected economies.

Despite the outbreak and impact of the global financial and economic crisis between 2007 and 2010, the effect of the debt crisis is a much more serious factor directly affecting the level of unemployment in the European Union. The largest increase in unemployment can be observed in the period from 2013 to 2014, when the monitored indicator increased year-on-year by 5.1% from 5.1% in 2013 to 10.2% in 2014 (www.europa.eu).

Given the potential negative impact and fundamental importance of unemployment it is important to proactively act in the sense of socio-economic reduction risks stemming from this phenomenon. Direct and targeted solutions to the problem of unemployment and youth unemployment in particular needs to be applied.

Development of the balance of payments of standard account in selected economies

Another indicator that significantly characterizes the country's economic development is the state's balance of payments. This is an assessment of foreign trade activity, specifically its result.

The countries of the Nordic region have export-oriented economies, as they have an active balance of payments in the long term. An exception is Finland's economy, which experienced a sharp deterioration in the balance of payments in the period under review, with the trend of this indicator having a long-term downward trend in the Finnish economy. Out of 6.2% in 2004, it dropped to -1.6% in 2013, which, together with more than 8% unemployment, puts

pressure on the growth of government debt and narrows the scope for growth-enhancing use of government spending (www.europa.eu).

Development of the Gini coefficient in selected EU countries

In order to identify and document the effectiveness of the socio-economic model in relation to meeting the key challenges and objectives of the welfare state, we must also take into account the social factors of the functioning of the economy in our analyzes. The indicator that allows us to do so in some extent is so-called Gini coefficient which is used to document the redistribution of generated values or wealth. It is a so-called balanced income. The higher the value of the index, the less egalitarian the redistribution of wealth in a given economy, and vice versa, if the index reaches 0, it means that all members of society have access to the same wealth. Mostly, it ranges from 0 to 1 and 0 to 100, respectively, in terms of the percentage of social inequality.

In view of the evolution of the Gini coefficient in the period under review, we cannot draw any major conclusions for a small number of data at European Union level, perhaps only that the degree of income inequality is higher in the European Union than in all the countries surveyed, and the Swedish economy can now be included in this aspect for the economy of Norway, as the economy with the second highest income equality among all the economies studied. As we have already mentioned, the economy with the highest level of income equality within the region is Norway's economy. As part of the development of the indicator we can conclude that there is a generally decreasing trend in the value of the given coefficient, where the value of the indicator decreased from 25.2% in 2004 to 22.7% in the whole period under review. This represents an overall decrease of 2.5% in the monitored indicator. Despite the overall decrease in the coefficient, the development of this indicator also showed periods of strong growth and subsequent changes in the trend. Between 2004 and 2006, the indicator increased significantly from 25.2% in 2004 to 29.2% in 2006 - an increase of 4.0%. Since 2006, it has been possible to identify a significant decrease in the value of the coefficient in question, when in 2007 it reached 23.7%. Its value thus decreased year-on-year by 5.5%. Subsequently, the development of the indicator increased by 1.4% to 25.1% in 2008 (www.europa.eu).

CONCLUSION

Sweden's successful socio-economic development at the end of the 19th and early 20th centuries was mainly based on the rapid industrialization of the economy and investment in infrastructure, effective institutional and school reforms, low corruption, the development of the financial system, the openness of the economy and, last but not least, the country's neutral position during the war conflicts.

After evaluating the current state of development of the welfare state theory and analyzing the key characteristics of the current development of the Swedish economy, it can be stated that we have succeeded in fulfilling the set goals and partial objectives of the article.

A significant economic risk or a complex of risks can be considered a potential and currently fairly long-term decline in economic growth as a result of the escalation of the debt crisis, or as a result of the political-economic turmoil in the European Union, or the escalating of the conflict in Ukraine. The high dependence of the Swedish economy on exports to European Union countries in this context should be addressed as soon as possible by the effective application of economic diplomacy in the framework of the development of sales alternatives e.g. in more developed countries in Asia, Africa, Brazil, Canada and others.

Taking into account the forecasts of the Swedish National Bank, we can conclude that, in the case of medium-term stability in the European Union, Sweden can, thanks to favorable

economic development indicators, create a sufficient set of resources for the mentioned anti-risk activities in a short time.

In relation to the existence and sustainability of the Swedish socio-economic model, it is possible to take a rather unequivocal position:

- Based on the characteristics of past developments in the Swedish economy, it is possible to confirm that the basic features of the socio-economic model of the so-called "welfare state" of Sweden and their reflection in the development of key parameter values of socio-economic development showed elements of discontinuity or deterioration:
- high government spending and support for the development of the state's social function,
- high taxation rate,
- the relatively small size of the banking system and the financial market.

These are the characteristics that currently must not always withstand fiscal and budgetary pressure on the one hand, and the inefficiency of the Swedish economy on the other. A separate chapter is the issue of liberalization of the financial market, which brought with itself a high-risk household debt. By examining the current development of the Swedish economy, we have come to the conclusion that although in some parameters and functions of the social function of the state Sweden still shows a high above-average level, even Sweden has already begun to promote the neo-liberal concept of addressing selected issues of understanding and securing socio-economic standards and security as individual citizens as well as the Swedish economy as a whole. Despite the fact that there has been a change in the spectrum of opinion in power within the Swedish political and economic scene, in many areas of development of the application of the welfare state concept, neoliberal changes were forced by the need to address the fiscal and budgetary sustainability of the guaranteed standards. From the presented findings we can conclude that, in our opinion, the Swedish socio-economic model, as presented by professional literature, is currently significantly distorted by the neoliberal policy, which is partly the result of a change in political power in the country and partly due to the unsustainability of the previously guaranteed social security when economic crisis hit the global economy.

In the long term, we consider the socio-economic risks associated with the demographic aging process of the Swedish population to be much more significant and the resulting need for effective resolution of the issues:

- Effectively increasing the effectiveness of the use of family policy development tools, focusing on increasing the birth rate, but also on creating conditions for effective education and training in line with the long-term needs of the Swedish economy - both in the family and in the school or other educational or interest institutions.
- Last but not least, the issue of efficient management of migration flows. In this area, we need to address the whole complex of issues:
- Effectively influencing the number and structure of immigrants in line with the long-term objectives of socio-economic development.
- Creating effective tools for assessing and verifying immigrants in terms of their social and economic usefulness and in terms of its potential risk in relation to state and citizen security.
- Creation and application of effective long-term integration programs into the majority society.
  - o At the level of individuals through integration programs and so-called immigration curators,
  - o At community level, by applying an effective and lawful distribution of the population in terms of transforming passive multiculturalism into an active and

enriching multiculturalism that is only possible by avoiding the phenomenon of social exclusion of migrants and their macrosocial communities. The introduction and mandatory use of programs for the re-integration of second and third generation immigrants into the majority society until the time of effective multi-generational impact of the first wave of integration.

- Initiate a global debate on refugee issues. Given the crucial importance and implications of both population aging and international migration processes for socio-economic stability and development, taking into account the level of risk of these factors in the Swedish economy, it is necessary to specify the alternatives for developing our framework proposals as follows:
  - o Increasing the effectiveness of family policy instruments should be on a different principle than before. The guarantee of the choice between maternity and career should be maintained. Given the "phenomenon of so-called economies of scale, however, higher welfare rates (today's level) and social security should be guaranteed to mothers and families who fulfill the socially preferred goal of (stopping the demographic decline) from one month of life to 3 three years of life of the child. In the first two children, the state-guaranteed standards were to be partially reduced to activate the economic motive in addition to the personality and biological motive, with a link to a real society-wide target.
- Effective influencing of migration flows should be addressed through the effective use of specific tools:
- Economic assistance in countries of migration or wave movement towards Sweden (this is seen as a protective measure against uncoordinated migrants' flows into the country),
- Using the tools of economic diplomacy and marketing techniques to build the image of the state in the sense of attracting a certain kind of migrants in accordance with society-wide goals,
- By modifying the asylum procedure and creating an assessment mechanism for immigrants, depending on their anticipated future social value. Taking into account the multi-generational effects of migration, the criteria for such evaluation should include the expected population contribution of the migrant or his / her relatives, the risk of the migrant in terms of security threats, health risks, religious risks, economic classification and qualifications and the anticipated societal (meaning socio-economic benefits - the migrant background in the home country to estimate roughly the volume of possible remittances the potential of its growth, social risks and social adaptability.

From the presented findings and expectations of future development, the growing influence of Sweden in the European Union as a technologically advanced economy with a stable socio-economic environment can be assumed to cope with the financial and fiscal-budgetary risks of economic growth. Despite the current trend of liberalization of the Swedish economy and the partial reduction of social standards, it is possible, based on the presented knowledge, to seek to maintain a socially understood model of state functioning on the principles of effective coexistence of the private and public sectors. The preconditions for success, and even though the fiscal problematic sustainable development of the welfare state development model, can be found in the long-term traditions of key values of society in terms of egalitarianism and transparency as well as a well-proven complex of mechanisms that align the positive effects of increasing the intensity of Sweden's involvement in international labor division or the development of internal competitive environment. It is worth noting the way in which state development is managed through state-supervised management of the strategic orientation of the economy to services with high added value and the way to stimulate this development through measures aimed at increasing competition in business research. Promoting and developing entrepreneurship has become key compared to the recent past of centrally

managed economies in former socialist bloc countries, while Sweden has not nationalized the production of goods and services compared to these economies, but has supported it through private property laws. However, Sweden has nationalized the income from this production with a high level of taxation. This has created room for the development of an efficient welfare state in the context of strategic nationalization or monopolization of the provision of services within the internal environment of the Swedish national economy (Bergh, 2014).

The focus of the attractiveness and adaptability of the Swedish socio-economic model concept lies in the long-term optimization of economic policy in support of the economic pro-export tendencies, as well as the efficient use of the resulting revenues for infrastructure or technology-oriented socio-economic development, resulting in a relatively high ability to maintain high social protection.

The long-term positive aspect of the Swedish economy is the school system, which effectively contributes to the valorisation of human capital in the Swedish economy, even on the basis of strategically motivated state investment.

The inspiration for the Slovak Republic should be the informal effectiveness of the formal anti-corruption policy and the way of resolving the banking crisis in the 1990s. Last but not least, it is the strategic orientation of education and the whole economy to develop the quality of human resources in the economy with regard to the development of production economic activities in the segment of high-end technology products.

Sweden has entered the history of world politics as the first country to practically apply the concept of welfare state. Thus, the Swedish economic model has become synonymous with a modern mixed economy that combines a market-based system with extensive state intervention that ensures economic and social stability. This model of political governance of the state combines efforts to bring together a liberal market economy and a centrally managed economy.

The issue of sustainable and effective implementation of the welfare state model is increasingly up-to-date in view of the increasing complexity of the world economy's structure, as well as the crisis and the increase in the risk of the global economic environment. In contrast to the past, a separate and sovereign state has to cope with the multiple challenges of the turbulent reality of the global economy in developing the application of the welfare state concept within its own internal environment. The key drivers of these challenges are, in particular, such factors as the growing interdependence of the individual entities of the world economy; the changed state position with regard to the operation of multinational corporations; the decreasing stability of world financial relations; the demographic implications of the world's population; the degradation of the environment. Sweden's research economy serves as a good example of both trends in the development of a socio-economic model of state governance.

Nevertheless, Sweden is a state that places great emphasis on meeting the broadly understood concept of the welfare state. The characteristics and analysis of the current development of the Swedish economy confirmed the need to correct the ambitious objectives of the Swedish model of the welfare state of the 1960s. Nevertheless, Sweden remains a promising example of a country with a broadly supported social system and good macroeconomic results even in today's world economy crisis.

The article confirmed both the effective management of the solution to the consequences of the current economic crisis and the preconditions for maintaining the greater part of the social standards of today in the medium term. On the other hand, despite the good forecasts of economic development, the sustainability of today's Swedish welfare state development model does not seem smooth.

In relation to the expected future changes resulting from the development tendencies of the Swedish economy and the world economy, it is possible to assume the necessity of gradual

reduction of state-guaranteed social security standards. However, excessive liberalization of the Swedish economy, which brought the country into a deep crisis at the beginning of the 90s of the 20th century, also appears risky.

Despite the need to take into account the aforementioned risk factors in the development of the Swedish socio-economic model, the sustainability and viability of key elements of the Swedish socio-economic model can be confirmed and even highlighted, as evidenced by the long-term placement of Sweden at the top of the Global Competitiveness Index as well as the highly positive assessment of Swedish socio-economic model in the international comparison using the human development index.

In a cautious and proactive application of economic policy aimed at maintaining a dynamic balance between development by key factors for the growth of competitiveness and sustainability of government spending in the social field, the Swedish socio-economic model can work effectively even in the conditions of the current globalized world economy, or even be an example for other countries, in particular through the enforcement of the above-mentioned anti-corruption mechanisms strengthening the effectiveness of public institutions, which is consequently translated into the effective functioning of the national economy.

A key prerequisite for the success of the Swedish socio-economic model will be to manage the renewal of the population structure by sustaining the current scale of the public sector through a stimulating family policy and effective migration management.

Based on the tasks set out in this article, we can conclude that the objectives of the work have been fully fulfilled, and in addition to the excessive dependence of the Swedish economy on the Member States of the European Union, we consider the risks associated with the development and the need for immigration tendencies to be the most significant risks of the current development of the Swedish economy. The proposed measures outline the possibilities and perspectives of particular solutions.

To conclude, this article plays an important role not only in the benefits of outlining and explaining the context and key factors of the Nordic region's development and analyzing current developments in the Swedish economy, but also in identifying its risks and formulating proposals on particular measures.

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Development of Foreign Trade Relations between Kazakhstan and the EU under the Influence of Geopolitical Changes

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Abstract: Kazakhstan, the most impressive reformer and the most developed country in the Central Asia region, has undergone major economic changes in last years. The country has played an important role in providing stability and security in the region. For the EU it is the most important trade partner from the region of Central Asia. The relations between Kazakhstan and the EU has developed also in other areas as political, cultural or social but the trade relations still play the most important role in the mutual relations. The aim of the article is to examine the position of Kazakhstan in the EU foreign trade relations, to analyze their mutual development in recent years on the basis of Trade Intensity Index and to draw out further possibilities of the future mutual foreign trade cooperation during the time of geopolitical changes.

Keywords: EU, foreign trade relations, Kazakhstan, Trade Intensity Index

JEL Classification codes: F13, F19, F60

INTRODUCTION

Kazakhstan is the ninth largest country in the world and the most developed economy of the Central Asia. (Drieniková, 2018). At present, Kazakhstan and the entire region of Central Asia play an important role in the current geopolitical relations of Russia, China, the EU and other regional players as Iran. For China, Kazakhstan is particularly interested in rich oil and gas supplies and as a transit country through which goods from China pass through a project of the New silk road heading to the Middle East and the EU. Russia is striving to strengthen its political and economic influence in the country. For the EU, Kazakhstan is an important importer of energetic materials, but also as a country that ensures safety and stability in the region. Iran focuses on economic cooperation and offers its territory as a transit territory for oil transport to Turkey and the EU.

The European Union and Kazakhstan have established a close economic and trade partnership since the independence of Kazakhstan. The cooperation between the EU and Kazakhstan is developing not only in field of trade, but in last years it also covers political, cultural or technical cooperation.

1 LITERATURE REVIEW

The ongoing geopolitical changes in the world economy and the gradual adaptation of the EU foreign trade policy to the turbulent development of the world economy in recent years have been accompanied by a number of unexpected phenomena. An important indicator of economic growth influencing the effective functioning of the whole economy is the positive development of foreign trade itself. (Baláž, Hamara, Sopková, 2015). A decisive factor in the

current global economy is the increasingly active interference with globalization processes that are directly or indirectly present in almost all types of economic activities. The development of the world economy over the last three decades has led to significant qualitative changes, the intensity of which is increasing even more at present (Ružeková, 2013). This phenomenon also applies to the development of foreign trade relations between the EU and Kazakhstan.

Kazakhstan has not only been an important trading partner from the Central Asia but has also become a reliable EU partner ensuring peacekeeping in the region. The main area of mutual cooperation is still the energy sector (Drieniková, 2018). The EU is trying to strengthen its position towards this region mainly because of the resources of raw materials, efforts to expand the sphere of its influence and the geostrategic importance of the region (Gast, 2014). Since the independence of Kazakhstan, relations between the EU and Kazakhstan have developed not only in the field of trade, but also in recent years we can also see closer cooperation in the field of politics, culture and social affairs (Kembayev, 2016). In comparison with China and the US, the EU has a lower political influence in Kazakhstan, but a rather significant economic impact (Peyrouse, 2016). The most important documents which show the direction of cooperation between the EU and Kazakhstan are the Enhanced Partnership and Cooperation Agreement (EPCA) and the Partnership and Cooperation Agreement (PCA). The EPCA allows better conditions for the political and economic cooperation and strengthening relations between Kazakhstan and EU contributing to the diversification of the Kazakh economy and thus increasing the overall competitiveness of the Kazakhstan economy (Drieniková, Kašťáková, 2016)

The field of trade flow tracking was first used by Brown (1949) and later by Kojima (1964) through the trade intensity index. Business intensity defined as trade between two countries in relation to the total value of world trade and its share of it. In the course of ten years, Yamazawo (1971) applied a trade intensity model and analysed trade between two countries and assessed trade changes and factors that affect trade intensity. At the same time, trade intensity could be estimated not only between countries, but also as the internal trade intensity or external trade intensity of some countries or regions (Lapadre, 2004).

2 METHODOLOGY

The aim of the article is to examine the position of Kazakhstan in EU foreign trade relations, to analyze their mutual development in recent years on the basis of the Trade Intensity Index and to draw out further possibilities of their mutual foreign trade cooperation during the time of geopolitical changes.

Several theoretical methods are used in the article to achieve the aim (synthesis, analysis, induction, deduction, comparison). The graphs are used to make foreign trade data more transparent.

The Trade Intensity Index (TII) is used to assess whether the trade volumes between two countries are larger or smaller than it would be expected on the basis of their world trade position. It is defined as the share of one country's exports going to a partner divided by the share of world exports going to the partner. (World Bank, 2010)

It is calculated as:

$$TII_{ij} = \frac{(x_{ij}/X_{it})}{(x_{wj}/X_{wt})} \qquad (1)$$

where:

x_{ij} represents the value of export from country *i* to country *j*;

X_{it} represents the value of total exports of country *i* to world;

x_{wj}   represents the value of total world exports to country j;

X_{wt}   represents total value of the world exports.

TII values range from 0 to +∞. If the index value is 1, it means that the exporting country i exports to country j exact ratio of exports, which is a matter for country B considering its share in world import. If the index value is higher than 1, the business flows between examined countries are on a higher level, as it would be expected in view of the world economy. This means, that country i exports to country j in a ratio of more goods than to the rest of the world. It is thus an intense trade relationship. If the value is less than 1, then the intensity of trade is at a level lower, than it would be expected. (World Bank, 2013)

For the purpose of this research, the source of the data were Ministry of economy of the Slovak Republic, Embassy of the Slovak Republic in Astana and Embassy of the Czech Republic in Astana which provided data for the analysis of foreign trade between Kazakhstan and the EU. Foreign trade commodity structure was classified according to the Harmonized System nomenclature. The data required for the calculation of TII were used from the EUROSTAT database and United Nations Conference on Trade and Development (UNCTADSTAT).

3 RESULTS AND DISCUSSION

Kazakh Republic is an inland state with an area of 2 724 900 km2 and population of approximately 18.6 million. (Czech Trade, 2018). It is the most developed state of Central Asian countries. The country has experienced tremendous economic development over the last 25 years and undergone transformation to market economy. From the economy with lower middle income it transformed into an economy with a higher average income (World Bank, 2018).

In 2017, Kazakhstan's GDP was 158.2 bln. $ (Embassy of the Slovak Republic in Astana, 2018). Although agriculture contributes only to a small percentage to GDP, it employs up to 15% of the population. The country has a rich supply of minerals, mainly petroleum, natural gas, black coal, uranium, gold, silver, or copper. The most important area of industry is the mining industry whose share in Kazakhstan's GDP in 2017 was 13.3% (Embassy of the Slovak Republic in Astana, 2018). Other major sectors are metallurgical, food, chemical, engineering, construction, metalworking and the pharmaceutical industry. Kazakhstan has been trying to diversify the structure of the economy in recent years and reduce its dependence on mining and exports of minerals. Services in Kazakhstan are represented mainly by wholesale and retail, real estate services and transport (Czech Trade, 2018). Kazakhstan spends money on road and rail construction. The rail link connects China, Kazakhstan and other Central Asian states, leading to the One Belt One Road (OBOR) project.

In 2012 Kazakh president Nursultan Nazarbajev promoted new strategy called The Strategy 2050 according to which should Kazakhstan become one of the 30 most developed countries in the world. The new strategy builds on Strategy 2030, adopted and implemented since 1997. The new strategy focuses on 7 long-term priorities which should support the development of the economy of Kazakhstan (strategy2050.kz, 2018).

3.1 Development of foreign trade and investments in Kazakhstan

For the last 18 years, Kazakhstan has had an active trade balance. In 2017, Kazakhstan's total foreign trade turnover was 77.6 bln. $, of which 48.3 bln. $ represented exports and 29.3 bln. $import (Ministry of economy of the Slovak Republic, 2018).

The development of Kazakhstan´s growth and foreign trade during the period 2014-2018 was negatively influenced by decline of prices of oil, EU sanctions against Russia, devaluation of Russian ruble against the Kazakhstani Tenge (Konopelko, 2018). As the Kazakh´s economy is highly dependent on the export of oil and other raw materials, the decline in the oil prices on the world markets caused the slow-down in the economic growth of Kazakhstan. As Russia is one of the three most important partners of Kazakhstan concerning foreign trade, the decline in the economic growth and foreign trade of Russia evocated by the EU sanctions against Russia effected negatively the foreign trade of Kazakhstan. Foreign trade of Kazakhstan in 2013 – 2017 is displayed on Fig. 1.

Fig. 1 Kazakhstan Foreign Trade in 2013 – 2017 (bln. $)
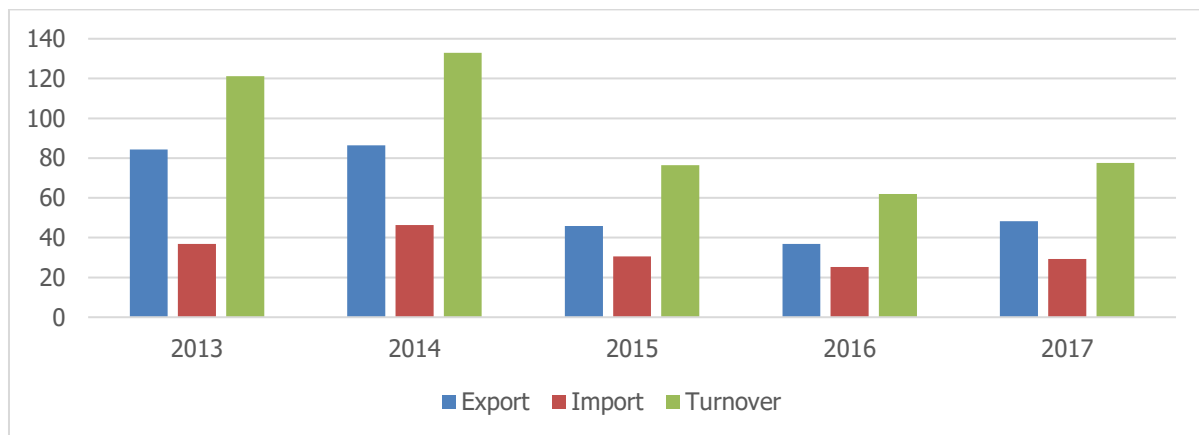
Source: processed by the authors according the data from the Ministry of economy of the Slovak republic

Kazakhstan's most important trading partner in 2017 was the European Union with a 38.7% share of Kazakhstan's foreign trade followed by Russia 20,6% and China 13,5%. Among the European countries, Italy (12.4%), the Netherlands (6.5%), France (4.4%), Germany (2.4%) had a significant share on Kazakhstan´s foreign trade in 2017. From non-EU countries, Kazakhstan's most important trading partners were Russia (20.6%) and China (13.5%), Uzbekistan (2.6%), Turkey (2.4%), Ukraine (2.1%) (Embassy of the Czech Republic in Astana, 2018). A detailed overview of Kazakhstan's most important foreign trade partners is shown in Fig. 2.

In 2017 Kazakhstan's largest share on exports had mineral products 87,1%, base metals 3,8%, pearls and precious metals 3,8% and product of chemical industry 1,9%. The main import goods in 2017 were machinery and appliances 33%, products of chemical industry 19,7%, transport equipment 11,5%, optical instruments 6,2% and base metals 5,8% (European Commission, 2018).

Fig. 2   Foreign trade partners of Kazakhstan
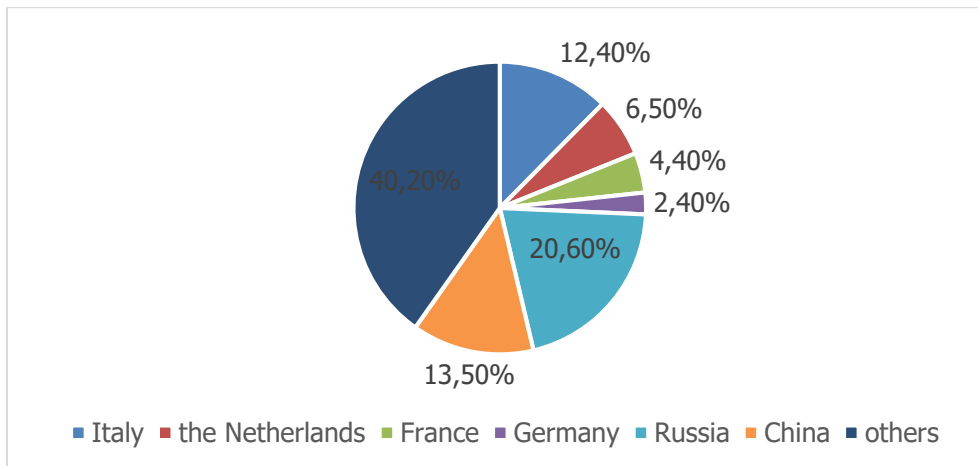
Source: processed by the authors according the data from Embassy of the Czech Republic in Astana

By January 1st, 2018 the amount of FDI in Kazakhstan was 147 064 mil. $. Most of the investments came from the Netherlands (42,7%), the US (18,4%), China (9,6%) and France (9%) (Embassy of the Czech Republic in Astana, 2018). Kazakhstan is trying to attract potential investors by offering attractive conditions for investment. In 2014, the government of Kazakhstan adopted new investment legislation including tax holiday, investment aid, exemption from custom duties and other. A detailed overview of Kazakhstan's FDI development for 2017 is shown in Fig. 3.

Fig. 3   Foreign direct investments in Kazakhstan
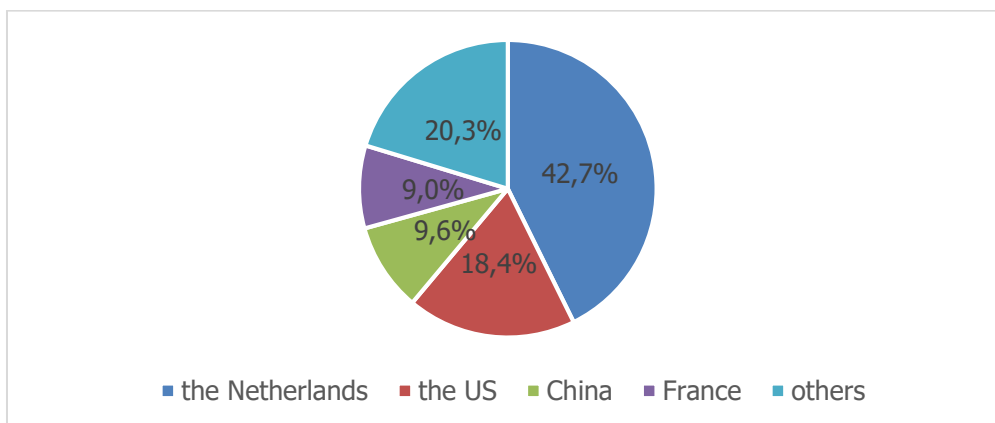
Source: processed by the authors according the data from Embassy of the Czech Republic in Astana

3.2 Foreign trade relations between Kazakhstan and the EU

The European Union plays very important role in the development and stability of Kazakhstan. The Delegation of the EU TO Kazakhstan was opened already in 1993. The European Union and Kazakhstan have established a close economic and trade partnership since the independence of Kazakhstan. The detailed development of the foreign trade between Kazakhstan and the EU in 2013 – 2017 is illustrated in the following figure.

Fig. 4 Foreign trade between Kazakhstan and the EU in 2013 – 2017 in bln. €
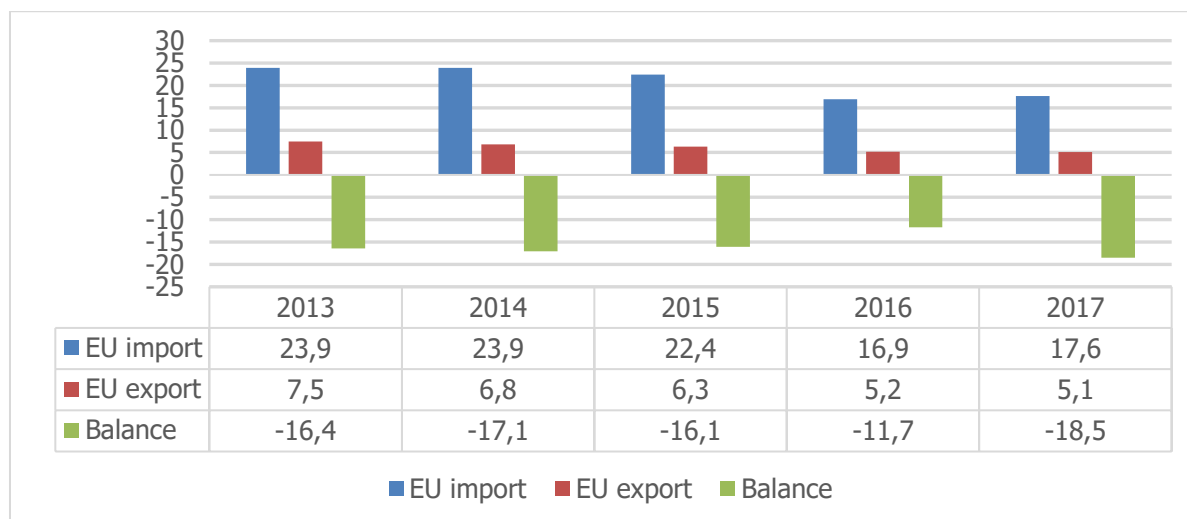
	2013	2014	2015	2016	2017
■ EU import	23,9	23,9	22,4	16,9	17,6
■ EU export	7,5	6,8	6,3	5,2	5,1
■ Balance	-16,4	-17,1	-16,1	-11,7	-18,5

Source: processed by the authors according the data from Embassy of the Slovak Republic in Astana

The decline in the foreign trade of Kazakhstan with the EU during the period 2015-2017 was caused by general decline of the foreign trade of Kazakhstan which was caused by factors already mention in the article before. In 2017 we can observe growth in Kazakh´s exports to the EU caused mainly by the growth of oil prices.

The EU is the most important partner for Kazakhstan. It has participated 19.6% in the import of Kazakhstan and 50.2% in Kazakh exports. On the other side, Kazakhstan is not a priority trade partner for the EU and is 32nd largest trade partner with only 0.6% of the EU's foreign trade turnover, 1% of total imports and only 0.3% of EU exports (trade.ec.europa.eu, 2018).

Tab. 1 Top 5 commodities of mutual foreign trade between Kazakhstan and the EU in 2017 (according HS2 classification)

HS2	Kazakh export to the EU	Value in mil. €	Share in %
27	Mineral fuels, mineral oils	15354,2	87,6
71	Natural or cultured pearls, precious or semi-precious stones	663,3	3,8
28	Inorganic chemicals	329,8	1,9
74	Copper and articles thereof	259,5	1,5
72	Iron and steel	226,0	1,3
	Kazakh import from the EU	**Value in mil. €**	**Share in %**
84	Nuclear reactors, boilers, machinery	1202,1	23,8
30	Pharmaceutical products	533,1	10,5
85	Electrical machinery and equipment and parts thereof	479,2	9,5
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	317,9	6,3

90	Optical, photographic cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	313,1	6,2

Source: processed by the authors according the data from Embassy of the Slovak Republic in Astana

According to data from Embassy of the Slovak Republic in Astana, most exported commodities from Kazakhstan to the EU in 2017 were mineral fuels 87,6%, natural or cultured pearls 3,8% and inorganic chemicals 1,9%. The most imported commodities from the EU to Kazakhstan were nuclear reactors 23,8%, pharmaceutical products 10,5% and electrical machinery and equipment 9,5%. Detailed information is displayed in Tab. 1. Kazakhstan, after Russia and Norway, is the third largest importer of oil to the EU outside OPEC. As Kazakhstan has to export oil to the EU through Russian territory, the tension in the relationship between the EU and Russia to a great extent negatively affected European-Kazakh economic and trade relations (Drieniková, 2018).

The barriers which are European companies facing when exporting to Kazakhstan have mainly non-tariff character. These companies are facing problems concerning certification and export financing.

European union is also the largest investor in Kazakhstan. In 2017, most of the foreign direct investments from the EU came from the Netherlands (42,7%) and France (9%). These investments were located mainly in oil and gas sector (68,2%), transportation (6,1%) and processing industry (4,7%). In Kazakhstan there are active European companies as Henkel, Danone or Siemens (Embassy of the Czech Republic in Astana, 2018).

The cooperation in foreign trade between the EU and Kazakhstan is since the independence of Kazakhstan focused mainly on the cooperation in field of energy but as the EU tries to diversify the suppliers of the oil, gas and raw materials, it is possible that the cooperation in this field will slowly decline in following years. The EU has its energetic interest in the region of Central Asia and therefore there is an assumption of the future cooperation with Kazakhstan and other countries from Central Asia in this field.

Kazakhstan has also strategic location and is becoming more important country concerning new trade and transit routes, mainly regarding Chinese project Belt and Road, which should be used for the transportation of Chinese goods to the EU. Kazakhstan became one of the first states engaged in Belt and Road initiative. In Kazakhstan, on the Kazakhstani-Chinese border, there is located very important logistical and transport node – Khorgos Gateway, the dry port, which is the strategic facility, which enable to cover the world market from China to Europe. China´s Belt and Road initiative triggered a new EU interest in Asia. The EU, Kazakhstan and also China have interest in using this initiative to develop their economies. Kazakhstan expects to transit 2 million containers by 2010 which should bring 5 billion in transit fees (Gotev, 2018). In 2010, there were zero Chinese containers shipped via Kazakhstan to Europe, in 2017 the number grew to 200,000 and by 2020 the number should reach 1,5 million containers (Gotev, 2018).

3.3 Analysis of mutual trade relations between Kazakhstan and the EU based on Trade Intensity Index

To evaluate the size of mutual trade between Kazakhstan and the EU we used the Trade Intensity Index (TII). TII assesses whether the value of the trade between assessed countries is bigger or smaller than could be expected based on their position in international trade. A

detailed overview of mutual trade intensity between EU and Kazakhstan between 2008 and 2017 is illustrated in Figure 5.

The figure 5 shows the trend of Trade Intensity Index of Kazakhstan and the EU (TI_{IKZ-EU}) and of the EU and Kazakhstan (TII_{EU-KZ}) in years 2008 – 2017.

Fig. 5   Development of the TII between Kazakhstan and the EU in 2008 - 2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
TIIKazakhstan-EU	0,95	0,93	1,03	1,04	1,07	1,19	1,24	1,23	1,16	1,24
TIIEU-Kazakhstan	0,60	0,71	0,65	0,65	0,63	0,63	0,67	0,69	0,66	0,59
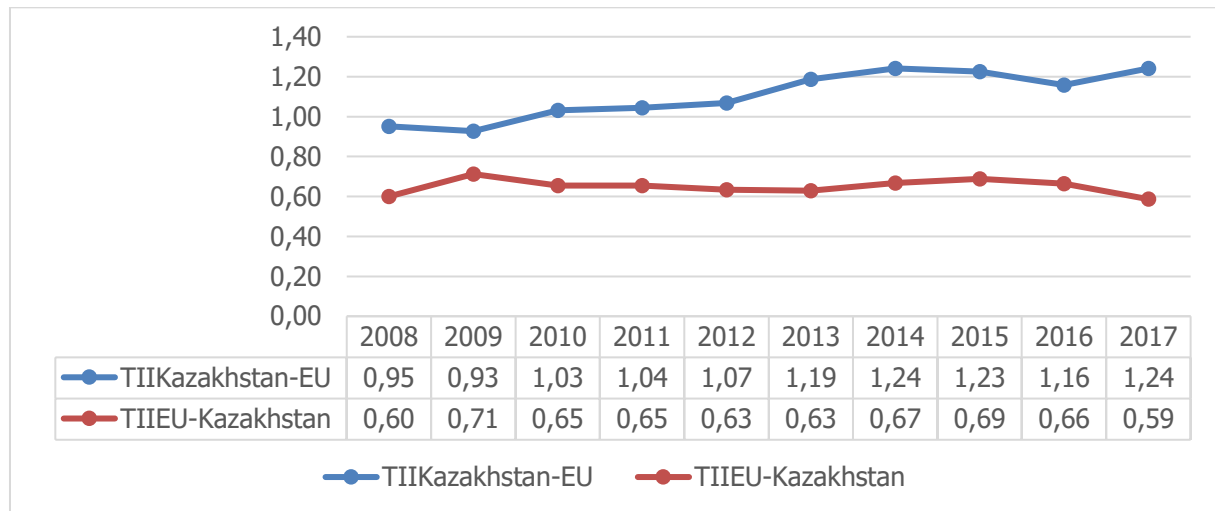
Source: processed by the authors according the data from UNCTADSTAT and EUROSTAT

In years 2010-2017 TIIKZ-EU was more than 1 and therefore we can claim big activity of exporters from Kazakhstan to the EU market. The figure also says that EU is an important partner for Kazakhstan. It indicates intense trade relationship. In 2014 the EU imposed sanctions on Russia, which caused decline in Kazakh export in years 2014 – 2017 by almost half as Kazakh economy is dependent on Russian economy. The biggest decline was recorded mainly in the export of raw materials. There was also a decline in Kazakh export to the EU but not that big as in total Kazakh export as the EU was still importing oil from Kazakhstan. Therefore, we can observe growth in TIIKZ-EU in years 2014-2015 .There was a decline in 2016 in the TIIKZ-EU which does not have to be caused by decline of the export but by also other factors as decline in oil prices. The highest value recorded in TIIKZ-EU was in year 2017 when there was an increase in Kazakh total exports and also Kazakh exports to the EU. TIIEU-KZ reached value less than 1 which not intense trade relationship and Kazakh share of 0.6% on the EU's foreign trade turnover, 1% of total imports and only 0.3% of EU exports (trade.ec.europa.eu, 2018). The increase in TIIEU-KZ in 2014 and 2015 may be influenced by increase of reexport from the EU to Kazakhstan caused by the EU sanctions against Russia.

3.4 Future perspectives of the development of foreign trade relations between Kazakhstan and the EU

Kazakhstan is for the EU a priority country within the Central Asia. Relations between the EU and Kazakhstan are regulated by the Enhanced Partnership and Cooperation Agreement (EPCA), which is an agreement signed on December 21st, 2015 in Astana (Delegation of the European Union to Kazakhstan, 2018). Majority of the chapters provisionally entered in force on May 1st, 2016. The relations between EU and Kazakhstan are also regulated by The Partnership and Cooperation Agreement (PCA) signed in 1995 and came into force in 1999

which is an agreement valid until all member countries of the EU ratifies EPCA (Embassy of the Czech Republic in Astana, 2018).

The economic part of the EPCA creates better regulatory in areas such as: (ec.europa.eu, 2018)

- trade in services
- establishment of companies
- capital movements
- raw materials and energy
- government procurement
- intellectual property rights

Trade relations between the EU and Kazakhstan should be strengthened by membership Kazakhstan in the World Trade Organization (since November 2015). The commitments to transparent rules and trade regulation and reduction of tariff rates should create better conditions for foreign trade between the EU and Kazakhstan.

So far, the cooperation between Kazakhstan and the EU was mainly economically oriented but in recent years we can observe also deepening relations in the social or cultural area (Kembayev, 2016). According to EPCA, the future cooperation between Kazakhstan and the EU will focus not only economic issues but also on other 29 key areas including financial, energy, transport, education, cultural and social issues (Drieniková, Kašťáková, 2016).

The Belt and Road initiative should also strengthen economic relations between Kazakhstan and China but also Kazakhstan and the EU. The country which is big in an area but not that big in terms of population or economy, can benefit from this initiative and therefore the foreign trade between Kazakhstan and the EU can increase in following years.

CONCLUSION

Kazakhstan is the most developed country of Central Asia and in last years it has undergone major economic, politic and social changes which has started the economic growth and the development of the economy. Kazakhstan also became a member of important international and regional organizations as WTO, Eurasian Economic Union, Shanghai Cooperation Organization, which also affects the focus of the trade policy mainly on the EEU member countries and China.

Kazakhstan is for the EU the most important trade partner from Central Asia (it accounts for up to 85% of EU trade with the whole of the region) but is also seen as a partner in promoting peace and security in the region. For Kazakhstan, the EU is the largest trade (almost 39% of foreign trade) and investment partner (almost 50% of foreign direct investment). There was a decline in foreign trade between Kazakhstan and the EU caused by EU sanctions against Russia in years 2014-2015 and other decline in 2016 caused by fall in oil prices. Because of the EPCA should improve some areas of economic cooperation between the EU and Kazakhstan and it should also contribute to the development of the cooperation between European and Kazakhstani companies.

The most important role in the trade relations between the EU and Kazakhstan plays energy sector. The country is also very important partner for the EU providing the stability and peace in the region. Kazakhstan has also an important strategic geopolitical location and in the future it should be used mainly as the transit country for the transportation of Chinese goods to the EU and Middle East.

Based on the analysis of Trade Intensity Index, we came to conclusion of intense trade relationship from Kazakhstan to the EU influenced in last by EU sanctions against Russia and

drop in oil prices and not intense relationship from the EU to Kazakhstan. We expect the increase of TII in following years which can be caused by more factors as the Belt and Road initiative, limitation of trade barriers, diversification of Kazakh export to the EU, stability in oil prices.

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The Impact of Consumer Behaviour on Healthy Lifestyle and Disease Prevention

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Abstract: Demographic changes in the European Union are characterized by population aging, declining fertility, increasing immigration, urbanization and lifestyle changes. These changes bring also new issues related to health, nutrition and diet. In recent years, the incidence of many serious diseases such as diabetes, obesity, heart diseases and cancer has increased. It is obvious that these changes are also related to changes in consumption and consumer behaviour. Problems of inappropriate eating habits, lack of exercise and absence of a healthy lifestyle overall, as well as an idea of consumerism affecting the society - it all directly affect consumer habits and leads to inappropriate consumer behaviour. On the other hand a new consumer movement arises – a large group of consumers that demand new lines of products and a new way of shopping – a healthy one. The aim of this paper is to highlight specifics of consumer behaviour of young people associated with healthy lifestyle and disease prevention.

Keywords: consumer, education, literacy, consumer behaviour, healthy lifestyle, disease prevention, health promotion

JEL Classification codes: P46, Q18

INTRODUCTION

A healthy lifestyle is a topic that is being discussed largely within the society today. There are many definitions of a healthy lifestyle and many sets of instructions hot to maintain it. The actual behaviour of the consumers directly affects the quality of their lives. Consumers around the world are becoming more and more demanding, looking for products that combine multiple positive features. In addition, they expect the product to be to be healthy in order to be fashionable.

There are consumers who decide about products based on information on the product itself, or just decide based on advertising but some search more and deeper to choose the proper one that will meet their expectations, and fit the healthy lifestyle requirements. And as it is well known that the choice of products influences the wellbeing and health of an individual, it is therefore the responsibility of marketers to increase the literacy of consumers in the sphere of healthy lifestyle, to help them to learn how to choose.

The aim of the paper "The Impact of Consumer Behaviour on Healthy Lifestyle and Disease Prevention" is to show what is typical for the consumer behaviour of young people associated with a healthy lifestyle and disease prevention.

1 LITERATURE REVIEW

1.1 Consumer policy with a focus on healthy lifestyle

The issue of healthy food, functional foods, healthy lifestyle and genetically modified food is very actively addressed by many world consumer organizations. International consumer and health organizations are annually recalling many important topics directly related to health and consumer behaviour. Consumer International (CI), Bureau Européen des Unions de Consommateurs (BEUC), World Health Organization (WHO), The Food and Agriculture Organization (FAO) These organizations work very closely together to draw attention to serious facts that have a significant impact on the entire society.

In 2015, during the World Health Day, which was the topic of "Safe Food from Farm to Plate", the WHO World Health Organization pointed out that dangerous foods cause up to 2 million deaths per year. There are a lot of child deaths among them. Foods containing bacteria, viruses, parasites or chemicals cause more than two hundred different diseases, such as diarrhea, different inflammatory diseases and even cancer (WHO, 2015). WHO urges states to strengthen protection and warning systems against hazardous ingredients in food or ready meals. The food safety is a very important issue

Another major organisation Consumer International (CI) annually commemorates the World Consumer Day on 15 March. The message of 15 March is to constantly raise consumer awareness and educate citizens to know their rights and apply them in practice. The topics of the World Consumer Rights Day have been very often focused on the issues of healthy lifestyle, health, food, water and healthy nutrition. World Consumers International Consumer Federation (CI) states that four of the ten largest causes of death worldwide are linked to unhealthy diet: overweight and obesity, high blood pressure, high blood glucose and high cholesterol. Consumers International draws attention to the fact that all consumers deserve not only the right to food but also the right to a healthy diet. The impact of bad and ill diet on health is currently higher than that of smoking health.

Incorrect choice, the affordability of unhealthy food, the marketing practices of large international food companies, and the lack of information available to the consumer impinges on inappropriate consumer behaviour. It is therefore essential that consumer behaviour in relation to food and healthy nutrition be changed significantly.

In the table below, we select the different topics of world consumer days that relate to a healthy and healthy lifestyle.

Tab. 1 World Consumer Rights Day 15 March - World Consumer Rights Day WCRD

Year	Dominant topic
1987	Foodstuffs of consumer interest
1992	Choice for a healthy environment
1996	Safe Foods for All
1997	Consumers and a healthy environment
2000	Our food choices? Consumers deal with genetically modified food
2003	Corporate Food Chain Corporations - GM Link (Corporate Governance Over Our Foods)
2004	Water is a consumer's right
2005	Consumers speak NO, genetically modified organism

2007	Unethical Drug Promotion
2008	Waste Food Generation (JunkFoodGeneration)
2009	O-Healthy Foods for Children - Introduction of International Code
2012	The day is devoted to raising awareness and educating responsible consumption
2013	Consumer Justice - Immediately!
2015	Healthy eating - healthy foods
2016	Combating the misuse of antibiotics in food

Source: customized by https://www.consumersinternational.org/ 2018

Several serious issues in the sphere of healthy lifestyles have been addressed through individual World Consumer Rights topics. For example, in 2008, "Junk Food Generation" was a major topic of the world consumer rights day. It was on the basis of the topic that discussions were started on fast food chains and their impact on young people. Common "fast food" and "junk-food" dishes include potato fries, hamburgers, cheesburgers, white pizza, hot dogs, etc. as well as some "favorite" bakery products such as cones, from white flour. With the initiative of consumer organizations, the law on advertising has been tightened in some countries, and in some countries it has been possible to enforce the ban on the broadcasting of junk food advertising in children's television programs. In 2015, "Healthy Nutrition" was passed in the slogan, where the World Organization for the Personality of the World (CI), in collaboration with the World Health Organization Organization (WHO), sought to point out that unhealthy diets have a significant impact on our health and life.

As a result of untreated nutrition, people suffer from obesity, high blood pressure, or increased blood sugar. According to information, CI's unhealthy diet contributes to more than 11 million deaths per year, and currently represents the highest mortality risk in the world. Obesity itself costs $ 2 trillion (USD) a year, or 2.8% of world GDP. The number of eating disorders, such as cancer, cardiovascular disease or diabetes, is constantly increasing (WHO, 2015). Based on this initiative, actions have been taken in many countries to promote a healthy balanced diet. In many countries, checks have been carried out where many facts have been revealed. For example, in the UK, they have revealed that many cereal bars that promote themselves as healthy contain high amounts of sugars and fats that are sacrificed to those intended for children. The fight against antibiotic abuse in livestock and the supply of such meat products, especially in fast food chains, was the central theme of World Consumer Rights Day 2016 (CI, 2016). Abuse of antibiotics is reflected in the quality of food, their use adversely affects consumers' health. Through this initiative, the negative effects of antibiotics in food in the form of etiquette were pointed out very sharply.

The European Union says that all consumers deserve not only the right to food but also the right to a healthy diet. The aim is to ensure that consumers have easy access to healthy foods. The causes of wrong food choices are also the affordability of unhealthy food, the marketing practices of large international food companies and the lack of information available to the consumer (EC, 2018). For these reasons, it is necessary to continuously increase consumer literacy in the food sector and a healthy lifestyle. The main aim of EU consumer policy and world organizations is the protection and the equal status of all consumers. Consumer policy directly affects the consumer, which is reflected in the consumer's lifestyle. Therefore, this policy plays an important role in society (Korčokova, 2014).

1.2 Prevention and health promotion

Prevention is an essential tool for maintaining and enhancing health. Detection of risk factors that threaten human health is essential to disease prevention. The importance of prevention is irreplaceable. Health promotion is the process of enabling people to take control over and to improve their health. Disease prevention includes the prevention and management of the conditions that are particularly common as individuals age: noncommunicable diseases and injuries. Prevention refers both to "primary" prevention (e.g. avoidance of tobacco use) as well as "secondary" prevention (e.g. screening for the early detection of chronic diseases), or "tertiary" prevention, e.g. appropriate clinical management of diseases (WHO, 2002).

Primary prevention is a set of measures designed to reduce the incidence of a particular disease in the population by protecting people who are not affected by the disease. The task is to strengthen human health and increase its resistance to disease. Primary prevention may include specific protection (vaccination) against infectious diseases, e.g. vaccination against childhood cerebral palsy e.g. health education that highlights the risk factors of the disease (smoking, hypertension, obesity, elevated cholesterol). The basic principle of primary prevention is to develop knowledge and cultivate a healthy lifestyle.

Secondary prevention includes measures for early diagnosis and effective treatment of the disease in order to reduce its serious consequences (decrease in its prevalence). It focuses on identifying individual or group issues. Its methods make it possible to detect a relatively rapid disorder or disease process and begin treatment before they are fully developed.

Tertiary prevention is based on measures to prevent patient disability and rehabilitation. It should prevent the deterioration of the already existing problems. It relates to situations when the disease is already manifesting. Its goal is to restore health and ensure the optimal functioning of the body (Bakoss, 2008).

WHO (1986) recommended a new approach to health, enhancing health, which consists in actively creating an individual's defense capabilities and not just in preventing disease. Health promotion is the process of increasing people's ability to influence and improve their health. To achieve a state of complete physical, mental and social well-being and well-being, an individual must be able to find and understand his plans and intentions, meet needs and change the environment, or adapt to it (Guliš, 1999).

Rovný (2005) characterizes health promotion as a process enabling people to exercise control and improve their health, with a strategic framework of health promotion comprising 5 basic elements:

1. Promoting public health policy.

2. Creating a supportive environment.

3. Strengthening public participation.

4. Improvement of personal abilities (healthy lifestyle).

5. Reorientation of health services.

Health promotion aims to make people aware of what is harmful to them and what makes them well (based on general education and health awareness, health literacy). And also to make a conscious decision for right activities.

A quantitative European study by BBDO, conducted in 13 European countries, has shown that managing a healthy lifestyle is a major problem of the current lifestyle of Europeans. The study showed that 50% of Europeans are looking for online health information. For most Europeans, health is equivalent to a healthy diet and exercise is the second part of a healthy lifestyle. Young people are more than average (Verhaegen, B. 2011).

As shown by several studies, age has an impact on attitudes and health management. According to Nielsen's worldwide research on generational attitudes in 2015 on a sample of more than 30,000 online consumers in 60 countries across Europe, Latin America, the Middle East, Africa and North America, consumers of all ages are striving to lead healthier lives, and many are doing so by making healthier food choices. More than half of global respondents from every generation say they're willing to pay a premium for foods with health benefits, and younger respondents lead the way. But while certain health attributes like low sodium and low sugar appeal to older consumers, attributes such as organic, gluten free and high protein appeal more to younger respondents (Nielsen, 2015).

A large review done by team around Axel Mie (Mie, A. et al., 2017) regarding impact of organic food and products of organic agriculture on human health summarises, that based on many studies done in this area this food has many positive health effects and prevents form several negative effects of food produced under standard nonorganic conditions.

2 METHODOLOGY

The goal of the paper is to show what is typical for the consumer behaviour of young people associated with a healthy lifestyle and disease prevention.

The research study, whose partial results form the core of the presented paper, was aimed at identifying attitudes and consumer behaviour related to healthy lifestyle and disease prevention.

Quantitative online research was conducted in 2018 among students of the Faculty of Commerce, University of Economics in Bratislava, which represented Generation Y. A total of 108 respondents aged 18-26, of which 31% were men and 69% women. For data analysis, pivot tables with chi- square good match test were used

Because research was exploratory, we were looking for answers to the following research questions:

Q1. What is the consumer behaviour of young people when buying food? Which information is tracked on the packaging? Do they prefer to buy Slovak food products? Do they have preference for organic food?

Q2. What are the attitudes of young people to disease prevention? Do they pay attention to preventive checkups? Do they purchase preventive pharmaceutical products (vitamins, over-the-counter medicines and nutritional supplements)?

Q3. What are the crucial sources of information for young people about healthy lifestyle?

3 RESULTS AND DISCUSSION

3.1 Generation Y and healthy lifestyle

Generation Y (also known as Millennials) was born in the developing world of technology. They grew up in a huge area of smartphones, laptops, tablets and other devices. In terms of health, this generation is eating smarter, less smoking and more moving than previous generations, utilizing various sports and exercise applications (Sachs, G. 2015).

According to the BBDO European study mentioned above, young people are less concerned about their health. 59% of European 18-24 old says they are at ease with themselves when it comes to food. Youngsters are somehow being slacker, not able to judge the importance of

leading a healthy life (yet). 46% of youngsters often skip meals compared to 39% of the total European sample. 89% of youngsters eat fast food, 10% more than the European 18+ sample. Health is clearly not top of mind for youngsters. Only 27% of 18-24 have regular health checks, 54% amongst the 18+ Europeans. Since they experience less health problems at their age, they are also less interested in everything that has to do with health. Only 27% of 18-24 have regular health checks, 54% amongst the 18+ Europeans. Since they experience less health problems at their age, they are also less interested in everything that has to do with health (Verhaegen, B. 2011).

The results of Nielsen's global research (2015) have shown that from generation to generation, Generation Y puts the greatest emphasis on purchasing when deciding to buy. At the same time, the willingness to pay a higher price for "healthier" products with age has been shown to decline. Members of Generation Y are willing to pay a higher price for functional products that reduce any risk or are healthy or are socially / environmentally responsible. Technology is motivated in this area (Johnson, M., 2016).

This generation takes into account the environment and sustainability when it comes to health. They often avoid certain foods because they are unhealthy but also harmful to the environment. They prefer products from farms and businesses that use sustainable environmental practices such as clean energy and recycled packaging. They can prefer local products and food because of a perceived lesser environmental impact. They turn to nature when they are sick, looking for ways to prevent disease. They are open to alternative diseases in the treatment of diseases. They are more likely to use acupuncture, herbal remedies and other prescription drug alternatives. They search for information from multiple sources, not just online and social networks. They often use apps. They want to be in good shape. But they are the biggest stress generation. Most Y generation members live in a world of chronic and disproportionate anxiety. According to the American Psychological Association, these people are experiencing more stress than any other generation. Most of them suffer most from high school students who seem increasingly stressed every year (Chamberts, B., 2016).

According to the reported European study, up to 53% of young people often feel stressed compared to 29% of X generation respondents (Verhaegen, B. 2011).

3.2 Overview of partial research results

The aim of the research study was to discover what is the consumer behaviour of young people associated with a healthy lifestyle and disease prevention. The partial objectives were based on the research questions as seen above.

The first partial objective was to find out what are the buying habits of young people when buying food. Which criteria are used when purchasing food? We were interested if they read the information on the food packaging and what are the crucial information they notice on the packaging. Do young people prefer Slovak food products? How do they evaluate the quality of Slovak food products? What is their attitude towards organic food products and what do they know about them?

The second partial objective was to find out how do young people take care of their health. We examined whether young people go to preventive health checkups and also what are the reasons not to go. It was important to find out the consumer behaviour in prescription-free medicines, vitamins or nutritional supplements. What are the reasons for taking medication without prescription, vitamins and nutritional supplements? Which factors affect young people's decision to buy vitamins and medicines without a prescription? Where do they get information on prescription-free medicines, vitamins and nutritional supplements?

The third partial goal was to find out if they were looking for health impact information and what resources they were using? We wanted to know what information young people are looking for health and what type of advertising they prefer when promoting pharmaceutical products.

Consumer behaviour of young people when buying food products

In looking at the answer to the first research question, we specifically focused on the criteria by which young people decide when choosing food. The most important criteria when deciding to buy food as shown in Figure 1 is for 48% of the total 108 respondents *food quality,* price is important for 60% of young people and less important considered 40% of young people *brand the product* and 32% of the *country of origin.*

Fig. 1 The decisive criteria when buying food
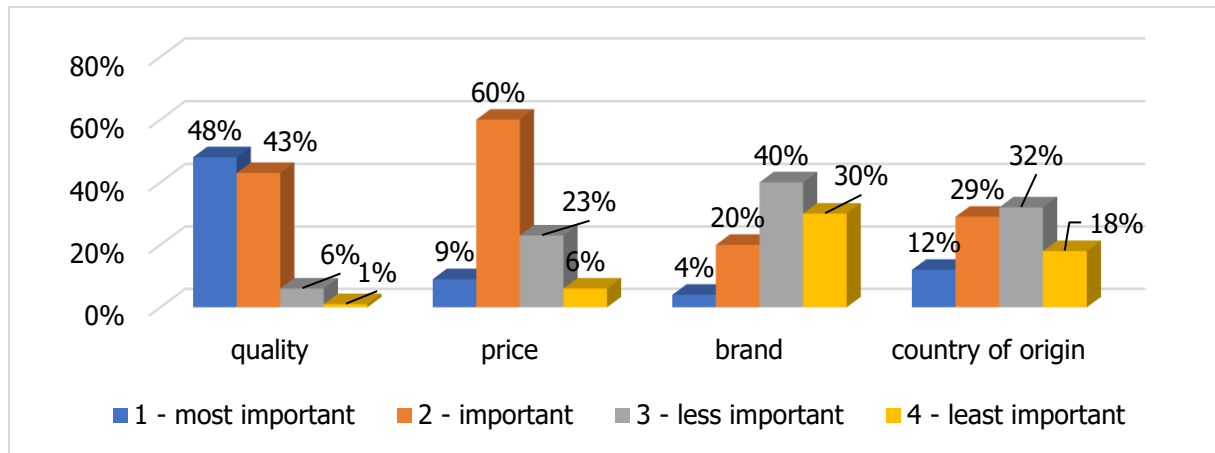
Source: own research

We were interested in how often they track information on the food packaging and what information they are looking for. 45% of young people always monitor information on the food packaging when purchasing.

Fig. 2 Information on the packaging, which are important when buying
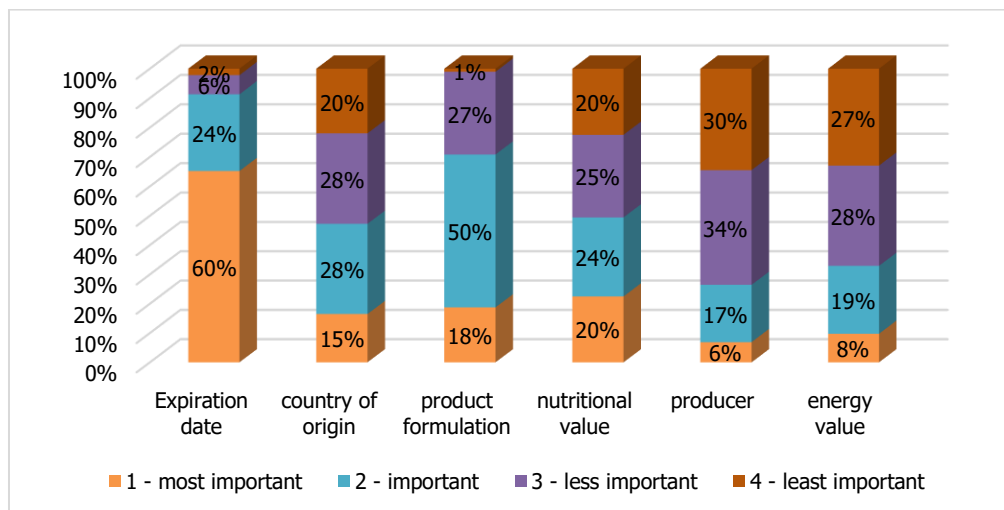
Source: own research

As Figure 2 shows, 83% of respondents look at information mainly on packages of dairy products, eggs, and meat products. 60% of respondents watching on the package expiration date/date of minimum durability, 50% considered important information, what is the composition of the product, 34% of respondents considered less important information about the manufacturer and the country of origin and the least important information to consider energy value of the product.

In research, we have examined whether young people prefer more Slovak food from the point of view of safety even if they have to pay a higher price. Half of the respondents as shown in Figure 3 u prefer certain foods Slovak producers, 23% prefer only Slovak meat products. Only 15% of young people prefer Slovak producers in all kinds of foods. The quality of Slovak foods is estimated by 57% as good, only 12% rated quality as very good. 21% rated it as average.

As we have reported many studies have shown that Generation Y prefer healthy food. Therefore, we asked Slovak university students, what´s their attitude towards organic food in terms of health. 80% of respondents consider organic food to be healthier. Up to 84% of young consumers occasionally carry organic products and are willing to pay for quality food from organic farms or from domestic breeders.

As shown in Figure 4, 44% of young people prefer organic food for the quality of these foods and 38% of respondents for their own will to lead a healthy lifestyle.

Fig. 3 Preference of Slovak food
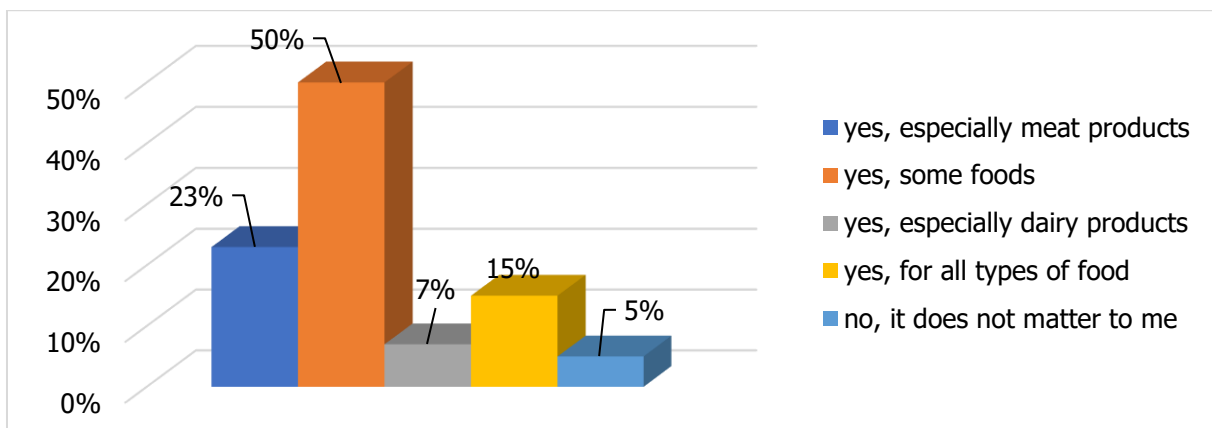
Source: own research

Fig. 4 Reasons for organic food preference
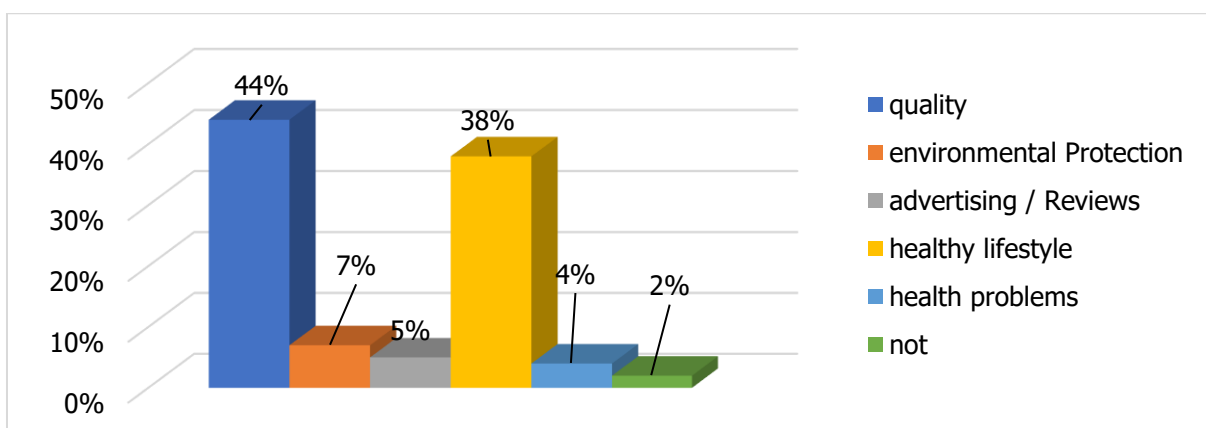
Source: own research

Bio shops or specialized e-shops occasionally attend 42% of respondents. However, they must take the offer or if they have a way around the bio trade. 68% of young consumers are on average satisfied with organic food on the Slovak market. Only 21% of consumers are satisfied with the offer of organic food.

The most frequent source of information on organic food, as shown in Figure 5, is for reviews, blogs, and sites for 36% of respondents. 18% gains information at the point of sale, 15% from friends and acquaintances, and 14% from internet advertising.

Fig. 5   Sources of information on organic food
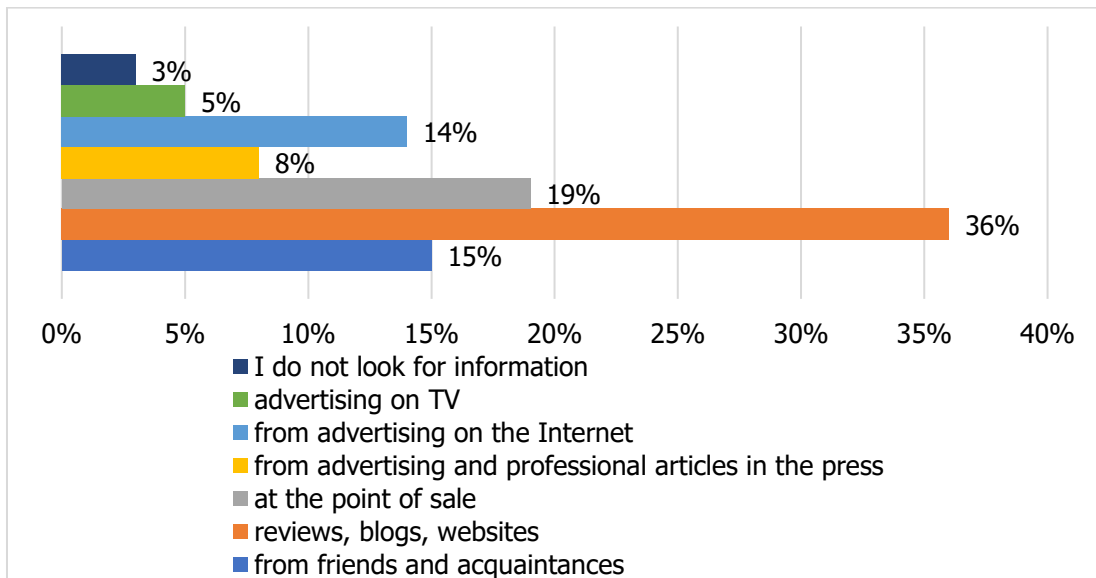
Source: own research

When analyzing Pearson's chi-square test (p=0,013), it was confirmed that there are significant differences, women attending bio shops occasionally compared to men. Figure 6 shows that 47% of women visit bio shops sometimes when they are interested in them and 55% of men do not visit bio shops at all.

Fig. 6   Buying in bio shops in terms of gender
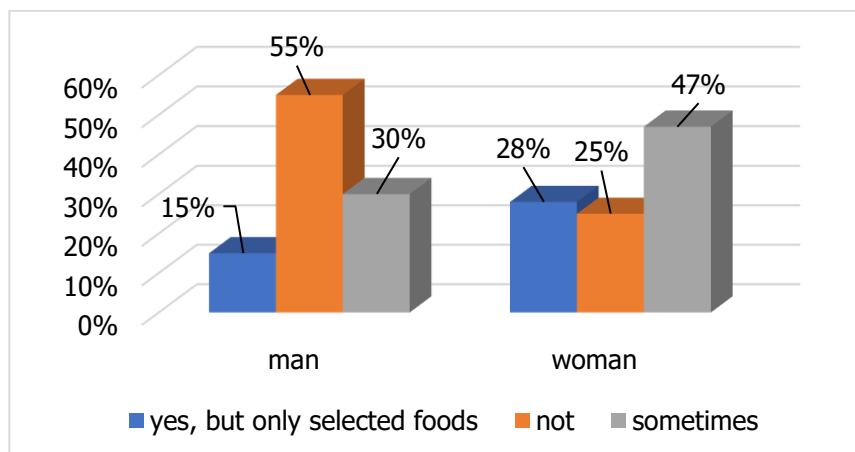
Source: own research   *Chi-square 0,013 n =108*

Attitudes and behaviour of young people in prevention of health

In looking at the answer to the second research question, we found out what young people's attitude to their health is. The results of the research showed that 82% of the total of 108 respondents undergo preventive medical examinations.

Medicines without a prescription, vitamins and nutritional supplements are regularly taken up by 39% of young people and 44% of them are taken during the disease.

Reasons for using non-prescription drugs, vitamins and nutritional supplements are shown in Figure 7. The main reason is 58% of respondents for disease prevention, 31% for disease treatment, 21% for fatigue and exhaustion and the remainder for other drugs.

Fig. 7 Reasons for taking medication without prescription and vitamins
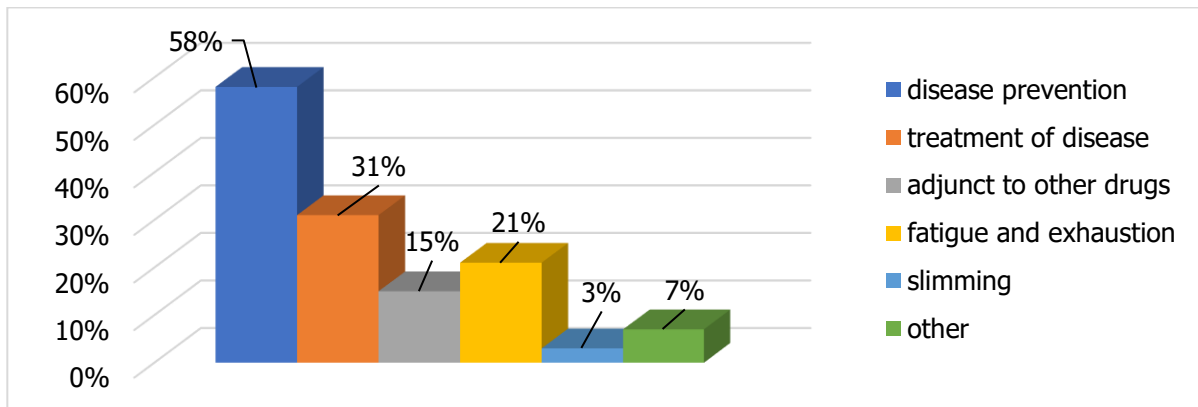
Source: own research

The decision to buy and take medication without a prescription, vitamins and nutritional supplements is shown in Figure 8. 58% of respondents doing it at its own discretion, 30% take advice from the pharmacist, 29% on medical advice, up to 42% makes its decision on the recommendation of friends, only 13% are decided on the basis of reviews on the internet.

Fig. 8 Factors in the decision to purchase and use of drugs without a prescription and vitamins
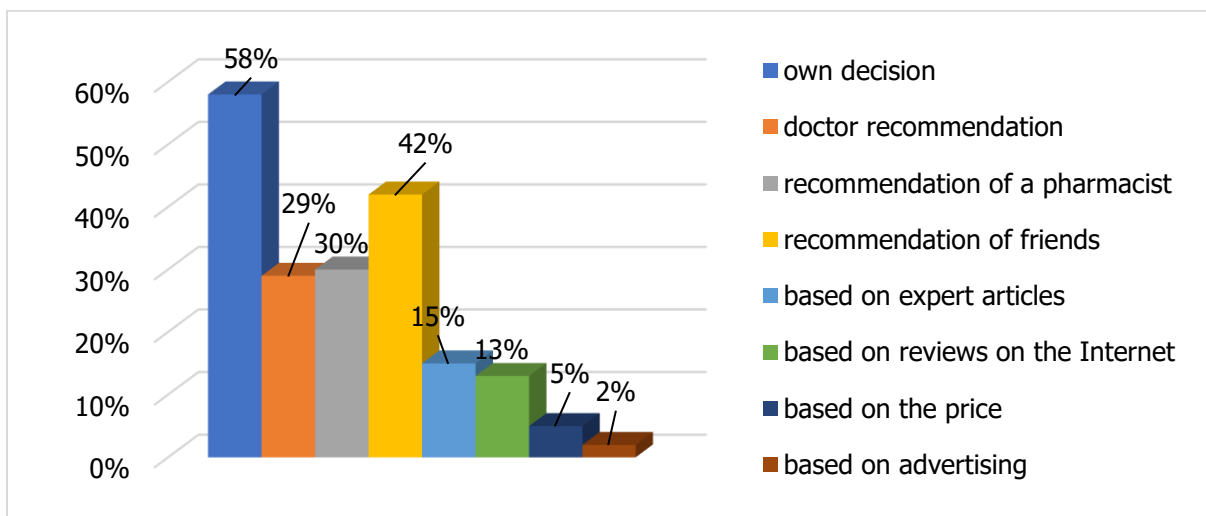
Source: own research

Young people are well informed about non-prescription drugs, vitamins and nutritional supplements according to our research, it 38% of young people said. As shown in Figure 9, 45% of respondents receive information from a pharmacist, 38% from doctors, 42% from the internet and 50% from friends.

Fig. 9 Sources of information on medicines without prescription and vitamins
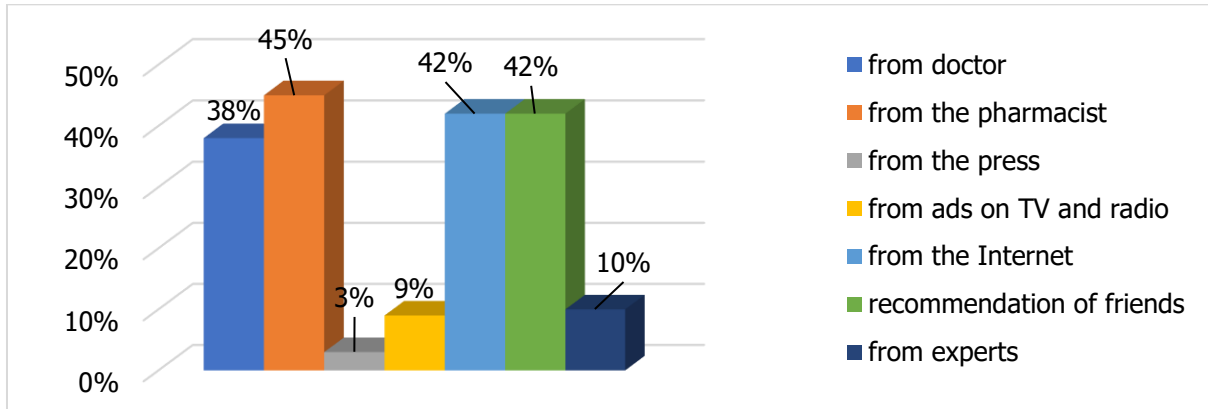
Source: own research

Fig. 10 Place of purchase of pharmaceutical products
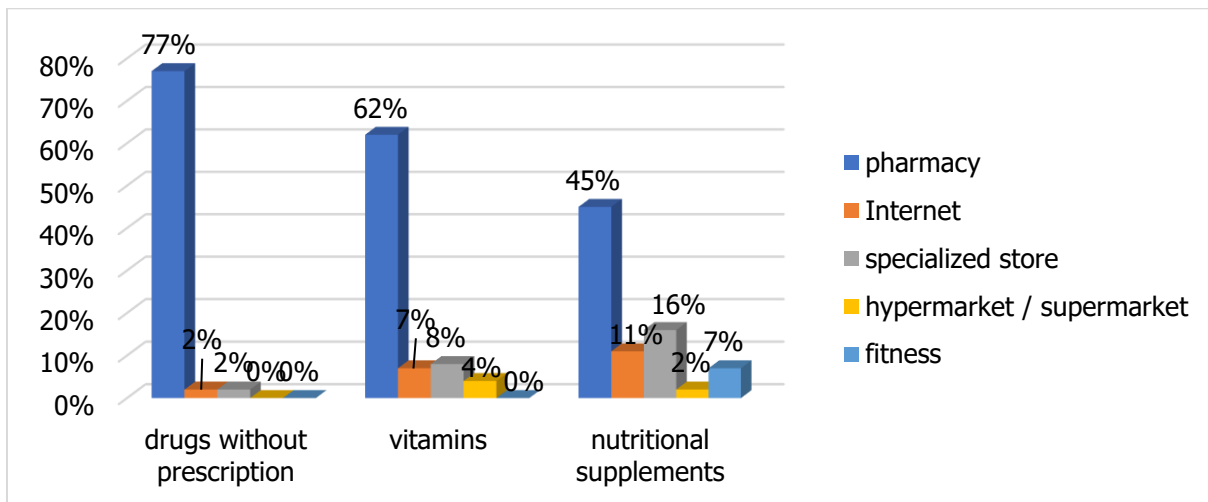
Source: own research

The most common place to buy pharmaceutical products is a pharmacy. As shown in Figure 10, 77% of young people buy non-prescription drugs in a pharmacy, vitamins buy at the pharmacy 62% of respondents, and 45% of them buy in nutritional supplements at the pharmacy. Research has shown that nutritional supplements are purchased by 16% of young people in specialized stores and 11% by internet.

Fig. 11 Shopping behaviour
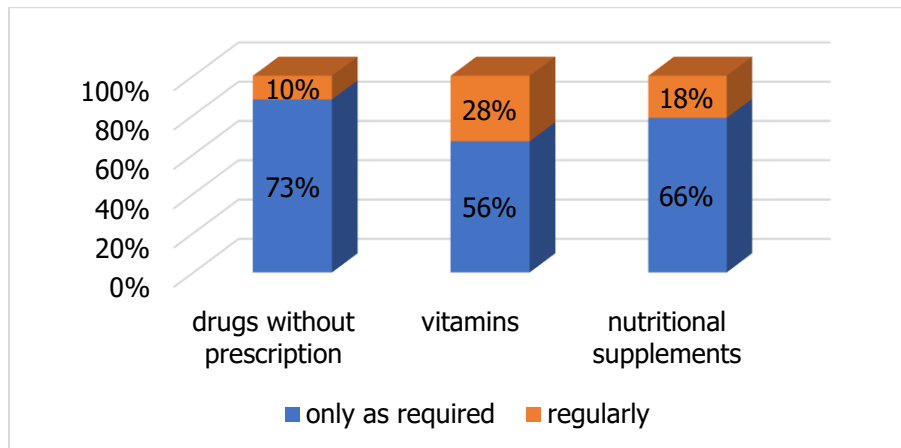
Source: own research

Young people buy prescription-free medicines, vitamins and nutritional supplements just as needed. According to figure 11, 73% of the respondents buy medicines without a prescription only when necessary, 28% of young people regularly buy the vitamins, and 66% of young people shop for nutritional supplements. 56% of respondents invest less than 10 euros per month.

Informing young people about health

Research has provided us with a response to a third research question, where we investigate where health information draws young people. As Figure 12 shows, 68% of respondents said that the primary source of information about health was the Internet, only 16% sought information directly from a doctor.

We were interested in what information was looking for health. 56% sought general information to maintain and improve health, 47% looked for information on a particular disease and 19% sought information on the treatment of a particular disease.

Fig. 12 Sources of health information
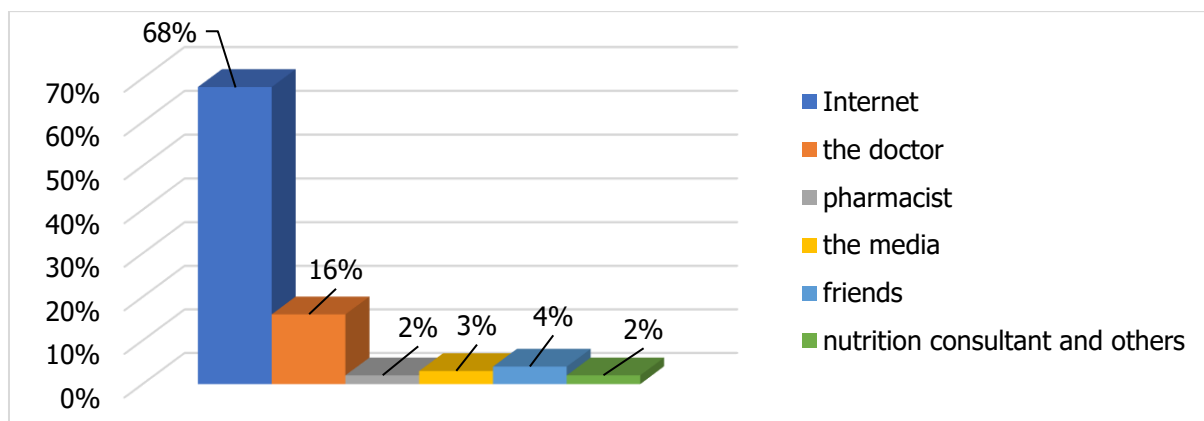
Source: own research

We also found out what kind of advertising for pharmaceutical products suits young people. We can say that no type of ad has been marked by the fact that they are very well suited to

them. As Figure 13 shows, 48% of respondents are particularly satisfied with online advertising, 43% with advertising in magazines and 41% with TV advertising.

Fig. 13 Types of advertising for pharmaceutical products
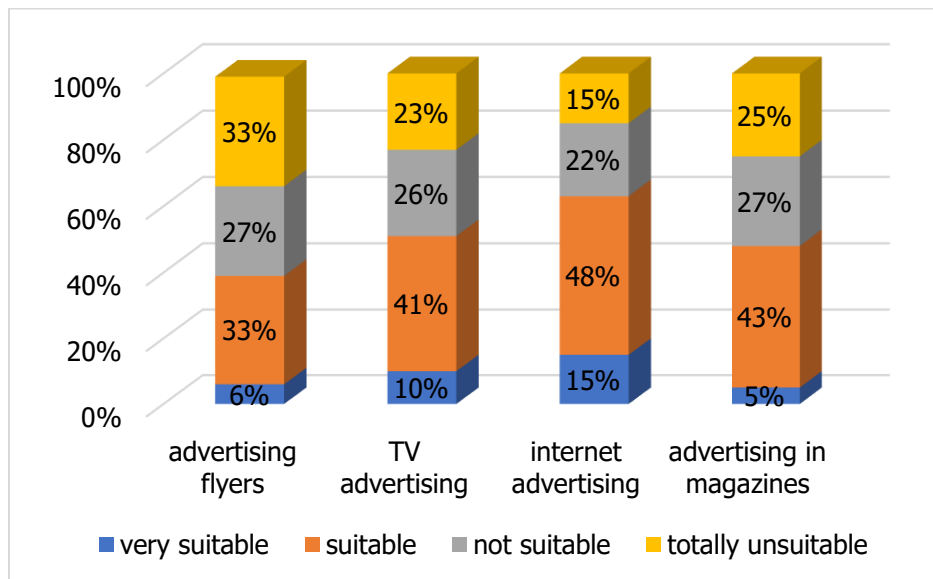
Source: own research

CONCLUSION

The presented research results have shown that university students who have taken part in this survey pay attention to their health and healthy lifestyle. In purchasing decisions, the quality of food is crucial to them. Young people prefer Slovak producers only for some types of food products. According to their opinion the quality of Slovak food is good. Their attitude to organic food is positive. Young people prefer organic food products mainly due to expected higher quality. Many of young respondents prefer organic because they expect it to help them to lead a healthy lifestyle and are therefore they are willing to pay more for quality food from organic farms or from domestic breeders. But they are not very satisfied with the offer of organic food products on the Slovak market. Information about organic food is mainly from reviews, blogs and web sites.

Young people pay attention to their health. Every year they undergo preventive medical examinations. They try to protect their health by taking vitamins. Most often they buy vitamins and medicines without a prescription in pharmacies and only as needed. More than half of young people rely on recommendation from friends and pharmacists when buying vitamins and nutritional supplements Health impact information of the purchased pharmaceutical products among students comes mainly from the Internet. Most of them are interested in general information aimed at maintaining and improving health. Young people do not like advertising. They pay more attention to online advertising.

Based on the results of our survey, we have come to a number of important conclusions. Young consumers do not feel sufficiently informed and educated in the field of organic food products through media or other sources. Based on the findings, we believe that there is a need to increase the literacy of consumers in the field of healthy food, where we also include organic food. A very vulnerable group is children and young people who are subject to various unverified information or misleading advertising. The recent European Commission survey on

eating children in European schools brought shocking insights. The results say that every third child in Europe aged six to nine years is overweight.

In Slovakia the government also started fighting with obesity, by passing the law on the sale of unhealthy food in school buffets. Families, schools, friends, leisure and boarding activities are most active in the youth. Educational institutions, independent organizations, families and society themselves should be more closely involved in the education of young people in the field of nutrition and healthy lifestyles.

ACKNOWLEDGEMENT

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Public Aid and Investment Outlays of Enterprises - Based on the Example of the Regional Aid in Poland

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Abstract: Public aid is an instrument of the structural policy of the EU. This policy comprises all measures and instruments in the domain of economy, law, management and other areas which express certain preferences and which are important for economic entities in the process of shaping and implementing different goals. The overall objective is to increase economic effectiveness and boost growth. The above issues can be reached through investment actions leading to the economic modernization or development of innovation. The basic research task undertaken in the paper is the analysis of the degree of dependency between the amount of the public aid, including the regional one, and the Polish companies' investment value. These elements may provide the fundamental conclusion of observation and research having been carried out in the framework of the public aid policy. However, the hypotheses verification concerning a positive influence of the public aid, including the regional one, on companies' investment has been accepted as a research goal. The statistical analysis has shown the existence of a correlation between the obtained public support and investment outlays. This particularly applies to Polish large-sized companies (the relationship was confirmed between the public aid and investment outlays of large companies (Hypothesis 1), but not between the regional aid and investment outlays (Hypothesis 2).

Keywords: public aid, regional aid, investments of enterprises, investment outlays

JEL Classification codes: F35, L26, R11

INTRODUCTION

The public aid involves undertaking actions by the state authorities or implementing financial ventures from the state resources that economically support activities of certain enterprises, sectors of the economy, regions or production of specific products. The institution of the public aid for entrepreneurs has been functioning in Polish legal framework since establishing the Europe Agreement in 1991 (Official Journal of The Republic of Poland, Annex to No. 11, item 38 of 27th January 1994), which imposed an obligation to align the national law with the law of the European Union, for example, through the introduction of regulations concerning the admissibility of the public aid as well as appropriate procedures in the scope of supervising the indicated aid.

However, the regional aid is considered as a special type of the public aid. The regional aid is defined as the one whose objective is the development of regions where living standards are very low or regions where the level of unemployment is significant. Very often it is also the aid intended for promoting projects having the pan-European importance or the aid which is focused on preventing serious disturbances in the economy of a member country. The regional aid can also be goal-oriented, for example, the development of small and medium enterprises. The regional aid is becoming effective only when it is implemented economically and proportionally or when it is focused on the less privileged regions. In particular the acceptable

limits of this aid should reflect the importance of problems that influence the development of supported regions.

Taking into consideration the criteria of public management, the process of providing the public aid, including the regional aid, can be referred to the entrepreneurs' support policy processes which are composed of a number of stages. Actual economic problem solving, which is expressed through general expenses and benefits resulting from the public aid policy, starts from the identification of a problem requiring the public intervention. The next stages are connected with defining possible solutions and public policy supporting instruments as well as the selection of one of the aid alternatives (decision-making process). The finishing stage concerns the implementation and assessment of the extent to which the public aid policy granted to entrepreneurs provides desired effects.

Compatibility of the public aid with the Treaty on the Functioning of the European Union (TFUE, OJ C 83, 30.3.2010) is mainly controlled at the European Union level by the European Commission. This Commission's entitlements in this scope are exclusive. That means that no other authority, especially the state, has powers to evaluate the legality of the aid in connection with acquis communautaire (Nicolaides, 2004; Nicolaides et al., 2005). However, the national authorities should assess whether the aid is granted in accordance with a given country domestic law and what effects can this aid provide to both entrepreneurs and the economy. In this context the public aid policy evaluation and properly selected evaluation criteria have a significant meaning.

In the context of the above it has been decided that the paper scientific assumptions will be connected firstly with attempting to expand academic achievements in the scope of research on the public aid significance, including the regional aid, within the process of companies' development and secondly with indicating the criteria (indicators) of the aid monitoring in the context of effects influencing the companies' development. The analysis of the degree of dependence between the public and regional aid amount and a value of Polish companies' investments, which may provide the fundamental conclusion of observation and research having been carried out in the framework of the public aid policy, has been regarded as the main research task. However, the hypotheses verification concerning a positive influence of the public aid, including the regional one, on companies' investment has been accepted as a research goal.

1 LITERATURE REVIEW

Investing is a key and probably the most crucial component of the development policy of every country. It refers to both the macroeconomic level – the economy and its separate sectors and the microeconomic level – specific companies. Goals and investment activity objectives are the key issues necessary to be defined by every business entity that strives to the economic growth.

Conditions and factors shaping changes in the size and structure of investment outlays as well as their economic results are strongly correlated with conditions and factors of the companies' development. They, in turns, are featured by the integrity of growth links (quantitative changes) with structural changes of obtained results. Increasing or decreasing the dynamics of the investments growth cause the increase or decrease of the dynamics (intensity) of structural transformations as well as their targeting (Kolegowicz, 2017). On the other hand, the implementation of selected objectives and the direction of structural transformations require the selection of the size and structure of investment outlays. These investments may ensure these objectives implementation taking into consideration functions and tasks of the investment policy. All of these consist of the following trends (Winiarski, 2006):

- interaction aiming at regulating the general size of investment outlays in the economy. The interaction influences the economic situation, counteracts the recession (preventing the unemployment, decreasing the level of investments); stimulates growth; eliminates dangers connected with ruining the economic situation,
- shaping the structure of an investment supporting structural transformations, which are considered as the ones that are desirable in a given country development conditions,
- interactions aiming at increasing the effectiveness of an economic investment.

The superior goal of a substantial part of material investments is the improvement of economic effectiveness as well as strengthening a company position on the market, among others, by (Bijańska & Wodarski, 2014): creation and increase the assets, modernization and high productivity of assets that must induce the constantly increasing turnover, increase of production capacity, production effectiveness and bigger profits.

Taking into consideration the definition of an investment as well as many other similar methods of understanding this notion that are presented in specialized literature, it is possible to conclude that these definitions gist is expressed in investing - in the increase of investment outlays in order to achieve economic results in the current period or in the future (Levy & Sarnat, 1994). Particular importance of financing and its impact on investment results come from the well understood investment definition. Polish entrepreneurs have the opportunity to obtain the investment activity support from public resources under the condition that their investment objective is clearly specified and justified.

The state's support, or defining it in a more precise way - providing the public aid to entrepreneurs, – should be considered as one of the forms of the state's interference in economic processes that occur in the economy. It is the basic instrument used by the state in order to influence the market economy. According to the principles of granting the public aid, the procedures and forms are regulated by separate provisions that should be understood as all provisions of national law as well as the law of European Union whose provisions sometimes present diverse legal nature (Arvan & Nickerson,2006; Burnside & Dollar, 2000; Collier& Hoeffler, 2004).

In the context of the public aid, companies' investment outlays have a significant meaning. The investment outlays belong to the main expenditures of business entities provided for creating new manufacturing capacity: acquisition of capital goods (constructing new or expanding the existing production plants, purchasing machines, devices, providing the increase of resources), which will serve the production of other goods and services. There exists another type of investments which do not aim at either increasing the manufacturing capacity or increasing revenues in the future. They preserve various specific needs of investors – business entities who usually invest in obtaining basic needs.

However, in connection with issues related to the public aid, it should be indicated that although the public aid has been discussed a lot about (extensive materials resulting from social consultations are available on the European Commission webpage), presenting practical aspects and trends connected with providing this kind of support is still a very interesting issue. The paper empirical analysis and its conclusions enrich the achievements of literature within the mentioned scope (Bernini & Pellergini, 2011; Radas, et al., 2015). The paper broadens opinions and, in particular, it refers to issues presented in materials concerning the public aid (Ramboer & Reynaert, 2018; Combes & Ypersele, 2013; Kerber, 2011) and also in descriptions referring to the evidence-based policy making (Kubera, 2017). Conclusions and trends presented in this paper can likewise enrich the literature achievements referring to the criteria of policy evaluation (Kubera, 2013) or to the company investment decisions (Kociubowski, 2012).

2 METHODOLOGY

In order to provide the analysis of changes in the size and pace of investment outlays compared to the size and pace of the granted public aid, the financial data of 2004-2016 were used. The analysis of trends occurring among variables as well as the research of linear correlation among the identified variables let verify the mentioned theses. On the basis of those theses it was possible to formulate general recommendations for evaluations of the regional aid that would indicate to what extent the public support determined the increase of companies' investment outlays.

The group of non-financial and various size enterprises divided into three groups was analyzed according to the pace of changes in investment outlays and according to the granted public aid. Relations between the researched variables were also examined. The size of a company was established with reference to the number of employees. In particular small enterprises (employing to 49 workers), medium enterprises (50-249 workers) and large-sized enterprises (more than 249 workers) were distinguished. Companies running investment activities aiming at improving their competitiveness, increasing productivity and employment were taken into consideration. Statistical data originated from the GUS – Polish Central Statistical Office reports (business entities' reports F-01 and F-02). Data concerning the public aid, including the regional aid, were obtained from Reports on the public aid granted to entrepreneurs in Poland in years 2004-2017.

Transformations occurring in the European Union implicate changes in companies functioning on the Polish market. In order to maintain the appropriate competition status, entrepreneurs are forced to invest both in modern technologies and in highly qualified human resources. Investments are becoming a factor of broadly understood multi-year enterprise development strategy that has to respond to constant changes on the market. Reports referring to the public aid prepared by the Office for Competition and Consumer Protection in Poland show that it was mainly intended for the support of investments. More than a half of its value was transferred to big companies. In the case of the regional aid, the objective was similar but the main beneficiaries were micro, small and medium enterprises. The following research hypotheses have been presented in the paper:

H1: There exists a positive dependence between the public aid value and the size of companies' capital expenditures.

H2: There exists a positive dependence between the regional aid value and the size of companies' capital expenditures.

The public aid was considered as the state aid defined in accordance with the article 107, item 1 (TFUE) as the advantage granted by public authorities to business entities and at the same time complying with the following conditions:

1. The support measure was granted by the state or through taking advantage of the state resources (it referred to benefits granted directly by the state, including central, regional and local institutions of the public administration, as well as to benefits provided by various public and private units controlled by the state or entitled to manage the public means).

2. The support measure constituted the economic advantage for a beneficiary.

3. The support measure was selective, that meant that it favored companies or production of some products or services. It applied objective, subjective or territorial criteria (this selectivity might result from provisions of the applicable law or it could be the result of a discretionary power of entitled entities).

4. The support measure influenced both the competition as well as a trade exchange among member countries.

However, the regional aid was considered as an aid that according to the article 107, item 3, point a) and c) (TFUE) was treated as compatible with the home market and intended for the development of the economic growth of Polish regions being in disadvantaged economic position.

In order to verify the following research hypotheses, the empirical data concerning the value of investment expenditures have been collected on the basis of GUS – Polish Central Statistical Office data of the years 2004-2017.

In order to analyze the collected data, statistical methods have been implemented, especially the Pearson correlation coefficient calculated according to the following pattern (1):

$r_{12} = \Sigma(Y_{i1} - Y\ average_1) * (Y_{i2} - Y\ average_2) / [\Sigma\ (Y_{i1} - Y\ average_1)^2 * \Sigma(Y_{i2} - Y\ average_2)^2]^{(1/2)}$

whereas two levels of statistical significance have been adopted: p V 0,05 and p V= 0,1.

The paper layout and content have been subordinated to the research problems. The empirical part constitutes the synthetic analysis of statistical data. Research methods based on the critical analysis of national and foreign literature as well as the desk research method have been used to achieve the objectives mentioned in the paper.

3 RESULTS AND DISCUSSION

3.1 Investment activity of companies in the context of the public and regional aid – results of statistical analysis

The analysis of the pace of changes in investment outlays and the size of the granted public aid as well as relations between the researched variables in years 2004-2016 have proved the occurrence of moderate or even weak relationships among subjective variables (confer Fig 1).

Fig. 1 Pace of changes in the public aid and in companies' investment outlays in Poland in years 2004-2016 (former year = 100 in %)
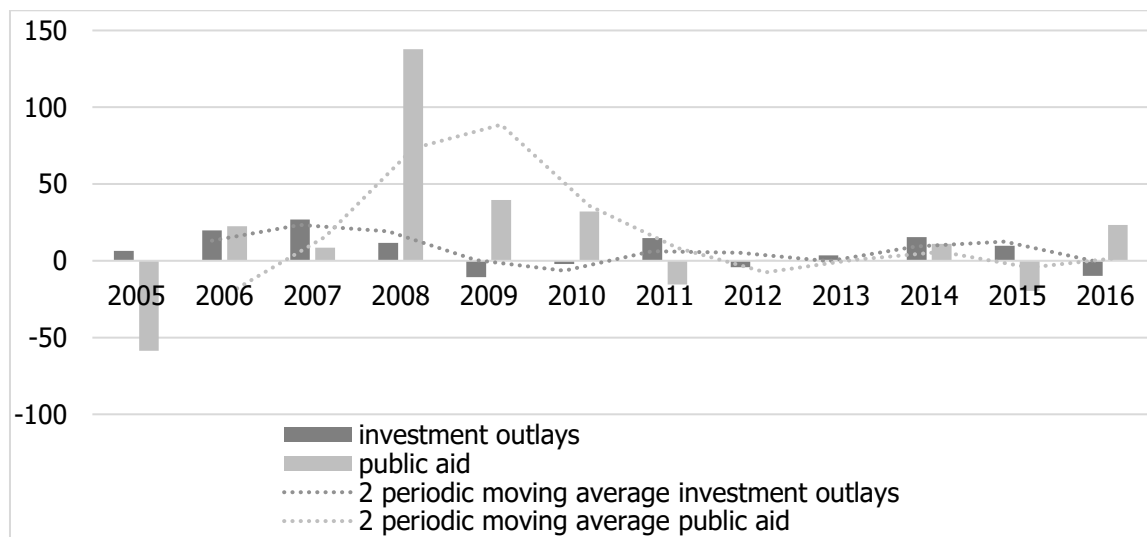
Source: own study on the basis of the data of GUS – Polish Central Statistical Office and data of UOKiK - Office for Competition and Consumer Protection

The comparative analysis of the pace of changes in companies' investment outlays and the pace of granting the public aid generally present the occurrence of correlated periods of

increase (few) and periods of decrease of researched measures (more frequent). Cycles of companies' investment outlays generally overlap with cycles of investment outlays borne by small, medium and large-sized enterprises (confer Fig. 2). It has resulted from a conducted observation that in total the dynamics of providing the public aid as well as the annual-average pace of changes in the researched period were determined by big enterprises (confer Fig. 2).

Fig. 2 Pace of changes in the public aid granted to small, medium and large-sized enterprises and changes in companies' investment outlays in connection with the size of these enterprises in Poland in years 2004-2016 (former year = 100 in %)
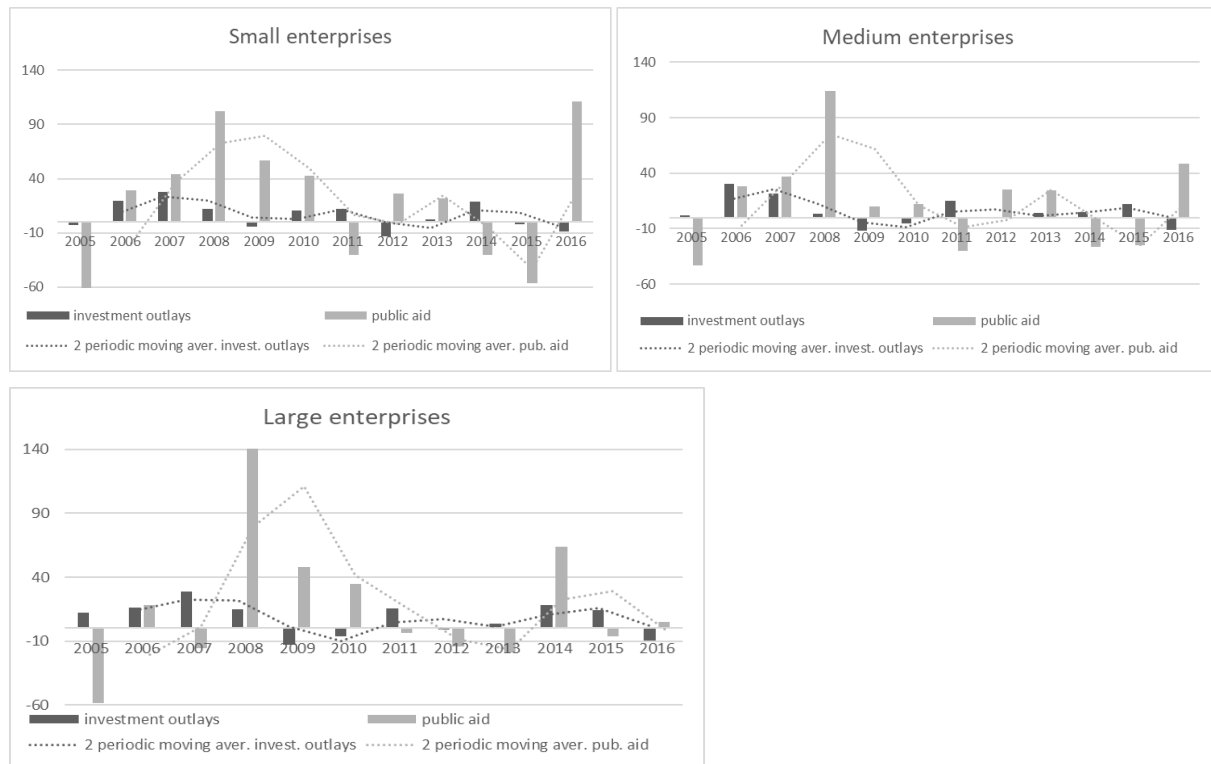
Source: own study on the basis of the data of GUS – Polish Central Statistical Office and data of UOKiK - Office for Competition and Consumer Protection

Similar findings have been provided by the analysis of the pace of changes in the regional aid. The regional aid is just a special example of the public aid because it is intended for the support of the development of the least developed regions and it is implemented through: supporting investments and creating new workplaces, supporting the new small enterprises or, in exceptional cases, granting the operational aid. The regional aid promotes the expansion and diversification of business activities of companies that operate in regions, especially through encouraging those companies to open new plants there.

In the framework of conducted observations, it is possible to state that the significance of the regional aid in Poland in former years has increased and has been proportional to the increasing amount of absorbed financial resources from the European Union budget (with the exception of the start of financial perspectives. The example indicates the years 2007, 2015 when preparations for the absorption and procedures of signing agreements with beneficiaries were carried out, confer Fig. 3 and 4).

Fig. 3 Pace of changes in the regional aid and in companies' investment outlays in Poland in years 2004-2016 (former year = 100, in %)
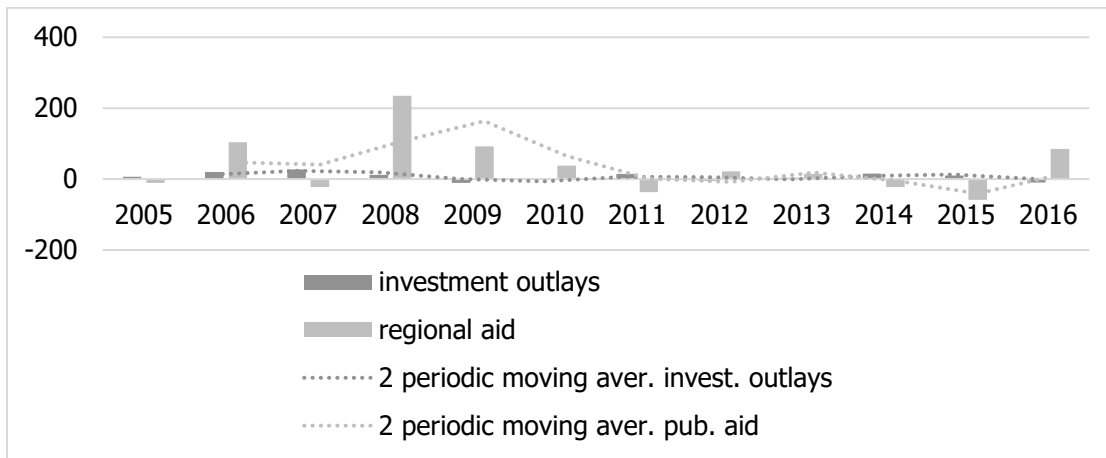
Source: own study on the basis of the data of GUS – Polish Central Statistical Office and data of UOKiK - Office for Competition and Consumer Protection

Fig. 4 Total share of the regional aid in the value of the public aid in Polnad in years 2004-2016 (%)
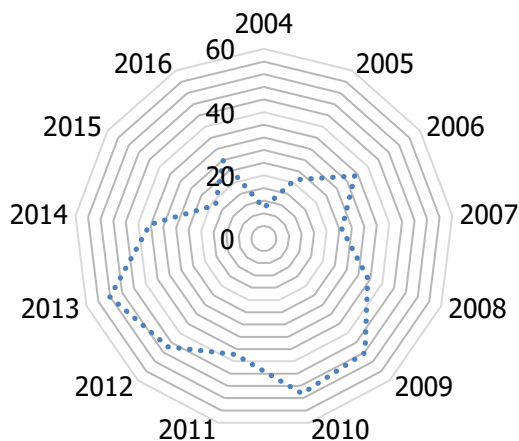
Source: own study on the basis of the data of GUS – Polish Central Statistical Office and data of UOKiK - Office for Competition and Consumer Protection

In order to research the significance of the public aid granted in the framework of the public and regional aids intended for financing the investment outlays of small, medium and large-sized enterprises, the linear regression analysis has been applied (confer Tab.1).

Tab. 1 Coefficient of correlation and determination of a dependence of a growth rate of companies' investment outlays and the coefficient of the size of the granted public aid, including the regional aid, in Poland in years 2004-2016, according to the size of enterprises

Coefficients	Determination (R^2)	Correlation(r_{xy})
Investment outlays vs. public aid in small, medium and large-sized enterprises in 2004-2016		

Coefficients	Determination (R^2)	Correlation(r_{xy})
Total	0,48	0,69
Small	0,35	0,59
Medium	0,29	0,54
Large	0,52	0,72
Investment outlays vs. regional aid in years 2004-2016		
Total	0,20	0,44

Source: own study on the basis of the data of GUS – Polish Central Statistical Office and data of UOKiK - Office for Competition and Consumer Protection

Altogether for companies, the R2=0,48 determination coefficient indicates the moderate adjustment of the regression equation presenting the pace of changes of investment outlays and resulting from the granted public aid of researched companies. The value of the Pearson correlation coefficient (rxy=0,69) indicates quite high interdependence among researched variables. The determination coefficient informs that in 48% the changeability at the level of companies' investment outlays in Poland can be explained by changes within the granted by the state public aid, but in 52% changes are induced by other factors.

Correlation coefficients for small, medium and large-sized entities take also positive values and they fluctuate within the following limits: |0,5–0,7|, which is considered as a strong variability in many research (Wach, 2008). The highest Pearson correlation coefficient equals rxy=0,72 and it refers to large-sized companies.

In the case of the regional aid, although its significance in last years has increased in connection with the general value of the public aid, it is observed that for changes at the level of companies' investment outlays, the regional aid does not play a major role. In the case of the regional aid, the R2 determination coefficient indicates the low level of adjustment R2=0,20 and a moderate level of correlation, which is shaped at the level of rxy=0,44. The result of the linear regression analysis does not let state that there is a significant dependence between the change in investment outlays and the change in the regional aid granted to entrepreneurs.

3.2 Evaluation process of the regional aid in the context of the assessment of the influence of the public aid on companies development

The public aid ceases to be a tool of the implementation of short-term political goals. It starts to be an aid stimulating the economic growth. Changes occur under the influence of modern public management postulates and under the pressure of more economic expenditures of limited public resources as well as under the European Union membership procedures, which imposes a number of control measures on the national system of the public aid (Kubera, 2013).

For the purpose of the regional aid evaluation, apart from statistical methods, the detailed criteria should be applied in order to assess the public aid instruments and they are as follows:

1. Usefulness/relevance – assumed goals of public interventions and all real effects caused by these interventions (both those planned and not planned - called secondary ones), in relation to the support beneficiary needs, should be assessed in the framework of this criterion,

2. Effectiveness – the degree of assumed goals implementation (this includes also the degree at which the mentioned above methods have been applied); institutions appointed to the implementation of objectives and the influence of external factors that contributed to the achievement of final effects resulting from the public aid should be assessed in the framework of this criterion,

3. Efficiency – relation between outlays, expenditures, resources (financial, human and administrative) and achieved effects of intervention within the regional aid should be assessed in the framework of this criterion.

However, in order to cause that the effectiveness and efficiency assessment of the regional aid can, from the economical and organizational point of view, contribute to the process of introducing more effective solutions in the public sector, the cause and effect relationship between the undertaken intervention and the intervention's impact on the companies' development should be established. In this case, testing and assessing the effects of the regional aid with the application of such measures (results coefficients) that can indicate the proportionality of intervention (difference at the levels of the intervention net effects depending on the intensity and structure of the aid provided to companies) as well as the direct and indirect effects of granting the regional aid to companies can be recommended.

Tab. 2 Range of more important effects of the regional aid affecting the companies' development in a region – indicators

Direct effects	Indirect effects
Financial indicators: sales revenues, profit/loss, profitability of assets, profitability of sales, productivity of assets, Employment increase, Number of business innovative entities, Value of total expenditures for innovations, Companies survival rate, Number of initiatives undertaken in the framework of cooperation with institutions of business external environment.	Financial factors of companies that are not included in the support policy: revenues from sales, profit/loss, profitability of assets, profitability of sales, productivity of assets, Employment increase in a region, Number of innovative business entities in a region, Value of total expenditures for innovations of companies that are not included in the support policy, Survival rate of companies that are not included in the support policy, Number of new external investors running business in a region.

Source: own study

CONCLUSION

While assessing the utility, results and effects of the regional aid for the companies' development, it should be remembered that the regional aid is an important element of the social and economic policy. An advantage obtained by a beneficiary has a form of a positive transfer of public resources (for example, in the form of grants, interest rate subsidies to bank loans or loans), as well as a negative form when the state resigns from its revenues (for example through tax exemptions or remissions). While assessing the regional aid, it is necessary to acknowledge the opinion that "taking advantage of such a form of an aid should have an essential impact on the improvement of companies functioning conditions, including the ability to invest". However, presented in the paper observations indicate that the mentioned statement is not quite correct.

The statistical analysis provided in the paper has let verify the research hypotheses:

H1: There exists a positive dependence between the value of the public aid and the amount of companies' investment outlays.

H2: There exists a positive dependence between the value of the regional aid and the amount of companies' investment outlays.

The first hypothesis has been confirmed, particularly with reference to large companies. In the case of the second hypothesis, it does not provide any basis to state about the obvious and crucial impact of the regional aid on the amount of investment outlays.

Concluding, it should be emphasized that the described above research verifies the frequently repeated opinion about the crucial dependence between aids granted by the public authorities in the framework of the regional aid. The research also indicates the necessity of applying other additional measures that would deepen the evaluation assessment (for example: indicators of regional aid in influencing the development of enterprises).

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Impact of Transformational Processes on Human Capital Development: A Case Study of Georgia and Azerbaijan

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Abstract: The basis of the fourth industrial revolution is the knowledge economy, in which the level and pace of development of the economies of all countries of the world depends on the quality of human capital. The purpose of this work is to show the results of economic transformation of Georgia and Azerbaijan, to study the opportunities of the knowledge economy as the basis for the human resources development in these countries. Based on this goal, the work presents the post-Soviet development of Georgia and Azerbaijan, shows the difficulties of transformation processes, the trends of their economic cooperation, analyzes the factors affecting the sustainable development, features of the knowledge economy in the framework of transforming systems of economic relations, role of education as a basis for the development of human capital.

INTRODUCTION

The current trend of global technological development is the fourth industrial revolution - Industry 4.0. "In the first half of the twentieth century, it was replaced by the" service ", it has been replaced by the" manufacturing process" (Kozmetzky, 1997). In this regard, the level and pace of economic development of all countries of the world increasingly depend on the degree of science and education development, on the transition to the knowledge economy, which is considered the highest stage in the development of a post-industrial economy. The knowledge economy is characterized by large scale and high rates of innovative transformations implementation. In this connection, the terms "knowledge economy" and "innovative economy" are often used interchangeably. However, the knowledge economy is the highest stage in the development of an innovative economy. In an innovative economy intellectual labor is of prime importance - labor in the form of human capital.

Currently, the priority direction of the economic policy of many countries is the transition to a knowledge economy. This issue is relevant for Georgia and Azerbaijan, which after the restoration of state independence (1991) turned out to be at the most difficult stage of its historical development. The transformation of society, the construction of new state and economic structures, the transition to market relations in both countries took place against the backdrop of political and economic crises, a sharp decline in all macroeconomic indicators.

Both countries faced a number of objective problems, including the following: breaking traditional production relations with the former Soviet republics, strong dependence on imports, little integration with the global economy, weak intersectoral economic integration within the country, low consumer demand for goods and services in the domestic market (small economy), etc.

As a result of market reforms, Georgia and Azerbaijan have achieved some success in economic development, the living standards of the population have increased, active cooperation has begun with many countries of the world in political, economic, cultural and other areas, but there are still serious economic problems in both countries and state structures and institutions are still distinguished by poor management. Solving these problems requires an innovative, human potential. In this regard, the purpose of this work is to show the results of the political and economic transformation of Georgia and Azerbaijan, to study the possibilities of the knowledge economy, as the basis for the development of human resources in these countries.

1 LITERATURE REVIEW

The modern economy based on knowledge. It should be noted that knowledge has always been an important component of economic development. In the XVII century W. Petty put forward the idea of paramount value of labor skills of the population in the national wealth of the country. Adam Smith developed this idea to include knowledge and skills in the basic capital of the company along with the machine and the ground. Knowledge, as embodied in human beings (as "human capital"-HC) and in technology, has always been central to economic development. But only over the last few years has its relative importance been recognized, just as that importance is growing.D. Ricardo noted the need and the role of human education, the population in the economic growth of the country.

The theory of human capital as an independent direction of economic analysis took shape at the turn of the 50-60-ies of the twentieth century. The founders of this theory are Nobel Prize laureates T. Schultz and G. Becker. In their works (Schultz 1961, 1971, 1972, Becker 1964, 1993, 1975), the expenses of an individual for the acquisition of knowledge and skills are considered as investments, the profit from which increases his income during the individual's life. T. Schultz proposed that HC consisted of the «knowledge, skills and abilities of the people employed in an organization» (Schultz 1961). In 1981, Schultz revamped this definition and defined HC as: "…all human abilities to be either innate or acquired. Attributes … which are valuable and can be augmented by appropriate investment will be human capital" (Schultz 1981).G. S. Becker defined human capital as "activities that influence future monetary and psychic income by increasing resources in people" and its main forms were schooling and on-the-job training, although he also considered medical care, migration, and searching for information about prices and incomes (Becker 1994).

Many researchers present that accumulation of one's human capital on education and training investment largely affects the growth of an individual' wage, firms' productivity, and national economy. Lepak& Snell show that firm's core competences or competitive advantage is induced by the investment of human capital entailed with value creating potential (Kwon, Dae-Bong, 2009).

A. Marshall (1890) considered knowledge as an essential factor in entrepreneurial activities. He referred to industrial training as "a national investment". Later N. Kondratiev, formulated a theory of large cycles conjuncture, tied the transition to a new cycle with a wave of inventions and innovations (Barnett 1998). K. Sveiby (1989, 2012) estimated the economic processes in terms of knowledge. The importance of knowledge for economic development was analyzed by M. Boisot (1999), V. Lundvall (2010), and many others. They note that in the knowledge economy, particular attention should be paid to human resources.

Arthur Madison (1991) found that the higher is share of educated people in the country's population, the higher will be rates of economic growth. He also deduced dependence, according to which an increase in spending on education by 1% leads to an increase in GDP by 0.35%. If in a particular country the average length of studies is extended by a year, its GDP will increase up to 3-6%.

At the present stage, the value of knowledge has increased even more. This effect is explained by the following trends: technological globalization and increasing role of human capital, increase innovation, as an organized activity, appearance of "New economy" based on the revolution of information and communication technologies, etc.

2 METHODOLOGY

Theoretical and methodological basis of the work are principles of scientific objectivity and historicism. For research purposes methods of analysis, synthesis, statistical, comparison, discussions and collection of facts. The Global Competitiveness Index, The Bertelsmann Transformation Index (BTI), Ease of Doing Business Ranking are used to characterize the transformation processes and compare the economic development of Georgia and Azerbaijan The assessment of the level of human capital development in Georgia and Azerbaijan was carried out using The Global Innovation Index.

3 RESULTS AND DISCUSSION

3.1 Georgia and Azerbaijan as strategic partners

Cooperation between Georgia and Azerbaijan has a long history, but after the collapse of the Soviet Union, it moved to a new stage of its historical development. Diplomatic relations between Georgia and Azerbaijan were established on November 18, 1992. After that, they regard each other as strategic partners and allies. Their bilateral relations are built on the basis of a market economy and a liberal foreign policy, in which the main place is given to observance of the principles of equality, good neighborliness, mutual respect and mutual understanding (Mammadova 2009). It should be noted that Georgia and Azerbaijan are not competing countries. They complement each other, which contributes to their successful cooperation both at the regional and global levels. In turn, good neighborly and friendly relations, mutual understanding and mutual support ensures the sustainable development of both countries (Korganashvili 2018).

In recent years, cooperation between Georgia and Azerbaijan has been developing dynamically through economic growth and sustainable development in various fields. Azerbaijan is in the first place in terms of investments made in Georgia. In 2017, their volume amounted to $ 465.0 million, which is 83.2% more than in the previous year and 5.5 times - in 2013. For 5 years, Azerbaijan has invested $ 2030.2 million in Georgia - 25.5% of all FDI of Georgia. In 2017, Azerbaijan ranks fourth among the main trade partners of Georgia in terms of turnover. It accounts for 7.7% of foreign trade turnover (USD 825.9 million), 9.9% of exports (USD 272.2 million) and 7.0% of imports (USD 553.7 million) of the country. The highest indicator of Georgia's exports to Azerbaijan was in 2013 - USD 709.9 million. Until 2017, there is a tendency to reduce the export of Georgia to Azerbaijan, but in 2017 compared to 2016, it increased by 78.6%. In turn, the highest indicator of Georgia's imports from Azerbaijan in 2012 was USD 703.8 million (Geostat). Since July 10, 1996, the Agreement on Free Trade between the Government of Georgia and the Government of Azerbaijan has been in force.

Georgia and Azerbaijan are small countries, so their role in the global economy is insignificant. In 2017, Georgia's share in world GDP was 0.03%, Azerbaijan - 0.14% (IMF). However, they occupy an important geopolitical and geostrategic position in the region. They are located on the border of the pan-European security space. The interests of Russia and the United States, as well as other regional and non-regional states, overlap here. Georgia and Azerbaijan have extremely important advantages of the transit hub of Central Asia, and this can contribute to or hinder the development of communications between the West and the East. Azerbaijan has reserves of oil and gas, for the transportation of which pipelines running through Georgia are used: the Baku-Tbilisi-Ceyhan and Baku-Tbilisi-Supsa pipelines, the Baku-Tbilisi-Erzurum gas pipeline. Both countries are participants of the TRACECA (Transport Corridor Europe Caucasus Asia) and INOGATE (Interstate Oil and Gas Transportation to Europe) projects. They are also linked by other projects of "global importance", one of which is the Baku-Tbilisi-Kars project, which was launched in October 2017. The launch of this railway completed the creation of the Trans-Caspian corridor, which, in combination with the Yavuz Sultan Selim bridge across the Bosphorus, provides conditions for fast and cheap transportation of goods from China to Europe and countries along the route of this corridor. Thus, Georgia and Azerbaijan became real participants in the Chinese Belt and Road initiative. The cooperation between Georgia and Azerbaijan is facilitated by the implementation of the project of the Southern Gas Corridor - TANAP, the Trans-Anatolian Natural Gas Pipeline, which was inaugurated on June 12, 2018.

3.2 Transformation of Georgia and Azerbaijan under the conditions of state independence

Every country aspires to the common goals of the civilization development, but goes towards them following its own path, based on its national interests, cultural habits, national mentality, etc. Accordingly, the sovereign development of Georgia and Azerbaijan has has its own characteristics, which are combined with their common Soviet past. After the collapse of the Soviet Union, they had to solve the problem of "triple transition" [Korganashvili, 2014]: 1) from the Soviet totalitarian state to democracy; 2) from the centrally-planned economy to the market economy and private property; 3) from a republic in the composition of the large state to a sovereign republic with a small economy. The world knew no analogue of transition from the socialist subsystem to the capitalist one and, naturally, such transformation was connected with enormous difficulties, the processes developed spontaneously and, generally, by the trial-and-error method.

After the collapse of the USSR, 15 new sovereign states faced various difficulties in the transformation process during the transition to market relations. Especially in a difficult situation were Georgia and Azerbaijan. In the post-Soviet period, Georgia had the lowest GDP in 1994 — USD 2.514 million, and Azerbaijan in 1995 — USD 3.052 million, respectively, which amounted to 32.4 and 34.4% of the 1990 level.

Due to hard socio-economic position of Georgia and Azerbaijan, crisis-proof programs of macroeconomic stabilization and systems transformation had been developed, under which the radical changes were initiated: transformation of the fiscal and monetary and credit sphere, privatization of the state property, reforming the health care, education, social sphere, etc. The transformation processes with a transition to market relations in Georgia and Azerbaijan proceeded under the recommendations of the International Monetary Fund (IMF), on the basis of the liberal economic policy. As a result of their implementation, they were able to overcome the existing economic crisis and achieve economic growth. For almost a 30-year period of sovereignty, Georgia and Azerbaijan have achieved some success in social and economic development. In 2017, the per capita GDP in Georgia was 4,057.29 USD (in 2014 was 4,430 USD), in Azerbaijan - 4,131.62 current USD (in 2014 it was 7,892 USD). However, the highest GDP per capita in both Georgia and Azerbaijan was in 2014: 4.430 and 7.892 USD, respectively.

According to the classification of the World Bank, Georgia belongs to the group of countries of the Lower-middle, and Azerbaijan to the group of Upper-middle countries (WB).

The economy of Georgia and Azerbaijan differs in structure. In 1990, the share of Agriculture in Georgia was 32%, Industry - 33% and Services - 35%. In Azerbaijan, these indicators were respectively 29, 33 and 38%. In 2017, the structure of Georgia's GDP is as follows: 6.88, 22.64 and 70.48%; in Azerbaijan - 5.63, 49.58 and 44.79%, respectively (WB).

The effectiveness of national economies is determined by competitiveness on the world markets. According to the Global Competitiveness Index 4.0 2018 edition rankings, Georgia is ranked- 66th and Azerbaijan - 69th among 140 countries [p.44-45]. Georgia has the best score for Pillar 8: Labor market (ranked the 31st, scored 65.6), Pillar 1: Institutions (ranked the 40th, scored 61.0), Pillar 7: Product market (ranked the 42nd, scored 61.0); in Azerbaijan, according to Pillar 11: Business dynamism (ranked the 31st, scored 68.8), Pillar 7: Product market (ranked the 37th, scored 61.4), Pillar 8: Labor market (ranked the 40th, scored 63.6). Georgia has the worst performance in Pillar 10: Market size (ranked the 102nd, scored 40.9), Pillar 9: Financial system (ranked the 88th, scored 54.1), Pillar 12: Innovation capability (ranked the 85th, scored 32.7), in Azerbaijan - according to Pillar 3: ICT adoption (ranked the 126th, scored 59.8), Pillar 4: Macroeconomic stability (ranked the 97th, scored 85.9), Pillar 9: Financial system (ranked the 96th, scored 52.6) (table 1).

Tab. 1 Global Competitiveness Index of Georgia and Azerbaijan, 2018

	Azerbaijan		Georgia	
	Score	Rank	Score	Rank
Global Competitiveness Index (GCI)		69		66
Pillar 1: Institutions 0-100 (best)	55.8	58	61.0	40
Pillar 2: Infrastructure 0-100 (best)	73.6	46	66.7	72
Pillar 3: ICT adoption 0-100 (best)	59.8	126	64.8	45
Pillar 4: Macroeconomic stability 0-100 (best)	85.9	97	74.5	72
Pillar 5: Health 0-100 (best)	67.8	54	78.2	80
Pillar 6: Skills 0-100 (best)	73.1	91	68.9	45
Pillar 7: Product market 0-100 (best)	61.4	37	61.0	42
Pillar 8: Labour market 0-100 (best)	63.6	40	65.6	31
Pillar 9: Financial system 0-100 (best)	52.6	96	54.1	88
Pillar 10: Market size 0-100 (best)	54.0	65	40.9	102
Pillar 11: Business dynamism 0-100 (best)	68.8	31	62.1	53
Pillar 12: Innovation capability 0-100 (best)	36.0	71	32.7	85

Source: World Economic Forum. The Global Competitiveness Report 2018. Geneva. pp. 83-85, 235-237

The transformation processes in Georgia and Azerbaijan can be characterized by the Bertelsmann transformation index, which analyzes and evaluates the quality of democracy, a market economy and political management in 129 developing and transition countries. It measures successes and setbacks on the path toward a democracy based on the rule of law and a socially responsible market economy. As the data in Table 2 show, transformation

processes are more successful in Georgia, it has the best rating for both the Status Index and the Governance Index. Moreover, the ratings of these indices in Georgia have improved, while in Azerbaijan they have mostly deteriorated. In 2018, Georgia is in 42nd place in the Status Index, while Azerbaijan is in the 100th place, and in the Governance Index, they respectively occupy the 33rd and 97th positions (Table 2).

Tab. 2 BertelsmanTransformation Index of Georgia and Azerbaijan, 2012-2018

	Azerbaijan				Georgia			
	2018	2016	2014	2012	2018	2016	2014	2012
Ranking Status Index	**100**	**95**	**88**	**84**	**42**	**45**	**48**	**57**
S | Status Index	**4.13**	**4.44**	**4.71**	**4.85**	**6.42**	**6.31**	**6.16**	**5.88**
SI | Democracy Status	**3.43**	**3.48**	**3.92**	**4.02**	**6.80**	**6.70**	**6.50**	**6.15**
Q1 | Stateness	7.3	7.0	7.5	7.5	6.5	6.3	6.5	6.3
Q2 | Political Participation	2.3	2.8	3.0	3.3	8.5	8.5	8.0	7.5
Q3 | Rule of Law	3.0	3.0	3.8	4.0	6.5	6.5	6.0	6.0
Q4 | Stability of Democratic Institutions	2.0	2.0	2.0	2.0	7.5	7.0	7.0	6.5
Q5 | Political and Social Integration	2.7	2.7	3.3	3.3	5.0	5.3	5.0	4.5
SII | Market Economy Status	**4.82**	**5.39**	**5.50**	**5.68**	**6.04**	**5.93**	**5.82**	**5.61**
Q6 | Level of Socioeconomic Development	4.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0
Q7 | Organization of the Market and Competition	4.3	4.3	4.5	4.8	7.3	7.0	6.8	7.3
Q8 | Currency and Price Stability	6.0	7.0	6.5	6.5	7.5	7.0	7.0	6.5
Q9 | Private Property	4.5	5.0	5.5	5.5	6.5	6.5	6.5	7.0
Q10 | Welfare Regime	5.5	6.0	6.0	6.0	5.5	5.5	4.5	4.0
Q11 | Economic Performance	5.0	6.0	6.0	7.0	6.0	6.0	6.0	5.0
Q12 | Sustainability	4.5	4.5	5.0	5.0	5.5	5.5	6.0	5.5
Ranking Management Index	**97**	**103**	**99**	**98**	**33**	**39**	**41**	**53**
M | Management Index	**3.86**	**3.72**	**3.95**	**4.00**	**5.87**	**5.72**	**5.78**	**5.38**
Q13 | Level of Difficulty	5.0	4.7	4.9	4.7	4.8	4.8	5.5	5.5
MII | Management Performance	4.35	4.22	4.45	4.53	6.65	6.47	6.43	5.98
Q14 | Steering Capability	4.7	4.3	4.3	4.3	6.0	5.7	6.0	5.7
Q15 | Resource Efficiency	4.0	3.3	3.3	3.7	6.7	6.7	6.0	6.0
Q16 | Consensus-Building	2.8	3.2	3.8	3.8	6.6	6.2	6.4	5.6
Q17 | International Cooperation	6.0	6.0	6.3	6.3	7.3	7.3	7.3	6.7

Source: BTI, 2018

The economic development of Georgia and Azerbaijan is facilitated by the business environment and economic freedom. According to the simplicity of doing business in the ranking published in 2018, Georgia ranks 6th among 190 countries of the world, Azerbaijan is the 25th (DB). Georgia's economic freedom score is 75.9, making its economy the 16th freest in the 2019 Index. Its overall score has decreased by 0.3 point, with a sharp drop in judicial effectiveness and lower scores on government integrity and monetary freedom exceeding a big gain in financial freedom. Georgia is ranked 8th among 44 countries in the Europe region (IEF). Azerbaijan's economic freedom score is 65.4, making its economy the 60th freest in the 2019 Index. Its overall score has increased by 1.1 points, led by a drama tic rise in judicial effectiveness and higher scores for property rights and government integrity that offset declines in labor freedom and fiscal health. Azerbaijan is ranked 13th among 43 countries in the Asia-Pacific region, and its overall score is above the regional and world averages (IEF). According to its indicators, Georgia is classified as a mostly free country, and Azerbaijan - as a moderately free country. Although Azerbaijan has worse indicators on Doing Business and the Index of Economic Freedom, but as noted above, it is ahead of Georgia in economic development. Openness to global trade and investment, supported by some improvements in regulatory efficiency, has aided Azerbaijan's transition to a more market-based economic system. At present, the goal of the government of Azerbaijan is develop Azerbaijan into a trade and transit hub by continuing investment in road and rail infrastructure, and diversify away from economic dependence on hydrocarbons (IEF).

3.3 Education as a basis for the development of human capital and the formation of the economy of knowledge

Human capital is the main asset of any state, and the main factor in its development is education, which forms the basis of the knowledge economy. In this regard, the improvement and development of the institute of education in the conditions of the fourth industrial revolution is an urgent problem. An effective educational system, on the one hand, contributes to the introduction of scientific and technical achievements, analysis and assessment of global technological trends. On the other hand, a high level of education of the population creates prerequisites for the development of demand for high-tech products, which stimulates the development of more and more innovative products and technological processes (Korganashvili 2018).

After the restoration of sovereignty in Georgia and Azerbaijan, the process of transition of the previously existing educational system to a system that meets modern world standards began. Major reforms began in the mid-1990s. The educational programs of all education levels have undergone fundamental change, the process of introducing new education standards has begun. The main mission of the education system of Georgia and Azerbaijan is a qualitative and quantitative increase in human capital, contributing to the innovative development of both countries (Korganashvili 2015, 2017).

The Global Innovation Index (GII), which consists of two sub-indexes: Innovation Inputs and Innovation Outputs, was used for a comparative assessment of the potentials of innovation development in Georgia and Azerbaijan. In the GII-2018 ranking, Georgia ranks 59th among 126 countries of the world, Azerbaijan - 82nd. Compared to the previous year, Georgia improved its GII rating by 9 positions, while in Azerbaijan it remained unchanged. In the Innovation Input sub-index, Georgia is in 53rd place and is ahead of Azerbaijan (76th place). Compared to the previous year, this sub-index improved the position by 16 positions, and Azerbaijan only by 2 positions. Georgia ranks 62nd in the Innovation Output sub-index, and its position remained unchanged compared to 2017, although it has deteriorated by 2 positions compared to 2016. In contrast to Georgia, Azerbaijan, both in 2018 and in 2017, is experiencing an improvement on this sub-index. In terms of innovation efficiency, Georgia is ahead of

Azerbaijan, but its rating has deteriorated by 19 positions compared with 2017 and by 12 positions compared with 2016 (Table 3).

Tab. 3 Ratings of Georgia and Azerbaijan on the Global Innovation Index

	Georgia		Azerbaijan	
	Score	Rank	Score	Rank
GII 2018 ((126 countries)	35.05	59	30.20	82
GII 2017 (127 countries)	34.4	68	30.6	82
ГИИ 2016 (128 countries)	33.9	64	29.6	85
GII Sub-Index Innovation Input 2018	44.44	53	40.39	76
GII Sub-Index Innovation Input 2017	42.2	69	40.7	78
GII Sub-Index Innovation Input 2016	41.0	67	38.4	81
GII Sub-Index Innovation Output 2018	25.65	62	20.00	87
GII Sub-Index Innovation Output 2017	26.6	62	20.5	89
GII Sub-Index Innovation Output 2016	26.7	60	20.9	94
Efficiency Ratio 2018	0.6	79	0.5	99
Efficiency Ratio2017	0.6	60	0.5	103
Efficiency Ratio2016	0.7	67	0.5	101

Source: The Global Innovation Index 2018 https://www.globalinnovationindex.org/gii-2018-report

As can be seen from table 4 of the seven Pillars of GII-2018, Georgia has the highest position on Institutions (39th places) and Infrastructure (39th places), Azerbaijan - on Market sophistication (26th places). Georgia has an unfavorable situation on Business sophistication (91st place), Azerbaijan - on Human capital & research (100th place) (table 4).

Tab. 4 Ratings of Georgia and Azerbaijan in the Pillars of GII-2018

Pillars	Georgia		Azerbaijan	
Institutions	71.7	39	58.9	71
Human capital & research	30.0	67	18.4	100
Infrastructure	42.5	71	44.4	66
Market sophistication	52.2	39	55.4	26
Business sophistication	25.7	91	24.8	96
Knowledge & technology outputs	24.5	57	17.1	89
Creative outputs	26.8	73	22.9	87

Source: The Global Innovation Index 2018

In Georgia, the quality of education is inferior to the education of many foreign countries, including Azerbaijan. Georgia takes the 106th place in Quality of primary education, Azerbaijan

- the 58th. According to the Quality of the education system, it is on the 107thplace, and Azerbaijan - on the 35th. According to Higher education and training Georgia occupies the 87thplace, Azerbaijan is the 68th, and they rank 103rd and 66th in the quality of mathematical and scientific education, respectively, and 103th in the quality of business education, quality of management schools - 113th and 72nd, by Extent of staff training - 125th and 51st (Weforum).

The poor quality of the country's education system is predetermined by insignificant expenditures on education. In 2018, spending on education in Georgia amounted to 3.8% of the country's GDP, and in Azerbaijan - 3.0. The development of innovative capacity is also negatively affected by the low costs of Research & Development. In 2018, their share in the GDP of Georgia and Azerbaijan was 0.3 and 0.2%, respectively (GII).

In improving the quality of human resources, an important place is given to higher education. The effective solution of these issues is possible only with the direct participation of universities, industry and the state (university-industry-government), that is, the application of the triple helix concept. This concept of university-industry-government relationships interprets the shift from a dominating industry-government dyad in the Industrial Society to a growing triadic relationship between university-industry-government in the Knowledge Society. The Triple Helix thesis is that the potential for innovation and economic development in a Knowledge Society lies in a more prominent role for the university and in the hybridization of elements from university, industry and government to generate new institutional and social formats for the production, transfer and application of knowledge (THC).

To improve the quality of education, Georgia and Azerbaijan have signed bilateral agreements on cooperation in science and education with many countries. In 2005, both countries joined the Bologna Declaration and made a commitment to ensure the integration of their universities in the European higher education area, as well as to improve the quality of education in accordance with the requirements of the labor market. Along with this, market relations began to be introduced in the education system, as a result of which private educational institutions emerged, and in state universities, self-financing education became a natural process (Korganashvili 2015, 2016, 2017, 2018).

Currently, universities in Georgia and Azerbaijan are characterized by a continuous structure of education, which creates conditions for lifelong learning, equality and continuity of access to all levels of education. At the same time, an objective process and a powerful factor in the development of educational services is internationalization. It contributes to the diversification and improvement of education through the use of accumulated international experience and forms the highest quality of knowledge.

The internationalization of Georgian and Azerbaijani universities is implemented in the following main areas: creation of joint training programs with the issuance of double diplomas; creation and maintenance of training programs in a foreign (mostly English) language; attracting foreign students to study at Azerbaijani and Georgian universities; training of Azerbaijani and Georgian students abroad; organization of students and academic personnel exchange (cooperation within various programs. For example, TACIS, TEMPUS, etc.; international accreditation of curricula and programs.

According to the theory of international competitiveness of M. Porter (1998), when making decisions about internationalization, four main aspects should be taken into account:

1. resources - the degree of development of higher education resources in the whole country and in particular the university;

2. university strategy, structure and competition;

3. The demand for educational services, the characteristics of which have a major impact on the competitive position of the university;

4. supporting (auxiliary) resources and activities, such as information technology, infrastructure for training foreign students, etc.

Ensuring the international competitiveness of higher education of Georgia and Azerbaijan is the most important problem, the solution of which depends on the sustainable economic development of these countries. The growing role of the international component contributes to the unification and standardization of certain aspects of the development of higher education, the need arises to develop recommendations for the development of internationalization processes, the creation of a regulatory framework for international cooperation in higher education. In this direction, the global convention on the recognition of qualifications of higher education will be of particular importance, with the adoption of which the value of foreign educational qualifications or approved training will be officially confirmed (UNESCO, 2015, 2019). This convention will not only facilitate the interregional mobility of students, teachers and researchers, but will also respond to the current context of internationalization and new trends in higher education (Korganashvili 2015, 2017, 2018).

The internationalization of higher education is an objective and regular process that aims to eliminate the national isolation of the higher education systems of individual countries. It focuses on the use of various forms of international cooperation and, through the pooling of resources from different countries, helps to increase the competitiveness of specialists in the global labor market. The integration of Georgian and Azerbaijani universities in the European and world educational space is an inevitable process, without which it is impossible to improve the quality of higher education and generate new knowledge.

CONCLUSION

At the present stage, the main role in the economic development of Georgia and Azerbaijan is played by human capital, which forms the basis of the knowledge economy. Georgia and Azerbaijan have implemented large-scale reforms, but the quality of economic growth remains low, little attention is paid to innovation and improving the competitiveness of human resources. There is no connection between the participants of the triple helix - universities-industry-government, whose close cooperation depends on the country's transition to an innovative model of economic development. Achieving a new quality of human resources requires a qualitative renewal of the education systems of Georgia and Azerbaijan. However, due to the low level of financing and the lack of awareness of the knowledge economy importance, the reform of both countries' education systems is proceeding slowly. Accordingly, the country's transition to an innovative model of economic development is blocked, without which progress and prosperity are impossible.

In order to solve the problems associated with the transition of Georgia and Azerbaijan to the knowledge economy, it is first necessary to single out education and science as one of the main strategic priorities of the country's socio-economic development. Everyone must realize that human capital is the main wealth of the country, a means of increasing capitalization of the most important strategic prospects, and it must be multiplied by all means and opportunities. It must be remembered that the higher the quality of a specialist, the greater the likelihood of successful mastering of complex technologies and technical equipment.

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Trend in Bilateral Trade between China and Visegrad Group during the Belt and Road Initiative Period

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Abstract: This paper explores trends in development of bilateral trade between China and Visegrad Group countries between years 2005-2017 and their relation to the existence of the Belt and Road initiative (BRI). Recent studies based on gravity models predict that BRI has the potential to increase the amount of the international trade. Author formulates a hypothesis that if existence of BRI contributed to a higher growth rate of bilateral trade, the trend from actual data would be higher than extrapolated trend from period preceding existence of the initiative. Hypothesis is falsified, which indicates that BRI did not have expected impact. Two possible explanations for this surprising result are offered. First possible explanation expands on the fact that BRI logistic network is far from fully realized. Second possible explanation puts the result into relation with the total trend in trade between China and the rest of the world. From this relative point of view, results seem quite positive. Therefore, to evaluate BRI in a balanced way, different points of view need to be taken into account.

Keywords: Belt and Road Initiative, Visegrad Group, China, bilateral trade

JEL Classification codes: F17

INTRODUCTION

China is undeniably a phenomenon of the world economy with its rapid economic growth that counted in double digits for almost one decade. Combined with the population of 1.3 billion, it makes China a very desirable partner for the international trade. And the Chinese are interested in the international trade as well.

Belt and Road Initiative (BRI) was first formulated during Chinese president Xi Jinping's visits in Central and Southeastern Asia during 2013. It aims to "promote the connectivity of Asian, European and African continents and their adjacent seas, establish and strengthen partnerships among the countries along the Belt and Road, set up all-dimensional, multitiered and composite connectivity networks, and realize diversified, independent, balanced and sustainable development in these countries" (State Council of PRC, 2015).

To fully realize all BRI projects in Asia, Abiad (2017) calculates the needed yearly investment as high as 1.7 trillion US dollars, totaling 26 trillion US dollars between 2016 and 2030. By the time of the study, however, the real investment in the region was estimated around 900 billion US dollars (Abiad, 2017). Other sources are more modest, citing total 8 billion US dollars needed to realize BRI's goals (Hillman, 2018). Institutions engaged in financing BRI projects are Asian Infrastructure Investment Bank (AIIB), New Development Bank BRICS (NDB BRICS), World Bank (WB), Asian Development Band (ADB), China Development Bank (CDB), The Export-Import Bank of China (China Eximbank) and Silk Road Fund (China Economic Information Service, 2017).

Since its beginning, the geographical scope of the initiative changed as well as the official translation into English. Originally targeting only countries along the countries on the ancient Silk Road, BRI is now open for every country interested in participating in it, Latin American countries being among the most obvious examples (Detch, 2018). BRI's original Chinese name remains the same while the English translation changed from One Belt One Road. One of the explanations was reportedly the fear of misinterpretation, because there is not only one maritime route and not only one land bridge (Bērziņa-Čerenkova, 2017).

One of the BRI's goals is to strengthen infrastructure such as oil pipelines and gas pipelines (Eder, 2018). But more important for purpose of this study, BRI's ultimate objective is to improve the intercontinental logistics network, both land and maritime. There are three main sea routes. First route stretches from China to south Asia, continuing to east Africa and ending in ports of south European countries. Second route leads from China to Netherlands passing Russia via the Arctic Ocean. Third sea route connect China with Australia and New Zealand (Mercator Institute for China Studies, 2018). That being said, BRI's scope is not limited to these three routes and continues to expand.

Land network consists from both roads and railroads, but main focus lies on the railroad network. There are currently six main economic corridors connected by railway:

1. The New Eurasia Land Bridge Economic Corridor,

2. The China-Mongolia-Russia Economic Corridor,

3. China-Central Asia-West Asia Economic Corridor,

4. China-Indochina Peninsula Economic Corridor,

5. China-Pakistan Economic Corridor and

6. Bangladesh-China-India-Myanmar Economic Corridor.

Railways in these corridors connect China with Western Europe through countries of Central Asia or Mongolia and Russia. Though not all Balkan and East European countries lie along these corridors, BRI railways intersect all four Visegrad countries (Hong Kong Trade Development Council, 2018).

1 LITERATURE REVIEW

By improving logistics network consisting of ports, railroads, roads, bridges and tunnels, both transport times and transport costs are expected to decrease. Since the announcement of BRI, there has been several attempts to quantify its potential impact on global economy.

De Soyres, Mulabdic, Murray, Rocha Gaffurri, & Ruta (2018) use network algorithms together with geographical data to calculate current shipping times between each of 1000 cities included in this study. This baseline is compared to the hypothetical network including all BRI projects and the difference signifies impact of BRI projects to lowering transport times. Then, the "value of time" is computed for different sectors and different pair of countries. The results show that after implementing all BRI projects, shipping time will decrease between up to 2.5 %, which will in turn lower transport costs up to 2.2 % for the world as a whole. Only BRI countries scored bigger improvement, up to 3.2 % reduction of shipping times and up to 2.8 % reduction in transport costs (De Soyres et al., 2018, p. 31).

Visegrad group or also Visegrad four (V4) consists of Czechia, Slovakia, Poland and Hungary. All four countries were part of a socialist bloc, all of them joined the EU in 2004, all of them have the similar GDP per capita and with the exception of Poland, all have similar population, therefore serve as a good base for comparison. Out of these four countries, Hungary was first

when it comes to promoting business relations with China. Hungary's "eastern opening" from early 2000's is reflected in largest Chinese minority and also highest amount of foreign direct investment in the region. In 2011 Poland established a strategic partnership with China. Czechia started emphasizing business relations with China after 2012. Finally, Slovakia marked its opening to China with its Strategy for the Development of Economic Relations with China in 2017 (Turcsanyi, 2017).

V4 countries also share similarities trade composition in trade with China starting from 1990's through next following 25 years. Trade between Czechia and China is dominated by Standard International Trade Classification (SITC) 7 - Machinery and transport equipment. Amount of SITC 7 was bigger than other SITC groups combined, both in Czech exports and imports. SITC 6 (Manufactured goods classified chiefly by material) and SITC 8 (Miscellaneous manufactured articles) are next in order but far from significance of the SITC 7 (De Castro & Stuchlíková, 2014, pp. 52–55). Hungary's exports consist mostly of machinery and electrical machinery products. Vehicles were the fastest growing export item since beginning of the millennium, thanks to the multinational companies present in Hungary. Two major Hungarian imports from China were machineries and electronic equipment. The third group on the list, that is toys and games, decreases its share (Fábián, Matura, Nedelka, & Pogátsa, 2014, pp. 99–100). Poland has a history of exporting mainly base metals as well as les dominant sections like machines, and transport equipment to China. Processed goods and agriculture products show fastest rise on the export side. About half of the all Polish imports from China is occupied by electro machinery section, after big gap followed by textiles and miscellaneous articles (Jurczyk & Mierzejewski, 2014, p. 108). Slovakia's exports to China has been heavily concentrated on motor vehicles, with export share going from 60-80 % during the period in question. The rest of the exports include auto parts, machinery and pumps. Slovakia's imports from China are spread on many sections and products, the most important being optical instruments followed by automatic data processing machines, telecommunication equipment, energy power machinery and office machines (Grančay, 2014, pp. 118–119).

The Economist Intelligence Unit (2016, pp. 32–33) provides a list of projects connected with BRI in Eastern Europe. Sadly, Slovakia is missing, otherwise it would be possible to have a full outlook on V4 countries. In 2016, the above mentioned study enumerated 3 projects in Czechia (2 planned, 1 tendering), 3 projects in Hungary (1 signed, 2 operational) and 40 in Poland (6 planned, 25 tendering, 2 awarded, 6 financial close, 1 in construction, 1 completed, 1 operational).

Based on previous paragraphs, a research question of this paper can be formulated as a following sentence: "How does the BRI affect bilateral trade between China and Visegrad countries (Czechia, Slovakia, Hungary, Poland) between years 2014-2017?"

Reduced costs of transportation are expected to stimulate international trade. Garcia-Herrero & Xu (2016) empirically measure whether the reduction in transportation costs (be it railway or shipping) has a positive impact on trade flows for Belt and Road countries, including the EU. Similar study was undertaken by Lu, Rohr, Hafner, & Knack (2018), focusing on the potential impact of improving multimodal transport connectivity on multilateral trade and economic growth in countries and regions across the BRI.

Both studies heavily rely on the use of gravity model analysis. Gravity in economic modelling is distinguished by its parsimonious and tractable representation of economic interaction in a many-country world. The distribution of goods or factors across space is determined by gravity forces conditional on the size of economic activities at each location. Modularity readily allows for disaggregation by goods or regions at any scale and permits inference about trade costs that is not dependent on any particular model of production and market structure in full general equilibrium (Anderson, 2011).

(Garcia-Herrero & Xu, 2016, p. 5) specify the trade between any two countries in their gravity model as a function of their log GDPs, tariffs, log transportation time and cost between them, and other control variables, namely: contiguity, common currency, common language, and post-colonial relationship. To get a measure for trade cost, distance is used as a proxy. (Lu et al., 2018, pp. vii–viii) use two-step process to design an accurate model, consisting of qualitative and quantitative analysis. Key facilitators and barriers to international trade are identified as a part of qualitative analysis. Then, these findings are used to model the relationship between transport connectivity and transport infrastructure and multilateral trade and economic growth. To measure transport infrastructure, a series of indices is defined including rail density, road density, airport density, maritime logistics performance and overall logistics performance. To measure transport connectivity, bilateral distances between countries by rail, aviation and maritime transport are used, which provide a proxy for transport costs by each mode.

Both studies present several scenarios for calculating the impact on international trade, but for the purpose of this paper, only scenarios relevant to the logistic aspect of BRI are considered. Figure 1 shows that the impact of transportation cost reduction on the total trade is positive for V4 counties. Figure 2 shows that improving transport connectivity and infrastructure has also positive effect on the V4 countries with the caveat that data for Czechia are not available.

Tab. 1 Transportation cost reduction scenario, the impact on total trade

Scenario \ Country	CZ	SK	HU	PO
Transportation cost reduction	2.82 %	9.18 %	8.68 %	8.22 %

Source: Garcia-Herrero & Xu, 2016

Tab. 2 Improving transport connectivity and infrastructure scenario, the impact on exports

Scenario \ Country	CZ	SK	HU	PO
Improving transport connectivity and infrastructure	N/A	2-5 %	0-2 %	2-5 %

Source: Lu et al., 2018

2 METHODOLOGY

Based on the results of the two above mentioned studies, the author hypothesizes that BRI had a positive effect on bilateral trade. To accept or falsify the hypothesis, following test is performed.

Real values of bilateral trade between given countries and China between 2014-2017, which is the time period that covers the existence of BRI, are compared with hypothetical values of bilateral trade in the same period without the existence of BRI. If the real values are higher than hypothetical extrapolated trend, the hypothesis that BRI positively affected bilateral trade is accepted. Otherwise, it is falsified.

To get hypothetical values of bilateral trade without the existence of BRI, data from 2005-2013 are extrapolated into the 2014-2017 period. Data for the original research are drawn from the Structural Analysis (STAN) Database by OECD, specifically the Bilateral Trade Database by Industry and End-use category (BTDIxE). Year 2005 was chosen as a starting point for analysis for dataset consistency reason, because there was change in database

methodology in 2005. End point is determined by latest data availability. A tool used to analyze data is the "Forecast" feature in program Microsoft Excel 365 ProPlus v. 1808. Confidence interval is set at 95 %.

3 RESULTS AND DISCUSSION

Figures 1-4 show real data together with extrapolated data for bilateral trade between given states and China. Data for bilateral trade is obtained by adding up import to China with export to China for a given country. Blue line represents real data while thick orange line shows extrapolation with two thin orange lines delimiting upper and lower confidence bound. This way, hypothetical scenario with no existence of BRI is compared with real scenario with existence of BRI.

Fig. 1 Bilateral trade between Czechia and China
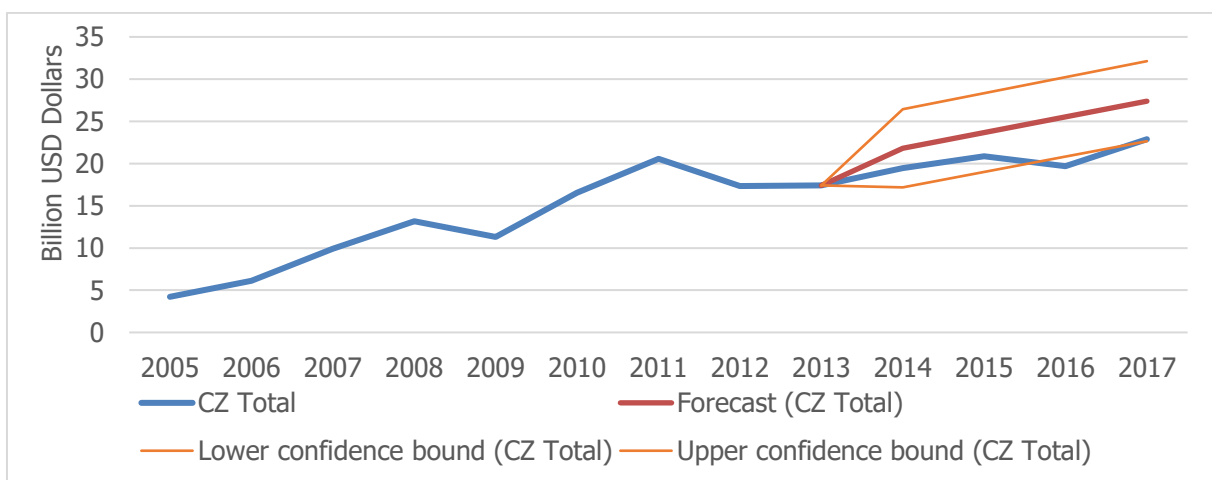
Source: Structural Analysis (STAN) Database by OECD, own computation

Fig. 2 Bilateral trade between Hungary and China
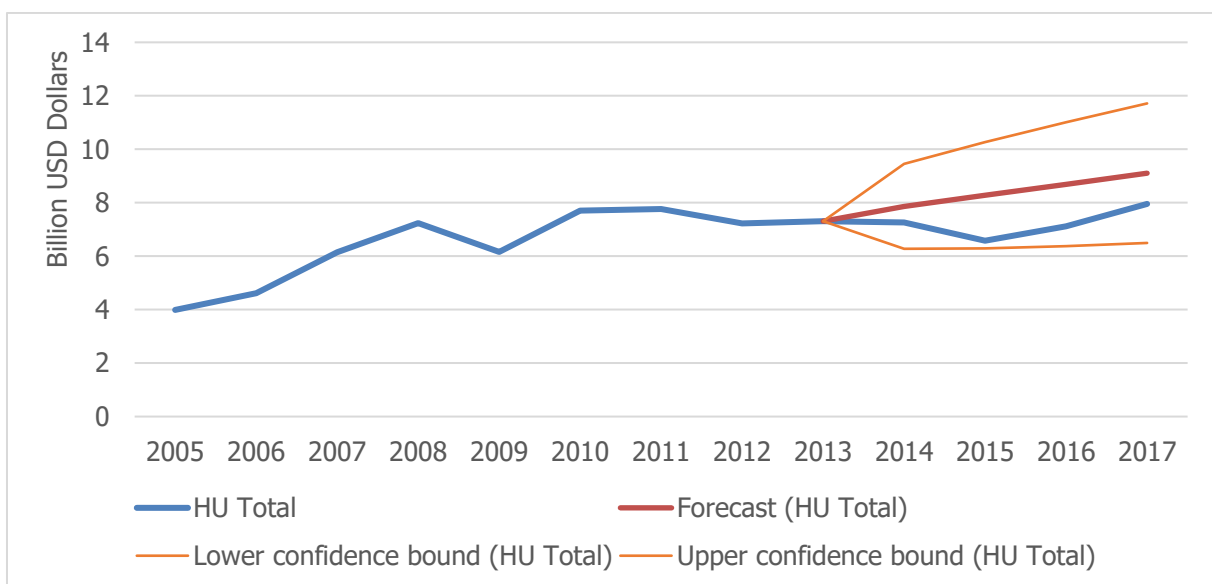
Source: Structural Analysis (STAN) Database by OECD, own computation

Fig. 3   Bilateral trade between Poland and China
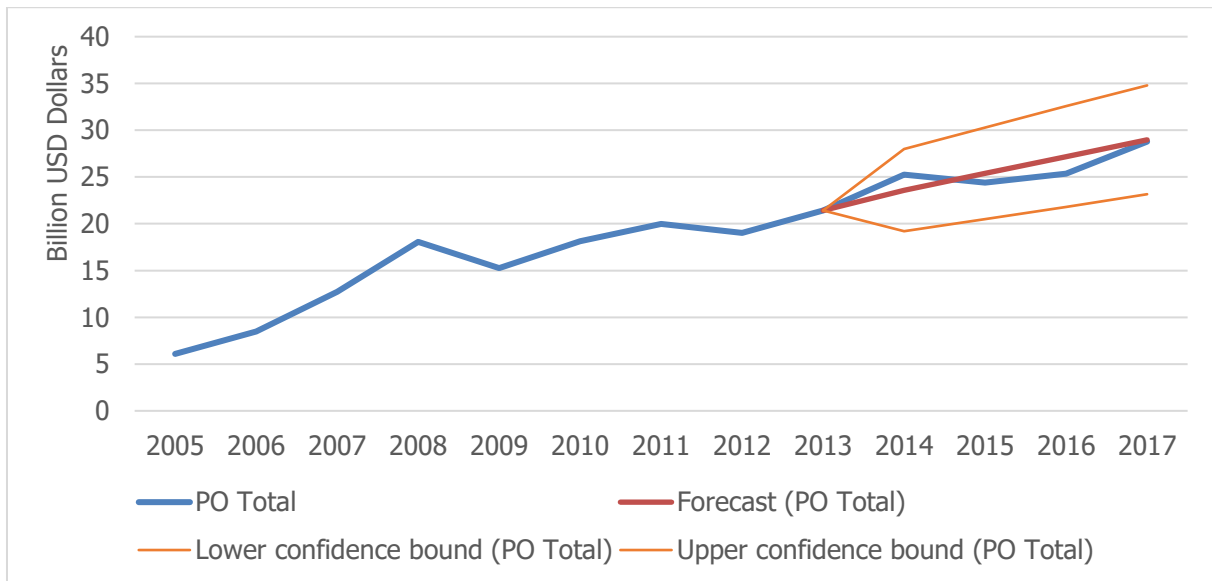
Source: Structural Analysis (STAN) Database by OECD, own computation

Fig. 4   Bilateral trade between Slovakia and China
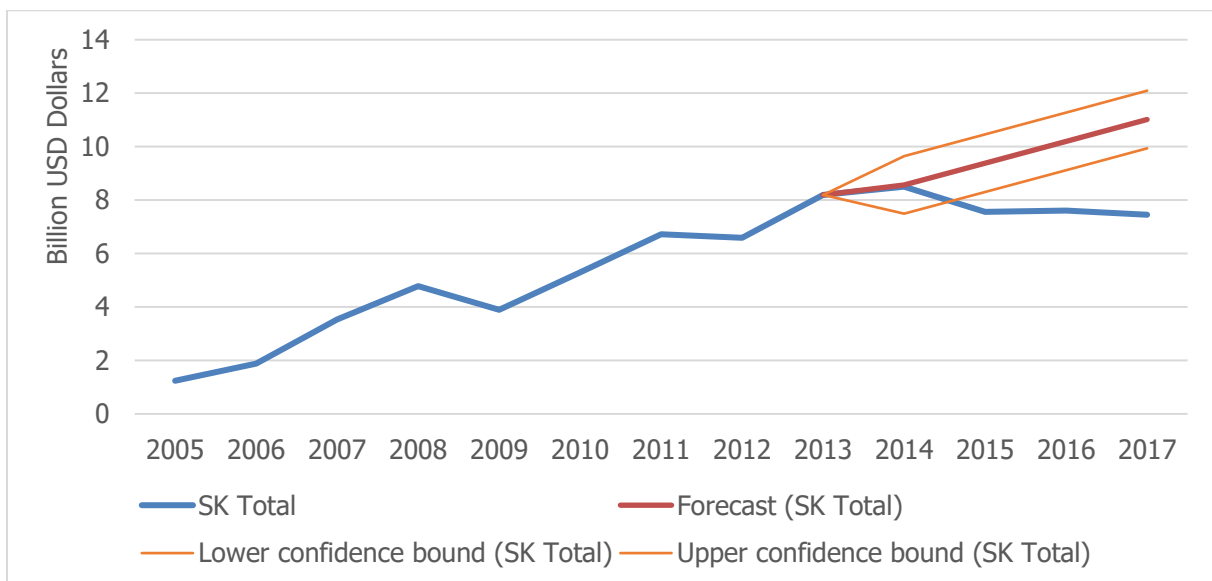
Source: Structural Analysis (STAN) Database by OECD, own computation

The result is as follows. No couple of countries showed significant rise in bilateral trade during the existence of BRI. In fact, every dataset shows that the trend in bilateral trade during the existence of BRI followed the same path before the existence of BRI or was even below it. The only exception is year 2014 in the dataset for Poland (Fig. 3). The hypothesis that BRI contributed to a higher growth rate of bilateral trade between the V4 countries is therefore falsified according the initial test conditions.

Following paragraphs focus on possible explanations. Author expands on two possible reasons behind the result:

1. Uneven development of BRI routes

2. Overall economic situation

First explanation is related to the difference between gravity models and methodology used in this paper. Underlying theoretical explanation is as follows. As opposed to gravity models, bilateral trade trend signalizes only the amount of goods and services exchanged between two countries. That is true even if these two counties are part of a trade system consisting of other countries, which is the state of the modern interconnected world economy. The consequence is, the trend in trade between two countries can be falling or stagnating even though the amount of the total international trade rises and vice versa. In other words, international trade shifts towards other countries.

In the specific case of BRI, this theoretical approach may reflect the uneven development of BRI routes, which is related to the vast scope of the whole initiative. BRI was not announced until 2013. It is not realistic to expect a realization of BRI projects to such a degree as presented in Garcia-Herrero & Xu (2016) and Lu et al. (2018) in the span of a few years. There were several models of BRI development at the beginning of the initiative (Liu, 2014):

1. Model of "Development in Stages" which focuses first on developing trade relations and logistic connections witch Chinese neighbours,

2. Model of "Corridor Development" which concentrates on first improving connections between China and destinations in Western Europe

3. Model of "Equal Development Between the East and West" which is the compromise between the two above-mentioned models.

As of 2018, BRI railroad network was not fully finished. Czechia, Slovakia and Hungary were therefore connected only by northern routes (Fig. 5) which go through Russia (Mercator Institute for China Studies, 2018). However, with no official list or overview of all BRI construction works and their realization status, it is hard to evaluate which model is taking place after all.

Fig. 5 Railroad network of the Belt and Road Initiative

Source: Mercator Institute for China Studies, 2018

It is expected that after full realization of the southern Balkan route, connectivity will improve which will be beneficial for the international trade. China tries to speed up the process by offering loans and construction firms to modernize outdated railroads, as it is in the case of

Budapest-Belgrade leg (Miller, 2018). So far, the route through the Middle East and the Balkans is not considered as a viable option which leaves only Trans-Siberian Railway (TSR) and China-Kazachstan-Russia (known as The New Eurasian Land Bridge, NELB) routes to Europe for unimodal railroad transport (Klapita a Liu 2018, 53–54; Schramm a Zhang 2018, 4). There are many European cities (Hamburg, Duisburg, Warsaw, Milan etc.) that receive 3-5 times a week fully-loaded freight trains from China (Pencea 2018, 197) via TSR and NELB.

Second explanation is related to the overall economic situation. If we add together exports from all V4 countries to China for every year between 2005-2017 and do the same for exports from China to V4 countries, we will find out that exports from China to V4 constituted 88 % of total bilateral trade between China and V4 in the mentioned period of time. This finding supports the intuitive notion that the trend of trade between V4 and China depends primarily on the trend of Chinese trade because of the sheer size of Chinese economy. Therefore, trend of trade in goods between China and the rest of the world was picked as a proxy for the baseline of trend in goods (Fig. 6). Now we can gauge the result from hypothesis testing against the overall China-world trade.

While the first explanation might work even in the situation of overall rising trade trend, a short look at the Fig. 6 reveals a different story. Trend in goods between China and the rest of the world peaks in 2014, then continuously falls until 2016 and a slightly increases in 2017. This pattern shows a similarity with Figures 1-4 which also haven't continuously grow neither have only continuously fell.

One of the reasons for this stagnation of trade may be China's shift towards a different growth model with higher domestic demand (Kroeber 2016, 216), which makes more of the Chinese-manufactured products be consumed at home.

Fig. 6   Trade between China and the rest of the world
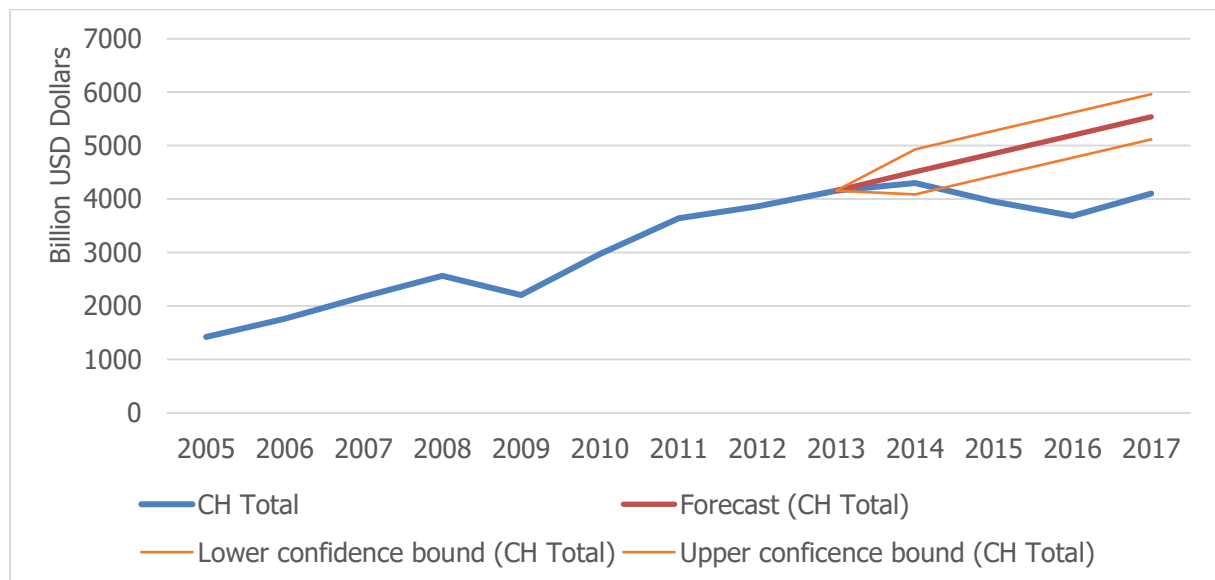
Source: Structural Analysis (STAN) Database by OECD, own computation

The amount of trade between China and the rest of the world in 2017 was 98.7 % of the value in 2013. We can take this relative value and use it as a benchmark for the bilateral trade between China and V4 countries. Czechia's bilateral trade with China in 2017 ended at 131.5 % of the 2013 value. Total trade between China and Hungary in 2017 rose up to 108.8 % of the 2013 value. Poland registered highest increase in bilateral trade with China out of four

Visegrad countries with 2017 values at 134.3 of the 2013 value. Slovakia was the only exception because the amount of bilateral trade fell to 91 % of the 2013 value. Given that benchmark baseline is 98.7 % of the 2013 value, trade in goods between Slovakia and China underperformed the global trend by 7.7 percentage points.

Seeing the problem from the relative view as opposed to the absolute view casts a different light on development of trade between China and V4 countries. Based on the data used in Figures 1-4 and 6, trade between China and Czechia, Hungary and Poland increased its share relatively to the trade between China and the rest of the world. This positive evaluation is contrary to the original negative evaluation based on absolute numbers and speaks in favour of the Belt and Road Initiative.

CONCLUSION

Belt and Road Initiative is a programme to connect China with the world via land and maritime corridors with the aim of improving logistic networks and subsequently increasing trade and stimulating economic growth. Economic simulations, which inspired this paper and which this study draws on, indicated improvement in trade after implementation of BRI. Result of the hypothesis testing did not prove this improvement in trade between China and V4 countries based on the initial testing conditions.

Two alternative views are offered as an explanation. First explanation presents a view that stagnant trend in trade between V4 countries and China may be result of an uneven development of the BRI corridors with Trans-Siberian Railway and New Eurasian Land Bridge routes being active but the southern route far from being finished. Incomplete state of the initiative may have caused delay in expected rise of bilateral trade between China and V4 countries.

Second explanation presents a view that trade between V4 and China just reflected trend in trade between China and the world. From this point of view, Belt and Road seems like a success because Chinese bilateral trade with Czechia, Hungary and Poland increased its share relatively to the trade between China and the rest of the world.

This paper shows that the evaluation of the BRI depends on chosen perspective. To prove the relationship between the existence of Belt and Road initiative and change of trend in bilateral trade, an extensive research on logistic networks is still needed. This study serves as a first step by putting bilateral trade trends of above-mentioned countries into perspective and shedding light on the problems that future research might face.

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Demand for Business Services in the Visegrad Group Countries and It's Factors of Development. Focus On Slovakia

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Abstract: Business services represent a key substance of modern economy. They support effectiveness and quality of value chains stimulating cost externalisation and specialisation processes. We focus on quantitative analysis of business service application in the Visegrad Group countries and identification of the performance that the selected factors have on their development in Slovak economy. We compare dynamic indicator development: turnover growth rate in business services in the V4. As a mean of evaluating performance of business services development factors in Slovakia we use regression and correlation analyses. The results indicated an increased demand for business services in the region, with Slovakia at the top growth rate when compared to the other V4 members. Economy performance, stronger industrial production, expenditure on research and development, foreign direct investments and exports are the key factors of development of demand for business services in Slovakia.

Keywords: business services, intermediate demand, Visegrad countries, development factors

JEL Classification codes: L84, M21, O14

INTRODUCTION

One of the most intensive trends in the economic performance of the V4 countries is increased demand for services, closely connected with the notable growth of services market so characteristic for recent decades. According to Melikhova et al. (2015): ´After several decades of planned economy and manufacturing-oriented economic policy, during the last 20 years the Visegrad Four (V4) countries (Poland, Hungary, the Czech Republic and Slovakia) have been experiencing a shift towards a market economy combined with intensification of services activity´. This is also confirmed by the statistical data regarding employment growth in the service sector and their respective share in GDP. In the period 1994 – 2015 the employment rate in the service sector in the Slovak Republic (Slovakia) and Poland has increased approximately 40%, whilst in Hungary and the Czech Republic around 20% (OECD, 2016). Share of services in GDP of the V4 countries represented more than 60% (OECD, 2016; WBG, 2016). It is evident that this sector is of crucial importance for economic growth for all, moreover it represents the largest and the fastest growing sectors in the world economics in the last two decades (Chahal, 2015; Joshi, 2008). Political and economic priorities of the Slovak Republic clearly define a dominance of automotive and electrotechnical industry in creating value of the country in an economic context. The production is integrated into global value structures to such an extent that it makes an economy more open to the volatility of external demand. On the other side, the power of the industry key branches generates the demand for intermediate products, including services. Therefore, construction of the Slovak national economy represents an effective environment for fast developing of service enterprises. In order to achieve it, production of competitive services is a conditio sine qua non. Due to

transition, deepening specialisation process as well as outsourcing and offshoring, Slovak national economy is currently experiencing a boost in service sector. Market services created 44% of GDP in SK with 18% being business services (Statistical Office of the SK, 2016a). However, when compared to the European Union Member States, Slovakia reports below average results of achieved productivity in services in 2015 (both knowledge-intensive and knowledge non-intensive services), with information and communication services which record the highest productivity in V4 countries (Kubičková et al., 2016).

The aim of this paper is to identify business services development in the Slovak national economy in comparison to their development in the V4 countries as well as recognise the key factors of demand development of business services in SK.

1 LITERATURE REVIEW

Economy of the European Union is characterised by a modern configuration particularly regarding its structural development, with services being the most dominate within such a formation. According to Camacho Ballesta et al. (2012): The continuous process of tertiarisation in developed economies can be appreciated not only by means of growth of the share of services within the value added and employment, but also through the more intensive use of services inputs by all the activities forming part of productive system.´

One of the key pillars of service sector growth in SK as well as other V4 countries was a complex process of economic transition characterized by the switch from the centrally planned towards market economy. Economic transformation has emphasised the importance of innovation and a necessity for structural industrial changes, job creation, social care, economic growth and international trade (Gallouj & Windrum, 2008). In this respect, the de-industrialisation in the state economy has been executed via growth in service sector (Vintrová, 1997). The workforce that seized to be a part of heavy industry sector was partially absorbed by their services counterparts (Baláž et al., 2007).

Michalová et al. (2013) claim that the position of services in the period of economic transition has especially been marked by the growth of businesses and their demand for services. It has also been characterised by dependence of business strategy and development in changed economy within the services sector, as in the case of the following activities: organisation, storing, financing, and sales, including recycling of both, the products as well as materials. The pressure of achieving higher level of interdependency between product and services' production has been increasing no less than growing proportion of services being in exchange process. The reason for doing so is the effort to attain comparative advantages in regards to growing international economic relationships and liberalisation of trade prerequisites. Supported by specialising, transformation process is characterised by intensified intermediate demand for services. Intermediate demand represents a production demand where creating the final product embodies its final objective emphasizing demand of businesses for production services. Complementarity of products enables a producer to seek competitive advantage namely in services, therefore making them a tool of differentiation of production that enterprises supply through innovation, specialisation and externalization. For the purpose of contemplating the importance of externalization processes in developing demand for production services, one can rely on the work of economists Coase (1937) and Williamson (1990), proponents of the New Institutional Economics. Working on the Theory of Transaction Costs they are pointing towards their significance in the context of achieving economic efficiency in the society. The basic unit of analysis in the institutional economics is a transaction, i.e. any act of transition between participants of the contractual relationship, such as a single, opportunist or repeated transaction. Hence, transaction costs represent those costs that are a result of functioning of this particular economic system (Mlčoch, 2005; Holman et

al., 2001). As explained by Coase, the existence of transaction costs is a result of the existence of firms (Soukup et al., 2015; Holman et al., 2001). A firm is founded at the moment when the administrative costs connected with using of the sources within the firm are higher than transaction costs related to using these sources through market agreement acts (Holman et al., 2001). The agreement acts are therefore, understood as service activities and currently perceived as outsourcing and offshoring.

Williamson (1990) assumes that firms represent the technological core thus undertaking 'core activities' via unique, specific actions. However, there are other activities in firms, too, that are not specialised to such an extent and that lack their own uniqueness. These activities can be carried out by other enterprises yet with lower costs. At this point the firm is at the crossroad to either 'make or buy' depending on transaction costs related to market agreement act in line with specificity and uniqueness of that particular service.

Intermediate demand for services is mostly assumed in the area of business services. According to the Statistical classification of economic activities in the European Community – NACE Rev. 2 (NACE Rev. 2; 2008), that encompasses revised classification of economic activities, following sections are considered as part of business services: Section J (Information and communication), Section L (Real estate activities), Section M (Professional, scientific and technical activities), and Section N (Administrative and support service activities). The key factor supporting development of business services is externalisation. Separating services from production is determined by competencies, costs, capacity, quality, risk, time, legislation, compatibility, control, flexibility, competition, availability as well as socio-psychological motives (Michalová et al., 2013).

Abovementioned factors represent key features influencing externalization from within the enterprise, hence on micro-level. Nevertheless, in order to better understand the relations between socio-technological changes and intermediate demand for service one must not neglect those aspects emerging externally, or for that matter, on macro-level. Macroeconomic variables epitomise aggregate results of enterprises operating on micro-level. Institutional environment encompasses an assembly of formal and informal institutions as well as organisations. Cause-effect relationship between institutions and macroeconomic setting of firms has already been proved in the paper of Kittová and Steinhauser (2017). Summarising ideas of several authors (Roa et al.,1993; Mattoo et al., 2001; Joshi, 2008; Hardy et al., 2012; Michalová et al., 2013; Michalová & Krošláková, 2014; Chahal, 2015; Kubičková et al., 2016; etc.) we can claim that development of intermediate demand for services on macro-level is influenced by the following factors: economic growth and economy efficiency, globalisation, knowledge-intensive service production, innovations/innovative activity of enterprises, structure of economy, power of the key economic areas.

2 METHODOLOGY

This paper main aim is to:

1. Identify the development of business services in the economy of Slovakia compared to its development in the (other) Visegrad Group countries.

2. Recognise the influence that selected factors have on the development of intermediate demand for business services considering economic conditions of Slovakia.

Data sources for achieving our first goal were gathered from the Eurostat (2017) for the period 2005 – 2015. Turnover was used as an indicator of demand development. Table 2. summarises the compared statistical and dynamic indicators of turnover volumes for the period of 2005 – 2015 in the V4 countries, thus expressing demand for business services.

Achieving our second goal is linked to our assumption that there is a relationship between the selected factors and quantified demand for business services in the Slovak Republic. Therefore, tab. 1 represents our systematic evaluation of a relationship between the volume of domestic intermediate demand for business services and selected development factors. The selection of these development factors is a continuation of factors of intermediate demand for services already identified (previously noted as: economic growth and economcy efficiency, globalisation, knowledge-intensive service production, innovations/innovative activity of enterprises, structure of economy, power of the key economic areas).

Tab. 1 Selected factors of development influencing demand for business services in the Slovak Republic

Independent variables X	Description	Source
GDP_mil_EUR_1	Economic performance of Slovakia expressed in absolute GDP	Statistical Office of SK
EXPORT_1	Total exports of Slovakia	Statistical Office of SK
FDI_mil_EUR_1	Foreign Direct Investments	National Bank of SK
AV_AUTO_mil_EUR_1	Added value of automotive industry – Section C29 of NACE Rev. 2	Statistical Office of SK
AV_ELE_mil_EUR_1	Added value of electrotechnical industry – Section C26 and C27 of NACE Rev. 2.	Statistical Office of SK
AV_MECH_mil_EUR_1	Added value of mechanical engineering industry – Section C25; C28; C30 of NACE Rev. 2.	Statistical Office of SK
AV_CHEM_mil_EUR_1	Added value of chemical industry – Section C19 to C 22 of NACE Rev. 2.	Statistical Office of SK
R&D_000_EUR_1	Expenditure on research and development (R&D)	Statistical Office of SK
E_on_innovation_000_EUR	Expenditure on innovations	Statistical Office of SK

Note: Variables with a suffix '_1' indicate a time shift of one year because of our assumption that demand for services is influenced by the situation of entrepreneurial environent with a minimum of a one-year time shift.

Legend: C (Section C) – according to NACE Rev. 2 it encompasses the section of manufacturing; GDP – Gross Domestic Product; SK – the Slovak Republic.

Source: Authors based on: National Bank of the Slovak Republic (2000-2014); Statistical Office of the Slovak Republic (2000-2014)

In case of Slovak economy, we perceive domestic intermediate demand for business services as a demand of enterprises for business services emerging from domestic production. This demand is met by both business service production is Slovakia as well as their imports from other countries and calculated on the basis of the following equation:

Demand for business services in SK = Turnover of enterprises (J, L, M, N) + Imports of services – Exports of services

Input data for calculating domestic intermediate demand for business services (Figure 1) was gathered by Statistical Office of the SK in the period 2000 – 2014. Basic parameter for this demand quantification is the turnover of business services. However, in this respect our paper meets certain barriers due to dissonant statistical reports for the monitored period. The year 2008 marks the change in NACE Rev. 2. For that reason (until 2008) calculation of turnover of enterprises included the following categories: Real estate activities; Information and appropriate activities; other service activities and also activities such as rental activities understood as leasing. Since 2008 and the renewed classification of activities, turnover was already quantified in concrete sections J, L, M, N.

Fig. 1 Domestic intermediate demand for business services in the Slovak Republic (2000 - 2014, mil. EUR)]
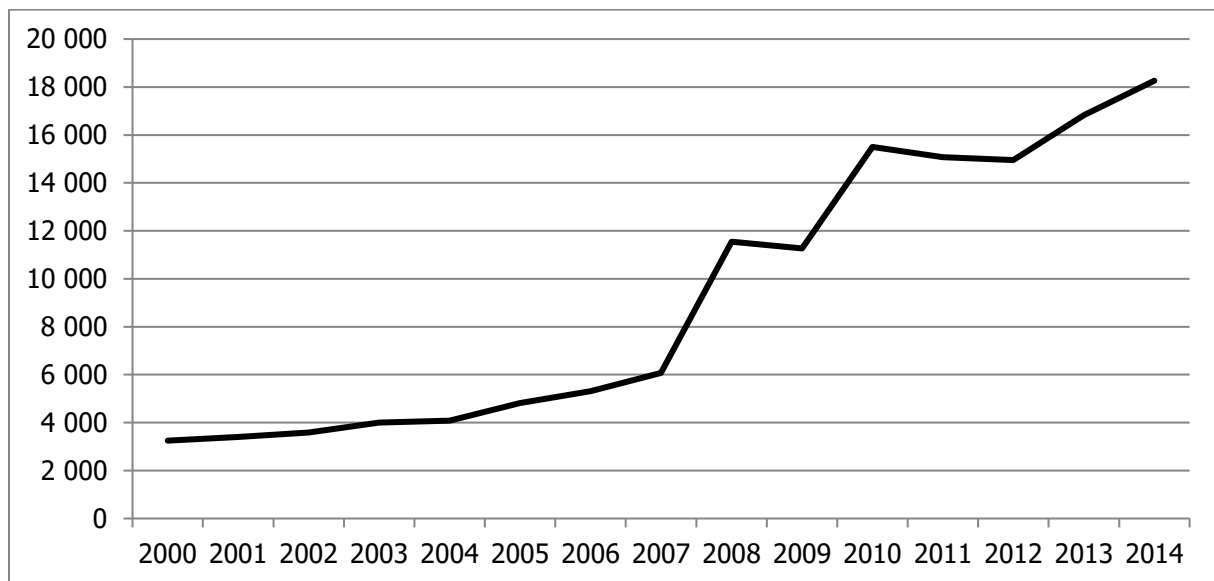
Source: Authors based on Statistical Office of the Slovak Republic 2000 – 2014

Subsequently we have approached the identification of the relationship between the variables using regression and correlation analyses. For data processing MS Excel software was used. Dell Statistics software was engaged to process estimated regression equation and correlation analyses combined with the indicators of the quality of estimated variables including for the model as a whole. Results of the regression and correlation analyses are presented in Table 3. All the parameters that point towards the existence of dependence between individual parameters and demand for relevant services are statistically significant on the significance level $p<0.05000$ and are marked with three stars (***). In case of enterprise innovation costs, this particular relationship has not been confirmed. Other variables have positive correlation coefficients (r). Dependence between variables increases with the increase of correlation coefficient (r) in absolute value. Estimated equation of linear regression analysis has the following design:

Demand for business services (y) = constant + slope*x

Quality of linear regression analysis is determined by the coefficient of determination indicator (r2), t-statistics, p-value, constant (meaning locating constant), slope (expressing regression coefficient) as well as the number of observations (N). Individual dependencies were determined on the basis of the regression and correlation analyses (Table 3).

3 RESULTS AND DISCUSSION

3.1 Quantitative comparative analysis of demand for business services in the V4

Business services demand has experienced a prominent growth in SK in all sections. Benešová (2015) believes these results are to be most likely due to seeking new solutions, consulting services defined by certain knowledge intensity in the context of dealing with the crisis. Enterprises pursued different ways of succeeding on the market, changing their strategy, or make processes more effective via out-of-house consulting and entrepreneurship knowledge diffusion.

Tab. 2 Selected factors of demand for business services of V4 countries, 2005-2015

Business services – turnover in 000 EUR							
	CZK 2015	change comparing to 2005 (%)	HUN 2015	change comparing to 2005 (%)	POL 2015	change comparing to 2005 (%)	SVK 2015	change comparing to 2005 (%)
section J	13,899.00	38.73	10,629.10	15.28	31,213.00	76.50	6,062.70	136.48
section L	6,898.30	101.13	4,646.10	-7.09	15,938.20	113.37	3,261.50	532.20
section M	16,977.70	46.31	10,466.30	42.77	29,710.90	92.98	7,971.70	365.56
section N	9,204.90	98.57	7,744.40	76.13	16,725.60	225.21	4,312.50	283.71

Legend: CZK – the Czech Republic; HUN – Hungary; L (Section L) – according to NACE Rev. 2 it encompasses the section of real estate activities; POL – Poland; SVK – the Slovak Republic; V4 – Visegrad Group

Source: Authors based on Eurostat 2005 - 2015

Section J

Demand for information and communication services is very closely interrelated with technological progress or even digital transformation. Information and new technologies represent the fundament of this transformation. Increase in demand for services in the Section J is connected with the growth in computer services that process data, enable expert activities, develop, test and modify software. Besides that, these activities also encompass creation of integrated hardware, software and communication technologies.

When dynamics of demand for information and communication services is concerned, Slovakia takes the lead, followed by Poland, Hungary and finally the Czech Republic. In the 1990s most Eastern European countries have oriented towards market economy. In this sense, starting position of Slovakia was poorer than the one of economically stronger Czech Republic. Regardless of its initial transition challenges, Slovakia managed to successfully become incorporated within Transatlantic and European structures. In 2004, Slovakia acceded to the European Union, and in 2009 became a member of eurozone as the first, and so far the last, amongst the V4 countries. With time, Slovak economy achieved the biggest growth (Čiderová & Kovačević, 2015), mostly due to reforms and foreign direct investments (Peter & Lalinský, 2013). In the context of structural development, Slovakia has profiled to service economy (Figure 2).

Fig. 2 Development of growth rate for demand (section J) in V4 countries (2005-2015, in 000 EUR)

Legend: CZK – the Czech Republic; HUN – Hungary; J (Section J) – according to NACE Rev. 2 it encompasses the section of information and communication service; POL – Poland; SVK – the Slovak Republic; V4 – Visegrad Four

Source: Authors based on Eurostat 2006 – 2015

Section L

Real estate market represents one of the most vocal indicators of the general economic situation as a rather sensitive indicator of economic development.

Fig. 3 Development of growth rate for demand (section L) in V4 countries (2005-2015, in 000 EUR)
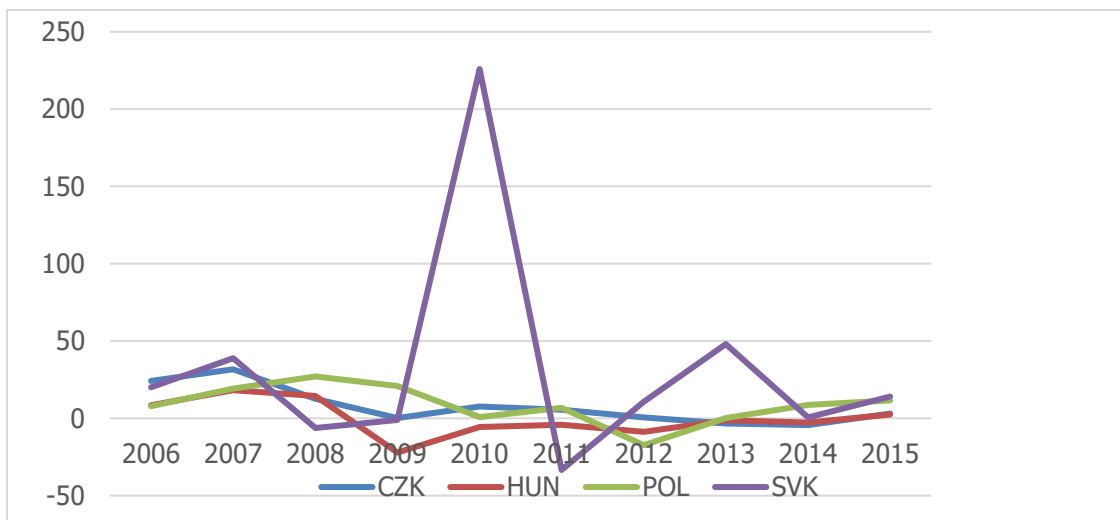
Legend: CZK – the Czech Republic; HUN – Hungary; L (Section L) – according to NACE Rev. 2 it encompasses the section of real estate activities; POL – Poland; SVK – the Slovak Republic; V4 – Visegrad Group
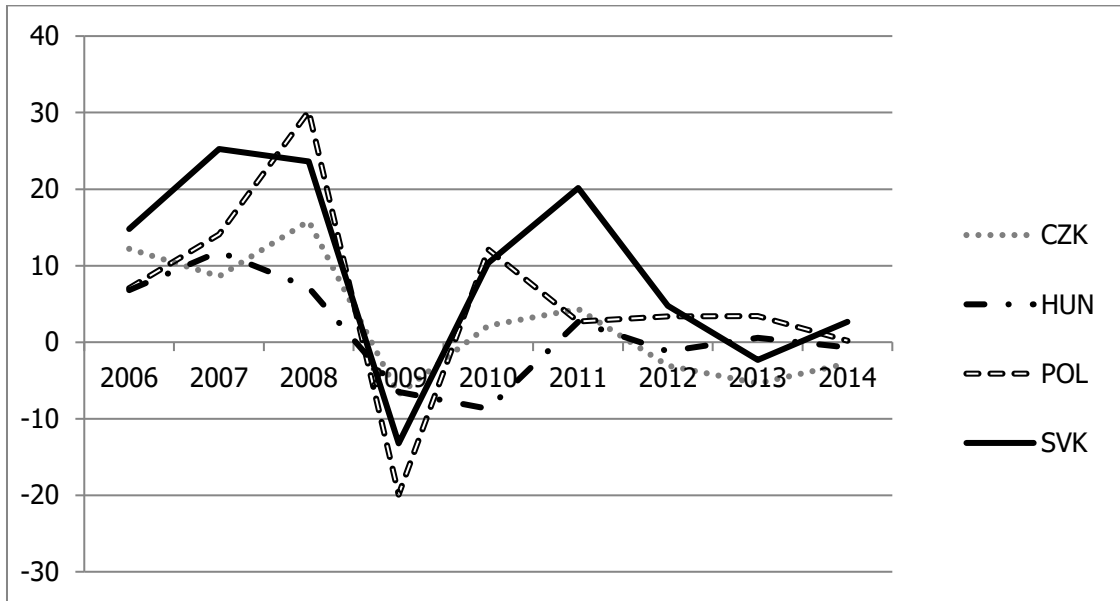
Source: Authors based on Eurostat 2005 – 2015

Two extremes considering demand for services in the framework of section L are noted within the conditions characteristics for the Slovak environment (Figure 3). The first one can be seen in the period 2009 – 2010 (SNB, 2010) and its growing outcome was a result of positive macroeconomic development having impact on mortgage loans growth and decrease of real estate prices. The second one in the period 2012 – 2013 followed the same trajectory but for different set of reasons: increasing demand for mortgage loans due to historically low interest rates as well as stability in development of real estate prices (SNB, 2014).

Section M

Section M is characterised by its typical set of services in the area of: legal and accounting activities; activities of head offices; management consultancy activities; architectural and engineering activities; technical testing and analysis; scientific research and development; advertising and market research; other professional, scientific and technical activities; and veterinary activities.

Fig. 4 Development of growth rate for demand (section M) in V4 countries (2005-2015, in 000 EUR)
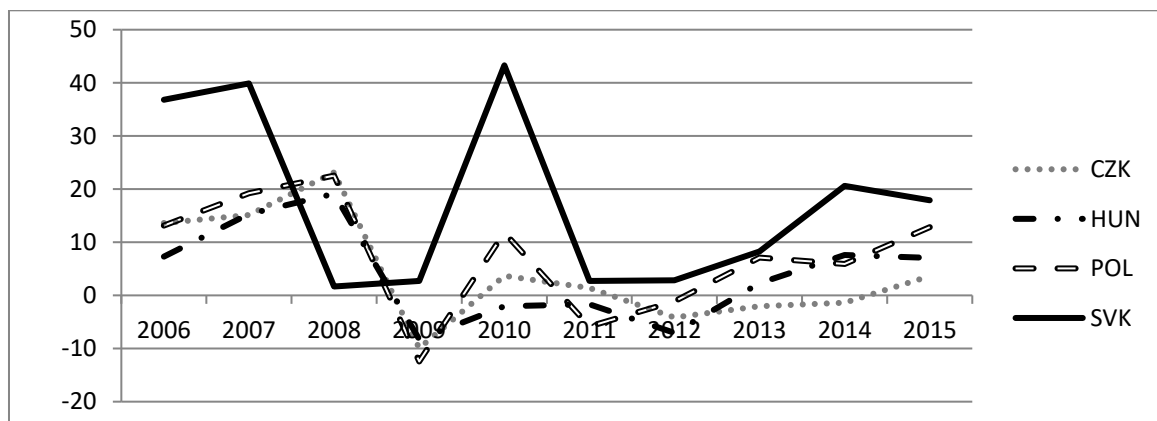
Legend: CZK – the Czech Republic; HUN – Hungary; M (Section M) – according to NACE Rev. 2 it encompasses the section of professional, scientific and technical activities; POL – Poland; SVK – the Slovak Republic; V4 – Visegrad Group

Source: Authors based on Eurostat 2005 – 2015

Comparison of average annual growth rate yet again demonstrates the highest average annual growth rate in the Slovak Republic, followed by Poland, Hungary and the Czech Republic. Their results are depicted in Figure 4.

Section N

Those activities encompassed by the Section N include: renting and leasing activities; employment activities; travel agency, tour operator reservation service and related services; security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support activities. From the dynamics point of view (Figure 5) the highest average annual growth rate is achieved in Slovakia ("catching-up" effect displayed), followed by Poland, the Czech Republic and Hungary.

Results of analysis involving both static and dynamic indicators as well as development figures enable us to monitor increasing demand for business services in the V4 countries that has been continuously inspired by the need of enterprises that mostly focus on their core activities. This particular propencity is a consequence of specialisation and the need for swift reaction to socio-technological changes. When comparing individual V4 countries one must conclude that

even though Slovakia reaches the lowest values in the context of the observed categories, its dynamic indicators do show the fastest growth among the V4. The most notable among them are contained in the area of trading and entrepreneurship services, more precisely in the Section L (Real estate activities) and Section M (Professional, scientific and technical activities). Reasons for such a dynamic growth of these particular services in Slovakia lie is the fact that Slovak economy represents one of the fastest growing economies not only within the eurozone but also in the European Union, substantially influenced by the foreign direct investments (FDI), that are creating new entrepreneurial opportunities in the area of services therefore enabling emergence of new service enterprises. The last but not the least, this growth made an impact on fading-out effect of economy restructuring, that was naturally inclining towards industry in the framework of international organisation Council for Mutual Economic Assistance (Comecon).

**Fig. 5 Development of growth rate for demand (section N) in V4 countries (2005-2015, in 000 EUR)**
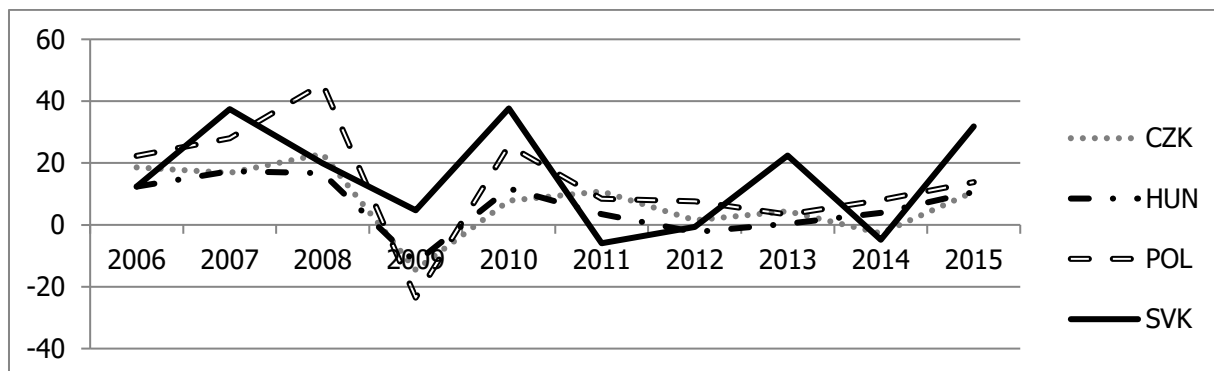
Legend: CZK – the Czech Republic; HUN – Hungary; N (Section N) – according to NACE Rev. 2 it encompasses the section of administrative and support service activities; POL – Poland; SVK – the Slovak Republic; V4 – Visegrad Group

Source: Authors based on Eurostat 2005 – 2015

3.2 Influence that selected factors have on the development of intermediate demand for business services considering economy of the Slovak Republic

We perceive GDP as a complex indicator of a country's performance. Using regression and correlation analyses we were able to confirm strong linear dependence (r = 0.94) between GDP growth and an increase in demand for business services. That implies that an increase of GDP by 1 mil. EUR increases the demand for business services by 271.197 EUR.

Growth in exports implies the increase in quality and competitiveness of Slovak production in foreign markets. The paper confirmed strong dependence (r = 0.90) in respect to the exports factor. With the exports performance growth, demand for services in Sections J, L, M, N also grows. This is additionally supported by the existence of free trade agreements, European Union membership, Internal Market Services Directive (Directive 2006/123/EC of the European Parliament and of the Council on services in the internal market), technological changes, as well as European Single Market building. In the context of international flows the factor of foreign direct investments has significant influence that serves as a feature of economic growth, job creation and growing exporting performance in Slovak economy. According to the noted results we acknowledge that increase in demand for business services is influenced by FDI growth. This model explains 90% (determination coefficient r^2 = 0.90) of input data and suggests a very strong dependence between variables (correlation coefficient r = 0.95). FDI

inflow is understood as a manifestation of a country's competitiveness in international context, characterized by desirable entrepreneurial environment, quality institutions and effective economic policy. FDI have an impact on economic strength of key industries in Slovak economy, such as automotive and electro-technical industry. However, structural changes in SK change the mere structure of Slovak economy, too, for the benefit of services (Kubičková et al., 2016). Therefore, we strive to focus on identifying the existence and amount of influence that selected industries, such as automotive industry, electro-technical and mechanical engineering industry, as well as chemical industry, have on demand for business services.

Tab. 3 Correlation and regression analyses in the period 2000-2014]

Marked ***correlations are significant at p < 0.05000							
Var. X & Y	r(X,Y)	r^2	t	p	N	Constant	Slope
demand for services GDP_mil_EUR_1 ***	0.94	0.89	9.70	0.00	14	-5,122.6	0.27632
demand for services EXPORT_1 ***	0.90	0.82	7.31	0.00	14	-2,821.2	0.29245
demand for services FDI_mil_EUR_1 ***	0.95	0.90	10.64	0.00	14	-308.6	0.38860
demand for services AV_AUTO_mil_EUR_1 ***	0.90	0.80	7.03	0.00	14	1,113.7	6.87849
demand for services AV_ELE_mil_EUR_1 ***	0.86	0.73	5.76	0.00	14	1,298.0	8.86566
demand for services AV_MACH_mil_EUR_1 ***	0.88	0.78	6.58	0.00	14	-1,020.5	6.12410
demand for services AV_CHEM_mil_EUR_1 ***	0.83	0.68	5.10	0.00	14	-8,989.7	15.30924
demand for services R&D_000_EUR_1 ***	0.88	0.78	6.44	0.00	14	-2,240.2	0.03618
demand for services E_on_innovation_000_EUR	-0.56	0.32	-1.67	0.15	8	2,435.8	-0.0123

Legend: AUTO – automotive industry; AV – added value; E – expenditure; ELE – electrotechnical industry; CHEM – chemical industry; FDI – foreign direct investments; GDP – Gross Domestic Product; MACH – mechanical engineering industry; N – number of observations; p – value; r – correlation coefficient; r^2 – determination coefficient; R&D – research and development; t – statistics; SK – the Slovak Republic

Note: Variables with a suffix '_1' indicate a time shift of one year because of our assumption that demand for services is influenced by the situation of entrepreneurial environent with a minimum of a one-year time shift.

Source: Authors based on: National Bank of the Slovak Republic, 2000 - 2014; Statistical Office of the Slovak Republic, 2000 – 2014 using the Dell Statistics software

Slovakia is one of the leading producers in automotive industry in the Central Europe thanks to the presence of the world car brands such as Volkswagen, PSA Peugeot Citroën, Kia Motors including newly arrived of Jaguar Land Rover only to strengthen its dominant status. The influence that the automotive industry has on demand for business services has also been confirmed by results of our analyses. The model explains 80% of input data and indicates an existence of strong positive correlation between variables (r = 0.90). This positive dependence has also been verified in the context of other industry sectors. Electro-technical and mechanical engineering as well as chemical industry are traditional industries in Slovakia producing substantial stimuli of demand for domestic services. Statistical significance in these three particular cases has reached almost 90% with very strong dependence occurring in all three situations, as proven by the correlation coefficient (r). Transformation of the Slovak economy was mostly focused on development of business services production that is heading towards intermediate consumption of both manufacturing including service providing enterprises. Therefore, one must evidently confirm the existence of cohesion between production of business services and accomplishments of enterprises in all economy sectors. As the industry further develops it generates demand for intermediate services thus supporting development of business services, and vice versa, in which case development of business services is an active participant in development of industry.

Although in recent period SK has increased its expenditure on R&D it is evident that so far not even an EU average has been reached (European Commission, 2016). Regardless of that fact, the influence of science and research on demand for business services is obvious. Moreover, it was also expected for enterprise expenditure on innovations to be closely correlated with demand for services, however this expectancy was not confirmed. The reason for such results might lie in the insufficient number of observations in this particular area, as statistical reporting occurs only once in two years. Nevertheless, the matter of a fact is that enterprise expenditure on innovations remains on a low level, particularly in the area of sophisticated areas such as science, research, or IT. Private expenditure on R&D in entrepreneurship sector in 2015 stood for 0.33% of GDP (Eurostat, 2017) in comparison to the EU average of 1.3% of GDP (European Commission, 2016). This negative stance is also confirmed by several studies dealing with innovation (Vasiľová et. al., 2013; Kubičková et al., 2016; Statistical Office of the Slovak Republic, 2016b). Insufficient innovation investment of enterprises potentially jeopardies their further strengthening as much as additional development of demand for business services.

CONCLUSION

Visegrad Group countries react to changing economic environment and structure in the framework of developed economic environment of the European Union establishing their status as service economies. Strengthening of service production goes hand-in-hand with externalisation of services, outsourcing and offshoring, but also with regular development of entrepreneurship environment in transformation period. As already mentioned, these facts apply for business services in the V4 countries where the most dynamic development is undergoing in the Slovak Republic. That is the reason that our centre of interest in this paper is on factors influencing development of business services in the Slovak economy. We have focused on the domestic intermediate demand for business services. Bearing in mind specificities of Slovak economy, we have used the systematisation of business services production know-how to identify the most relevant development factors for aforementioned services: economic growth and performance of an economy, globalisation, production knowledge intensity, innovation/innovative activity of enterprises, structure of economy, strength of key industries. Those were expressed by appropriate variables (GDP, volume of exports of SK, volume of FDI, added value gained by selected industries, expenditure on R&D,

enterprise expenditure on innovations). Positive linear dependence between independent variable and domestic intermediate demand for business services was given using correlation and regression analyses for one particular case – enterprise expenditure on innovations, where the correlation was not confirmed. The reason could lie in a low number of observations due to missing statistical data. Nevertheless, the matter of a fact is that enterprise expenditure on innovations in the Slovak Republic are at a poor level which can potentially lead to limitations in respect to demand for business services creation as well as disadvantages in quality and competitiveness of domestic production. Results of our analyses have proven that performance of economy, stronger industrial production, expenditure on R&D, foreign direct investments including exports, are the key factors of development of demand for business services in the Slovak Republic. For the time being, strengthening of private expenditure on innovations remains to be solved via stimulative systems of Slovak economy that is yet to be applied.

ACKNOWLEDGEMENT

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Choice Architecture in Healthy Consumption Behaviour

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Abstract: The purpose of our article is to investigate the role of environmental factors and policies influencing healthy consumption behaviour. In the first part we explore direct, indirect and interactive effects of environment on changes in healthy consumption behaviour. In the context of direct environmental factors government interventions, nudging and choice architecture interventions will be examined. Further, indirect or mediated effects of the environment on health behaviour are presented, leading to changes in perceptions, which in turn affect behaviour. In the second part of the article we explore policy-based approaches to changing healthy consumption behaviour and possibilities of the social marketing approach to behavioural change. To explore the changes in behaviour, experiment is used as a key research method. Three specific designs of experiment are applied: one-shot design, one-group pre-test-post-test design and the static group design.

Keywords: healthy consumption behaviour, environmental factors, social norms, choice architecture

JEL Classification codes: M30

INTRODUCTION

Various aspects of the environment may influence our health behaviour. For example, a lack of financial resources can prevent individuals from buying healthier but more expensive foods and consumer products. These factors of the environment can have effects on behaviour either directly (where an automatic / unconscious effect is expected) or indirectly (where mediated effect is present), or by interacting with cognitions (moderation effect). In our paper we consider these direct, mediated and moderated effects by which environmental factors may influence our behaviour.

In the framework of direct effects we explore nudge theory and choice architecture as a research area that has examined how making changes to the environment factors might change our health behaviour.

Under mediated effects we explore how changes in the environment may produce changes in cognitions, such as social norms or intentions, which in turn evoke changes in behaviour. Under moderated effects we examine how various aspects of the environment may interact with cognitions to produce behaviour. We also investigate the effects of public policy-based solutions in changing behaviour.

1 LITERATURE REVIEW

In their book „Nudge: Improving Decision about Health, Wealth and Happiness" explore Thaler & Sunstein (2008) changes in behaviour based on changing various aspects of the environment. They focus on the impact of the environment on decisions and behaviours. They suggest that we do not make choices in a vacuum but in an environment where many aspects

of that environment influence our decisions. It is assumed that many of these environmental aspects influence behaviour directly, outside of conscious awareness. Other aspects may require more cognitive and behavioural effort to have their effect.

Thaler & Sunstein (2008) use the term "choice architecture" to describe the creation or modification of aspects of the environment that influence choices. Nudge theory is used to show how choice architecture can be used to influence people to make certain choices using a variety of tools. The authors have created a website where they describe various strategies under headings such as defaults, giving feedback and creating incentives. For example, the idea of changing defaults from an "opt in" default to an "opt out" default proved to be successful in changing different types of behaviour.

Since the publication of the book, several authors tested the nudge theory in socially important contexts. For example, a team of researchers (Thorndike et al., 2012) tested some relevant nudges and choice architecture interventions to decrease the likelihood of employees purchasing high-calorie food and to increase the likelihood of purchasing healthier foods. In one of their studies, they created a nine-month longitudinal research with interventions introduced sequentially. First, after a baseline period, they introduced food labels with a "traffic light" signal scheme. Foods were labelled as green (healthy), yellow (neutral) or red (unhealthy/high calorie). Three months after the traffic light scheme was introduced, they then used choice architecture to make "green" choices more available and accessible, and to make the "red" choices less available and accessible. Following their interventions they found significant reductions in "red" choices, especially for "red" (high calorie) beverages, which were reduced by about 40 %. In addition, most of the positive changes were sustained for longer period.

Fig. 1 Images used to nudge people in the direction of healthy food choice

Red: Unhealthy
Consume rarely, or not at all
(Sweet beverages, cakes)

Yellow: Neutral
Consume occasionally
(Fruit juice, low-sugar drinks)

Green: healthy
Consume a lot
(Low-fat milk, cereals, vegetable, some fruits)
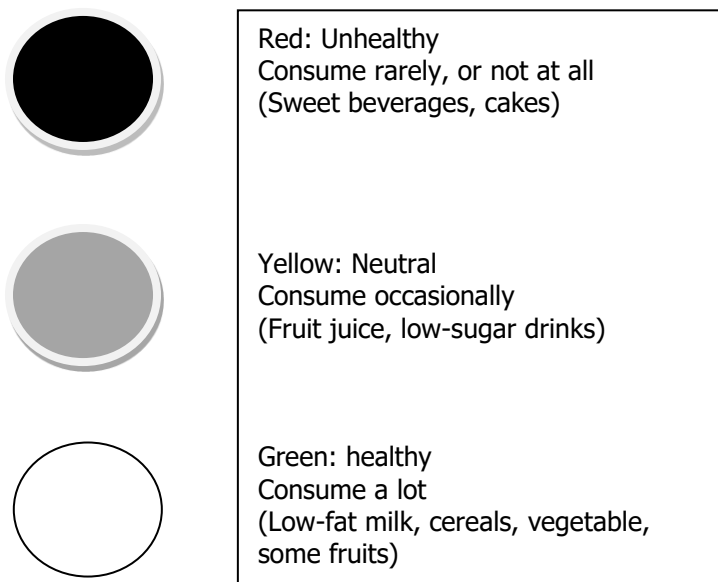
Note: Red shown as black, yellow shown as grey, green shown as white

Source: own production

In another study, Hanks, Just, Smith & Wansink (2012) tested the idea of a "healthy cafeteria products" in addition to standard cafeteria products (with unhealthy foods) in a school. In the healthy cafeteria students could only purchase healthy items (e.g. salads, corn sandwiches, fruits and vegetables). This additional healthy offer resulted in a significant reduction in the

purchase of unhealthy foods. These studies illustrate the power of choice architecture in influencing healthier eating behaviour.

2 METHODOLOGY

The aim of the article is twofold: first, we explore the effects of environment on changes in health behaviour. Direct, indirect and integrated effects are compared in relation to the effects of developing an impact on health behaviour. Second, prospects of policy-based approaches and social norms in behavioural changes are assessed in the framework of complex public health policy.

To explore the changes in behaviour, experiment is used as a key research method. Three specific designs of experiment were applied: one-shot design, one-group pre-test-post-test design and the static group design. One-shot experiment design is applied as the after-only design, which may be symbolically represented as: X-O_1. In this type of experiment a single group of test participants is exposed to a treatment X, and then a single measurement on the dependent variable is taken (O_1). The one-group pre-test-post-test design may be symbolised as: O_1-X-O_2. In this experiment a group of test participants is measured twice. First, a pre-treatment measure is taken (O_1), then the group is exposed to the treatment (X), and finally a post-treatment measure is taken (O_2). The treatment effect is computed as (O_2-O_1). The static group design experiment is a two-group experimental design. One group (called the experimental group EG) is exposed to the treatment, and the other (called the control group CG), is not. Measurements on both groups are made only after the treatment. This design may be symbolically described: EG-X-O_1; CG-O_2. The treatment effect will be measured as the difference (O_1-O_2). All three types of described designs are characterised by an absence of randomisation.

3 RESULTS AND DISCUSSION

3.1 Direct environmental impacts on health behaviour

To test the direct intervention, nudge theory and choice architecture, we adapted in our research the concept developed by Miller, Gupta, Kropp, Grogan & Mathews (2016). In the pre-test-post-test experiment we used two interventions that were compared to a control condition. The first intervention required students to use the traditional pre-ordering system for their lunches, while the second intervention used the same pre-ordering system supplemented with behavioural nudges, which helped students to order a balanced and healthy meal. In particular, students were asked to order one item of each from among fruits, vegetables, whole grains, dairy and a main dish. The second intervention delivered better outcomes compared to first intervention. Students using the system with behavioural nudges for ordering more balanced meals selected in fact more fruits, vegetables and grain products in their lunches.

As mentioned above, some of the environmental incentives or nudges that influence behaviour are often outside of our awareness, whereas others are more visible and require more conscious, deliberate decision-making. Some researchers (e.g. Jung & Mellers, 2016) have used the terms "System 1 thinking" and "System 2 thinking" to describe the nudges. System 1 stimuli have more of an automatic or impulsive influence on behaviour. Examples of this type of stimuli include smaller portions of food, or changes in the visibility and accessibility of food items in shops or cafeterias. System 2 stimuli, by comparison, require more effort, reflection and deliberation. For example, System 2 stimuli can include food labels or nutritional

information, aiming to make different food selections. These types of interventions provide education and information enabling individuals to make more informed choices. So, when consumers are aware of these different types of interventions influencing their behaviour, they could respond in a desired way (Andreasen, 2002). However, there is also a view, that people may feel that nudges are an attempt to control or manipulate their behaviour, reacting negatively and resisting the stimulus attempt, especially if those stimuli are from the System 1 type.

In a sample of adults, Jung & Mellers (2016) explored the role of individual differences in perceiving different types of nudges, and found some interesting patterns. First, there was general support for nudges to increase the likelihood of positive behaviour, but stronger support was found for System 2 (informational) nudges than for System 1 (automatic) nudges. Concerning individual differences and preferences, empathetic and open minded people showed support for both types of stimuli, especially when they were offered as to have societal benefits. People with high level of individualism and conservative respondents rejected both types of stimuli. Participants expressing the need to do free and independent decisions were primarily against System 1 nudges, and the key determining factors in their resistance to such nudges were feelings that their autonomy was threatened by such interventions and that such stimuli were too paternalistic.

In an international research of obesity (Robinson et al., 2013) respondents were asked about the acceptability of a variety of interventions, based on nudging or choice architecture, to reduce obesity. These interventions, such as reducing portion sizes, changing the size and shape of packaging, and making foods differentially accessible to consumers, included both System 1 and System 2 type nudges. Participants showed a preference for educational interventions (System 2 nudges) to policy-based interventions, such as taxation or price increase on sugary beverages, etc. Attitudes towards interventions based on choice architecture were also assessed in their study. In this case, respondents preferred interventions that were presented as effective in solving the problem, even when it was automatic or "System 1" nudge. Hence, in may be concluded that as long as an intervention works, participants evaluate them as acceptable even they know that it works largely non-consciously.

Some people might explicitly oppose direct interventions in the form of nudges and choice architecture, especially if they are perceived as reducing personal autonomy and freedom, or if they are considered as being used outside of our awareness. This aspect is something that several researchers and economists (e.g. Langford et al., 2013) criticized from a point of view of the ethical implications of applying these principles, even if it was for the "general good" of society.

One ethical concern with nudges is that nudging programmes may contribute to health inequalities and disparities. Some people have limited (or no) access to more optimal choices, like adequate health care and healthy food choice.

3.2 Indirect environmental impacts on health behaviour

In guiding behaviour indirectly, the social norms are used in attempts to change various behaviours, such as the overconsumption of alcohol and smoking in children / young people segment (Wiltshire et al., 2001). The key feature of applying this approach as a research tool is that individuals first provide information about their own behaviour and attitudes. Later, the same individuals make estimates of other people in their environment who perform similar behaviour (two-group experimental design). Feedback is then provided about the actual behaviour and attitudes of other people based on the results of actual exploration. So, for example a student might estimate that about half of the students of his school accept smoking

and that about one quarter are actual smokers. Based on the actual exploration among the students he can be provided with information showing that the actual figures are lower, (e.g. showing that only 1 in 5 accept smoking and only 1 in 10 actually smoke). The assumption is that this more accurate information concerning prevalent social norms will stimulate the individuals to decide not to smoke and less likely to start smoking in the future. There is some evidence for the success of this approach, particularly in relation to reducing drinking. However, recent studies suggest that even medium-to-large changes in norms evoke only small changes in drinking behaviour and no changes in alcohol-related problems.

In several experimental tests of the effect of social norms on eating behaviour, Robinson, Benwell & Higgs (2013) found clear evidence that informational social norms have an impact. When research participants were presented with a "high consumption norm", or information about other people consuming a lot of food, it increased the amount of food consumed by them, compared to control conditions. Likewise, research studies that presented to participants a "low consumption norm" also found a significant effect resulting in comparison to control conditions in reduced food consumption among research participants. In addition to impact on the quantity of food consumed, social norms – being "indirect stimuli" can demonstrate also impact on the type of chosen food (healthy food versus "junk food").

In our research among university students we examined the impact of social norms on eating behaviour on the case of the potato chips. To conduct the test, a pre-test-post-test experimental design was applied. Students were divided into three groups with different conditions: low norm (up to 5 chips), high norm (more than 15 chips) and no norm (control variable). The theory suggests that such consumption norms will act as direct influence on eating behaviour, so we expected that participants would eat more chips than control variable in the high norm group, and fewer chips than control variable in the low norm group. In the real test, students were presented with a package of chips and were left alone to eat for 15 minutes. It was found in the result that norms affected behaviour as expected, such that participants consumed the lowest number of chips in the low norm group, the highest number of chips in the high norm group and an intermediate number in the control group. It was confirmed that social norms for eating can have a certain influence on eating behaviour.

Understanding of how cognitions / information mediate the effects of changes in the environment on behaviour might help to develop more effective interventions (Gordon et al., 2006). For example, where the effects of the environment are mediated by cognitions, it may be useful to combine interventions targeted to environmental changes (e.g. opening more sport centres) with interventions targeting different cognition changes (e.g. strengthening intentions to be physically active).

3.3 Moderated effects and policy-based interventions in health behaviour

In addition to mediated effects, we may also find moderated effects, or interaction effects, between aspects of the environment and cognitions about the behaviour itself, in determining behaviour. In general, an interaction effect means that the direct effect of one variable is different for different groups of people. These groups may be based on individual differences or personality factors. For example, the influence of intentions to behave healthy on actual behaviour might be strongest for people with high level of personality consciousness.

Concerning health behaviour generally, a key environmental variable is socio-economic status (SES). SES refers to the social standing of a person (or group of people) and is measured by factors such as income, education and occupation. Research has demonstrated differences in health behaviour as a function of SES (O´Brien, 2012). For example, health risk behaviour such as smoking and alcohol dependency are usually higher for low SES groups compared to high SES groups, and healthy behaviour such as physical activity and healthy eating tend to

be lower. It was documented in medical research studies that the relation between SES and mortality is attributable to differences in health behaviour.

In relation to policy-based approaches to behaviour changes it is important to examine how changing prices (e.g. for alcohol and tobacco, high sugar drinks) and requiring health warnings (e.g. fat consumption, smoking) can be effective means of changing health behaviour. We will examine the direct behavioural outcomes of public policy.

The approaches in the category of policy-based interventions could be of two types. They could be based either on an informational strategy, or be based on the change of the market environment itself. Informational strategies are focused on informing people to think more about their choices, and the benefits of certain choices or the dangers of other choices. One drawback of this approach is that it may not result in behaviour change even though people may be more knowledgeable, informed, aware of the consequences of certain behaviour. The other type of strategy involves changing the market environment directly. This is more difficult and expensive, but can be quite effective in producing changes in behaviour (Luca & Suggs, 2013).

We can raise the question, whether price increases on certain products have their desired effects. Studies in relation to smoking found that increasing the price of tobacco products reduced both the prevalence of youth smoking behaviour as well as the amount of tobacco that they consume. However, one concern with raising prices on certain products is that such a policy risks are socially regressive and more punishing to the finances of poorer people. In this case they must spend a greater proportion of their total income on higher prices, compared to wealthier people.

With price increases on sugared products that were introduced in some countries, the key question is whether and how they work in favour of public health. Many health experts recommend a tax on sugar-sweetened beverages because such a policy would improve health and reduce obesity. Sweet beverages are seen as a main cause of obesity and reduction in sugar beverage consumption is associated with improved health. It is argued that warning labels on foods are good for higher educated people and people who think rationally about the relationships among consumption of calories, weight and associated diseases. However, warning labels are perhaps unlikely to have desired impact on people who have problems with weight. One of the ethical dilemmas for warning labels about obesity is that such labels may lead to further stigmatization and moral judgment of people who consume such products.

Concerning the effectiveness of warning labels on behavioural change, VanEpps & Roberto (2016) conducted a research to test whether warning labels for sugar-sweetened beverages can influence their consumption. They gathered responses from over 2200 students aged 12-18 years. The key independent variable was the type of label on various drinks. They compared two types of label: the warning label and the calorie indicator label. The labels with warnings were telling to the prospective consumer that sugar drinks are linked to weight gain, obesity, diabetes and tooth decay. The calorie indicator label contained only the information about the size of calories and sugar content. The main outcome of the research was, that warning labels compared with labels indicating only calories content significantly reduced the percentage of students choosing sugar-sweetened beverages. Similar studies (Vartanian et al., 2007), in which the authors examined the effects of price increase on sugar-sweetened beverages, documented that such policies could reduce obesity and they might be effective despite their "regressive" nature.

CONCLUSION

The aim of the paper is the evaluation of various approaches used in applying different methods to encourage or promote change in health behaviour. The ideal outcome is that individuals make more healthy choices for their own benefit as well for the benefit of society as a whole. According to this desired behaviour researchers and practitioners should examine and understand the values and beliefs that motivate and underlie a variety of health behaviours, so that those values and beliefs can be targeted to creating messages or interventions that have the greatest likelihood of effecting change.

Informative campaigns can be effective in increasing consumption of fruits and vegetables, reducing fat consumption and improving peoples´ attitudes towards healthy eating. Informative campaigns seem to be effective for changing peoples´ awareness, knowledge or attitudes.

Some critics (e.g. Langford & Panter-Brick, 2013) argue that many campaigns aimed to improve people´s health focus too much on individual behaviour, without taking into account the real constraints of many people, especially disadvantaged population that are often most in need of health interventions. For example, when individuals in disadvantaged population are motivated to change through various social campaigns, they often cannot respond because of their resource limitations. In the end, they may have even worse outcomes because they can feel powerless to act, and stigmatized for not changing their behaviour.

Because many of the principal factors influencing health behaviour are social and political, public health campaigns should include also stimuli to change public policy in the way that the barriers and constraints to opportunities can be reduced or removed for everyone.

It has to be noted that if the strategies of health conscious behaviour are to be effective, then they will likely require long-term investments by communities and governments. This is because such interventions must compete against a constant pressure of commercial forces motivating people also to engage in unhealthy behaviours.

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Polish-German Trade in Innovative and Knowledge-Based Services in 2010 – 2017

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Abstract: The purpose of the paper was to present the tendencies identified in Polish-German trade in innovative and knowledge-based services, and to identify and demonstrate the structural changes occurring in such trade. Their exports and imports, as well as their trade balance for the years 2010-2017, are characterized. The study is based on data published by the National Bank of Poland and the Central Statistical Office. For the purposes of this research, simple statistical methods, desk research and graphic methods were used. In the analyzed period, Polish-German trade in innovative and knowledge-based services developed. The structure of these services changed, as well. Poland's exports to Germany began to be dominated by IT services, and imports by business consultancy and public relations services.

Keywords: Polish-German trade, services, innovative and knowledge-based services, economic development

JEL Classification codes: F14, F40, L84

INTRODUCTION

Trade is an essential element of economic cooperation between countries and brings numerous benefits to them, both economic and non-economic ones. Traditional commodities are the most important objects of trade for most countries, but under the current globalization and economic integration conditions services are becoming increasingly significant. They come in many different types, but presently it is mainly innovative and knowledge-based services that are considered to be an essential factor contributing to a country's economic development and bolstering its competitive advantage. Especially in a global economy that witnesses a more and more dynamic development of modern technologies.

Polish foreign trade in services is growing constantly and exerting an increasing influence on the generation of Poland's GDP. Additionally, Poland is characterized by an increasingly deeper specialization in selected branches of services. Demand for Polish specialist services is growing. Also, the development of the services sector determines access to the liberalized common European market. Therefore, there is a need for detailed analyses of and research into Poland's trade in services, including from a bilateral perspective.

1 LITERATURE REVIEW

The problem of trade between countries has been thoroughly studied and described in the literature. However, the international trade theory, similarly to most empirical studies, focuses rather on trade in commodities (cf. Krugman & Obstfeld & Melitz, 2018). International trade in services is a relatively less frequent topic of discussion in economic literature. Among other reasons for this, it stems from the difficulty providing a clear definition of the concept of a

"service", or creating a comprehensive classification of services. The general characteristics of services, and the fact that new types of services keep appearing on a regular basis, make any efforts to define them an even greater challenge. This in turn translates into difficulties related to gathering and publishing homogeneous detailed and comparable statistical data. Hence, the task of formulating a theory of international trade in services is still a challenge faced by contemporary researchers. The attempts undertaken by, f.e. Deardorff (1985) and Stibora and de Vaal (1995), have turned out to be insufficient. Nevertheless, authors generally agree that the role of services in developing both trade and the socioeconomic dimension is growing in many countries (Jones & Kierzkowski, 2018; Szyja, 2017). This is a resultant of different factors, including such obvious ones as liberalization of trade in services (McGovern, 2018). However, as pointed out by Glapiński (2018), probably the most important of them is technological progress. His argument in favor of this stance is that the development of IT technologies, including the Internet, has affected the service provision system, thus increasing international trade in services. Also, the fragmentation of the goods production process has created an opportunity for relocating certain production stages and the related services to foreign enterprises that enjoy some comparative advantages, such as low costs or highly-specialized staff, for instance.

Research into the factors determining trade in services was markedly intensified only in the second half of the 1990s (Chilimoniuk-Przeździecka & Kuźnar, 2018). These problems have been discussed by Grünfeld and Moxnes (2003), Walsh (2006), Chilimoniuk-Przeździecka & Kuźnar (2018), and others.

The determinants of Polish foreign trade, including that in services, with the country's most important partner Germany have changed over the years. The factors shaping the structure and scale of Polish-German trade have been subject to serious variation and evolution following Poland's 2004 accession to the EU. The economic potential disproportions have changed clearly to the benefit of Poland, although the difference is still considerable (Sporek, 2016). The economy of Germany, a country that is highly developed economically, has been characterized by development dependent on the manufacture of highly processed goods, investments in modern technologies and provision of specialist services (Małachowski, 2013). Poland's growth has mainly resulted from the continuing absorptiveness of the county's internal market and the lower costs of production as compared to the developed economies. However, as Orłowski (2015) emphasizes, the geographic location of both these countries has also continued to play an extremely important role.

2 METHODOLOGY

The article discusses the problem of Polish foreign trade in services, with a focus on trade with Germany. The subject matter of the research is narrowed down to innovative and knowledge-based services. The four main groups of such services, as classified by the National Bank of Poland, were analyzed:

- telecommunication, IT and information services;
- research & development services;
- services provided by professionals;
- fees for intellectual property rights.

The purpose of the paper was to present the tendencies observed in Polish-German trade in innovative and knowledge-based services, and to identify and demonstrate the structural changes occurring in such trade. Additionally, an attempt was undertaken to determine the significance of this sort of trade with Germany for the Polish economy. For the purposes of this article, it was hypothesized that the increase in Poland's trade in innovative and

knowledge-based services with Germany is accompanied by transformations within the structure of the trade.

The research time frame was from 2010 to 2017, and the choice of the period was determined by the availability of homogeneous statistical data. The research material was compiled from factual data published by the National Bank of Poland (NBP) and the Central Statistical Office (GUS). The research methods applied were simple statistical method, desk research, and graphic methods.

3 RESULTS AND DISCUSSION

3.1 Polish-German trade in innovative and knowledge-based services in 2010 – 2017

After the year 2000, Polish foreign trade in services developed dynamically. This also applies to innovative and knowledge-based services, whose exports grew three-fold from between 2010 and 2017, i.e. from PLN 18.9 bln in 2010 to 57.2 bln in 2017, with imports having grown more than two-fold, i.e. from PLN 21.1 bln to 47.1 bln. The balance of Polish foreign trade in this particular type of services grew almost six-fold in the analyzed period, to reach a surplus of PLN 10.1 bln in 2017 (Malkowska, 2018).

Together with the United Kingdom, Switzerland and the USA, Germany is among Poland's most important trade partners in respect of innovative and knowledge-based services. Between 2010 and 2017, Polish-German trade in these highly-specialized services developed markedly. This applies to both exports and imports, with imports growing less dynamically than exports. Revenues from foreign sales of these services grew by 289%, e.g. from PLN 2.3 bln in 2010 to 6.8 bln in 2017. As for the value of imports of services in the same period, it grew by 214%, i.e. from PLN 3.7 bln to PLN 7.9 bln (see Fig. 1).

Fig. 1 Polish-German trade in innovative and knowledge-based services in 2010-2017 (PLN bln)
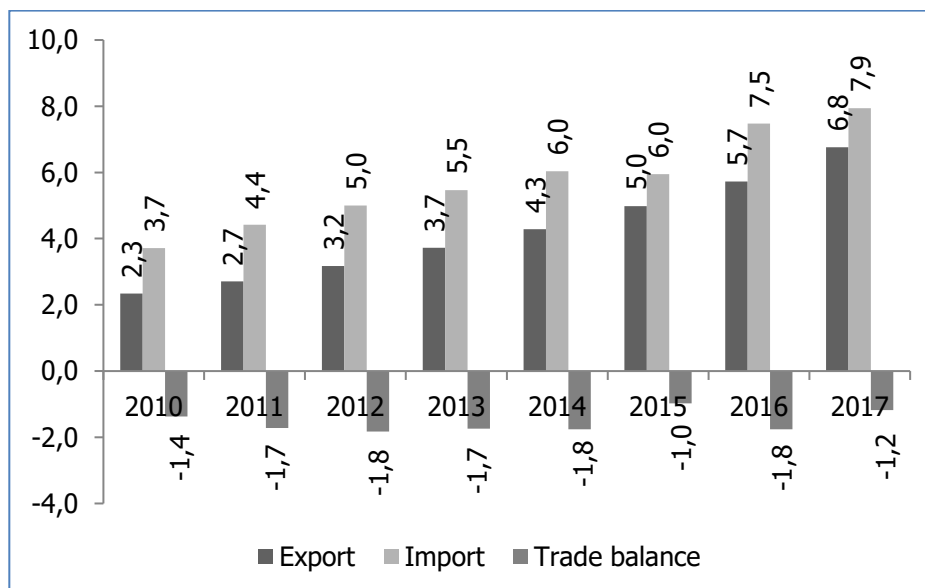
Source: the author's own study based on the National Bank of Poland (NBP, 2018).

Poland's balance of trade in innovative and knowledge-based services with Germany in the analyzed period was always negative. Therefore, it can be said to have been relatively stable. Nevertheless, it must be emphasized that in 2017 it amounted to PLN -1.2 bln, and decreased as compared to the year 2010 by PLN 0.2 bln (see Fig. 1). This drop resulted from revenue growing faster than expenses.

When characterizing the balance between Poland's exports and imports in innovative and knowledge-based services, it is important to take into account the structure of the individual types of such services. For the period concerned, quite significant changes in this respect were observed (see Table 1). In 2010, Poland made over half of the analyzed revenue (i.e. 51.5%) from exports to Germany through services provided by professionals, which totaled more than PLN 1.2 bln. Among these particular services, 28.4% were marketing services, market surveys and public opinion polls. As for Poland's sale of telecommunication, IT and information services to Germany, they brought over PLN 0.9 bln. It must be stressed that IT services accounted for almost one-third of all revenue from the sale of all innovative and knowledge-based services. The share of the remaining two components in Poland's exports to Germany was much smaller, with research and development services accounting for 6.3% and fees for intellectual property rights a mere 2%.

Tab. 1 Polish-German trade according to the component of innovative and knowledge-based services in 2010 and 2017 (PLN mln; %)

Service	2010				2017			
	Exports		Imports		Exports		Imports	
	Mln PLN	%	Mln PLN	%	Mln PLN	%	Mln PLN	%
Telecommunication, IT and information services	942	40.2	1 193	32.1	3 046	45.1	2 598	32.7
including: telecommunication	245	10.5	287	7.7	200	3.0	476	6.0
IT	669	28.6	809	21.8	2 781	41.1	1 941	24.4
Information	26	1.1	96	1.5	63	0.9	180	2.3
Research & development services	147	6.3	113	3.0	319	4.7	193	2.4
Services provided by professionals	1 208	51.5	1 060	28.6	3 329	49.2	3 304	41.6
including: legal	116	5.0	77	2.1	142	2.1	55	0.7
accounting, auditing and tax consultancy	190	8.1	49	1.3	1 006	14.9	155	2.0
business consultancy and public relations	234	10.0	707	19.0	1 115	16.5	2 614	32.9
marketing, market surveys and public opinion polls	666	28.4	225	6.1	1 066	15.8	478	6.0
Fees for intellectual property rights	46	2.0	1 347	36.3	68	1.0	1 845	23.3
Total	2343	100	3713	100	6762	100	7940	100

Source: the author's own study based on the National Bank of Poland (2018).

By 2017, as compared to 2010, there had been a growth in the value of Poland's exports to Germany within all the four main components of services classified as innovative and knowledge-based. The growth, however, was accompanied by a change in their structure. An increase in the share was only observed for the telecommunication, IT and information services component (by 4.9 percentage points), which in 2017 amounted to 45.1%. Consequently, the share of the other categories diminished, with services provided by professionals dropping by 2.3 p.p., research and development services by 1.6 p.p. and fees for intellectual property rights by 1 p.p. (see Table 1).

Interesting information is also derived from an analysis of the individual types of services classified within the main four components (see Table 1). From this point of view, the largest increase in exports to Germany was observed for accounting, auditing and tax consultancy services (by 529%), business consultancy and public relations services (by 476%), and IT services (by 416%). In the period concerned, it was indeed the share of IT services that grew the most (by 12.5 p.p.), to reach 41.1% of Poland's exports to Germany in 2017. In turn, marketing services, market surveys and opinion polls were seen to drop the most. Their share in revenue from the sale of innovative and knowledge-based services to Germany dropped from 28.4% in 2010 to 15.8 in 2017, which was a decrease of 12.6 p.p.

In the case of the imports of innovative and knowledge-based services to Germany, Poland's largest expenses in 2010 were for fees for intellectual property rights (PLN 1.3 bln). In 2017, however, the highest value of imports was achieved by services provided by professionals (PLN 3.3 bln), including mainly business consultancy and public relations services (PLN 2.6 bln).

The largest share in imports of innovative and knowledge-based services to Germany was enjoyed by the component of services provided by professionals, which grew by 13 p.p. in the period concerned, and accounted for as much as 41.6% in 2017. This category was dominated by business consultancy and public relations services, the share of which grew the most (by 13.9 p.p.) between 2010 and 2017, and accounted for as much as 32.9% in the target year. As for the largest drop in imports to Germany, it was observed for the fees for intellectual property rights component, which decreased by 13 p.p., i.e. from 36.3% in 2010 to 23.3% in 2017.

It is worth stressing that the positive balances of trade that Poland had in 2017 were observed for IT services: PLN 0.8 bln, and accounting services: almost PLN 0.9 bln. In Poland's trade with Germany, these type of services provided the most financial benefits to the Polish economy.

The General Agreement on Trade in Services (GATS) defines trade in services as the supply of a service through any of four modes of supply (note: Mode 1 - cross-border supply: from the territory of one country into the territory of another country; Mode 2 - consumption abroad: in the territory of one country to the service consumer of another country; Mode 3 - commercial presence: by a service supplier of one country, through a commercial presence in the territory of another country; Mode 4 - presence of natural persons: by a service supplier of one country, through the presence of natural persons of that country in the territory of any other country). Statistics on total trade in services by modes of supply aim to answer the question of how and where services are supplied to foreign customers. In practice, services can be produced, distributed, marketed, sold and internationally delivered through a combination of modes. For exports, mode 1 accounts for a considerable share in Poland (51 %). These results may indicate that country is more involved in the innovative technologies used to supply services through electronic channels. For imports, mode 3 is dominant in Poland (where it accounts for 66% of imports) (Eurostat, 2019).

3.2 The significance of trade in innovative and knowledge-based services to Poland's economy

Germany is Poland's largest trade partner, also in respect of services. For example, this is confirmed by the fact that just in the first half of 2018 the Polish exports of services to the German market in general amounted to approx. 23%. Also, Germany was responsible for approx. 22% of the total imports of services to Poland (Ministry of Enterprise and Technology, 2018).

Between 2010 and 2017, Poland saw a clear increase in the share of innovative and knowledge-based services in the overall trade with Germany. In 2010, only 8.5% of total exports to Germany was accounted for by innovative and knowledge-based services, while in 2017 this rate grew up to 13.3%. This positive change was contributed to by an increase in the share of three main service components, with the telecommunication, IT and information services component enjoying the largest growth from 3.4% to 6% (see Table 2). The nature of these groups of exported services may be indicative of the growing importance of non-price competitiveness, one that is rather related to the quality of the services provided. Among such services there are, for example, research and development, legal services, consultancy, and architectural and engineering services. They constitute examples of outsourcing or offshoring, namely the transfer of a certain stage of operations to another country (cf. Arndt & Kierzkowski, 2001). Such steps are not only motivated by the pursuit of lower costs, but also by ability to access highly-qualified staff pools (Glapiński, 2018).

Tab. 2 The share of innovative and knowledge-based services in total trade in services between Poland and Germany in 2010 and 2017 (%)

Service	2010		2017	
	Exports	Imports	Exports	Imports
Telecommunication, IT and information services	3.4	5.7	6.0	8.2
Research & development services	0.5	0.5	0.6	0.6
Services provided by professionals	4.4	5.0	6.5	10.5
Fees for intellectual property rights	0.2	6.4	0.1	5.9
Total	8.5	17.6	13.3	25.2

Source: the author's own study based on the National Bank of Poland, 2018

It should be added here, however, that the largest share in exports to Poland's western neighbor in the period concerned was observed for IT services, which are part of the telecommunication, IT and information services component. The share of IT services alone grew from 0.1% to 5.5%. This impressive increase contributed to the fact that IT services (Note: IT services encompass, inter alia, consultancy and implementation, hardware- and software-related technical advice, hardware and software installation, and computer hardware and peripheral equipment maintenance and repair (NBP, 2015)) began to dominate the sales of innovative and knowledge-based services to Germany.

Poland is able to deliver IT services thanks to having high-class IT professionals. IT hardware and software, which Poland mostly imports, is generally becoming increasingly cheaper, and does not present an obstacle to entering the market in Poland anymore. Thus, as emphasized by Glapiński (2018), the spectacular growth in exports in these services indicates that comparative advantages have manifested themselves in the Polish economy, and such

advantages in the case of this type of activity are indeed associated with the availability of specific human capital, namely highly-qualified staff. In summary, IT services can be considered as the most promising in the context of Poland's further expansion into foreign markets, including Germany. In 2017, the chief recipients of Polish IT services were: the USA (29%), the UK (28%) and, notably, Germany (23%). It is worth stressing that Germany's share in Poland's imports of IT services was by far the largest, accounting for as much as 42%.

The significance for Poland of trade in innovative and knowledge-based services with Germany is growing. This is confirmed by the ratio of exports and imports to the Polish GDP calculated for the period concerned. Between 2010 and 2017, the rate of exports in innovative and knowledge-based services kept increasing systematically, from 0.16% to 0.34% (see Fig. 2). This should be interpreted as an improvement in Polish economy's competitiveness with regard to innovative and knowledge-based services in relation to the German economy.

The share of imports of services in the Polish GDP grew too, from 0.26% in 2010 to 0.40% in 2017 (see Fig. 2). The lower this rate is, the lower the economy's dependence on imports from abroad. In the case of innovative and knowledge-based services, however, this correlation should not be assessed negatively. Here, imports have the potential of improving the structure of the services available within the given economic system. This type of services may contribute to the modernization, development and upgrading of the economy, which may lead to an increase in its competitiveness. Notwithstanding, as Starzyk (1997) underlines, the prerequisite for an effective post-import opening of the economy to occur is that imports should be tied with exports, especially within the framework of, inter alia, such direct investments that will create export capacity. This stems from the requirement to ensure stable conditions for the economy to pursue an internal and external balance with constantly increasing imports.

Fig. 2 **The ratio of exports of innovative and knowledge-based services to Germany to the Polish GDP (%) and the ratio of imports of innovative and knowledge-based services from Germany to the Polish GDP (%)**
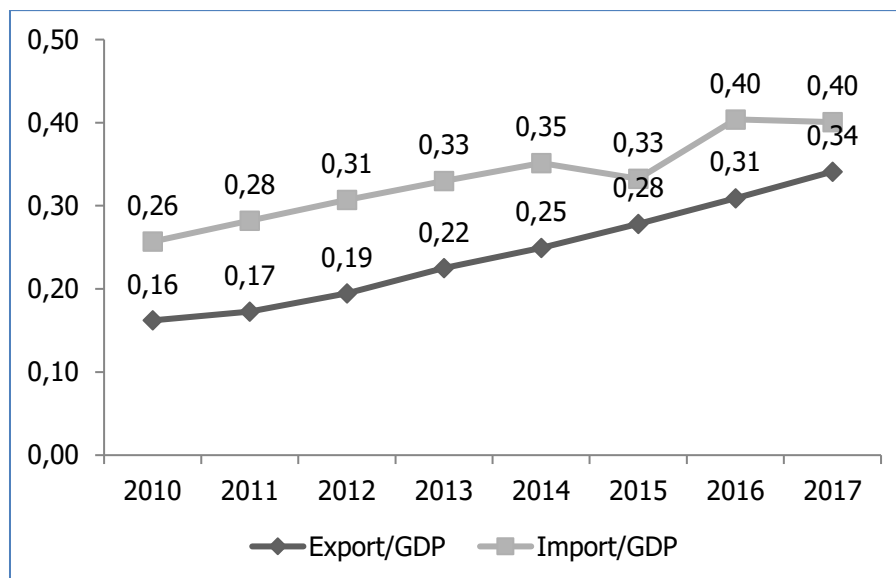
Source: the author's own study based on: NBP (2018); Local Data Bank of the Central Statistical Office, 2017

A dominant role in export and import activity is played by enterprises. Unfortunately, Polish public statistics do not distinguish a category only for those involved in international trade in

services. In total, there were 31.4 thousand commercial entities involved in exporting goods and services in Poland in 2010 (Górniak, 2012). At the end of 2017, there were already as many as 44.5 thousand of them (Skóra, 2018), which was an impressive increase of 41.4%. As for entities involved in importing goods and services in Poland, their total number increased from 44.9 thousand in 2010 to 51.1 thousand in 2017, i.e. by 13.9%. In the period concerned, the growth rate of entities involved in exports was then higher than the growth rate of entities involved in imports.

It must be emphasized that in Poland an essential role in export and import activity is played by enterprises with foreign capital ties. One of the reasons for this is that such companies have a much easier access to foreign markets. In the period concerned, it was actually enterprises with German capital that accounted for the largest number among them, with almost 6 thousand of such businesses in 2010 (i.e. 26%), and 4.9 thousand in 2017 (i.e. 22%). However, Germany was never a leader in terms of the value of foreign capital invested. In 2010, Germany invested a capital of PLN 29.1 bln in Poland, which accounted for 18.3 of the total foreign capital invested in this country. With this figure, Germany placed third, after the Netherlands (18.8%) and France (18.5%). Still, the shares enjoyed by each of these three countries were similar. In 2017, however, the value of German capital invested in Poland grew to almost PLN 35 bln. At that time, Germany's share accounted for 17.7%, and it advanced to the second position, with the Netherlands placing first, once again (20.1%).

In terms of value, the Polish exports and imports in services were dominated by companies with foreign capital ties. However, Polish exports to Germany were of a very different nature than those to other countries. It was the only major market to which more domestic companies than enterprises with foreign capital ties exported their services (NBP, 2016).

CONCLUSION

The research conducted in this paper suggests that Polish-German trade in innovative and knowledge-based services grew between 2010 and 2017. Both the value of Polish exports and imports in the services grew systematically. Despite this, the balance of services was always negative.

In Poland's trade with Germany, the value of all the main service components increased, both in terms of their exports and imports. At the same time, the structure of the individual types of innovative and knowledge-based services changed. IT services began to dominate in exports, and business consultancy and public relations services began to dominate in imports.

IT services must be considered as the largest export potential of Poland, also as it comes to exports to the German market. It appears that this type of services is becoming Polish international specialization, which may be of significance for the country's development and the improvement of its competitiveness.

The studies performed for the purposes of this paper allow for the conclusion that the structure of Polish-German trade in services improved. Poland demonstrated a clear increase in the share of innovative and knowledge-based services in its trade with Germany, both in respect of exports and imports. This is important for the improvement of economic effectiveness.

The research confirmed Poland's growing openness to trade in specialized services with Germany. For the period concerned, however, constant dependence of the Polish economy on imports of innovative and knowledge-based services from Germany was identified. Still, this dependence diminished between 2015 and 2017. Anyway, the pro-import opening of the Polish economy can in this case be assessed as a positive one. The structure of Polish foreign trade in services, and the export capacity of Polish enterprises – including those with foreign capital participation – improved. Germany is the most important trade partner for Poland in terms of

trade in services. This is also confirmed by the growing value of German capital invested in Poland, and by the fact that the number of enterprises with German share capital is the largest of all.

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Border Traffic as a Factor in the Development of Peripheral Areas

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Abstract: Cross-border cooperation is an important factor for peripheral development. It becomes an incentive to establish social and economic cooperation. Free movement of people and related cross-border trade is one of the important factors for the development of border areas. The increase in border traffic and the development of cross-border trade is an important indicator of the competitiveness of peripheral areas. The aim of the article is to present selected issues related to the development of border traffic as an important factor in the development of peripheral areas. The article presents selected results of research conducted on the Polish-Ukrainian border. The conducted research indicates that border traffic is an important factor in the development of the border area.

Keywords: cross-border cooperation, peripheral development, border

JEL Classification codes: O12

INTRODUCTION

Intense geopolitical changes taking place in Europe cause this particular part of the world to become a particularly interesting area of research. For many years social sciences, of which economy of development constitutes a part, have been trying to answer the question why some areas develop faster, and others decidedly more slowly. The ongoing research indicates that the deepening interregional differences lead to a separation of peripheral regions and centers in the spatial structure (Arbuthnott et al., 2011; Bosma, Schutjens, 2011). Peripherality in economic sciences is described as a state of developmental retardation in relation to central areas (Dawkins, 2003; Bajerski, 2008). The notion of a periphery found its way into economy dictionaries as a synonym for the differences in the levels of socio-economic development of particular areas (Idczak, 2013; JANČÁK, Vít, et al., 2010). Regions divided by borders are a particular type of peripheral areas. There are numerous differences between them, but the common denominator is the lower level of socio-economic development in comparison with centers (Stiglitz, Pike, 2004; Cali, Laestadius, 2010). Economic retardation of peripheral areas and the accompanying unfavorable political conditions lead to the lowering of their competitiveness level (Krugman, 1997; Weissenbacher, 2018). They are not capable of competing with other areas not only as far as goods and services are concerned, but also in terms of competiton for production factors. Therefore, they are affected by more and more serious issues of social nature, such as: migration, depopulation, aging of societies, development of social and economic dysfunctions (Aria, Gaeta, Marani, 2018; Dubois, 2016).

Europe is an example of an area which underwent a significant transformation over a short period of time; those transformations resulted in even greater differences in the levels of socio-economic development between the regions (Bosma, Schutjens, 2011). Historical conditions and current intense political and economic contacts caused contemporary Europe to become an area without borders for many of its citizens (Reitel, Wassenberg, Peyrony, 2018). This

influenced the intensification of migration processes within the so called internal migrations, but also the development of cooperation between countries.

One of the elements of this cooperation is the development of border traffic, and border cooperation and commerce. Centuries-long animosity between societies divided by borders was replaced with a mutual desire to get to know each other and to cooperate. This stimulates the development of cultural contacts. It influences the development of tourism and commerce. It becomes an element of promotion of border areas. In consequence, it can become a factor raising the competitiveness of these areas (Rodrigues, Pereira da Costa, 2018; Rodríguez-Pose, Wilkie, 2017).

The functioning of peripheral areas is a particularly interesting area of research in the field of economy of development. Commonly considered peripheral and thus less developed than the central areas, they currently play an important role in the integration processes taking place in Europe (Chojnicki, 1998; Ciok, 2004). This concerns the peripheral areas in Poland in a special way, particularly the Polish-German or Polish-Ukrainian borderland. The increase in research interest related to the issues of socio-economic development of peripheral regions in Poland and in the world is expressed in scientific publications (Crescenzi, 2012; Dumała 2012).

1 LITERATURE REVIEW

1.1 Peripheral regions as a subject of economic research

The period of intense development of economic sciences should be considered as the beginning of studies on peripheral regions. Among the key economic theories, we shall find those which are directly or indirectly concerned with supporting the development of peripheries. These include, above all: A. Smith's location theory, Keynes doctrine, theory of sustainable development, F. Perroux's growth pole theory, R. Prebisch's center-periphery theory.

Thünen (1826) is considered a precursor of localization theory in a regional scope, as he presented the model of spatial specialization of agricultural production (also referred to as Thünen rings). It shows the placement of various kinds of production around one, centrally situated market. It indicates the occurrence of economic rent resulting from a favorable location in relation to the centrally defined market (Feser, Malizia, 1999).

A concept referring to Thünen's theory is Weber's theory of industrial location (1929). The significance of common location as a factor generating additional benefits for enterprises in the form of increase in the scale of production was emphasized by A. Marshall (1925). Similar advantages were also mentioned by W. Isard (2017).

A supplementation of localization theories are undoubtedly the opinions of Keynes (1956), for whom peripheral regions are characterized by a low level of development. Therefore, they cannot overcome socio-economic issues on their own. In their case, it is necessary that the authorities intervene in the form of public service, mainly large infrastructural investments, creating institutions supporting entrepreneurship, raising the qualifications of the workforce, and promoting export.

In theories of unbalanced regional growth, the growth pole theory by F. Perroux (1961) and center-periphery theory by R. Prebisch (1959) are most often presented. According to those observations, growth does not manifest itself everywhere in a balanced way. Economic processes are characterized by varying spatial intensity and varying economic results, which leads to the emergence of growth poles and peripheral regions.

It was assumed that development depended on the most dynamic businesses which lead on the market, creating growth poles (Perroux, 2017; Higgins, Savoie, 2016).

The contemporary changes in the perception of the functions of peripheral regions are a consequence of socio-economic and political changes, including the progressing process of integration with European structures and the process of globalization of world economy. This causes an ever stronger territorial differentiation as far as social and economic structures are concerned, and also the functional structure of borderlands in Europe.

This especially relates to those areas which due to the change in the function of borders became peripheral areas for the entire European Union (e.g. the Polish-Ukrainian borderland). It is also crucial for the regions for whom the process of European integration meant total abolition of border regimes and depriving the borders of their isolating functions (e.g. the Polish-German borderland).

Many studies that are being conducted indicates that peripheral regions in many cases maintain their peripheral character (Przybyła, 1995; Miszczuk, 2013). Overcoming these negative processes and phenomena typical of border regions is possible owing to the discovery of new economic and social functions for the borderland areas (Krok, 2006; Malkowski, 2011).

1.2 Borders as subject of study

There are many factors of socio-economic development which influence the peripheralization or growth of borderland areas. On the one hand, the geographical location of those areas decides about their peripherality and lower level of development, on the other hand, it gives them the opportunity to enter into transborder cooperation, including economic cooperation which involves commercial exchange (Malkowska, 2013).

The studies conducted by the author indicate that peripheral areas are usually characterized by highly unfavorable socio-economic features (Malkowski, 2013).The change of the borders' functions often becomes a factor which dynamizes the social and economic processes taking place in peripheral areas.The liberalization of commercial exchange, free movement of people, the development of logistics systems on an international scale are a chance for the borderland regions (Malkowski, Malkowska, 2014).

Looking at the borders as boundaries dividing nations and economies was deeply transformed at the turn of the twentieth and twenty-first centuries. This especially concerns the European continent, integrating economically and politically. The borders changed their functions, and borderland areas became regions of intense cooperation. Contemporarily, three types of the so-called border regimes can be distinguished (Hooper, Kramsch, 2007).

Absent borders, also referred to as boring borders, function between the countries within the Schengen zone (Struver, 2005). This area is characterized by a situation in which the borders lose their isolating function.Lack of formal control, development of settlements on both sides of the border by the citizens of formerly divided countries, is conducive to cooperation and permanent contacts. This often results in the emergence of a new spatial and economic layout, in which areas located along the non-existent border slowly integrate into one functional region.

An example of such region is without a doubt the German-Danish or German-Dutch borderlands. This is largely owing to the local communities, most often focused in Euroregions, which play the role of regional self-governments.

Another example of solutions connected with the functioning of borders is the so called march. This usually concerns the external regions of the EU. In this case, the border separates the member states and the countries which are not part of the EU. The requirement of rigorous

controls and protection of the EU's external borders results in the peripheral regions of the EU being called a Golden Curtain (Gorzelak, Kot, 2006). A border which separates the European well-being from the rest of the poor world. In the case of the EU's western borders, the reference to the so called Iron Curtain, separating the Cold War Europe, seems to be particularly fitting.

The march in the form of a so called external border is perceived as a safety cordon around the countries of united Europe. An important tool for creating a safe and stable external border is, among others, the European Neighborhood and Partnership Instrument. In accordance with the assumed premises, transborder cooperation with the EU's neighboring countries aims at promoting a cohesive and integrated approach to regional development, undertaking common challenges, guaranteeing efficiency of actions and safety on the external borders, and encouraging local cooperation.

The presented functions of the borders are one of many classifications mentioned in the debate which began in the 1990s and concerns the future of borders, transborder cooperation, and the development of border areas.

The conditions of the development of border regions and overcoming their peripherality are inextricably linked to the notion of border permeability. The marginalization of border regions is very often caused by rigorous regulations of border protection. The difficulties with crossing the border, militarization of borderland areas, strict rules regulating one's stay in the border zone cause a situation in which if a border is impermeable, the bordeland region develops worse than the remaining regions of a given country (Nijkamp, 2017). An impermeable border intensifies the unfavorable differentiation of socio-economic development, the conditions of business activity on its sides, and the functions related to the formalization of the border. What occurs then is the peripheralization of borderland regions (Miszczuk, 2013).

2 METHODOLOGY

The purpose of this article is to present selected aspects of border traffic as an important factor shaping the development of borderland areas. The article presents selected results of research conducted in Western and Eastern borderlands of Poland. The following research hypothesis was to be verified: the expenses incurred by foreigners are a significant factor in the development of borderland areas.

Descriptive method and analysis of the available literature on the subject were used in the study. The data used came from the Tourism Institute, Border Guards, the Main Statistical Office, and the results of the author's own research. A survey questionnaire was circulated among 100 customers from the markets and malls located in the borderland area. The research was conducted in July and August 2017. A separate study was conducted among the entrepreneurs whose business operations were located in the borderland area.

3 RESULTS AND DISCUSSION

One of the basic factors allowing to determine the level of border permeability is the volume of border traffic.The visa regime or difficulties in obtaining a passport, few low-capacity border crossings result in a low number of border crossings.

The changes which had occurred in the Polish-German borderland, and whose effect seems to be an integrated borderland region, should be considered a success. An enormous role in his process is attributed to local self-governments, which attempted cooperation already in the 1950s. Currently, transborder cooperation includes the entire area of Poland's Western border. The research conducted by the author in 2003 and then cyclically repeated, concerning the

influence of the border on the socio-economic development of borderland area, showed that in the unanimous opinions of self-governments, the border has a significant impact on this development. The studies also show that this impact is the strongest in municipalities and communes located in the direct vicinity of the borders (Malkowski, 2004; Malkowski, 2011).

A different situation occurred in the Eastern borderland, which in the initial stage of integration did not use its potential.This resulted most of all from historical and social limitations, which largely influenced the dynamics of contacts between Poles and Ukrainians. Made into Euroregions on Poland's Eastern border, unlike their Western counterparts they struggled to find partners on the other side of the border. Ukrainian self-governments were not ready for cooperation. Just like in the 1970s ad 1990s in the Western borderland, it was the border traffic and development of entrepreneurship that were the earliest manifestations of contacts between Polish and Ukrainian communities. Economic and political transformations reduced the isolating function of the Eastern border.

The liberalization of commercial exchange between the integrating European economies became an opportunity for an accelerated development of borderland areas. It was possible owing to the effect of creating international exchange, abolishing administrative borders in the flow of people, capital, and services, and so these liberties which are characteristic of the process of shaping a common market. Among the factors of the development of borderland areas, the role of tourism thus began to be noticed, as well as that of transborder economic cooperation, including above all border trade.

The research conducted in 2017 showed that the estimated number of Poland's border crossings was 287.1 million. The border was crossed by 171.6 million foreigners and 115.5 million Poles. Over 74% of the people crossing the border used land border crossings between Poland and the EU, while 12.5% crossed the EU's external border (borders with Russia, Belarus, and Ukraine).

The most people crossed Poland's land border with Germany (45.7% of the overall number of crossings of Poland's land border in 2017). Large volume of border traffic also applied to the border with Czechia (23.4%), Slovakia (13.1%).

The conducted studies of border traffic showed that among the foreigners crossing particular sections of Poland's land border, most came from neighboring countries. For instance, at the border with Ukraine, 96.6% were Ukrainian citizens, at the border with Russia, 90.5% were Russians.

Comparing the data on border traffic in Poland, it should be stated that in 2017 there was a 4% increase in border traffic compared with 2016.

Fig. 1   Border traffic in Poland
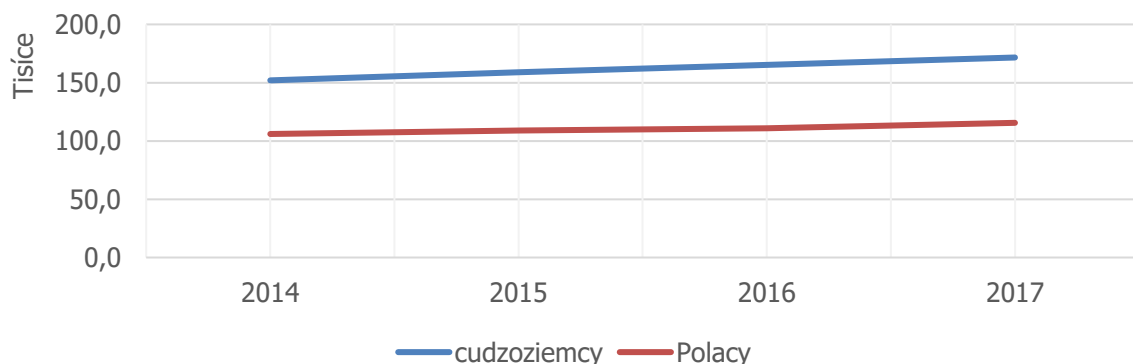
Source: GUS (Main Statistical Office)

The increase in border traffic occurred at all sections of the border except the Russian border, where the percentage of people crossing the border decreased over 8%. The unfavorable situation on the border with Russia is the result of suspending the agreement on local border traffic between Poland and the Kaliningrad Oblast. This caused the increase of costs related to crossing the border. The citizens of the Kaliningrad Oblast are forced to obtain visas while entering the EU territory.

This inconvenience resulted in a clear decrease in the number of border crossings and mixed the traffic at the border marketplaces and in malls. The surveyed sellers on borderland marketplaces indicated that it particularly concerned the area up to 50 km from the border, where Russians traditionally bought food products, electronics, and construction materials. In 2017, there was a sudden drop (by over 30%) in the number of Poles visiting the Kaliningrad Oblast.

It is one of the examples of how administrative barriers can effectively impede the volume of border traffic. Suspension of cooperation between Poland and Russia unfavorably impacted the volume of border traffic.

In 2017, the most intense border traffic occurred on the border between Poland and EU countries, and it constituted about 3/4 of Poland's overall border traffic as well as 86% of the traffic on the land border. The largest intensification of the border traffic with EU countries occurred on the border with Germany.

In the case of the EU's external border on the territory of Poland, the phenomenon of increased traffic on the border with Ukraine is markedly visible. According to the border services, in 2017 there were almost six times more checks at the Polish-Ukrainian border than at the Polish-Russian border, and 2.5 times more than at the Polish-Belarussian border.

The increase in border traffic with Ukraine is the result of the Polish market opening to Ukrainian workers. The estimated number of Ukrainians who found jobs in Poland is already 2 million.

The conducted research showed that the majority of people crossing the land border left and returned within one day. This concerns 84% of foreigners and as many as 87% of Poles. This means unequivocally that in the borderland area dominated traffic connected with daily needs of the residents of a borderland area.

The study of motivations for the foreigners to come to Poland indicated that in 2017, 94% of such trips were shopping-related. In 2014, the same purpose was declared by 93% of the people crossing the border.

In the case of Poles, over 30% of people crossing the border went to shop on the other side of it. The percentage of Poles declaring shopping as their reason to cross the border was especially high in the case of the EU's external borders and it was 83%.

Long-term observations of border traffic in Poland show that shopping is the main premise for crossing the border for the residents of borderland areas. The dynamic development of marketplaces, which dominated the economy of Poland's Western borderland already in the 1990s, has been to a large extent halted. The border marketplaces in Osinów Dolny, Kołbaskowo, Łęknica, or Słubice significantly reduced their activity. They were replaced by malls offering a good quality infrastructure, and high quality of customer service. Also the service sector developed dynamically. This especially concerns the Western border. Towns near the border offer cosmetic, hair styling, and construction services to foreigners. Medical tourism also developed significantly.

The research conducted by the author show that in the case of Germans, more than 70% positively assesses the quality of Polish goods and services. Shopping in Poland is largely determined by attractive prices and accessibility of shopping malls. In the case of the Eastern

border, a factor which encourages people to shop on the Polish side is the quality of the goods sold. More than 56% of respondents visiting the borderland shopping malls stated that the goods purchased in Poland have attractive prices.

In the case of the EU's external border, a very similar phenomenon occurs. For many residents of the Ukrainian and Belarussian borderlands, Poland is a place to shop for high quality food products, electronics, or furniture. The lower prices in Poland, and most of all the higher quality of goods attracts Russians, Ukrainians, and Belarussians to shop in Poland. The surveyed entrepreneurs from border locations indicated that the foreigners constitute up to 60% of their customers, and the assortment of goods and services provided is often adjusted to the needs of customers shopping on the external border of the EU.

For the Poles crossing the external border with the EU, the main objective is still the purchase of fuel and cigarettes. In 2017, on average they could save about 50% on 1 litre of diesel fuel, which makes shopping at the Eastern border extremely profitable. The case is similar with cigarettes, which are about 65% cheaper. The differences in prices of excise goods are the main motive for the trips, and at the same time the basis for the development of illegal trade.

The volume of border traffic caused the costs related to it to be an important factor supporting local economy, although its effects are difficult to measure. As many as 89% of the respondents indicated that borderland trade and tourism were important for the local development.

The estimated value of goods and services purchased in Poland by foreigners in 2017 was at the level of PLN 41.5 billion, and the costs incurred by Poles abroad – PLN 20.1 billion.

The conducted research showed that in 2017 foreigners shopping in Poland spent 80% on goods and 20% on services. Among the Polish citizens, the costs incurred abroad for the purchase of goods were 42%, while for the services – 58%.

The value of purchases of goods, in current prices, made in Poland by all foreigners visiting Poland in 2017, accounted for 4% of the total value of retail sales in Poland. The value of goods purchased in Poland by foreigners crossing the EU's external border on the territory of Poland was 14% of the value of retail sales in the provinces located by the external border of the EU.

This means that border trade plays a significant role in the economy of borderland areas. This is confirmed by the difficult situation of the Poland-Russia borderland areas after the suspension of agreements on low border traffic. The decrease in border traffic by 30% resulted in lower revenues of local business operators.

Overall, the spendings of foreigners in Poland in 2017 were 107% higher than the expenses of Poles abroad. In the studied year, the value of goods and services purchased by foreigners and Poles in Poland also grew by 6% compared to 2016.

Fig. 2 The spendings of foreigners in Poland (in mil. zł)
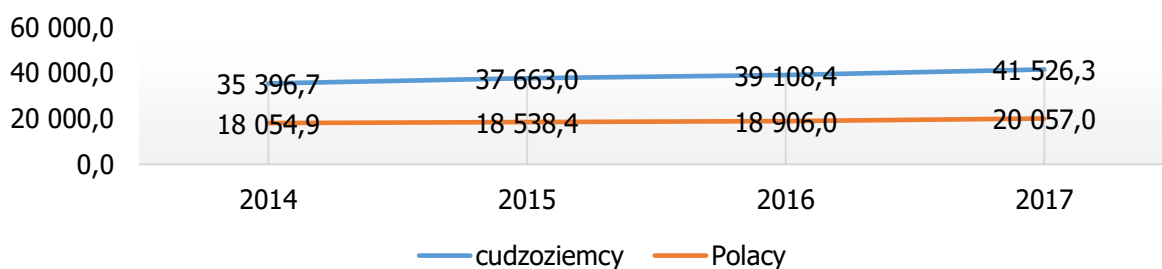
Source: GUS (Main Statistical Office)

Out of the total expenses incurred by foreigners in Poland in 2017, PLN 24.6 billion (59.1%) were made by persons crossing the internal land border of the European Union in Poland (compared to 2016 by 1.3 percentage points less), and PLN 10.7 billion (25.8%) at the external EU land border (compared to 2016 by 0.4 percentage points more).

Foreigners spent the most money in Poland in 2017 on the purchase of goods – PLN 33.7 billion, which accounted for 81.1% of their total expenditure (compared to 2016, by 6.3% more). They spent PLN 7.9 billion on services (mainly accommodation and catering).

Non-food products were the most popular among foreigners, who spent PLN 24.4 billion on them in 2017 (58.8% of their overall expenses). They spent PLN 5.1 billion (12.3%) on food and non-alcoholic beverages, and PLN 4.2 billion (10.0%) on alcohol and tobacco products.

The average expenses of foreigners per capita in 2017 were at the level of PLN 493 (in 2016 – PLN 484), while the average expenses of Poles abroad per capita were PLN 355 (against PLN 346 in the previous year).

The average spendings of foreigners in Poland (per capita) returning across the land border with non-EU countries were almost twice as high as of those who crossed the internal land border of the EU.

An average foreigner crossing a Polish section of the EU's external land border spent PLN 695 in Poland in 2017, and it was almost three times as much as he expenses of Poles crossing the analyzed section of the border abroad (PLN 236).

In comparison with 2016, the average expenses of a person crossing a section of a border with countries from outside the EU – both foreigners in Poland and Poles abroad – were higher by 1.2% and 2.0%, respectively.

In the case of the external border, the most money was spent by Ukrainian citizens crossing the Polish-Ukrainian border (PLN 751 per capita), and the lowest sum was spent by those crossing the Polish-Russian border – PLN 455.

Border traffic also has a negative impact on the development of the peripheral area. This applies to a large load of technical infrastructure (roads, bridges).

Residents complain about noise and air pollution. The movement of many cars leads to traffic congestion on the border roads. The increase in demand caused a rise in prices, which is felt by the inhabitants of the border area. An important problem related to the border movement is illegal activity, including smuggling and prostitution.

CONCLUSION

The expenses of foreigners are an important factor influencing the development of borderland areas. The developing services located in border towns, or shopping malls whose offers reach customers abroad, are examples of the economic development of the region. For many small border towns, trade and services catered to foreigners become key elements of the local economy. A large majority of the costs incurred by foreigners in Poland is located in the borderland area.

The development of borderland areas is dependent on the freedom to cross the border. Border regime impacts the commercial exchange on the border.

Borderland trade is an essential source of income for the residents of peripheral zones. It allows access to cheaper food and industrial products. This especially concerns fuel, alcohol, cigarettes.

In a quantitative aspect, borderland trade constitutes an important factor in the development of local economy, especially the commerce and services sectors. Servicing border traffic creates new jobs in hitherto marginalized areas.

The vast majority of border traffic is generated by the residents of the borderland zone. Border traffic is a factor dynamizing the entrepreneurship of local communities. It is especially visible in the area of Poland's Western borderland. This is particularly important due to the possibility of developing new directions of creating competitiveness of peripheral regions, for whom the development of border trade seems to be a natural direction of specialization.

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The aim of the paper is to design a model of sustainable tourism, illustrate the DPSIR model, as well as the effects of tourism sustainability factors. The paper contains the definition of basic terminology, the methodology, the results and discussion as well as the conclusion.

1 LITERATURE REVIEW

The tourism industry is a major contributor to the economic development of many countries (Malik et al., 2016). Thanks to its dynamic growth, it has a unique position in order to positively contribute to tackling the challenges of sustainable development. This is also confirmed by the specific relationship between the consumers in tourism (tourists), local communities, service providers and the physical environment. The close relationship between tourism and sustainable development can be harmful on the one hand, but very positive on the other, in order to tackle the challenges of sustainable development. It is important for all stakeholders in tourism to recognize their responsible role in sustainable development. Tourism has significant means of development in its own right, but it can also destroy its own resources (Mason, 2003).

Tab. 1 Definitions of sustainable tourism

it meets the needs of the present without compromising the ability of future generations to meet their own needs	WCED (1987)
today's generations enjoy the benefits while preserving resources for the future	Pearce, D.W. (1990, 1993); Turner, R.K. (1990); Warford, J.J. (1993); Sathiendrakumar, R. (1996); Inskeep, E. (1991)
the prosperity of the current generation is ensured, provided that the prosperity does not diminish in the future	Pearce, D.W.; Warford, J.J. (1993)
meets the present needs of tourists and reception sites, as well as the economic, social and aesthetic needs of humanity; protects and increases the possibilities of the future; basic ecological processes, biodiversity, cultural integrity of different groups and people will be preserved	UNWTO (1998)
it minimizes damage and resource use	McIntyre, G. (1993); Butler, R.W. (1993); Rátz, T. (1998); Swarbrooke, J. (1999)
the economic viability is ensured, but the resources on which the future of tourism depends, will not be underestimated	Swarbrooke, J. (1999)
many benefits from the social, cultural and environmental aspects of tourism improve the quality of life of residents	Gursoy, D.; Jurowski, C.; Uysal, M. (2002)
it is the development of a territory that will ensure the constant conditions for life, despite the exhaustible sources of energy	Plesník, P. (2010)
thanks to conceptual development and planning, in the long term, it does not disturb the natural, cultural and social environment, its aim is to protect and preserve the environment in all its aspects, as well as to respect the lifestyle (including the former livelihood) of local people	Zelenka, J.; Pásková, M. (2012)
it is difficult to talk about an unchanging sustainable development, it is necessary to look for opportunities to protect and preserve past and present values even for the future	Novacká (2013)

a continuous process consisting of interactive environmental, social and economic elements in the market and in society, and is based on planning, implementation, evaluation, control and review	Padin, C.; Svensson, G. (2013)

Source: own processing

The definitions of sustainable tourism (Tab. 1) are generally known, but are not uniformly recognized, nor applicable to any host country, which is understandable given the different political, socio-cultural and natural environment of individual destinations. In the absence of a uniform definition, we should draw attention to the characteristics that most internationally active experts in the field of tourism recognize as suitable for the definition of the concept of sustainable tourism.

1.1 Dimensions of sustainable tourism

The concept of sustainable tourism includes the dimension of economic, social, cultural and environmental capital in relation to the goals of sustainable development (Hall, 2000; Ivars, 2001). The goal of sustainable tourism is to find a balance between economic growth, social progress and the preservation of the environment (Camus et al., 2012).

The economic dimension of sustainable tourism is based on ensuring viable economic operations, which provide a fairly distributed socio-economic benefit to all stakeholders including stable employment, employment opportunities and social services for the host communities, also contributing to poverty alleviation (UNWTO, 2017). According to Hutmannová (2011), the aim of economic sustainability of tourism is to ensure long-term economic prosperity for the host community, in particular by supporting local tourism businesses and creating jobs for residents. Many authors assume that the tourism's primary impacts on the economy are increasing employment, generating income, stimulating investments and raising living standards (Ritchie, 1984; Lickorish, 1991; Tribe, 1999; Kubičková et al., 2017). Job creation is perceived as one of the largest direct benefits of the tourism industry (Mathieson & Wall, 1992; Lickorish, 1991; Mason, 2003; Frechtling, 2013; Kumar et al., 2015; Krošláková & Kubičková, 2015). According to Kumar et al. (2015), tourism also contributes to job creation indirectly in secondary and tertiary sectors, such as construction and banking. Budeanu (2005) on the other hand refers to the fact that the majority of jobs in tourism is seasonal, offering low wages, without guarantee of future employment or the provision of adequate social and health care for workers. There is often lacking work experience, and many skills and experience gained by employees are not recognized. The negative economic impact of tourism according to UNEP (2017) is also the migration of labour to popular destinations, which is also a problem in social and cultural terms. The attractiveness of the tourism industry distracts employees from other economic sectors in the region, which negatively affects employment in other sectors of the economy (Budeanu, 2005).

The aim of social and cultural dimensions of sustainable tourism is to secure the exchange of cultural values between residents and tourists, preserve local traditions and the authenticity of communities, as well as to protect the tangible and intangible cultural heritage of the destination (Camus et al., 2012). Various authors have agreed on the definition of social and cultural sustainability as a concept that aims to maintain the stability of social and cultural systems while reducing the contradiction with the requirements of the tourism industry (Bahaire and White, 1999; Cottrell et al., 2004). Maintaining and promoting the culture and identity of local communities is an important challenge for sustainable tourism, otherwise they may disappear (Griswold, 2004; Hitchcock, 1999; Santos and Buzinde, 2007). Social

sustainability lies primarily in the development of the local society, the social approach to tourism business employees, as well as in the social responsibility of regions, associations and tourism businesses (Novacká et al., 2013). Concerning the definition of the interaction between tourism and local culture, a number of authors are referring to tourism as a destroyer of the authenticity of cultures and a source of local identity degradation (Greenwood, 1978; Hitchcock, 1999; Mellinger, 1994; Oakes, 1993; Turner a Ash, 1975). International tourism is therefore perceived as an enemy of the local culture and identity, transforming authenticity into artificiality. On the other hand, Mellinger (1994) suggests that tourists prefer unique cultures, and authors such as Buzinde, Santos and Smith (2006) emphasize the need to preserve local identity, supporting alternatives to mass tourism.

The environment plays a key role in the tourism industry. It was only in the last decade of the twentieth century that it has been perceived as an attraction, or an environment that gave space to tourism activities (Holden, 2000). According to UNWTO data, approximately 75% of tourism products are linked to the natural environment, so an environmentally unburnt environment is a prerequisite for tourism supply (Plesník, 2009). The goal of the environmental dimension of sustainable tourism is to preserve the natural environment by reducing greenhouse gas emissions, eliminating air and water pollution and avoiding the degradation of plant and animal species, deforestation, desertification, as well as the depletion of natural resources (Camus et al., 2012). Pigram (1990) emphasizes the importance of sustainable tourism as a viable tool for economic development and environmental prosperity, including environmental education of stakeholders. Lane (1994) refers to environmental sustainability as an important tool for supporting rural development and conservation. The assessment of the tourism's impact on the environment is particularly demanding due to the existence of a strong link between the tourism industry and the physical environment (Fodranová et al., 2015). The nature is protected in order to sell tourism products, on the other hand, however, the impacts of tourism on the environment are obvious (Puczkó and Rátz, 2001). According to Mason (2003), there is an increasing conflict between tourism activities and the conservation of natural habitats.

2 METHODOLOGY

As a basis for the determination of the indicators of sustainable tourism categorized by the economic, social, cultural and physical environment served the already existing indicators, specifically the indicators of sustainable tourism according to the UNWTO and the ETIS – European Tourism Indicators System, as well as several models of sustainable tourism such as the DIT-ACHIEV Model for Sustainable Tourism (Morrissey et al., 2010) and the Framework Model (Klein-Vielhauser, 2008). Subsequently, the indicators were modified and determined in a way enabling their evaluation at the regional level.

The set of indicators of sustainable tourism has been selected for the model of sustainable tourism in Slovakia based on their importance for monitoring critical areas in tourism in the destination. The significance of the indicators was evaluated by tourism experts in Slovakia at the national and regional level by the Delphi method, which consists in questioning experts using a questionnaire usually in two to three stages in order to achieve convergence of expert opinion and a certain consensus in the perception of relevant issues. The survey was attended by 8 experts from the field of tourism in the first round and 7 experts in the second round:

- Ing. Rastislav Sekerák from the Department of Strategy and Analysis, Tourism Section at the Ministry of Transport, Construction and Regional Development of the Slovak Republic,
- Mgr. Marek Harbuľák, general manager of the Union of Hotels and Restaurants in Slovakia,

- Prof. JUDr. Ľudmila Novacká, PhD., Member of the Board of Directors of Bratislava Tourist Board and Professor at the University of Economics in Bratislava, Faculty of Commerce, Department of Services and Tourism,
- Ing. Karol Jurica, Head of the Tourism Department in the Nitra Region,
- Bc. Iveta Kodoňová, Head of the Monumental Inspection of the Ministry of Culture of the Slovak Republic,
- Ing. Beáta Sebő, Head of the Department of Foreign Relations, Information Office and Sustainable Development of the City Office in Komárno, Slovakia,
- Ing. Zoltán Bara from the organization Pons Danubii EGTC and
- Mgr. Karol Balogh from the Tourism Administration of Senec, Slovakia.

The questionnaires were compiled using Adobe Acrobat and were sent to the email address of the experts. The survey was conducted in two rounds. Each expert, independently of the others, filled out the questionnaire and sent it back to the evaluation. Subsequently, the questionnaires were distributed in a second round in which respondents could, but did not have to reassess their opinions and replies to modify them. In the second round of the survey, the questionnaire contained the median values which were evaluated based on the results of the first round, and the experts tilted to the median values in their assessments, thus achieving the consensus in their opinion. The indicators of sustainable tourism were evaluated by assigning points of 1 (least significant indicator) to 10 (most significant indicator). The experts were able to express their opinion on the importance of evaluating individual indicators in Slovakia in the 'Arguments' section of the questionnaire. They could also design their own indicators which should be, in their opinion, evaluated in Slovakia by also determining their significance.

The indicators of sustainable tourism were evaluated by the calculation of the median values based on the points given by the tourism experts after both rounds of the survey. We have selected only those indicators for the model of sustainable tourism in Slovakia, which, after evaluating the median values, have reached 8 points in the second round of the survey. The indicators were then adjusted on the basis of the expert arguments specified in the questionnaire. The proposed model of sustainable tourism in Slovakia was subsequently depicted in the form of a scheme. We further elaborated the indicators of the proposed model in the form of the DPSIR model (Jurado et al., 2011), which consists of introducing the five stages of tourism development in the destination. Based on the proposed model of sustainable tourism in Slovakia, we also outlined the effects of sustainable tourism factors in the destination.

3 RESULTS AND DISCUSSION

The model of sustainable tourism in Slovakia was designed in order to monitor key areas in tourism in terms of sustainability through evaluating quantitative and qualitative indicators. The proposed model of sustainable tourism in Slovakia consists of 36 indicators divided into four dimensions of sustainable tourism, which are the economic, social, cultural and environmental dimension. The aforementioned dimensions are further subdivided into categories of sustainable tourism by the areas of research. The economic dimension includes 9 indicators, grouped into the following categories: the flow of revenue and expenditure in the destination, the performance of tourism businesses, the number of employees and their quality, and the supply chain in tourism. The seven indicators of the social dimension are categorized by the impact of tourism on the local community, satisfaction with tourism and the safety of tourists. The cultural dimension of the proposed model focuses on the local cultural and historical monuments, culture of the local community, as well as on the employment in culture, including 6 indicators. 14 environmental indicators are categorized by

air pollution, waste management, sewage treatment, water management, energy management and landscape and biodiversity protection (Fig. 1).

Stakeholders in tourism can use the model in order to monitor the weaknesses of the tourism industry in any region of Slovakia, with indicators tailored to the specific needs of the selected region.

Fig. 1   Model of sustainable tourism in Slovakia
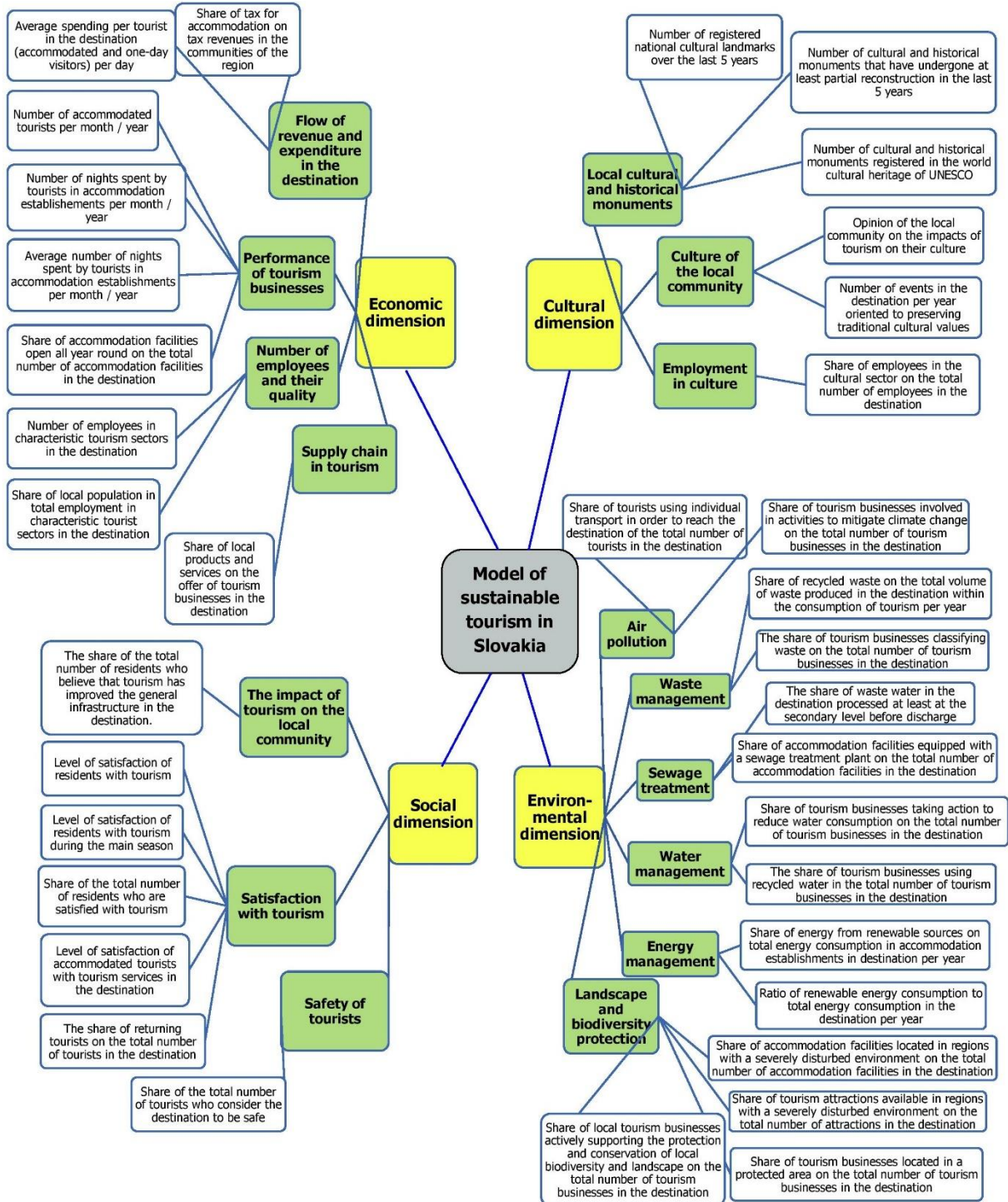
Source: own processing

3.1 DPSIR model

The indicators of the proposed model of sustainable tourism in Slovakia were also illustrated by the DPSIR model (Jurado et al., 2011), which consists of the five stages of tourism development in the destination, namely: driving force, pressure, state, impact and response (Fig. 2).

Fig. 2 DPSIR model

DRIVING FORCE
- visitors and accommodated tourists in the destination
- tourists using transport
- UNESCO sites located in the destination
- national cultural monuments located in the destination

PRESSURE
- waste arising from consumption in tourism
- waste water discharged by tourism enterprises
- water and energy consumption in tourism businesses
- accommodation facilities and tourist attractions located in a severely disturbed environment
- accommodation facilities located in a protected area

RESPONSE
- restoration of cultural and historical monuments in the destination
- events that preserve the traditional culture of local people
- tourism business activities to mitigate climate change
- waste, water and energy management of tourism enterprises
- dealing with waste water in tourism businesses and generally in the destination
- use of renewable energy by tourism businesses and in general in the destination
- protecting and preserving local biodiversity and landscapes by tourism businesses

IMPACT
- tax revenue from accommodation of tourists
- visitor and tourist expense in the destination
- job creation for residents
- improvement of the infrastructure thanks to tourism
- impact of tourism on the traditional culture of residents

STATE
- satisfaction of tourists with tourism services in the destination
- satisfaction of residents with tourism
- destination safety

Source: own processing

The tourism development in the destination is a driving force which transforms the economy, society and the environment. Visitors and tourists at a destination can extensively use the individual means of transport in order to travel to the destination. However, this action has negative consequences in the long run directly in terms of increasing greenhouse gas emissions and indirectly by contributing to the climate change. An increased number of tourists may jeopardize the satisfaction of locals with tourism in the destination in the absence of a proper management.

The presence of tourists can result in a pressure on the environment, for example in the form of waste generated as a result of tourists' consumption in the destination. Many

accommodation facilities and tourist attractions are located in a severely disturbed environment or in a protected area. These facilities should, therefore, increase their focus on maintaining the quality of the environment in the destination, if they expect tourists to arrive in the future.

The current state of the social environment in the destination can be expressed through the indicators of the satisfaction of tourists with the services provided in connection with tourism and the safety of the destination, as well as the satisfaction of the residents with tourism.

The positive impacts of tourism on the destination include tax revenues resulting from the accommodation of tourists, which pretend revenues to the municipal budget, also expenses of overnight visitors and accommodated tourists in the destination, which are revenues of tourism enterprises, as well as municipalities. An important positive impact of tourism in the destination is the creation of jobs for the local community, because the sector does not employ only university-educated residents, but also graduates of secondary vocational schools. A prerequisite of a developed tourism industry is, among other factors, a high quality infrastructure, which also benefits local people. Tourists' behaviour cannot influence only the quality of residents' lives, but also their traditional culture. However, this impact is not necessarily negative, because thanks to tourism many events are organized with an aim to preserve traditional values in the region.

Driving forces, environmental pressures, current status, as well as the impacts of tourism trigger a response from tourism businesses, residents and municipalities. This response should contribute to the sustainability of the destination. Tourism businesses can focus on waste, water and energy efficiency in their work, they can devote to waste water treatment, as well as promote the conservation and preservation of local biodiversity and landscape. The municipality as a unit of territorial self-government can allocate funds for the restoration of cultural and historical monuments, and it can also endeavour to register national cultural monuments, which pretend an attraction for tourists. The municipality, as well as locals can participate in organizing events to preserve local customs and traditions.

3.2 Effects of tourism sustainability factors in the destination

Based on the proposed model of sustainable tourism in Slovakia, we have illustrated the effects of the tourism sustainability factors in the destination (Fig. 3), which may be positive or negative, and act either on the destination as such, or on individual subjects in tourism, namely tourists, residents and tourism businesses. Based on the tourism sustainability factors, we have pointed out the link between residents, tourists and tourism businesses in the destination. The green arrows indicate positive, the red, on the contrary, negative impacts of individual factors on the destination, respectively on subjects in tourism. Yellow arrows indicate that the effects of factors may be both positive and negative, depending on the situation in the particular destination.

The positive and negative effects of tourism sustainability factors indicate different guidelines for actors in the destination, in accordance with the principles of sustainable tourism. Attention should be paid to the factors behind the red arrows in the destination, and the negative impacts of tourism sustainability factors on the destination, such as transport, seasonality and the location of businesses and tourist attractions in disturbed or protected areas, should be permanently reduced or eliminated. The effects of the tourism sustainability factors behind the yellow arrows can be both positive and negative. For this reason, the tourism management of the destination should ensure in particular the satisfaction of tourists and residents, as well as the safety of tourists, and should minimize the impact of the tourists' presence in the destination on the traditional culture of residents.

Fig. 3 Effects of tourism sustainability factors in the destination
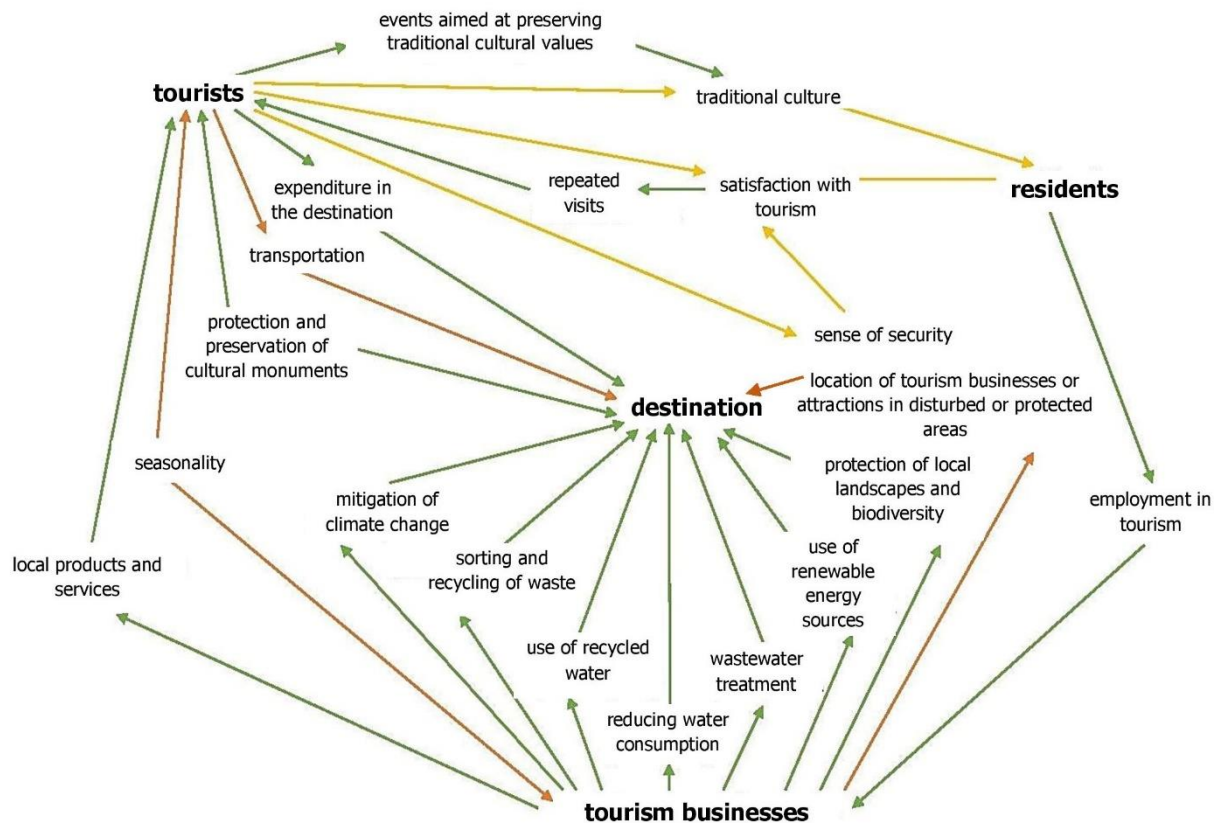
Source: own processing

The tourism sustainability factors behind the green arrows should be strengthened in the destination in order to:

- ensure the satisfaction of tourists with tourism services in order to return to the destination and realize expenses at the destination,
- provide benefits to local residents by their employment in tourism, as well as local entrepreneurs by selling local products and services to tourists,
- maintain and preserve cultural heritage,
- organize events to revive or preserve the traditional cultural values of residents,
- protect the environment, for which should be responsible mainly the tourism businesses in the destination, through activities such as climate change mitigation, waste sorting and recycling, using recycled water, reducing water consumption, waste water treatment, using renewable energy sources and promoting the protection and preservation of local biodiversity and landscape.

CONCLUSION

Tourism is a globally evolving industry, the number of tourists is increasing every year. The expansion of the tourism industry while respecting the principles of sustainable development can make a positive contribution to the development of the destinations around the world, both in economic, social, cultural and environmental terms. However, the absence of planning in the tourism industry can lead directly or indirectly to the degradation of individual destinations. It is therefore in the interest of the industry to generate revenue, especially for

local communities, ensure the satisfaction of tourists and residents, as well as preserve scarce resources and contribute to the attractiveness of tourism destinations.

In connection with the promotion of sustainable tourism practices, it is necessary to identify the positive and negative impacts of the industry and monitor the development of these impacts in the destinations through indicators. Many destinations are threatened precisely because of the lack of attention paid to eliminating or mitigating the negative impacts of tourism. The determination and, subsequently, the evaluation of indicators can be effective tools in order to ensure sustainable tourism in the destination. Indicators serve to uncover critical areas that need to draw attention by managing territorial development, they are also useful by predicting the future development of destinations, or by controlling the results of management measures.

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Sharing the Loot? – Shedding Light on the Uneven Distribution of M&A Success

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Abstract: Numerous empirical studies indicate that the involved parties of a merger transaction profit very unevenly from this transaction. While the abnormal returns of the targets' shareholders appear to be strong, the returns of the acquirers' shareholders turn out to be zero or negative. Using event-study methodology and analysing 3,361 public offerings worldwide that were announced and completed in the period between 01/01/1990 and 10/31/2017 we find that on average the major proportion of the economic benefits of value creating transactions goes to the acquirer, while only a minor share can be allocated to the target company. Vice versa, we show that in the majority of value destroying transactions the acquirers' shareholders carry all economic losses, while the target's shareholders still gain a benefit. The negative economic outcome for the acquirers' shareholders cannot be sufficiently explained by the fact that inflated premiums are paid for the transaction, rather we argue that acquirers on average enter into economically disadvantageous transactions due to agency-problems or hubris.

INTRODUCTION

According to the synergy hypothesis, takeovers occur because of economic gains that result from merging the resources of two companies (Berkovitch & Narayanan, 1993). This implies that merger transactions come along with positive stock price gains for both, buy-side shareholders as well as sell-side shareholders. However, numerous empirical studies indicate that the involved parties profit unevenly from the merger so that the synergy hypothesis may not be a sufficient explanation for merger transactions. Usually, sell-side shareholders achieve substantial stock returns when a merger transaction is announced, while the buy-side shareholders do not gain an advantage from the transaction or even incur substantial losses. The value weighted sum of sell-side and buy-side gains is typically significantly positive (e.g., Bruner, 2002, Martynova & Renneboog, 2008, Jensen & Ruback 1983, Andrade, Mitchell & Stafford, 2001, and Betton, Eckbo & Thorburn, 2008). As the synergy hypothesis does not fully hold up empirically, the literature draws on other theories to explain corporate takeovers, such as principal-agent theory (Jensen & Meckling, 1976) or behavioral theories (Roll, 1986).

The present study contributes to the discussion in the literature of how M&A success is distributed and reinterprets the decision to carry out a merger transaction as a decision on "sharing the loot" among the involved parties. The main lever of the distribution of the M&A result is the premium paid – a high premium will be to the advantage of the sell-side shareholders, a low premium will benefit the buy-side shareholders. The vast majority of acquisitions are friendly takeovers; it can therefore be assumed that the premium is based on a prior negotiation among the directors of the involved parties. Even a hostile takeover can be

considered as resulting from an implicit negotiation. However, considerations of a "fair" distribution resulting from these negotiations should rarely play a role. The share of each party's M&A result is determined by its negotiation power compared to the negotiation power of the respective antagonist. In the course of the negotiation, the weaker negotiating party is brought to the limit of its willingness to participate in the transaction, i.e. to the point where no share of a positive transaction result is obtained. Accordingly, each party has an acceptance range and a rejection range. Assuming symmetric information, a negotiated result can only be expected within the area in which the acceptance ranges of both parties overlap. All distribution results beyond the acceptance limits are clearly attributable to principal-agent conflicts or hubris, while all negotiation results inside both parties' acceptance ranges can be considered as normal – although possibly still biased by potential agency conflicts or hubris.

We are the first to introduce a relative measure of distribution of the transaction's outcome. Such a measure is needed because in a first step it has to be determined which economic advantages arise from the transaction, while in a second step it can be discussed how these advantages are distributed. This approach contrasts prior literature, which has separately studied the relative stock market returns (CAR) of both parties not considering value added, size and power relations. We apply this new method to a large international sample of M&A transactions and demonstrate that the benefits of, in their entirety, value-creating transactions either fully go to the buy-side shareholders or – in less common cases – are shared more justly. This result is counterintuitive at first sight as many previous studies point out the high stock price announcement returns of the sell-side shares. However, this effect accounts only for a very small proportion of the value created – even if controlled for the size relationships of the companies. Contrariwise, the loss from value destroying transactions is almost always fully born by the buy-side shareholders. Accordingly, there is a clear-cut distinction between two types of takeovers: value destroying transactions that are carried out by the acquirer from a position of weakness and value creating transactions carried out from a position of strength. Regardless of this result, it can be shown that acquisitions clearly put buy-side shareholders at a disadvantage. The right of shareholders to vote in the UK for or against an acquisition can only partly prevent this distribution pattern.

This study is structured as follows: In Section 1 the extant literature is briefly reviewed. Section 2 presents the applied sample and methodology of the empirical study. In section 3, the results of the study are presented, discussed, and checked for robustness. The paper ends with a conclusion.

1 LITERATURE REVIEW

Numerous empirical studies indicate that the involved parties profit unevenly from a merger. While the abnormal returns of the targets' shareholders appear to be strong, the returns of the acquirers' shareholders turn out to be zero or negative (Bruner, 2002, Jensen & Ruback, 1983, Andrade, Mitchell & Stafford, 2001, Moeller, Schlingemann & Stulz, 2005, Eckbo, 2014). Antoniou, Arbour, and Zhao (2008) demonstrate a negative and significant cumulative average abnormal return (CAAR) of -1.3% for the acquirer, while they find a significant positive CAAR for the targets' shareholders of +16.3% for a three-day event window around the announcement day. Similarly, Chidambaran et al. (2010) observe a significant CAAR for the target of +20% in the same three-day event window for publicly traded companies with an announcement date between 1988 and 2005. While, the authors document a statistically significant positive CAAR of 1.3% for the acquirer in the same period of time. However, recent literature contrasts these results and presents evidence for wealth gains for the acquirers' shareholders (Netter, Stegemoller & Wintoki, 2011).

One major lever of the redistribution of the success is the offered takeover premium. It should be noted that there is always room for negotiation as long as both parties benefit from the transaction. This range spans between the acquirer's shareholders price cap and the target's shareholders price floor. The distribution within this negotiation area can be explained, among others, by negotiation skills and power of the involved parties. Wealth distribution outcomes beyond the boundaries of the negotiation area can be explained by agency problems or managerial hubris.

The principal-agent theory originated by Jensen and Meckling (1976) addresses the problem of asymmetric information resulting in undetected self-serving activities of the management to the disadvantage of the shareholders. In this context, Jensen (1986) hypothesized that free cash flow entices managers to invest in opportunities such as takeovers in order to increase their power and authority, a phenomenon which is called empire building (Müller, 1969). More precisely, empire building implies a self-serving behaviour which is characterized by the desire to increase the size of the company as bonuses, equity interests and career opportunities depend on company size. Closely related to the problem of asymmetric information is Shleifer and Vishny's (2003) suggestion that merger waves occur after periods of abnormally high stock returns. According to their theory, transactions are motivated by incorrect stock market valuations of merging firms in imperfect stock markets. However, following the assumptions of this theory, managers act in a completely rational manner. They are aware of stock market inefficiencies and take advantage of them. The behaviouristic theory, which assumes non-rational behaviour in the decision makers, delivers another explanation for M&A-transactions. Roll (1986) postulated the hubris theory, which suggests that an incorrect value assessment of the combined firms can be attributed to the hubris of the acquirer's management. Hubris can be considered as the main reason for the winner's curse phenomenon, i.e. the phenomenon that winners of a bidding competition are exposed to a significant risk of engaging in poorly performing investments (Thaler, 1988). Malmendier and Tate (2008) have provided empirical evidence on the influence of managerial hubris on M&A transaction decisions. The authors observed that overconfident managers are 65% more likely to enter into M&A processes, given sufficient internal funding.

As takeovers seem to be accompanied by an uneven allocation of gains and losses between target's and acquirer's shareholders, this study is, in a greater context, relevant to the ongoing discussion on shareholder rights – especially in M&A transactions. Whereas the targets' shareholders are always asked for their consent – except in squeeze outs –, the acquirers' shareholders do not per se have a right to vote. The acquirers' shareholders' rights are regulated differently across nations: Shareholders of NYSE-listed acquirers can only vote on deals in which the transaction is financed with newly issued shares in excess of an additional twenty percent of the common shares outstanding. However, this rule is rather aimed at regulating capital increases and the dilution of voting rights of minority shareholders than at corporate transactions. Hence, managers can avoid a vote by funding the deal with a sufficient amount of internal funding. The rule can also be avoided by issuing preferred shares without voting power, which can be transferred into common shares after the completion of the transaction (Davidoff, 2010). Contrary to the United States (USA), the listing authority in the United Kingdom (UK) has devised a system in which shareholder voting on large acquisitions is mandatory, binding, and imposed via a series of threshold tests. If within several class tests the acquisition of a target is defined as large in relation to the acquirer, the UK Listing Rules require a vote. Each test employs a different measure of relative size: the ratio of gross assets, gross capital, and profits, and the ratio between the offer and the market capitalization of the acquirer. Transactions that exceed 25% in any of the tests (Class 1 transactions) require a mandatory shareholder vote, while transactions below 25% (Class 2 transactions) do not require a vote. In a recent study, Becht, Polo, and Rossi (2016) investigated whether mandatory shareholder voting, as implemented in the UK, can prevent value-destroying

acquisitions that harm shareholders' wealth. The authors found a significant difference in the performance of Class 1 and Class 2 transactions. In a univariate comparison, the abnormal announcement returns calculated for a three-day event window [- 1,+1] for Class 1 transactions were positive (CAAR: +2,5%) and highly significant larger than those of Class 2 transactions (CAAR: +0.8%). Moreover, the authors could show that voting of the shareholders caused higher acquirer returns. Although, the shareholders within their sample never voted against Class 1 transactions, the authors emphasized the deterrence effect of voting. Managers are forced to evaluate potential investments more intense and to determine the price more accurately in order to prevent a vote against the proposal.

2 METHODOLOGY

Sample Description

The present study is broad in nature: it considers worldwide M&A transactions that were announced and completed in the period between 01/01/1990 and 10/31/2017. The financial market data is extracted from Thomson Reuters Eikon database. 34,922 M&A transactions between listed companies were identified in this period of time. To avoid results driven by very small deals, we followed Fuller, Netter, and Stegemoeller (2002), Moeller, Schlingemann and Stulz (2004), Moeller, Schlingemann & Stulz (2005), and Antoniou, Arbour, and Zhao (2008) in applying a one-million-dollar threshold for the deal value. After excluding share repurchases, recapitalizations, equity exchanges and reorganizations, 26,141 transactions remained in the sample. 22,780 transactions had to be removed from the sample as a result of incomplete data, especially historical price data and historical financial data were missing from those companies that were bought in the transaction. Hereafter, 3,361 M&A transactions remained in the sample constituting the basis for the analysis.

Event-Study Methodology and Dependent Variables

The capital market's reaction to the announcement of an acquisition was analysed by applying an event-study. At this stage, daily abnormal returns ARt = Rt - ERt were determined as the difference between the daily stock returns Rt at day t of the corresponding shares and the expected returns ERt due to Sharpe's (1964) market model. To parameterize the market model, the time interval [- 221, - 21] was applied as estimation window in relation to the event date [0]. The calculation of model parameters ends 20 days prior to the announcement date because Dodd (1980) and Asquith (1983) have identified a possible leakage of merger information during that period. The return of the S&P 500 was chosen as an estimator for the market return. The S&P 500 covers a major part of the world's stock market capitalization. We calculated event specific CARes for the [- 1,+ 1] event window by aggregating the ARt in the respective time interval. The advantage of the shorter window used here is that the results are typically insensitive to the model chosen for expected returns (Bargeron et al., 2008). A shorter event window is less influenced by confounding events, but also collects less information that has previously echoed the market due to insider information or that has reached the market later due to market inefficiencies. For a longer event window, the opposite effect can be expected. For checking the robustness of our results, we also applied the [- 2,+ 2] and the [- 5,+ 5] event window.

To measure the actual distribution of the economic gains of corporate takeovers among the involved parties, we applied the variable DISTe according to Formula 1:

$$DIST_e = \frac{CAR_{e,A} \cdot MC_{e,A} - CAR_{e,T} \cdot MC_{e,T}}{\left| CAR_{e,A} \cdot MC_{e,A} + CAR_{e,T} \cdot MC_{e,T} \right|} \tag{1}$$

The gains or losses in the market value of the acquirer company A or the target company T at the time of the event e were obtained by multiplying the respective $CAR_{e,A}$ or $CAR_{e,T}$ with the

respective market capitalization $MC_{e,A}$ or $MC_{e,T}$. Thus, the denominator of the fraction equals the absolute value of the aggregated economic gains or losses of the transaction, which is the "loot to share" among the involved parties. It was used here for the normalization of the results. The numerator of the fraction indicates the fairness in sharing these economic gains. A positive numerator of the fraction implies an uneven distribution of the economic gains in favour of the acquirer, while a negative numerator expresses an uneven distribution in favour of the target. Accordingly, a $DIST_e$ value of one indicates that the acquiring company obtains the entire economic gain of the transaction or, alternatively, has no share in the case of an economic loss. Values above one result from extreme situations, in which the acquirer's monetary gain is positive and the target's monetary gain is negative. For values below zero, the pendulum will strike towards the target, and for values above zero towards the acquirer.

It can be argued that values below minus one constitute a compelling argument for the acceptance of the takeover offer by the shareholders of the target as these can take full advantage of the transaction or even achieve economic benefits beyond. At the same time, however, this range of values also constitutes a compelling argument for the rejection by the shareholders of the acquirer – if they were actually asked for a vote. Conversely, at values above one, the shareholders of the target should always reject, while those of the acquirer would typically agree to an acquisition if asked. The area between these two poles does not necessarily outline a fair distribution of the economic gains or losses of the transaction, but rather the parameters of a rectified behaviour of the parties involved. Nevertheless, both parties would agree in case of success, and both would reject in case of failure. Values below minus one clearly indicate the abuse of the control rights of the acquirer's board, while an unequal distribution above this value can also be attributed to unequal power relations between the parties.

Explanatory Variables, Controls, and Descriptives

The determinants of abnormal returns following merger transactions can be divided into deal characteristics and company characteristics. The information needed for the deal characteristic variables were mainly obtained from Thomson Reuters Dealscreener. The firm-specific financial information was provided by Thomson Reuters Eikon & Datastream. We made sure that no data was used that referred to the time period 21 days before the deal announcement to avoid a confounding distortion.

In order to address the problem of the skewness bias described by Barber and Lyon (1997), all variables included in the regression were winsorised, except for binaries or logarithmized variables. Skewness could lead to a biased test statistic and excessive rejections of the null hypothesis in favour of a lower-tail alternative. Thus, extreme values were given a lower weight, but are, however, not excluded from the sample. These control variables were winsorised at the 1st and 99th percentile. An overview of the variables used for the analysis is presented in table 1. Therein, the index e indicates event-specific variables, the index A indicates acquirer-specific variables, and the index T indicates target-specific variables.

Tab. 1 Variables, Data Sources, and extant Literature

	Variable	Definition	Expression	Thomson Reuters code	Literature source
Dependent variable	$CAR_{e,T}$	Cumulated abnormal return of target (winsorised)	$CAR_{e,T} = \sum_{t=-1}^{+1} AR_{t,T}$		

		$CAR_{e,A}$	Cumulated abnormal return of acquirer (winsorised)	$CAR_{e,A} = \sum_{t=-1}^{+1} AR_{t,A}$		
		$DIST_e$	Distribution of M&A-success (winsorised)	$\dfrac{CAR_{e,A} \cdot MC_{e,A} - CAR_{e,T} \cdot MC_{e,T}}{\lvert CAR_{e,A} \cdot MC_{e,A} + CAR_{e,T} \cdot MC_{e,T} \rvert}$	$MC_{e,A/T}$: TR.CompanyMarketCap (USD)	
	Explanatory variables	$D\_VALCREA_e$	Value creation of the deal	Boolean variable "1" if $CAR_{e,A} \cdot MC_{e,A} + CAR_{e,T} \cdot MC_{e,T} > 0$ "0" otherwise		
		$PREM_e$	Premium (winsorised)		Dealscreener: Premium in % 4 weeks prior to announcement	Antoniou, Arbour, and Zhao (2008)
		$D\_REGION\_x_{e,A}$	Acquirer's region	Boolean variables Differentiation of ten regions: Africa, Asia, Australia, Canada, Continental Europe, Middle East, Russia, South America, United States of America, United Kingdom. United Kingdom serves as benchmark.	Dealscreener: Nation (Manual assignment to self-selected regions)	Becht, Polo, and Rossi (2016)
Control variables	**Deal characteristics**	D_CASH_e	Cash payment	Boolean variable "1" if transaction is fully paid by cash "0" if transaction is paid by mixed payment	Dealscreener: Consideration Structure	Travlos (1987), Walker (2000), Fuller, Netter, and Stegemoeller (2002), Goergen and Renneboog (2004), Faccio, McConnell, and Stolin (2006), Chidambaran et al. (2010), Martynova and Renneboog (2011), Golubov, Petmezas, and Travlos (2016)
		D_STOCK_e	Stock payment	Boolean variable "1" if transaction is fully paid by acquirer's stock "0" if transaction is paid by mixed payment	Dealscreener: Consideration Structure	Travlos (1987), Walker (2000), Fuller, Netter, and Stegemoeller (2002), Goergen and Renneboog (2004), Faccio, McConnell, and Stolin (2006), Chidambaran et al. (2010), Martynova and Renneboog (2011), Golubov, Petmezas, and Travlos (2016)
		$D\_FRIENDLY_e$	Friendly takeover	Boolean variable "1" if transaction is described as friendly takeover "0" if transaction is described as hostile/neutral	Dealscreener: Deal Attitude	Goergen and Renneboog (2004), Martynova and Renneboog (2011)

		D_DOMEST_e	Domestic takeover	Boolean variable "1" if acquirer's and target's nation match "0" otherwise	Dealscreener: Nation	Conn et al. (2005), Martynova and Renneboog (2011), Danbolt and Maciver (2012)
		D_RELA_e	Business relation	Boolean variable "1" if acquirer's and target's business sector match "0" otherwise	TR.TRBCBusinessSector	Walker (2000), Martynova and Renneboog (2011)
		$SIZEREL_e$	Size relation (winsorised)	$\dfrac{MarketCap_T}{MarketCap_A}$	TR.CompanyMarketCap (USD)	Asquith et al. (1983), Fuller, Netter, and Stegemoeller (2002)
		$D\_TIME\_t_e$	Year of the transaction	Boolean variables Differentiation of the years 1990 to 2016 with the year 2017 as reference	Dealscreener: Announcement Date	Jarrell and Bradley (1980), Bruner (2002)
	Company characteristics (acquirer)	$L\_SIZE_{e,A}$	Size (logarithmised)	$\ln(MarketCap_A)$	TR.CompanyMarketCap (USD)	Moeller, Schlingemann, and Stulz (2004), Jansen, Sanning, and Stuart (2015), Fich, Nguyen, and Officer (2018)
		$LEV_{e,A}$	Leverage (winsorised)	$\dfrac{Total\ Debt_A}{Total\ Assets_A}$	Datastream: Total Debt Total Assets	Maloney, McCormick, and Mitchell (1993), Yook (2003), Schlingemann (2004), Martynova and Renneboog (2009), Harrison, Hart, and Oler (2014)
		$BMR_{e,A}$	Book to market ratio (winsorised)	$\dfrac{Total\ Equity_A}{MarketCap_A}$	Datastream: Total Shareholders' Equity Market Capitalization Fiscal Year End	Lang, Stulz, and Walkling (1989), Servaes (1991), Sudasarnam and Mahate (2003), Dong et al. (2006)

Econometric Models

Based on the findings of De La Bruslerie (2013) and Alexandridis et al. (2013), we performed the analysis with and without including the premium in the regression model. We therefore applied two regression set-ups: model 1 excludes the premium variable and model 2 includes the premium as explanatory variable. Except for the premium, the control variables within the multiple regressions stay the same. All models were applied for our three dependent (DEP_e) variables: $CAR_{e,T}$, $CAR_{e,A}$, and $DIST_e$. In total, we generated six regression models which are based on Equation 2.

$$
\begin{aligned}
DEP_e = \ \beta_0 \ &+\beta_1 \cdot D\_VALCREA_e & +\beta_2 \cdot PREM_e & +\beta_3 \cdot D\_CASH_e & +\beta_4 \cdot D\_STOCK_e \\
&+\beta_5 \cdot D\_FRIENDLY_e & +\beta_6 \cdot D\_DOMEST_e & +\beta_7 \cdot D\_RELA_e & +\beta_8 \cdot SIZEREL_e \\
&+\beta_9 \cdot L\_SIZE_{e,A} & +\beta_{10} \cdot LEV_{e,A} & +\beta_{11} \cdot BMR_{e,A} \\
&\textstyle\sum +\beta_{12,x} \cdot D\_REGION\_x_e & \textstyle\sum +\beta_{13,t} \cdot D\_TIME\_t_e & +\varepsilon_e
\end{aligned}
\tag{2}
$$

3 RESULTS AND DISCUSSION

3.1 Descriptives

We observe a highly significant mean $CAR_{e,T}$ of 11.6% (p-value = 0.000) for the targets' shareholders and an insignificant mean $CAR_{e,A}$ of 0.1% (p-value = 0.261) for the acquirers' shareholders. Half of the targets' shareholders generate a $CAR_{e,T}$ of more than the median of 6.5% (p-value = 0.000). It is exactly half of the acquirers' shareholders to report a negative $CAR_{e,A}$, according to the observed median of 0.000 (p-value = 0.903). These results are fully in line with the extant literature (Bruner, 2002, Martynova & Renneboog, 2008).

The newly introduced variable $DIST_e$ shows with a mean value of - 1.075 (p-value = 0.000) that M&A transactions do not only cause an unbalanced distribution of the transaction results that strongly favours the targets' shareholders. Moreover, on average, these transactions generate dollar gains for the target's shareholders while acquirer's shareholders suffer dollar losses. Thus, from an economic point of view, the acquirers' shareholders would reject these transactions, if they were asked for approval ex-ante. This result indicates that, on average, M&A transactions are accompanied by agency problems resulting in a wealth redistribution from the acquirer's to the target's shareholders. Values below minus one clearly indicate the misuse of control rights of the acquirer's board. Furthermore, at least 50% of the transactions considered in our sample report an unbalanced distribution of transaction results that favours the target, expressed through a median value of $DIST_e$ of - 0.511 (p-value = 0.000).

Of 3,361 deals included in the analysis, 1,977 transactions result in a positive, and the remaining 1,384 transactions in a negative total dollar gain. This result is in line with the extant literature, finding a positive total gain for the combined parties on average (Bruner, 2002, Martynova & Renneboog, 2008). In case of a positive total dollar gain, 1,328 transactions result in positive gains for both parties involved and, thus it can be assumed, that these transactions would have been approved by both parties irrespective of the distribution of transaction results. Out of these transactions, the gain of the target's shareholders is greater than the gain of the acquirers' shareholders in 473 cases. In 855 transactions the distribution of total gains is vice versa. 396 transactions with positive total dollar gains result in extreme distributions towards the target, hence, generate gains for the target while losses for the acquirer. In 253 the result is vice versa.

In case of a negative total gain, 471 transaction result in negative gains for both parties involved and, thus it can be assumed, that these transactions would have been rejected by both parties if asked or if they were able to anticipate the results beforehand. While in 332 cases the loss of the targets' shareholders is smaller than the one of the acquirers' shareholders, in 139 cases the result is vice versa. 812 transactions with a negative total dollar gain, result in extreme distributions towards the target, hence, generate gains for the acquirers' shareholders while losses for the targets' shareholders. In 101 transactions the result is vice versa.

Irrespective of the outcome of the combined parties, we observe a redistribution effect towards the target in 2,013 of 3,361 transactions considered in the sample, hence with a value of $DIST_e$ below zero. In 1,208 of these transactions the distribution effect is extreme in the sense that $DIST_e$ is below -1. Accordingly, in 1,348 transactions the effect oscillates towards the acquirer, implying a value of $DIST_e$ above zero. Extreme distribution effects with a value of $DIST_e$ above one are observable in 354 transactions.

Overall, the acquirers' shareholders would have accepted 1,682 deals of our sample as all of them imply gains – although the target shareholders might have gained relatively more. 2,536 transactions would have been approved by the targets' shareholder if they had known the

result beforehand. Only 1,328 should have been realized, as both sides would have approved them if they were asked beforehand.

3.2 Model results

The results of the main models without and with acquisition premium as explanatory variable and for $CAR_{e,T}$, $CAR_{e,A}$, and $DIST_e$ as explained variable are summarized in table 2.

Tab. 2 Model results of OLS-Regressions

	Model 1			Model 2		
	- a -	- b -	- c -	- a -	- b -	- c -
	CAR_T	CAR_A	DIST	CAR_T	CAR_A	DIST
	coeff.	coeff.	coeff.	coeff.	coeff.	coeff.
	(t-value)	(t-value)	(t-value)	(t-value)	(t-value)	(t-value)
Intercept	0.0463	-0.0523 ***	-3.4479 ***	0.0053	-0.0511 ***	-3.3033 ***
	(1.5079)	(-5.1293)	(-4.8966)	(0.188)	(-5.0196)	(-4.6859)
W_PREM				0.1342 ***	-0.0038 *	-0.4738 ***
				(14.9745)	(-1.8668)	(-3.6792)
D_VALCREAGAIN	0.0787 ***	0.0693 ***	1.1923 ***	0.0709 ***	0.0695 ***	1.2201 ***
	(14.8523)	(43.3552)	(9.6351)	(14.6428)	(43.6059)	(9.8393)
D_MPCash Only	0.0349 ***	0.0037 **	0.1762	0.027 ***	0.0039 **	0.2043
	(6.2106)	(2.1478)	(1.2669)	(5.2202)	(2.2729)	(1.4667)
D_MPStock Only	-0.0001	0.0007	0.0676	-0.0053	0.0008	0.0859
	(-0.0125)	(0.2347)	(0.3345)	(-0.7185)	(0.2846)	(0.4252)
D_DAFriendly	0.0386 ***	0.0015	-0.3932 ***	0.0378 ***	0.0015	-0.3903 ***
	(6.5466)	(0.7033)	(-2.9113)	(6.4367)	(0.7145)	(-2.8991)
D_GEODomestic	-0.0133 **	-0.0029	0.3477 **	0.0013	-0.0033 *	0.2962 *
	(-2.0335)	(-1.563)	(2.2789)	(0.2102)	(-1.768)	(1.937)
D_RELARelated	0.0094 *	0.001	-0.0541	0.0042	0.0011	-0.036
	(1.757)	(0.5919)	(-0.4159)	(0.8679)	(0.6767)	(-0.2776)
W_SIZEREL	-0.0243 ***	0.0008	0.2566 ***	-0.017 ***	0.0006	0.2309 ***
	(-9.2608)	(0.5101)	(4.3182)	(-7.1087)	(0.3786)	(3.8687)
L_SIZE	0.0025 *	0	0.0768 **	0.0042 ***	-0.0001	0.0708 **
	(1.7105)	(-0.0506)	(2.3508)	(3.1142)	(-0.1519)	(2.1575)
W_LEV	-0.0421 ***	0.0136 ***	0.4969	-0.0313 **	0.0133 ***	0.4587
	(-2.7266)	(2.6735)	(1.3732)	(-2.1949)	(2.6112)	(1.2684)
W_BMR	-0.0138 ***	-0.0004	0.1173	-0.0159 ***	-0.0003	0.1245
	(-3.4016)	(-0.2644)	(1.3393)	(-4.2318)	(-0.224)	(1.4278)
D_Region_USA	0.0419 **	0.0012	-1.2678 ***	0.0191	0.0018	-1.1873 ***
	(2.4909)	(0.2362)	(-4.87)	(1.2659)	(0.3645)	(-4.5898)
further region dummies	…	…	…	…	…	…
time dummies	…	…	…	…	…	…
R^2	0.2545	0.3614	0.0653	0.3823	0.3624	0.0688
adj. R^2	0.2441	0.3526	0.0523	0.3735	0.3533	0.0556
df	46/3314	46/3314	46/3314	46/3314	46/3314	46/3314
F-statistics	24.5900	40.7800	5.0340	43.6200	40.0600	5.2090
p-value	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***

*) $p \leq 0.1$, **) $p \leq 0.05$, ***) $p \leq 0.001$

All regressions show highly significant model statistics; thus, these models have a strong explanatory power. The adjusted explained variance (adj. R2) for the two CAR variables is in both settings comparatively higher than for the DIST variable, indicating, that the explanatory variables elucidate the success of the merger better than the distribution of the success. However, the adjusted explained variance is remarkably higher when including the acquisition premium into the model. Hence, including the premium into the model results in additional explanatory power. Applying an ANOVA-test, we observed the change in the explained variance to be significant in all cases. The model statistics are slightly weaker compared to some other studies in the extant literature. Nevertheless, our study is very diversified in terms of geographical distribution and industry characteristics and is therefore less homogeneous.

3.3 Is there a systematic redistribution of wealth?

When examining the intercept of the first regression model which excludes the premium as explanatory variable, the results indicate insignificant positive abnormal returns for the target (const. = 0.046, p-value = 0.132) and highly significant negative returns for the acquirer (const. = - 0.052, p-value = 0.000) that are not explained by any of the explanatory variables. These results are perfectly in line with the extant literature (Bruner, 2002, Martynova & Renneboog, 2008) and indicate, that – even controlled for a multitude of variables – there is a distribution of transaction results between the involved parties that favours the targets' shareholder. This observation does not necessarily lead to a significant change of the $DIST_e$ variable. Here, however, this is the case: in model 1c a strong distribution of results to the advantage of the target and the disadvantage of the acquirer is observable (const. = - 3.448, p-value =0.000), independently of the influence of all other explanatory variables and, thus, unexplained so far. As the value is smaller than - 1 and highly significant, it can be concluded that the acquirers' gain is negative whereas the target faces a positive gain. Hence, M&A-transactions that belong to the reference group are on average beneficial for the target shareholders but detrimental for the acquirers' shareholders. At first sight, this result seems to contradict to the findings of Becht, Polo, and Rossi (2016) who report positive $CAR_{e,A}s$ for UK acquirers. However, in a multiple regression the authors detect factors that negatively influence the positive results of UK acquirers such as the ownership status of the target. Accordingly, the authors observe a negative and significant influence of publicly traded targets on the acquirer's $CAR_{e,A}$. Hence, in the light of this information, a negative intercept in model 1c is still in line with the observations of Becht, Polo, and Rossi (2016), as the sample applied in the present study only includes public targets.

When integrating the premium as explanatory variable in the regression models 2a-c, we observe that the magnitude of the intercepts stays all in all constant if compared to model 1a-c without including the premium. In terms of the target's $CAR_{e,T}$ the coefficient is slightly positive but insignificant (const. = 0.005, p-value = 0.851). In terms of the acquirer's $CAR_{e,A}$ the intercept remains also unchanged when controlling for the premium (const. = -0.051, p-value = 0.000). As the intercept in model 2c is reduced only slightly (const. = -3.303, p-value = 0.000), the unbalanced distribution towards the targets' shareholders that we observed in model 1c cannot be resolved by the takeover premium. Accordingly, large parts of the distribution effect towards the targets' shareholders remain unexplained and significant.

3.4 Does the distribution of the M&A-results depend on the success of the transaction?

All observed models strongly depend on whether the acquisition creates or destroys value. It goes without saying that the group of value-added acquisitions is generating positive stock market reactions from both acquirers (coef. = 0.078, p-value = 0.000) and targets (coef. = 0.069, p-value = 0.000), as this is more or less the definition of adding value. Less self-evident, on the other hand, is the fact that the variable $DIST_e$ variable indicates a clear shift of wealth towards the acquirer and to the disadvantage of the target (coef. = 1.192, p-value = 0.000).

The high explanatory power remains unchanged while considering the premium in all three models 2a-c in comparison to models 1a-c. The value creation shows a highly significant impact on the target's $CAR_{e,T}$ (coef. = 0.071, p-value = 0.000), on the acquirer's $CAR_{e,A}$ (coef. = 0.070, p-value = 0.000), as well as on the $DIST_e$ variable (coef. = 1.220, p-value = 0.000).

This result clearly indicates, that the "share of the loot" of the acquirer is positively related to value creation. As this result is corrected for absolute firm size of the acquirer as well as relative firm size of both companies involved, the reason for this behaviour cannot be seen in the

negotiation power of the acquirer alone – although this cannot be fully ruled out. Rather, this finding supports the hypothesis that target shareholders will be released from all project risks by the payment of the takeover offer and therefore will not participate in either positive or negative M&A-results.

3.5 Does the acquisition premium trigger the wealth transfer?

The premium, defined as the percentage by which the offered price exceeds the stock market value of the target company, is often suggested in practice to be the main lever of the unequal distribution of the transaction success. It is often lost sight of the fact that the takeover premium represents only a small dollar amount compared to the significant distortions on the stock markets around the announcement day. Nevertheless, it allows further insights to include the premium in the regression, as this is a direct transfer of wealth from the acquirer to the target and should ideally induce a positive $CAR_{e,T}$ exactly to the extent of the premium. If the model is corrected for the premium, influencing factors that are included in the premium will then show lower explanatory power.

As expected, the coefficient of the variable $PREM_e$ is positive and highly significant (coef.= 0.134, p-value = 0.000) for the target's shareholders. This result is not surprising, as the offer typically exceeds the current market price of the target company. For the acquirer's $CAR_{e,A}$, the variable $PREM_e$ is negative, however extremely small and insignificant (coef. = - 0.004, p-value = 0.062). In other words: the market does not react on the offer independent of its size. This is a remarkable result, as there can be no question of an "overpayment" at all. However, the premium obtains a highly significant negative effect on the variable $DIST_e$ and hence triggers an unbalanced distribution of transaction results towards the target to the disadvantage of the acquirer (coef. = -0.474, p-value = 0.000). Consequently, this effect is rather due to the rise in the target's share prices than in a reduction of the acquirer's.

3.6 Does the British institutional setting have an impact on the distribution?

We observe the target's $CAR_{e,T}$ to be significantly larger when acquired by a company from the USA (D_REGION_USA) compared to a UK acquirer (coef. = 0.042, p-value = 0.013). The result for the acquirers' shareholders $CAR_{e,A}$ is not as distinct as the targets' shareholders. Its coefficient is extremely small and not significant (coef. = 0.001, p-value = 0.813). However, we observe US acquirers causing a highly significant unbalanced distribution of transaction results that strongly favours the targets' shareholders (coef. = -1.358, p-value = 0.000) and thus, find evidence that the British institutional setting with a voting right on M&A-transactions effectively improves the acquirer's shareholders position. The positive effect on the target's $CAR_{e,T}$ of being acquired by a company from the USA (D_REGION_USA) decreases when controlling for the premium (coef. = 0.019, p-value = 0.206) and loses its' significance. Hence, US acquirers seem to pay higher premiums in comparison to UK acquirers. However, a positive and yet unexplained effect remains. The coefficient in model 2b did not remarkably change in comparison to model 1b (coef. = 0.002, p-value = 0.716). However, in line with the results in model 2a, the newly introduced control variable $PREM_e$ reduces the unbalanced distribution of transaction results towards the target (coef. = - 1.187, p-value = 0.000). Yet, similar to model 1a, a great part of the difference in the distribution of transaction results between transactions initiated by US and those initiated by UK acquirers, remains unexplained, even controlled for the premium.

CONCLUSION

Theoretically M&A transactions should come along with positive gains for both, acquirer's as well as target's shareholders. However, numerous empirical studies indicate that the involved parties profit unevenly from the merger. As takeovers seem to be accompanied by an uneven allocation of gains and losses between targets' and acquirers' shareholders, this study sheds light on the economic rationale and characteristics of M&A transactions and applies a new approach. We analyse the announcement effect of 3,361 worldwide M&A transactions that were announced and completed in the period between 1990 and 2017. Although, the issue of wealth creation cannot be completely separated from the issue of wealth distribution, this study focusses explicitly on the distribution of the M&A success or the "sharing the loot" between the involved parties, respectively. In line with existing empirical findings, we can show that the distribution of M&A success among the involved parties is systematically biased in favour of the targets' shareholders. We find that on average the major proportion of the economic benefits of value creating transactions goes to the acquirer, while only a minor share can be allocated to the target company. Vice versa, we show that in the majority of value destroying transactions the acquirers' shareholders carry all economic losses, while the targets' shareholders still gain a benefit. Thus, the targets' shareholders benefit from takeovers in both cases. We hypothesize that a minor share of these value gains is granted to the targets' shareholders by paying the transaction premium to uphold their willingness to participate in the transaction   even if the market subsequently evaluates the transaction as negative. Accordingly, a negative overall market result will be carried by the acquirers' shareholders. We find that the majority of transactions are value destroying for the acquirer, which we explain by agency problems or managerial hubris. We find the takeover premium to be a significant lever of redistribution of merger success towards the targets' shareholders. Nevertheless, the negative economic outcome for the acquirer's shareholders cannot be sufficiently explained by the fact that inflated premiums are paid for the transaction, rather we argue that acquirer's on average enter into economically disadvantageous transactions. To minimize the impact of agency problems and management hubris, UK has granted the shareholders of the acquirer's company a voting right on certain transactions. In line with Becht, Polo, and Rossi (2016) we could observe that in the UK there is a significant improvement in the situation of the acquirers' stockholders in comparison to the US, where such a setting is not in place. Acquirer's shareholders thus have the opportunity to express their displeasure about a certain transaction at a general meeting instead of realizing it without further complaints.

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Artificial or Real Fur? An Empirical Study on Fur Consumer Behaviour in Germany

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Abstract: In recent years, an increasing number of consumers are choosing to wear fur clothes, made from artificial or real fur. This has resulted in an increase in the global consumption of real fur and growth in the number of fur farms. In addition, because of non-species-appropriate livestock farming, the reputation of fur farms is increasingly attracting public criticism and the resulting fur scandals are reported at regular intervals in the media. The research objective of the present empirical study was therefore to investigate the consumer behaviour of fur buyers in the German market. The aim was to identify the most relevant factors resulting in a purchase decision of a specific fur type of either artificial or real fur. For this purpose, four research questions were derived.
Consequently, over 2,018 interviews in different German regions were conducted. The analysis of the survey results has revealed some interesting differences and similarities regarding the purchase behaviour of artificial and real fur clothes buyers. Furthermore, this study could identify a need for future research within this subject area.

INTRODUCTION

Fur as a garment has always been part of human history. The reasons for wearing fur clothing have changed over the centuries from a protective function to a symbol of luxury (cf. Loschek 2011: 397). In the winter months in particular, fur is an indispensable garment on the streets. Whether used in a winter jacket, as a bobble on a cap, fur gloves or as a complete fur coat, many passers-by on the street wear fur.

Fur is processed and worn in textile products in two different ways, first as real fur and second as artificial fur, also known as woven fur. Real fur is the material obtained from the densely haired fur of a furry animal (cf. Eberle et al. 2013: 141-149). Synthetic fur on the other hand, is produced synthetically (cf. Meyer zur Capellen 2015: 420f).

Over the centuries, the consumption of real fur has increased steadily until the 1980s, when demand - and image - collapsed. The main reasons for this collapse were controversial practices in the keeping and killing of fur animals, the resulting actions of the animal rights activists against wearing real fur and negative media reporting (cf. Loschek 2011: 401).

For some years a partially strong trend towards the increasing consumption of real fur has been emerging again. Both the production figures and the sales figures have experienced extreme increases in some cases. The increase in turnover from 2002 to 2012 was 44% (cf. Copenhagen Fur 2013). In the years 2011 to 2014 there was even an increase of 59%. In the financial year 2013 to 2014, sales of US$ 38.5 billion and US$ 87.2 million in animal hides were achieved (cf. Copenhagen Fur 2016).

In an apparent contrast to these figures are the results of surveys dealing with consumer opinion on the production and wearing of real fur. The majority of German consumers have a negative attitude towards wearing real fur clothing (82%) (see Ipsos 2016). In addition, critical reporting in social and traditional media concerning the retention of fur animals and fur farms has obviously increased in recent years.

At present, there is a lack of studies investigating the reasons for consumers' choices of real or fake fur when buying fur clothing. Similarly, there is a lack of evidence to explain why consumers buy real fur garments despite their awareness of critical media coverage concerning the production of genuine fur.

The aim of this study was to analyse fur buying behaviour in Germany and to identify which factors have an influence on the type of fur worn, whether real or artificial fur. In addition, this study also investigated the reasons for consumers' conscious purchase of real fur garments despite knowledge of critical reporting regarding the production of real fur.

1 LITERATURE REVIEW

The very simplified S-O-R model is based on the idea that a stimulus triggers processes in the human organism that then manifest themselves in a reaction (Kotler et al. 2011: 298; Bröring/Griese 2011: 69). S-O-R means stimulus, organism and response. In economics, this reaction usually refers to the purchase decision. Accordingly, the S-O-R model can be used to explain purchasing behaviour or customer behaviour. Like many model representations, the S-O-R model is greatly simplified.

Transferred to buyer behaviour this means that the "potential buyers are offered a product whose appearance, price, advertising, etc. (=stimulus) cause them to buy it at a certain time, in a certain quantity and in a certain store (=response)" (Gelbrich/Wünschmann/Müller 2008: 34). 'Stimulus' refers to the stimuli acting on humans and 'response' refers to the reaction to the stimuli. The transition of these two areas which comprise the decision-making process contains the considerations, moods and feelings and is called the black box (=organism). In this context, the black box describes the complex 'invisible' phenomena that are inaccessible to research. In order to understand what a person thinks and feels, research into buying behaviour takes place in the black box.

Cultural, social, psychological and personal factors are among those which influence consumer behaviour or the process in the black box. Personal factors include socio-demographic data such as age and stage of life, occupation or economic circumstances. Psychological factors are motivation, perception, views and attitudes. The social environment is shaped by reference groups, family, role and status. Culture, subculture and social class are cultural factors.

The question of the motive or the reason for the purchase of a fur garment is an essential part of the explanation of fur buying behaviour. On the one hand, it is a fashion product in which

purchasing motives such as appearance, quality and price/performance ratio (cf. Fuchslochner/Hochheimer 2001: 32ff) are in the foreground. On the other hand, the status of a real fur garment as a purchase motif automatically comes into focus (cf. Kolaschnik 2012: 183ff). In addition, fur garments are mainly worn during the cold season. As a result, the functionality and comfort of the garment are of particular importance.

One reason that the purchase decision is usually not made by the wearer of the garment is the possibility that it is a gift. In order to ensure that the decision to purchase one of the two types of fur was not made accidentally or unconsciously, it is necessary to ask whether the choice of one of the two types of fur is a conscious purchase decision. Conscious in this context means that there is an intention behind the purchase decision.

In order to consider the ethical aspect, it was necessary to question the influence of the critical media reporting of animal husbandry on the fur buying behaviour. Real fur wearers were therefore asked whether they are aware of one of the fur scandals from the media. If they said yes, the respondent was then asked to give a reason explaining why they wear real fur despite their knowledge. Synthetic fur wearers were asked to provide information about their purchase, including why they made a conscious decision to wear artificial fur and whether animal protection or the knowledge of the fur scandals from the media played a role.

The socio-demographic factors associated with the fur wearer also represent an important component. These include age, gender and location. The spending power associated with the location of the fur wearer can also be used as an indicator of economic strength. Spending power refers to the disposable income of a population of a region, which is net income excluding taxes and social security contributions, including the transfer of payments received.

In this study, a standardized spending power index was used, which was determined for each city or county (see MB Research 2016). The national average spending power index per inhabitant is D = 100. The highest spending power in Germany is found in the Hochtaunuskreis district with a value of 144.2, while the lowest spending power is in the Görlitz district with 80.

Finally, the type of fur garment was clarified, with options provided for fur jackets, fur trim in fabric jackets, caps, bags, accessories, shoes and gloves.

Tab.1 shows the factors which explain the purchasing behaviour of real and artificial fur garments.

Tab. 1 Factors explaining the purchasing behaviour of real and artificial fur garments

Main purchase reason	Type of purchase decision	Ethical aspect	Socio-demographic factors	Fur clothing
Look Quality Price/performance ratio Status Functionality/ wearing comfort Gift	Consciously/ intentionally Unconsciously/ unintentionally	Knowledge of critical media reporting about fur farming / fur scandals	Age Gender Spending power/ Domicile	Fur jacket Fur trimming in fabric jacket Fur cap Fur bag Fur accessory Fur shoes Fur gloves

2 METHODOLOGY

Research questions and corresponding hypotheses

Based on the objective of the study to analyse fur buying behaviour in Germany the following four research questions with the corresponding hypotheses were formulated:

1. Is there a connection between the reason for purchase or gender and the purchase of one of the fur types?

   Hypothesis 1.1: The fur type has no significant influence on the reason for purchase.

   Hypothesis 1.2: The buyer's gender has no significant influence on the purchase decision regarding the fur type.

2. What influence does age or spending power have on the acquisition of one of the fur types?

   Hypothesis 2.1: The buyer's age has a decisive influence on the type of fur acquired.

   Hypothesis 2.2: Spending power (budget) has a decisive influence on the acquired fur type.

3. Is there a connection between gender and the purchasing reason 'animal welfare/knowledge of critical media reporting' in the conscious acquisition of artificial fur clothing?

   Hypothesis 3: Female wearers of artificial fur state 'animal welfare/knowledge of fur scandals' more frequently as a reason to buy artificial fur than male artificial fur wearers.

4. What are the reasons for buying real fur clothing despite knowledge of critical reporting for the production of real fur?

   Hypothesis 4: If the buyer is aware of the fur scandals in the production of real fur the look of the garment is the most common reason for the conscious decision to purchase real fur garments.

The variable definition (code plan) can be viewed in Tab. 2.

Tab. 2 Definition of variables (code plan)

Variable name	Hypothesis	Variable type	Variable values	Measurement level
Main reason for purchase/acquisition the fur garment	1.1	Dependent	Look Quality Price/performance ratio Status Functionality/ wearing comfort Gift	Nominal
Fur type	1.1 1.2; 2.1; 2.2	Independent Dependent	Unknown Artificial fur Real fur	Nominal
	4	Dependent	Look	Nominal

			Wear comfort/ functionality	
Conscious purchase decision for real fur despite knowledge of the fur scandals from the media			Sustainable production	
			No interest in scandals	
			Status	
			Quality	
			Other reasons	
Knowledge of fur the fur scandals	4	Independent	Yes	Nominal
	3	Dependent	No	
Age	2.1	Independent	Numerical	Metrical
Gender	3	Dependent	Male Female	Nominal
Postcode (spending power)	2.1	Independent	Numerical	Metrical

Research Methodology

A face-to-face survey based on a standardized questionnaire was conducted to collect data (cf. Bortz/Döring, 2006: 191ff; cf. Möhring/Schlütz 2010: 67ff). If the hypotheses, concepts, variables and indicators are now defined at the level of the context of justification in the research process, the question of operationalization at the lowest level - that of the measurability of the target - must be clarified. The fact that the investigation was conducted through the instrument of questioning means that a questionnaire was developed.

The interview questions were designed in three parts with an introduction, a main part and conclusion. Only the main part of the survey is based on a standardized questionnaire, ensuring that an open and harmless conversation between the interviewer and the fur wearer can be guaranteed. In order to prevent a high involvement of the participants and answer tendencies influenced by social desirability, the interviewers wore garments with real fur components (jacket with fur collar, fur cap, etc.).

The aim of the introductory question was to arouse the interest of fur wearers and motivate them to participate. The interviewer addressed fur wearers with positive emotions about their fur garments. These statements were adapted to each target group (age, gender, appearance) and were not given to the interviewers, allowing them to vary from "A very nice fur coat you are wearing" to "Cool fur jacket". These introductory statements were formulated in question form and also served as icebreaker questions, as they introduced the interviewee to the interview situation and could be answered quickly by participants with little cognitive effort (cf. Möhring/Schlütz 2010: 67ff).

After this introduction to the interview, the actual part of the survey began, which was divided into six questions on fur buying behaviour and surveyed in a standardized manner. The survey was completed by providing socio-demographic data and the postcode to determine purchasing power. In order to avoid answer tendencies based on social desirability as has been postulated (Schumann 2006: 57ff), the anonymity of the answers was guaranteed.

Execution of the survey

Between 10th and 12th January 2017 a pre-test with 40 individuals was conducted. The aim of the pre-test was to assess the duration and comprehensibility of the question items.

The actual data collection took place between 17th and 31st January 2017 in 37 German city centres. In order to reflect the influence of the survey location on purchasing behaviour, this study distinguished not only between the geographical and economic situation (high-income and low-income regions), but also between rural and urban areas. The aim was to create a comprehensive sample with as representative a selection of areas as possible.

In addition to a representative selection of locations, the participants were approached completely randomly. The only selection criterion was the wearing of a garment with a visible fur component. A distinction was made between seven different pieces of fur clothing: (1) fur jacket, (2) fur trim fabric jacket, (3) fur cap, (4) fur bag, (5) fur accessory, (6) fur shoes and (7) fur gloves.

3 RESULTS AND DISCUSSION

3.1 Descriptive data analysis

A total of 2,018 fur wearers were successfully interviewed.

1. Gender-specific distribution

A total of 1,514 participants were female (75.02%) and 504 were male (24.98%). The gender-specific comparison of the fur type shows that the percentage of artificial fur garments among the female volunteers (59.58%) was higher than among the male volunteers (47.22%). In contrast, the share of male participants was higher for real fur garments (31.15% male, 28.60% female) and for garments without knowledge of the fur type (21.63% male, 11.82% female).

2. Knowledge-specific distribution

When asked about the type of fur, 56.49% of interviewees (1,140 participants) said they wear artificial fur. A further 29.24% (590 participants) said that they wear real fur. A total of 85.73% (1,730 participants) knew which type of fur they were wearing. Nearly one in seven of the participants (14.27%, 228 participants) did not know what type of fur comprised the worn fur garment.

3. Age-specific distribution

The average age was 35.29 years. The age span ranged from 15 to 92 years. A total of 22.15% of the participants (447 participants) were 20 years old or younger, 44.86% (885 participants) were 21 to 40 years old, 22.84% (461 participants) were 41 to 60 years old and 11.15% (225 participants) were 61 years old or older. The 21 to 40-year-old age group thus accounts for the majority of participants.

The age-specific comparison of the two fur types shows that the wearing of artificial fur garments decreases with increasing age, whereas the wearing of real fur garments increases.

In the 20 years old or younger age category, the percentage of artificial fur wearers is highest at 68.23%, while the lowest percentage is found in the 61 years old or older age group at 39.11%. The highest percentage of real fur clothing wearers (48.00%) is in the 61 years old or older age group, while only 18.34% of the 20 years old or younger age category wore real fur clothing.

4. Spending-power-specific distribution

As far as the distribution of spending power among the participants is concerned, 25.82% (521 participants) came from places with a relatively low purchasing power of up to 95. A total of 25.97% (524 participants) had a purchasing power range greater than 95 and extending up

to and including 103. A total of 16.85% (340 participants) were within a purchasing power range greater than 103 and up to 111. The largest share of 31.37% (633 participants) of participants came from a place with a relatively high purchasing power above 111.

The distribution of the fur type in relation to spending power shows that clothing with artificial fur is most in demand (65.45%) in areas with low purchasing power (purchasing power less than 95). As spending power increases, the share decreases (55.53%, 48.82%) until it rises again (54.03%) in areas with the highest purchasing power (purchasing power greater than or equal to 111). The opposite is true for real fur garments: the lowest share (21.69%) is in areas with the lowest spending power. With increasing spending power, the proportion of real fur increases (25.00%, 37.94%) until it finally decreases again (34.28%).

5. Distribution of piece of fur clothing

The most frequently worn fur clothing was fur trim fabric jackets at 78.54 % (1,585 participants). The second most common fur garment was fur jackets at only 10.11% (204 participants), closely followed by fur caps at 7.43% (150 participants). Only a small proportion of participants wore fur accessories (2.53%, 51 participants). Bags, shoes and gloves were worn at a negligible frequency.

With regard to the distribution of worn pieces of fur clothing per type of fur (artificial or real fur), it is noticeable that the greatest absolute differences exist between the fur jacket, fur trim fabric jacket and fur cap.

The fur jacket was worn by 18.29% of real fur wearers (107 participants) and only 7.95% of artificial fur wearers (91 participants). A similar ratio can be found with regard to the fur hat, which was worn by 10.26% of real fur wearers (60 participants) and 5.15% of artificial fur wearers (59 participants).

The opposite is true for the fur trimming in fabric jacket. This garment was worn by 84.10% of the artificial fur wearers (963 participants) and 65.98% of the real fur wearers (386 participants).

6. Distribution of the main reason for the acquisition or purchase of the fur garment

The questionnaire allows for status, look, functionality/wearing comfort, quality, price/performance ratio and gifting as possible answers for the main reason for acquisition or purchase.

Status was the main reason for 106 participants (5.25%) to buy fur. A total of 815 of all consumers (40.39%) bought the fur garment because of how it looks. Functionality and wearing comfort were decisive for 685 participants (33.94%). Quality played a decisive role in the purchase 81 times (4.01%). The price/performance ratio of the fur-trimmed garment convinced 156 participants (7.73%). For 175 participants (8.67%) the garment was a gift.

The comparison of the main reason for the acquisition or purchase per each type of fur shows that look, price/performance ratio and gift are more frequently given as the reason by artificial fur wearers than by real fur wearers. Status, functionality/wear comfort and quality were more frequently mentioned by real fur wearers.

The biggest difference in favouring artificial fur was seen was associated with how the garment looks (artificial fur at 42.80% with 648 participants in comparison to real fur at 37.29% with 220 participants).

With regard to status as a reason the largest proportion was in favour of real fur clothing, with 7.66% (44 participants) wearing real fur for this reason in contrast to 4.29% (65 participants) who wore artificial fur. Quality was also preferred by the real fur wearers with 5.25% (31 participants) of these participants citing quality as a reason for their choice in contrast to 3.5% (53 participants) who wore artificial fur.

7. Conscious buying decision for a certain type of fur

Of the 1,730 participants who knew their fur type, 67.05% (1,160 participants) intentionally (consciously) chose one of the two fur types. A total of 32.95% (570 participants) stated that they unintentionally (not consciously) chose one of the two fur types.

For artificial fur, the percentage of conscious buyers was 69.47% (792 participants) and for real fur 62.37% (368 participants). For those who made their decision unconsciously 30.53% (348 participants) chose the artificial fur garment and 37.63% (222 participants) chose the real fur garment.

8. Gender-specific distribution of the reason for a conscious purchase decision for artificial fur

The fourth question of the questionnaire explicitly asked the reason for the conscious decision to purchase the artificial fur garment.

A total of 792 participants identified as conscious buyers of artificial fur formed the basis for this evaluation. The answer options provided were functionality/wear comfort, fur scandals in the media/animal welfare, price/performance ratio, appearance and status. Multiple responses were permitted.

A total of 920 answers were given as a reason for the conscious decision to buy artificial fur clothing. Functionality/wearing comfort was given as a reason by 34 participants (4.29%). Fur scandals from the media/animal welfare were cited 648 times (81.82%). For 152 participants (19.19%), the price/performance ratio is a reason for gainful employment. Appearance was led by 83 participants (10.48%). Status was mentioned only six times (0.38%).

When looking at the gender-specific distribution, it can be seen that the female participants relatively frequently stated fur scandals from the media/animal protection as the reason for the conscious purchase decision for artificial fur garments, with 83.91% of the female and 70.87% of the male artificial fur wearers. The price/performance ratio is exactly the opposite, with 28.35% of the male and only 17.44% of the female artificial fur wearers citing this reason.

9. Knowledge of the fur scandals in the media among those who consciously bought real fur

In the sixth question of the questionnaire, all participants who had consciously chosen to purchase a real fur garment were asked whether they were aware of at least one recent fur scandal in the media.

A total of 280 of the 368 conscious real fur wearers (76.09%) answered this question in the affirmative and 88 real fur wearers (23.91%) answered this question in the negative.

In terms of gender, it can be seen that the female participants among the conscious real fur wearers were informed about the fur scandals from the media to a higher percentage (77.74%) than the male participants (71.84%).

10. Reasons for the conscious decision to purchase real fur clothing despite knowledge of the fur scandals from the media

Of the 280 participants who opted for a real fur garment despite knowledge of the fur scandals in the media, a total of 179 evaluable reasons were given in response to the question "Why did you nevertheless buy real fur?" As this was an open question, multiple answers were possible.

Answers were sorted according to the number of mentions in decreasing order, resulting in the following distribution:

- Look; mentioned in 87 responses (48.60%)

- Functionality/Wearing comfort; in 21 responses (11.73%)
- Sustainable production, poaching; in 15 responses (8.38%)
- Indifference, no interest in scandals; in 14 responses (7.82%)
- Privilege, status, brand; included in 11 responses (6.15%)
- Other reasons such as quality, gift, etc.; in 23 responses (12.85%)

3.2 Validation of the hypotheses

Hypothesis 1.1: The fur type has no significant influence on the purchase reason.

The relation of the variables 'type of fur 'and 'purchase reason' is illustrated in a cross table. The number of mentions and their percentage share within the respective fur type group are shown in Tab. 3.

Tab. 3 Cross table (reason for purchase and fur type)

	Artificial fur		Real fur		Unknown		Total	
Status	40	3.51%	44	7.46%	22	7.64%	106	5.25%
Look	487	42.72%	220	37.29%	108	37.50%	815	40.39%
Functionality	395	34.65%	199	33.73%	91	31.60%	685	33.94%
Quality	35	3.07%	31	5.25%	15	5.21%	81	4.01%
Price/Performance	96	8.42%	46	7.80%	14	4.86%	156	7.73%
Gift	87	7.63%	50	8.47%	38	13.19%	175	8.67%
Total	1140	100%	590	100%	288	100%	2018	100%

It can be shown that there is basically no decisive difference between the reasons for purchase associated with the acquisition of a certain type of fur with regard to the respective percentage weighting.

The only difference is that the real fur buyers attached much more importance to status (7.46%) than the artificial fur buyers (3.51%). The total number of participants is n = 2,018.

A Chi-square test was used to check the significance of the results. Cramer-V was used to measure the strength of the correlation (see Bortz/Lienert/Böhnke 2008: 295ff). The corresponding results can be viewed in tab. 4.

Tab. 4 Results of the Chi-square test and Cramer-V (purchasing reason and fur type)

Chi-Square Test	Value	df	Asymptotic significance
Chi-square after Pearson	174.900	10	.000
Number of valid cases	2018		
0 cells (0.0%) have an expected frequency of less than 5. The minimum expected frequency is 11.52.			
Symmetrical Dimension	Value	Approximate Significance	
Nominal- in terms of nominal dimension Cramer-V	.294	.000	
Number of valid cases	2018		

The execution of the Chi-square test results in an 'asymptotic significance' of 0.000 and in addition, the correlation is weak (Cramer V = 0.294). Hypothesis 1.1 can be confirmed.

Hypothesis 1.2: The buyer's gender has no significant influence on the purchase decision regarding the fur type.

The relation of the variables 'buyer's gender' and 'fur type' is illustrated in a cross table. The number of mentions and their percentage share within the respective fur type group are shown in table 5.

Tab. 5 Cross table (Gender and Fur type)

		Artificial fur		Real fur		Unknown		Total	
Gender	female	902	59.58%	434	28.67%	178	11.76%	1514	100%
	male	238	47.22%	157	31.15%	109	21.63%	504	100%
Total		1140	56.49%	591	29.29%	287	14.22%	2018	100%

It shows that female fur wearers clearly preferred artificial fur (59.58%) to real fur (28.67%). This difference is less pronounced in male fur wearers.

As a result, there is a clear difference in gender in terms of the preference to purchase a particular type of fur.

The total number of participants is n = 2,018.

The significance of the results from the cross table was again checked with the help of a Chi-square test. The corresponding results can be found in tab. 6.

Tab. 6 Results of the Chi-square test and Cramer-V (gender and fur type)

Chi-Square Test	Value	df	Asymptotic significance
Chi-square after Pearson	36.916	2	.000
Number of valid cases	2018		
0 cells (0.0%) have an expected frequency of less than 5. The minimum expected frequency is 11.52.			
Symmetrical Dimension	Value	Approximate Significance	
Nominal- in terms of nominal dimension Cramer-V	.135	.000	
Number of valid cases	2018		

The use of the Chi-square test has resulted in an 'asymptotic significance' of 0.000, which suggests the significance of the hypothesis. The correlation is again weak (Cramer V = 0.135).

Hypothesis 1.2 can be confirmed.

In summary, Research Question 1 shows that there is a connection between the acquisition of one of the fur types and the reason for the purchase or the gender. However, this connection is extremely weak.

Research Question 2 examines the influence of spending power and age on the fur type worn. Two simple covariance analyses were used to analyse the predictor (fur type) under the control of the covariates (gender) with regard to the spending power factor and the age factor. The control variable 'gender' was included as covariate. The fur type was classified as real fur, artificial fur or unknown and was used as a predictor in the model.

The prerequisites for carrying out a covariance analysis were largely fulfilled. There is no variance homogeneity, since the level test is significant for all covariance analyses. However, this is not necessarily required for large samples. The single-sample covariance analyses were performed because of their robustness as an analysis procedure and because of the sample size despite a slight violation of the normal distribution of the criterion variables, variance homogeneity and same group sizes, since on the one hand they are capable of extracting effects from control variables and on the other hand pair comparisons can be easily calculated. Independence and linearity between the covariates and the dependent variable are also provided.

Hypothesis 2.1: The buyer's age has a decisive influence on the type of fur acquired.

The analysis shows that real fur wearers were on average considerably older ($M_{realfur}$ = 40.1, $SD_{realfur}$ = 18.7) than known non-fur wearers ($M_{Unknown}$ = 35.1, $SD_{Unknown}$ = 16.9) and artificial fur wearers ($M_{Artificialfur}$ = 32.8, $SD_{Artificialfur}$ = 16.2).

This mean value difference is significant as shown in tab. 7.

Tab. 7 Results of one-factor covariance analysis (fur type and age)

Age				
Predictor	Df	MS	F	η2
Gender (Covariate)	1, 2018	6.807	0.02*	.003
Fur type	2, 2018	15590.1	35.982***	.034

Note: *p < .05, **p < .01, ***p < .001

Under control of the covariate (gender) a significant influence of the predictor fur type (F [2, 2018] = 35.982, p < .001, ηp2 = .034) on the variable 'age' was observed.

The fur type could explain 3.4% of the variance. According to (Cohen 1988) this is a small effect. According to the Bonferroni post hoc test, real fur wearers were on average significantly older (40 years) than known non-fur wearers (35 years) and artificial fur wearers (33 years).

This test is preferred to the Scheffe post hoc test and the Tukey post hoc test because only a few groups are compared with each other and there are small differences in the individual case numbers of the groups (see Field 2009). Hypothesis 2.1 can be confirmed.

Hypothesis 2.2: Spending power (budget) has a decisive influence on the acquired fur type.

Descriptively it can be shown that real fur wearers on average have a higher spending power ($M_{realfur}$ = 104.6, $SD_{realfur}$ = 11.7) than artificial fur wearers ($M_{artificialfur}$ = 101.2, $SD_{artificialfur}$ = 12.2) and unknown fur wearers ($M_{unknown}$ = 101.2, $SD_{unknown}$ = 12.2). This mean difference is significant as shown in tab. 8.

Tab. 8 Results of one-factor covariance analysis (fur type and spending power)

	Spending power			
Predictor	Df	MS	F	η2
Gender (Covariate)	1, 2018	3.1	0.02*	.000
Fur type	2, 2018	2390.1	16.774***	.016

Note: *p < .05, **p < .01, ***p < .001

Under control of the covariate (gender) a significant influence of the predictor fur type (F [2, 2018] = 16.774, p < .001, ηp2 = .016) on the available spending power was found. The fur type could explain 1.6% of the variance. According to (Cohen 1988) this is a small effect.

According to the Bonferroni post hoc test, real fur wearers had on average a significantly higher spending power ($M_{realfur}$ = 104.6) than artificial fur wearers ($M_{artificialfur}$ = 101.2) and known non-fur wearers ($M_{unknown}$ = 101.2). Hypothesis 2.2 can be confirmed.

Hypothesis 3: The female wearers of artificial fur state 'animal welfare/knowledge of fur scandals' more frequently as a reason to buy artificial fur than the male artificial fur wearers.

The conscious artificial fur wearers were the reference value for this hypothesis.

Of the 2,018 participants surveyed in total, 792 were conscious arterial fur wearers, including 665 female and 127 male participants. The relationship between the variables 'gender' and purchasing reason 'animal welfare/knowledge of fur scandals' is illustrated in a cross table. The number of mentions and their percentage weighting within the respective fur type group are shown in tab. 9.

Tab. 9 Cross table (Conscious artificial fur wearers - gender and reason for purchase 'Animal welfare/ knowledge of fur scandals')

		Purchasing reason 'animal welfare/ knowledge of fur scandals'					
		Yes		No		Total	
Gender	female	558	83.91%	107	16.09%	665	100%
	male	90	70.87%	37	29.13%	127	100%
	total	648	81.82%	144	18.18%	792	100%

It can be seen that the percentage of female artificial fur consumers who cite animal welfare or the knowledge of fur scandals as a reason to buy is 83.91%, 13.04% higher than the male percentage (70.87%).

A percentage of 81.82% was obtained across the genders. Hypothesis 3 can be assumed with the help of the cross table. Hypothesis 3 can be confirmed.

Hypothesis 4: If the buyer is aware of the fur scandals in the production of real fur the look is the most common reason for the conscious decision to purchase real fur garments.

The significance of the results from the cross table was again checked with the help of a Chi-square test. The results can be found in tab. 10.

Tab. 10 Results of the Chi-square test and Phi (Conscious artificial fur wearers - gender and reason for purchase 'animal protection/knowledge of fur scandals')

Chi-Square Test	Value	df	Asymptotic significance
Chi-square after Pearson	313.770a	1	.000
Number of valid cases	792		
0 cells (0.0%) have an expected frequency of less than 5. The minimum expected frequency is 11.52.			

Symmetrical Dimension	Value	Approximate Significance	
Nominal- in terms of nominal dimension Cramer-V	-.128	.000	
Number of valid cases	792		

The Phi value of -0.128 regarding Hypothesis 4 is only slightly meaningful and shows only a small association between the two variables.

An evaluation of the responses from buyers who have knowledge of the reporting of fur scandals has shown that the appearance of the garment is the most frequently cited reason with 48.60%. A total of nine further reasons follow at a considerable distance. Hypothesis 4 can be confirmed.

3.3 Discussion of the Results

This study provides an in-depth insight into the consumer behaviour of the German fur market. The insights gained are most relevant for textile retailers, as they can form an important basis for selling fur garments.

In addition, at a time when topics such as sustainability or ecological responsibility are the focus of public attention, this study also makes a contribution to the impact of social values on consumer purchasing behaviour (Felser 2015, pp 161ff). This applies in particular to real fur products, the manufacture and wearing of which are regularly the subject of ethically controversial public debate.

A look at the sample population (2,018 participants) reveals that 14.27% (288 participants) of those wearing fur garments did not know which type of fur they wore. The fur type does not seem to have any relevance for this group of buyers, which is why it can be assumed that they did not actively deal with the subject of fur.

Nearly two thirds of the participants who knew the fur type wore an artificial fur garment (1,140 participants, 65.90%). Only approximately one third of the participants (590 participants, 34.10%) wore real fur clothing. This means that clothing made of artificial fur is sold and worn much more frequently than clothing made of real fur. This finding has a direct influence on the assortment policy of textile clothing retailers, who predominantly encounter a demand for artificial fur.

However, the importance of real fur garments for textile retailers must not be underestimated, as consumer acceptance is still an important factor. In order to better assess the consumption of real fur garments, the purchasing reasons given in the survey may be helpful. According to the results of the study, appearance and functionality are the most frequently cited main reasons for buying real fur garments. For example, the aesthetics factor in visual merchandising can be increasingly used to promote the sale of real fur. These results are in line with the literature, which cites hedonism and utility orientation as relevant purchasing

reasons (Kuß/Kleinaltenkamp 2009: 239ff). Appearance falls under the category of hedonistic reasons and is the most frequently cited reason in the survey at 40.39%. Functionality as a benefit follows as the second most frequent reason, which is mentioned in 33.94% of all cases.

Research Question 1 asks whether there is a connection between the reason for buying or the gender of the purchaser and the purchase of one of the two types of fur.

It is conspicuous that status was chosen as the reason for purchase much more frequently for real fur wearers compared to artificial fur wearers, but with a share of 7.46% it was relatively rarely mentioned in relation to all real fur wearers. The expectation that status plays a decisive role in buying real fur is therefore not fulfilled.

Furthermore, it could be shown that there is only a small significant correlation between the personal determinant gender and the decision to purchase real or artificial fur. Men (31.15%) wore a real fur garment comparatively more frequently than women (28.60%), whereas female fur wearers (59.58%) were more likely to wear a synthetic fur garment than male (47.22%). It is also striking in this context that the proportion of those who did not know the fur type was considerably higher among the male participants (21.63%) than among the female participants (11.82%).

With regard to Research Question 2, which asks about the influence of age and purchasing power on the acquisition of one of the two fur types, it can be stated that age and purchasing power have a decisive influence on the choice of fur type. The older the wearer, the less likely they are to wear artificial fur clothes and more often real fur clothes will be worn. The following applies to the purchasing power available: the more purchasing power the wearer has at his disposal, the higher the proportion of real fur and the lower the proportion of artificial fur.

Furthermore, it can be stated that the wearers of real fur garments (∅ 40.1 years) are on average older than those who wear artificial fur garments (∅ 32.8 years). With regard to average purchasing power, there was a slight difference between real fur wearers (∅ 104.6) and artificial fur wearers (∅ 101.2).

Research Question 3 deals with the connection between gender and the purchasing reason 'animal protection/knowledge of critical media reporting' when purchasing artificial fur clothing. The results demonstrate that the female participants cited this reason more frequently than the male participants (female 83.91%, male 70.87%).

Research Question 4 examines the reasons real fur garments were acquired despite knowledge of critical reporting concerning the production of real fur. It should be noted that Hypothesis 4 did not involve any significance tests, which limits its validity.

In this context, it can be seen that the majority of participants who consciously chose real fur (76.09%, 280 of 368 conscious wearers of real fur) seem to be unimpressed by the fur scandals. They made the purchase despite this knowledge.

Most often appearance was mentioned as the reason real fur garments were purchased despite knowledge of the fur scandals (48.60%). It is noticeable that 11.73% of those who had consciously chosen to buy real fur garments mentioned functionality as a reason for purchase despite knowledge of the fur scandals. It would be interesting to carry out further analyses of the type of fur garment in this respect. For example, the use of fur in jackets usually does not contribute to warming the wearer of the jacket. The functionality argument must therefore be questioned.

It also seems paradoxical that 8.38% of all real fur wearers who had consciously decided to buy despite being aware of the fur scandals stated sustainability as the reason for buying. This gives rise to the idea that despite knowledge of critical media coverage, real fur wearers are not aware of the conditions under which real fur garments are frequently produced.

CONCLUSION

In conclusion, it can be said that this study is a snapshot of the consumer behaviour of fur wearers rather than a study lasting years or even decades. However, the results of the survey provide deeper insights into fur buying behaviour.

The basic population of the study refers to all wearers of real fur and artificial fur clothing in Germany. According to Bahrenberg, a sample should not consist of a number of participants that is less than 30. With increasing sample size, however, the characteristics of the sample approach those of the population, which is why samples should be as large as possible. The fur study shows a satisfactory sample size with an n of 2,018. In order to guarantee the representativeness of a sample, it must have been formed at random (cf. Bahrenberg et al. 2010: 20ff). This was not the case in this study. On the one hand, the surveys were largely conducted during weekdays, so that many employees with traditional working hours had a lower chance of participating. In addition, it should be mentioned that the survey was always conducted in shopping streets and not all groups of people who wear fur are likely to be found there.

The choice of survey type has advantages and disadvantages. On the one hand, the face-to-face survey could increase the success rate in terms of the number of participants who are addressed and ultimately participate. Personal contact may make it more difficult to refuse to participate in the survey than is the case, for example, with an online survey. This type of survey also ensures that the interviewee understands the content of the question correctly, as help can be given if there are any ambiguities. On the other hand, it is more likely that some participants will not answer a critical question concerning subjects such as fur or animal welfare honestly for reasons of social ostracism. This inhibition threshold would not have occurred in an anonymous survey. For this reason, the result that only 6.15% cited status as the reason for purchase despite knowledge of relevant scandals should be interpreted with caution. It is possible that the participants were not honest when answering the question.

In addition, there are other influencing factors that were not collected by this study. These include for example the significance of status for the respective individual or their preferred lifestyle. In order to get to the bottom of the question about the influence of status in more detail, it would also be necessary to include additional questions that are an indicator of status orientation. This would avoid the problem of not obtaining an honest answer to critical questions. Cultural origin also affects the purchasing behaviour of fur in general. This was also not considered in this study.

After fashion designers rediscovered the theme of fur, it has once again come to play a special role in fashion. Although the wearing of fur coats is not particularly widespread, the wearing of fur trim on jackets and other garments is popular. This often leads to animal welfare falling by the wayside in order to meet the demands of the market. The desirability of the product is also reflected in the fact that, according to the International Fur Federation, worldwide sales have risen by 70% in the last decade and a continuing expansion of worldwide fur farming can be observed (see Deutsches Pelzinstitut e.V. 2015).

In Germany on the other hand, the majority of participants are in favour of animal welfare and against the unworthy keeping of fur animals. This is accompanied by an increase in the desire for artificial fur. This development can be explained, among other things, by the increasing importance of sustainability and the increasing ecological awareness in society (cf. Bundeszentrale für politische Bildung 2012).

The question of buying real fur leads to a strong polarization in society as a whole. Through the multimedia networking of the world, further information about the unworthy keeping of fur animals in captivity regularly reaches the public. This increasingly leads to education and a change of consciousness in the population. Possible effects can also be observed in the

textile industry. This industry is increasingly responding to consumer expectations of greater commitment to animal welfare. For example, several companies have already voluntarily committed themselves to forgo real fur. These companies include internationally active companies such as Hugo Boss, H&M and Zara (cf. Deutscher Tierschutzbund e.V. 2015).

An interesting way of meeting the demand for real fur garments without producing genuine fur using controversial farming methods is the 'Fellwechsel' initiative of the German Hunting Association (see Fellwechsel 2017). Approximately 500,000 red foxes are annually hunted in Germany in accordance with legal requirements and predominantly disposed of as waste. The aim of this initiative is to pass on the skins produced from the fulfilment of the shooting quotas to the regionally active furriers. The natural fur from sustainable domestic hunting can then be transformed into high-quality goods (see Weprefur 2017).

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Pricing of Consumers and Possibilities of Using the Theory of Mental Accounting in Marketing

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Abstract: Marketing managers decide on sales prices and consumers decide on their expenses. Knowing consumer behavior is concerned not only with marketing but also with behavioral economics that uses the theory of mental accounting. In the context of the philosophy of behavioral economics, the mental accounting theory belongs to the part of distributing consumers to rationally thinking and decisive consumer and into intuitive consumers. The theory of mental accounting suggests that individuals are likely to assign different functions to each asset group and in this case, the result of which can be an irrational and detrimental set of behaviors. We compare marketing and mental accounting approaches to investigating consumer decision-making about consumer spending on consumer baskets, but also on making decisions about purchasing long-term products and services.

INTRODUCTION

The study of consumer behaviour has been one of the key areas of the marketing concept for several decades. Successful management of his research and good knowledge of this area allowed marketing to be a very successful management concept in the last decades of the last century, but also in the 21st century.

Just briefly, why we are dealing with marketing and behavioral economics. Daniel Kahneman received the award of the Swedish National Bank for the development of economic theory on the memory of Alfred Nobel in the year 2002. And in 2017 was awarded by Nobel prize professor of Chicago University Richard H. Thaler. The award was awarded for the research of the psychological factors behind the decision-making of the people in the economy. Not only the awarding of these two representatives of the "School of Behavioral Economics", but also the growth of popularity of this type of economics, especially within the groups of younger economists, is the reason for opening a process of exploring the processes of penetration or replenishment and enrichment of behavioral economics and marketing science.

1 LITERATURE REVIEW

The big volume of decisions consumer must make can lead people to use simple rules of thumb to make decisions rather than to optimize in the way that traditional economic theory suggests. We will talk about two areas of expertise that explore differently but also similarly the process of consumer buying decision-making – marketing and behavioural economics. In line of previous mentioned behavioural economics people can use a system called mental accounting to make decisions as well as to rationalize previous decisions. Mental accounting is a procedure of keeping accounts of income and expenses, similar to that used by corporations, except in

this case, each person is his or her own bookkeeper and the books are kept in the ledgers of one's mind (Baláž, 2009).

Behavioural economics, opposite traditional economics, does not assume that entities always behave rationally. As the subjects, even in the beginnings and also in current behavioural economies are people, consumers. And opposite to marketing, it does not deal with business entities (business company) and their behaviour on the market. The behavioural economics study human behaviour. Behavioural economics complements traditional economics with more realistic assumptions of economic behaviour (Tversky & Sunstein, 2010). Traditional economics criticize it mainly for the methodology or, insufficient elaboration of its own methodology.

Academic economists rarely mention marketing. Only in little range are published articles on marketing in journals and periodicals that are profiled in the "economics". For most economists, marketing lies sideway from academic economics. It is full of data, practice, and no theory. The cynic economist even claims that marketing activities are aggravating the economy's effectiveness - advertising distorts the real price and leads consumers to buy a brand (the name), not a real value (Kotler, 2016). Just a short counter argument – contemporary marketing has, on the contrary, formulated its paradigm as an intention to create and deliver value.

It is a paradox that marketing theory has begun to develop by economists. The first textbooks of marketing (focusing on advertising) appeared between the years 1900 and 1910. The authors were economists mostly oriented institutionally as theoretically. These economists looked at the roles and functions of the different distribution organizations in the economy - wholesalers, agents, retailers. They analysed various communication tools such as advertising, discounts on sales, and investigated whether they actually supported demand (Kotler & Keller, 2016). Some classically educated economists did not consider marketing to be an internal (in-company) economic activity. However, they could not incorporate marketing into either macroeconomic theory or microeconomic theory. They did not see a role in mathematics in this discipline. Marketing was considered rather as a psychological and sociological discipline, not an economic discipline. It is a paradox that, if we are currently opening a journal focused on marketing, we often see mathematically sophisticated articles, almost incomprehensible to ordinary readers. Although traditional economists do not like the mathematical analysis of marketing tools and strategies, marketers nowadays articulate interesting and complex market analyses.

Another paradox is the confrontation of traditional economics with a new competitor - behavioural economics. Behavioural economics has taken the fundamental assumptions that consumers are maximally engaged in their decision-making behaviour. The goal is to maximize profitability or profit, with the key target to build economic decision-making models. Otherwise, economists had to work on the next assumption that consumers are basically satisfied (or satisfied with a small benefit), stopping their spending and spending-time to maximize happiness to achieve what they want (Baláž, 2009). Behavioural economics instead of predicting that consumers and manufacturers maximize goals, explore how different market players behave. It includes the collection of empirical data and leads to recognizing many cases of rational or even irrational behaviour (Just, 2014).

If economists now have to study and explain how consumers really do buy decisions, they have to speak to marketing. For decades, merchants, retailers have collected data as to how and why consumers are buying what they buy. The only conclusion and we directly note Philip Kotler: "... we can say that behavioural economics is, ironically speaking, another word for marketing. Traders were economists of behaviour! "(Kotler, 2016).

Behavioural economics currently offers a wide range of definitions and characteristics but is still only part of modern economics. Thus, it is one of the thoughts of economic thinking focused on human behaviour. Its contemporary studies do not address attention to the basic

question of economics or to the goal of economics – the optimal use of rare resources. From the first steps of shaping this thought stream, the decision-making process is the decision-making process of people as subjects not only of economic processes, but also of other social processes, generally related to the organization and management of life via various life situations (Kahneman, Knetsch & Thaler, 1991).

We open nearly the full theory of mental accounting and describes several types of behaviour that apparently result from this decision heuristic. This theory study how income source can determine the types of spending, how individual consumers can rationalize bad investments, and how consumers can group events in their mind to obtain a balanced account. Mental accounting is a procedural rational model of consumer choice in that it tells us what is motivating the consumer to make these choices (Just, 2014). Although mental accounting can lead to many and varied anomalous decisions, the model itself is surprisingly similar to the accounting methods used by large firms for exactly the same purposes.

2 METHODOLOGY

The paper is a partial outcome of a more extensive study and comparison of current behavioural economics and contemporary marketing.

The aim of the article is to answer the research question, which is the common and different approaches to behavioural economics and current marketing when examining consumer buying decisions. We do not expect that the answer or broader statement to be final. It creates and formulates the conditions for elaboration in which areas of exploration and development of both disciplines are the potential for closer penetration and complementarity.

After the analytical part, which discusses current trends in the development of behavioural economics – mainly mental accounting and marketing, the comparisons are used as the main method of studying mutual influence. However, this is an adaptive approach to comparison, focusing on defining and characterizing common and different approaches, and not based on measurable phenomena and facts.

The target of research has not only a descriptive and analytical aspect, but an emphasis is put on the formulation of recommendations which knowledge of behavioural economics is desirable to implement in marketing theory and its application. The main sources of information and knowledge have been used secondary resources, especially from foreign literature. Altogether, we have used up to three dozen sources, of which only those quoted or directly used in the article are listed in the bibliographic source.

3 RESULTS AND DISCUSSION

A marketing approach to consumer behaviour is characterized by continuity and the awareness that it is an interdisciplinary approach, exploring knowledge from psychology, sociology, as well as demographics science (aspects of demographic development of households, changes in the structure of households and families, etc.) and other sciences. From the outcomes of behavioural economics, marketing has been implementing knowledge to improve research methodology, in communication (advertising), but a deeper focus on consumer decision-making processes is still a challenge.

3.1 Marketing approach to the consumer buying decision-making process – the five-stage model

Understanding consumer behaviour and, in particular, identify trends is one of the cornerstones of a marketing concept. To understand basic psychological processes forming buying decisions provides a list of some key consumer behaviour questions marketers should ask in terms of who, what, when, where, how, and why. Smart companies try to fully understand customers' buying decision process - all the experiences in learning, choosing, using, and even disposing of a product.

The consumer typically passes through *five stages: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behaviour.* The buying process starts long before the actual purchase and has consequences long afterwards. Some consumers passively shop and may decide to make a purchase from unsolicited information they encounter in the normal course of events. Recognizing this fact, marketers must develop activities and programs that reach consumers at all decision stages. Consumers don't always pass through all five stages, they may skip or reverse some. The model provides a good frame of reference, however, because it captures the full range of considerations that arise when a consumer faces a highly involving or new purchase.

From the aspect of this paper, target is the most important phase of the consumer's decision-making process – *evaluation of alternatives.* How does the consumer process competitive brand information and make a final value judgment? No single process is used by all consumers or by one consumer in all buying situations. There are several processes, and the most current models see the consumer forming judgments largely on a conscious and rational basis. Some basic concepts will help us understand consumer evaluation processes. First, the consumer is trying to satisfy a need. Second, the consumer is looking for certain benefits from the product solution. Third, the consumer sees each product as a bundle of attributes with varying abilities to deliver the benefits (Kotler & Keller, 2016).

The evaluation of alternatives is process and marketing works with several models. Expectancy-value model. The consumer arrives at attitudes toward various brands through an attribute-evaluation procedure, developing a set of beliefs about where each brand stands on each attribute. The expectancy-value model of attitude formation posits that consumers evaluate products and services by combining their brand beliefs, the positives and negatives, according to their importance. The expectancy-value model is a compensatory model, in that perceived good things about a product can help to overcome perceived bad things. But consumers often take "mental shortcuts" called heuristics or rules of thumb in the decision processes (Richterová et al., 2015). Using *the compensation deciding rules,* each of the alternatives is considered in terms of the importance of the attribute, and for each alternative, the evaluation is determined that reflects its relative strengths. Compensatory rules allow a positive rating based on a certain attribute to offset a negative evaluation of some other attribute.

With *non-compensatory models* of consumer choice, positive and negative attribute considerations do not necessarily net out. Evaluating attributes in isolation makes decision making easier for a consumer, but it also increases the likelihood that consumer would have made a different choice if he or she had deliberated in greater detail. We see three choice heuristics here.

- Using the *conjunctive heuristic*, the consumer sets a minimum acceptable cut-off level for each attribute and chooses the first alternative that meets the minimum standard for all attributes.
- The consumer can also use a *disjunctive rule,* which is characterized by the fact that the threshold is set for the individual attributes, which is more advantageous for the

consumer than at the conjunctive rule. All shopping alternatives which reach any attribute of the required level are accepted.

- With the *lexicographic heuristic,* the consumer chooses the best brand on the basis of its perceived most important attribute.
- Using *the elimination-by-aspects heuristic,* the consumer compares brands on an attribute selected probabilistically, where the probability of choosing an attribute is positively related to its importance and eliminates brands that do not meet minimum acceptable cut-offs.

Our brand or product knowledge, the number and similarity of brand choices and time pressures present, and the social context, all may affect whether and how we use choice heuristics. Consumers don't necessarily use only one type of choice rule. For example, they might use a non-compensatory decision rule such as the conjunctive heuristic to reduce the number of brand choices to a more manageable number and then evaluate the remaining brands.

A number of factors will determine the manner in which consumers form evaluations and make choices. Professors from The University of Chicago Richard Thaler and Cass Sunstein show how marketers can influence consumer decision making through what they call *the choice architecture* – the environment in which decisions are structured and buying choices are made. According to these researchers, in the right environment, consumers can be given a "nudge" via some small feature in the environment that attracts attention and alters behaviour (Thaler & Sunstein, 2010). This brief remark shows how knowledge from behavioural economics is passed into marketing.

Another area is family models of buying behaviour. *Sheth's model of family buying decision-making.* Sheth, in her classic model of family decision making, shows that the adoption of a definitive decision may be preceded by the decision-making processes of individual family members, and the purchase itself can be a result of an autonomous or group decision. In this case the purchased Goods may be intended for the consumption of one or more persons, or to ensure the functioning of the household as a whole.

Etgar's production-oriented model of family decision-making. Michael Etgar sees the family as a consumer unit, based on the assumption that consumption often requires consumer input into various activities. His model demonstrates consumer behaviour as a process consisting of three stages: decision-making, consumption, evaluation (Richterová et al., 2015).

3.2 Behavioural economics approach to buying decision-making – the theory of mental accounting

At a general level, mental accounting is a theory of grouping and categorizing money and transactions so that the consumer can systematically evaluate the potential trade-offs. Spending is categorized into separate budgets for various types of items. People can deposit money into separate physical accounts, such as a savings or checking account, and they also treat these as physically different types of money. Income is classified by type (e. g., regular income, bonus, gift). The real workhorse of the theory of mental accounting is that people classify items to allow them to segment decisions. This is an area, where behavioural economics is matching closely marketing. Marketing intensively uses customer segmentation.

Segmenting decisions allows them to simplify the decision process. Clearly it would be difficult to consider all income, wealth and transactions at once. By narrowing the items that must be considered when making a decision, people create a manageable problem that can allow better control. Better than considering all transactions together to determine the optimal consumption bundle. The theory of mental accounting supposes that people keep a mental ledger of income

and expenses by category in their mind in order to keep track of and make spending decisions. So, decisions may be made either on a categorical basis or on a transaction-by-transaction basis. This ledger can be thought of as a series of accounts with a traditional double-entry accounting system for each account. The double-entry accounting system requires that each transaction is recorded twice: once as a debit and once as a credit.

Mental accounting supposes that consumers open a ledger for each transaction or transaction category, classify each event associated with the transaction as a gain or loss. And seek to have a positive or zero balance by the close of the transaction. Because each transaction is entered in a ledger by itself, decisions are not made on a comprehensive basis but on an individual basis. Because items are evaluated partially based on the category of the transaction, people might behave very differently depending on the source of income or depending on the category of an item they consider purchasing. Essentially, a person creates budget categories and evaluates these separately from other budget categories in considering a transaction. Because each income source is categorized, the person fails to treat separate accounts or income sources as completely fungible. Money in a savings account is not treated the same as money in a checking account. One may consider one to be more appropriate for a particular type of transaction. For example, one may consider a checking account to be more useful for day-to-day expenses, whereas a savings account is more useful for longer-term holding of money and thus only for more expensive items.

The prospect theory. Mental accounting combines this notion of a budget and double-entry accounting with the prospect theory notion of valuing outcomes described in the previous text. Each event must be classified as a gain or a loss. Then, the amount is evaluated based on the prospect theory value function. Later we see this value function looks as pictured in Figure 1. The value function is generally made up of two utility functions: one for gains, and one for losses. The value function is concave over potential gains. It displays diminishing marginal utility from gains (Kahneman & Tversky, 1979). Thus, the first Euro of gain results in greater pleasure on the margin than the hundredth Euro of gain. The value function is convex over losses, displaying diminishing marginal pain from losses. Whether an outcome is considered gain or loss is measured with respect to a reference point. The extent to which outcomes are integrated or segregated can be very important in determining the value of a particular transaction or consumption episode.

First, consider a man who, after eating dinner at an expensive restaurant, finds that the bill is about 30 EUR more than he was expecting to pay. In addition, suppose he leaves the restaurant and picks his car up at the nearby parking garage and finds that he is charged 4 EUR more than he had expected to pay for parking for the dinner. Here, the amount the man expected to pay serves as the reference point. In each case, the man spent more than he expected, resulting in a loss relative to the reference point. If these expenses are segregated, then he would experience: $v - 30 + v - 4$ (v = value). Alternatively, if he integrated these expenses, he would experience $v - 34$. He might reason that they were both added expenses of going out to eat and thus treat them all as one loss. He might say: "I had to pay way too much to go out tonight". Alternatively, he might separate the experiences because they occurred at different times and in different places.

Figure 1 shows also the two possible scenarios. Because the value function over losses is convex, the 4 EUR loss evaluated on its own is associated with a much greater loss in utility than when added to the original 30 EUR loss. This means that the person who integrates the two losses is much better off than the person who segregates the two losses. When they are integrated, we may say that they are entered into the same mental account. The same thing happens in reverse for gains. If instead the man had been charged 30 EUR less than he expected for dinner and 4 less than he expected for parking, he would be much better off for segregating the gains. The figure shows that because the value function is concave over gains,

the pleasure experienced for saving 4 EUR in parking when evaluated on its own is slightly greater than the pleasure for adding 4 EUR in savings to the 30 EUR savings experienced when paying for dinner. The person consumer who segregates the experiences in this case feels better off than the person who integrates them. The same thing happens in reverse for gains (Cox & Sadiraj, 2006).

The final component of mental accounting incorporates the notion of transaction utility. People use a value function to assess their consumption experience relative to their expectations = their consumption utility, but they also use a value function to assess their enjoyment of the particular deal they were able to obtain – transaction utility (Rieger & Wang, 2006).

Fig. 1 Integrating and segregating event
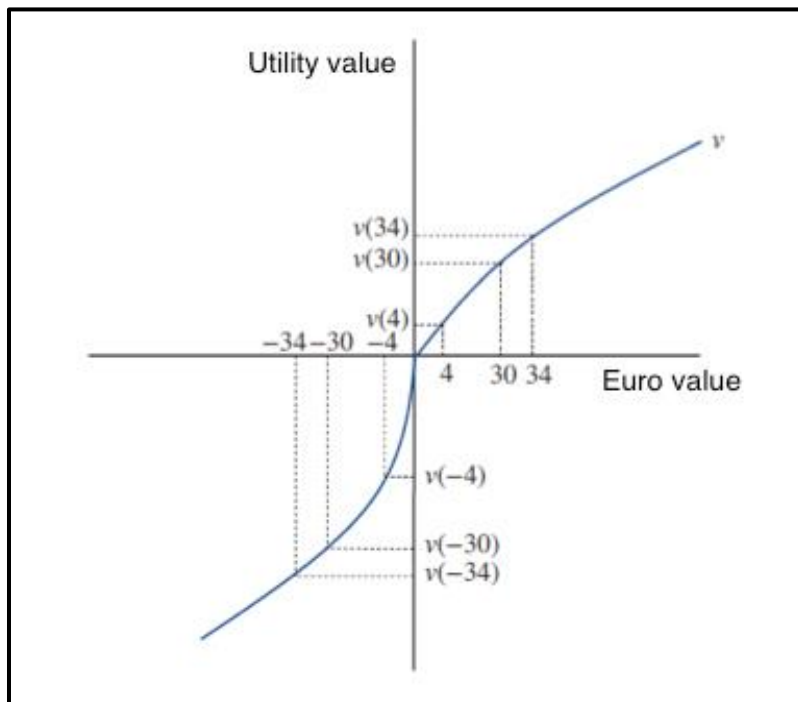
Source: adapted according D. R. Just, 2014, p. 48

Mental accounting is a collection of several theoretical concepts: budgets, accounts, reference points, value functions, consumption utility, and transaction utility. As with many behavioural models, the model makes no clear a priori predictions of behaviour in many cases. Because the theory itself provides no particular guidance on how budgets or accounts are formed (Baláž, 2009).

This is one of the primary criticisms of behavioural economics is that by failing to make clear predictions, it might not be possible to test the proposed theory. Although *it might not be possible to create a grand test of mental accounting, it is possible to test various components of the model and to discover where the particular pieces are most likely important and applicable.*

As we have already mentioned, mental accounting is not a bounded theory, but a collection of theoretical concepts. We will evaluate the important concepts in more detail from the aspect of the possible application to marketing as well: *Budgeting and consumption bundles; Accounts, integrating or segregating; Payment decoupling, pre-purchase and credit card purchases; Investments, opening and closing accounts; Rational choice, temptation and gifts*

versus cash; Budgets, accounts, temptation, and gifts. Behavioural life-cycle; Rational choice over time.

- *Budgeting and consumption bundles.* The use of budgeting categories creates isolated choice problems. The standard rational model supposes that all goods are considered together, implying that an overall optimum can be achieved. If a person does not have the cognitive resources to conduct the types of complicated optimization this might imply, he or she might reduce the problem into various budgets by category (Just, 2014). So, for example, a person might have one budget for food, another for clothing, another for utilities, etc. In the past, people often kept separate envelopes of money for each of these budgets. More recently, people tend to use software to keep track of spending in each category. Budgeting leads to misallocation of wealth so that the consumer could be made better off without having access to any more resources. Except in the case where the budget allocations happen to line up exactly with the amount that would be spent in the unconditional optimum, this will be the case. If particular income sources are connected with particular budgets, any variability in income leads to a further shifting of funds. For example, if the money that is received as a gift is only budgeted for entertainment or for items that are considered fun, a particularly large influx of gift money will lead to overconsumption of entertainment and fun, relative to all other items. The consumer who optimizes unconditionally could instead spend much of this money on more practical items for which he or she will receive a higher marginal utility.

- *Accounts, integrating or segregating.* The shape of the value function suggests that people who are experiencing multiple events will be better off when their *gains are segregated, and their losses are integrated.* Several literature sources mentioned as mental accounting supposed that people would be motivated to group events in order to make themselves feel better off (Just & Wansink, 2011). If this were the case, people who had faced multiple gains would choose to segregate them to maximize their utility. Someone facing multiple losses would choose to integrate them to maximize utility. Further, people who lose an item that was recently given to them as a gift will be better off considering this the elimination of a gain rather than an outright loss. This is due to the steeper slope of the value function over losses than gains. *This theory has been called hedonic editing.* Research done by Eric Johnson and Richard Thaler (1990) suggests that people do not engage in hedonic editing. Johnson and Thaler tested the hedonic editing hypothesis by offering subjects the choice between gains and losses spaced over different time periods (let us recall a simple story - an example that describes the principles of prospect theory). The idea was that offering a pair of losses or gains spaced farther apart in time might make it easier for the subject to segregate the outcomes. Researcher found that subjects preferred gains to be spread out and they also preferred losses to be spread over time. Result – people prefer to spread all changes over time, whether positive or negative.

- *Payment decoupling, pre-purchase and credit card purchases.* According to the theory of mental accounting, when an item is purchased, a person figuratively opens a mental account that may be closed when the good is consumed. This account is evaluated through the value functions to determine if the account has a positive or negative balance. D. Prelec and G. Loewenstein (1998) propose that transaction and consumption activities often *bring these accounts to mind, causing additional pleasure when the account balance is positive or additional pain when the account balance is negative.* Someone or customer who has taken out a loan for a car might recall the outstanding balance on the loan when he drives. Because the loan has not been paid, the framing of the loan and driving events forces him to integrate the debt and the driving, making the experience of driving unpleasant. Alternatively, someone who has paid for the car outright does not consider the expense of the car when driving. Rather,

he only considers the consumption experience, making driving a much more pleasant experience. Payment decoupling leads one to write off past payment at the time of consumption while recognizing the weight of future payments. Researchers (and not only D. Prelec and G. Loewenstein) speculate that items that provide repeated consumption (such as a washing machine) allow one to carry future payments, whereas single-use items (for example a vacation) do not. *They propose that people prorate future payments over future expected consumption experiences.* In other words, consumers consider the number and quality of the anticipated future consumption episodes when considering the number and size of future payments. And consumer-facing future payments on a durable good might consider the value of the account. If the consumer anticipates this future dread of payment when consumption no longer occurs, then prorating payment can lead consumers to prefer to prepay for goods that can be consumed only once but potentially prefer to buy durable goods on credit. By prorating, the consumer considers the future payment and future consumption when evaluating the account. If the future consumption is expected to be at least as good as the forgone money, consumers evaluate the account as having a positive balance even if there is outstanding debt. We could ask participants whether they would prefer to prepay for a holiday journey at 200 EUR a month for six months or to pay upon returning at 200 EUR a month for six months. Additionally, we could ask participants whether they would prefer to prepay for the delivery of a washing machine at 200 EUR a month for six months or pay after delivery 200 EUR a month for six months. On average, we could be sure the participants prefer to prepay for the vacation and prefer to buy the washing machine on credit. *We see the support for the notion of payment decoupling together with prorating.* Similar motives can drive credit card spending. Intuitively, credit cards are often used for purchases of single-use goods, which seems counter to the above mention principles. Some evidence suggests that credit cards allow consumers to ignore the cost of purchase while consuming, much like the prepayment option described above. Perhaps, by aggregating a large number of insignificant purchases in one bill, the credit card serves to effectively decouple payment from consumption, despite the knowledge of future payment.

- *Investments, opening and closing accounts.* One of the primary suppositions of the mental accounting model is that consumers have a desire to close accounts only when they have a positive or zero balance (Thomas, 2016). Consider a person who makes an investment. The initial cost of the investment sets a natural reference point for the decision maker. Any return above the reference point may be considered a gain, and any return below the reference point may be considered a loss. If people are motivated to close accounts that have a positive or zero balance, they are more likely to sell an investment (living house or apartment) that has made a gain than one that has made a loss. For example, selling a house that has declined in value forces the seller to realize the money loss he incurred. Alternatively, holding onto the house and waiting for the price to come back up above the purchase price can allow the seller to forget the pain of the loss in investment. Selling the investment would instead close the mental account, solidifying the reality of the losses. People depreciate the cost of investments over time *in a process called payment depreciation.* Over time, the pain of payment diminishes, and they feel less and less motivated by the initial payment. However, this thinking process seems to be just more suitable for a developed real estate market. The real estate market in Slovakia is still one of the emerging ones and there are a number of specific factors
- *Rational choice, temptation and gifts versus cash.* Rational choice models have a difficult time explaining the notion of temptation. Inherent in the problem of temptation is the idea that consumers want something but don't think they should have that thing. Traditional economics uses the utility function to capture both what consumers want

and what they think they should have, eliminating the possibility of temptation. One way that has been proposed to model cases in which a decision maker feels temptation is to differentiate between the short-term and long-term impacts of items. Thus, a good can generate an immediate positive utility (say, the taste of a particularly desirable dessert), but a negative long-term impact on utility (e. g., additional unattractive kilos of weight plus). Presumably, increasing the consumption of cake decreases health in the future, thus decreasing utility in the future. The traditional model has the consumer selecting an amount "xyz" that maximizes intertemporal utility, balancing current utility against the future utility. This represents the notion that the diner desires the cake now but must also dread the impact it could have on his future utility. Problems of temptation also often involve regret. This sort of regret suggests that either the individual decision maker did not perceive the problem correctly, or he did not have complete control of his actions. Rational models do not account for such systematic regret. Gift givers, on the other hand, are not always so accurate. Consider, for example, that your grandmother sends you a sweater she purchases for 75 EUR. The sweater is nice, but had you been given the 75 EUR, you would have purchased a new MP3 player instead. In this case, you must prefer the MP3 player to the sweater. Further, you would have been better off if your grandmother had given you the 75 EUR directly. Under the assumptions of rationality, so long as consumers are aware of all the possible options, they could spend their money on, they will always be at least as well-off receiving cash as receiving a gift at the same amount.

- *Budgets, accounts, temptation, and gifts. Behavioural life-cycle.* Consumers often view their checking account as being much more easily accessed than their savings account. In essence, they place in this account money that they are comfortable spending. Alternatively, they place money in their savings account partially to limit the temptation to use it. Hersh Shefrin and Richard Thaler (1988) propose that consumers classify each physical monetary account into one of three categories: current income, current wealth (assets), and future wealth. Current income consists of accounts intended to be spent in the immediate term. Current wealth consists of money accumulated to purchase items too expensive for "paycheck-to-paycheck" purchases. Finally, future wealth is money that is intended for future consumption, such as retirement savings. Corresponding to the three different orientations of these accounts, each type provides a different level of temptation to spend. Money in the current income account is very tempting because it is intended to spend in the near term. Money in the current wealth account is less tempting, and one needs to find some substantial justification for spending from this account. Finally, future wealth accounts may be treated as nearly untouchable. Shefrin and Thaler suggest that the propensity to spend from each account differs. People code income into different categories based on their intention to spend it, and they place the money in the appropriate account. The theory predicts that people are able, to some extent, to overcome temptation by viewing different accounts as nonfungible and setting the amount in the more-tempting accounts artificially lower than the amount they are tempted to spend. Similar behaviour is possible in limiting specific consumption temptations and reduce "quick spending". This idea, the concept is the starting point of *the behavioural life-cycle model* that examines the MPC - the marginal propensity to consume, in the different stages of the life cycle. Behavioural life-cycle concept is excellently applicable in marketing

- *Rational choice over time.* Some of the important predictions of mental accounting deal with how people trade off consumption choices over time. Temptation and self-control issues are just one example. Rational models of consumption over time assume that people are forward-looking and try to smooth consumption over time. The best way to explain the essence of this concept is to describe a formula that contains critical elements and parameters. For example, a typical model of consumer choice over time

may be written as where u represents the instantaneous utility of consumption in any period, δ represents the discount factor applied to future consumption and compounded each period, ct represents consumption in period t, yt represents income in period t, w represents some initial endowment of wealth, and T represents the end of the planning horizon – when the person expects to die.

$$\max_{\{c_t\}_{t=1}^T} \sum_{t=1}^T \delta u(c_t) \qquad (1)$$

subject to

$$\sum_{t=1}^T c_t < w + \sum_{t=1}^T y_t \qquad (2)$$

Equation 2 requires that consumers cannot spend more than their wealth plus the amount they can borrow against future earnings in any period (Just, 2014). This model can be used to model how a windfall gain in wealth should be spent. Generally, the model shows that people should smooth consumption over time. Thus, if you suddenly come into some unexpected money, this money is incorporated into your income wealth equation and will be distributed relatively evenly across consumption in future periods (though declining over time owing to the discount on future consumption).

1.2 Rational explanations for source-based consumption and possible applications

Little work has been done to reconcile mental accounting–based behaviour with the rational choice model. However, the mental accounting model is based on the methods of accounting employed by business companies. Companies have many resources and many activities. It is relatively difficult for central decision-makers in these organizations to keep track of all the various activities in order to make informed decisions. The method of accounting, including the keeping of separate accounts and budgets for various activities, has been developed as a method of keeping track of expenses and capital. This may be thought of as a response to the mental costs of trying to optimize generally. Instead of considering all possible activities and income sources at once, breaking it down into components might simplify the problem and allow manageable decisions. People might face similar problems in managing their own purchasing and income decisions. Hundreds of decisions are made each day. To optimize generally would be too costly.

We do not forget that consumer marketing is working with more and more educated customers who allocate knowledge through the learning process as well as the availability of information. The education system also increases the level of knowledge through so-called financial literacy programs.

A brief summary of outcomes and suggestions from analysed concepts for marketing

- With respect to marketing mental accounting suggests that how you categorize your product and how you frame purchasing decisions does matter. In selling products that require repeated expenditure, you may be able to increase sales of the item by framing these continued expenses so as to aggregate them in the minds of consumers. Additionally, segregating the gains can induce greater sales.
- The use of prepayment for single consumption items might induce greater sales than offering consumer financing alone. Additionally, goods that receive repeated use may be more easily sold with financing that amortizes the costs over the life of the product. Clever use of mental accounting principles can induce sales without significant cost even from the producer.

- To the extent that people suffer from self-control problems, using budget mechanisms may be an effective tool. If self-control is not an explicit issue, budgets should be set to maximize the enjoyment from consumption over time.
- Today, we generally accept a confirmed opinion – people who behave according to mental accounting heuristics can potentially improve their wellbeing by re-evaluating their spending budgets regularly, cutting budgets for categories for which the marginal utility is low relative to others.
- One of the most pervasive and systematic sets of behaviours documented by behavioural economists is loss aversion. Loss aversion is the closest thing to a unifying theory proposed by behavioural economics. The notion that people experience diminishing marginal utility of gains and diminishing the marginal pain from losses, as well as greater marginal pain from the loss than marginal pleasure from gain, can be used to explain a wide variety of behaviours. In the framework of mental accounting, loss aversion provides much of the strong incentives.

The main elements and practices of marketing and behavioural economics in the consumer buying decision-making process as the basis for comparisons are showed in Tab. 1.

Tab. 1 The main elements and practices of marketing and behavioural economics in the consumer buying decision-making process

Marketing concept	Behavioural economics concepts
Five steps consumer decision-making buying process	Prospect theory, value function, mental accounting
Buy or not buy? Evaluation of alternatives: • brand • place • payment method	• Budgeting and consumption bundles • Accounts, integrating or segregating • Payment decoupling, pre-purchase and credit card purchases • Investments, opening and closing accounts • Rational choice, temptation and gifts versus cash • Budgets, accounts, temptation, and gifts • Behavioural life-cycle • Rational choice over time
Family models: Sheth's model of family buying decision-making Etgar's production-oriented model of family decision-making	
Family life-cycle model	
Decision making rules: • compensation rules as expectancy-value model • non-compensation rules • conjunctive rules • disjunctive rules • lexicographic heuristics	

Source: own processing

Summarizing the conclusions is based on the overview table Tab. 1, but also throughout the full paper.

- It should be noted that marketing here has taken only part of marketing, which we call consumer marketing. We did not take into account business marketing when comparing

purchasing decision-making processes. The reason is that behavioural economics deals with and develops only the area of consumer decisions - do not perceive the customer as a business company.

- The research of the consumer decision-making process in marketing is more comprehensive, especially since in recent decades marketing offers the satisfaction of needs and wishes but is built on the concept of creating and delivering value. Behavioural economics in its models and concepts works with the concept of utility value, which is often expressed in terms of prices or costs.

- Marketing as a customer or "consumer unit" does not research only the individuals, but also the household as a basic economic (and demographic) unit and family. This view of the object of research in behavioural economics is absent.

- Marketing is significantly based on research, but in particular on forming and influencing consumer lifestyles, on the concept of the consumer's life-cycle and the interconnection of these approaches. The lifestyle of the target consumer is shaped according to the certain life-cycle stage. Changes in the household life-cycle concept are in several aspects - the growth of women's role, the direct dominance of women in purchasing decisions and in spending decisions, their economic emancipation. The role and position of children and their impact on household purchasing decisions are also being developed.

- The strong point of concepts of behavioural economics is the formalization in formulas, graphs and curves, which makes it possible to develop modelling of decisional situations and relationships. In this context, there is important compatibility in information sources. Behavioural economics is working more with experiments, marketing uses questionnaires.

- We already see the intense influence and practical use of knowledge from both disciplines in the family life-cycle and behavioural life-cycle model, in investment/purchasing decisions within the real estate purchases and financing (financial products marketing). Decoupling payment shopping, first-moment holiday journey purchase, product set-ups such as credit cards – the concepts of behavioural economics can be used to model these purchasing situations and decisions.

CONCLUSION

The aim of our study was to supplement more extensive research into the comparison of current behavioural economics and modern marketing and as a direct goal to answer the research question, which is the common and different approaches of behavioural economics and current marketing, when examining consumer buying decisions. We have confirmed that both disciplines have a number of common elements, the main one being an intense interest in knowing consumer behaviour, identifying trends and trends in the field. In the result section, we have summarized the results of the study and, in conclusion, we generalize them as follows:

- Much like the rest of behavioural economics, mental accounting can seem to be a loose collection of heuristics. By spurning the systematic overarching model of behaviour embodied by traditional economics, behavioural economics often provides a less-than systematic alternative. In particular, mental accounting combines elements of prospect theory, double-entry accounting, and mental budgets to describe a wide set of behaviours. To the extent that these behaviours are widespread and predictable, this collection is useful in modelling and predicting economic behaviour.

- Contemporary marketing has a clearly proactive approach, from the position of looking for unmet needs and wants, from the position of searching for free space in the market, has moved into an active position - creating needs and wishes, generating demand, influencing the lifestyle of consumers and households.

- Concepts of behavioural economics based on mental accounting and behavioural lifecycles are suitable for synergistic use in marketing, particularly in the area of consumer spending decision-making. It is necessary to overcome certain barriers between these disciplines.

The question of the appropriateness to deal with the merger of economics, psychology and marketing has a good, satisfactory answer. The main conclusion is that this interdisciplinary cooperation will benefit everyone: economists - both traditional and behavioural economists will pay more attention to developments in marketing discipline, and marketers seeking support and stimuli in economic theory will bring benefits and benefits to the knowledge of traditional and behavioural economics.

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The Flight to Quality Effect in Crisis Periods in an Emerging Market: Local Risk versus Global Risk

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Abstract: This paper studies stock and bond relationship in crisis periods in an emerging market economy, using the case of the Korean economy. It is shown that the sign of stock and bond returns correlation depended on the origin of risk triggering the crisis. In the local risk- driven crisis, the "flight to quality" occurred across countries, causing the stock and bond prices to fall together. However, in the global risk-driven crisis, the "flight to quality" occurred across assets domestically, causing the stock price to fall, but the bond price to rise. It is also shown that the stock and bond returns correlation was systematically related to the changes in some macroeconomic variables, including stock market volatility and business leading indicator.

Keywords: dynamic conditional correlation, flight to quality effect, local risk-driven crisis, global risk-driven crisis, stock market uncertainty, country risk

JEL Classification codes: G10, E44

INTRODUCTION

In the past, stock and bond prices tended to move in the same direction, but occasionally moved in the opposite direction for a prolonged period of time. Stock and bond returns correlation indeed varied over time. Particularly, the correlation behaved in a distinctive manner in crisis periods relative to in non-crisis periods.

A large literature documented this empirical phenomenon that the stock and bond returns correlation changed its sign in the past history. For example, the recent study by PIMCO (2013) showed that the correlation between the S&P 500 and long-term Treasuries has changed sign 29 times from 1927 to 2012, ranging from -93% to +86%. Li (2004) also documented that the major trends in stock and bond correlation for G7 countries followed a similar reverting pattern in the past forty years. Although there are a large literature on this subject, they are all for advanced economies, and not for emerging markets. An exception is Johansson (2010), which studied stock and bond relationship in Asian emerging markets during the 1997-1999 Asian financial crisis. Our paper fills this gap in emerging markets by studying the Korean economy. In doing so, we are particularly interested in understanding the relationship in the local risk-driven crisis period and in the global risk-driven crisis period in Korea.

The Korean financial markets are relevant for our research interest on several grounds. First, the stock and bond markets of the Korean economy are big enough for our studying the relationship between stock and bond returns, particularly in crisis periods. The stock and bond markets in Korea have rapidly grown since the 1997 Asian financial crisis, especially thanks to the financial markets liberalization policy of the Korean government. As of December of 2015, the market capitalisation of the Korean stock market reached about 1.2 trillion U.S dollars, and the bond outstandings were worth about 1.4 trillion U.S dollars. Second, the stock and bond futures market in Korea is well developed and very efficient to serve their price discovery

function, and investors have an easy access to the market so that they can initiate and subsequently close out their futures position at small costs. On Korea Exchange (KRX), the initial margins for trading KOSPI 200 index futures and 3-year government bond futures are currently set to 4.5%, and 0.35% of their respective contract amounts. Third, the Korean financial markets are highly integrated into the global financial system, and hence much more subject to global risk. Foreign investors such as hedge funds currently own more than 30% of the shares of the Korean stock market, and about 7% of the total outstandings of the Korean bond market. Last, but not the least important, the Korean economy experienced the local risk-driven crisis (i.e., the 1997-1999 Asian financial crisis) and the global risk-driven crises (i.e., the 2007-2009 global financial crisis and the 2010-2012 European fiscal crisis). These experiences offer us an excellent opportunity for the empirical study of our particular research interest in an emerging market.

Our study will focus on the stock and bond relationship in the Korean economy in three crisis periods: the 1997-1999 Asian financial crisis, the 2007-2009 global financial crisis, and the 2010-2012 European fiscal crisis. In this paper, we define such that local risk-driven crisis of an emerging economy is caused by an internal weakness at home, whereas global risk-driven crisis is faced because of its openness to an external shock abroad. The Korean economy faced a financial crisis during the 1997-1999 Asian financial crisis period. It was blamed on the structural weakness at the country's corporate and financial sectors in early 1997. The crisis culminated when the country was bailed out in December of 1997 by IMF, agreeing to abide by the IMF-imposed strict restrictions. The Korean economy again ran into another two crises during the 2007-2009 global financial crisis and the 2010-2012 European fiscal crisis. This time, they were caused not by the country's structural weakness, but by the country's exposure to the financial crises outside of the country. During these crises periods, stock and bond prices in Korea moved wildly.

1 LITERATURE REVIEW

In the literature, there are two approaches to the study of stock and bond relationship. Shiller and Beltratti (1992), and Campbell and Ammer (1993) priced stock and bond by discounting their future cash flows, respectively, and using the pricing formulae, derived the stock and bond relationship. In this present value approach, the stock and bond discount rates are the crucial factors determining the stock and bond relationship. Among these factors, for example, inflation increases the discount rates for both stock and bond, and cetris paribus, decreases stock and bond prices together. This is particularly so when inflation is high, and the stock and bond returns correlation is hence predicted to be positive. These earlier present value models, however, implicitly assumed that the stock and bond returns correlation was constant.

In recent years, several researchers including Gulko (2002), Connolly et al. (2005), Andersson et al. (2008), and Baur and Lucey (2009) studied the time variation in the correlation, specially in periods with a negative correlation. They found that stock and bond returns were negatively correlated in periods of highly volatile stock market. They attributed this negative correlation in periods of elevated stock market uncertainty to the "flight to quality" phenomenon.

Connolly et al. (2005) studied the U.S. markets from 1986 to 2000, covering the 1987 black monday crash and the 1997 Asian financial crisis. Andersson et al. (2008) examined the financial markets in the U.S., U.K., and Germany from 1992 to 2006, covering the 1997 Asian financial crisis and the early 2000s dot. com. bubble. In these advanced markets, the negative correlation of stock and bond returns was observed in periods of crises. Indeed, bond was substituted for stock domestically as a result of the "flight to quality" phenomenon. However capital was not really outflowed from these advanced countries in crisis periods.

On the other hand, Johansson (2010) studied the emerging market economies from 1993 to 2008, and found that stock and bond returns correlation increased during periods of turmoil such as the 1997 Asian financial crisis in 9 Asian countries. It concluded that if there was a flight to quality effect, it seemed to be in the form of capital moving away from a certain country rather than into a relatively safer asset in the same country. Noting that this "flight to quality" phenomenon in crisis periods has different implications for the stock and bond returns correlation between in advanced and emerging market economies, Johansson (2010) suggested that the stage of economic development might affect how stock return would be related to bond return in crisis periods.

Will this "flight to quality" effect on the stock and bond returns correlation in crisis periods qualitatively differ in emerging market economies from that in advanced economies? To put it in a specific way, will the stock and bond returns correlation be, in crisis periods, negative in advanced economies, but positive in emerging market economies? If it is not so, does it matter for the sign of the correlation whether the emerging market crisis is originated from local risk or global risk? To answer this question, we study the Korean economy, an emerging economy which experienced the crises originated from the local risk of the 1997-1999 Asian financial crisis and the global risk of the 2007-2009 global financial crisis and the 2010-12 European fiscal crisis.

2 METHODOLOGY

We estimate the stock and bond returns correlation using two methods:

(1) Rolling window correlation (RWC), and (2) dynamic conditional correlation (DCC) developed by Engle (2002). Our RWC is computed based on the immediate past 22 trading days such as

$$\rho_t(\text{RWC}) = \sum_{i=t-1}^{t-22} r_i(s) r_i(b) / \sqrt{\sum_{i=t-1}^{t-22} r_i^2(s) \sum_{i=t-1}^{t-22} r_i^2(b)}, \tag{1}$$

where r(s) and r(b) are the log returns of the stock index futures and the 3-year bond futures, respectively.

The second method used in this paper comes from the Engle's DCC specifications (2002), which are also widely applied in the industry. Maximum likelihood estimation of the DCC model is done in two steps: (1) First, an univariate GARCH to estimate the time-varying volatility of r(s) and r(b), respectively, and (2) second, a bivariate DCC to estimate the time-varying correlation between r(s) and r(b). In its log-likelihood function, the volatility part and the correlation part come in an additive form so that maximization of the likelihood function can be done in two separate steps.

For its first step, we can write the GARCH(1,1) model as:

$$\sigma_t^2(k) = \omega(k) + \alpha(k) r_{t-1}^2(k) + \beta(k) \sigma_{t-1}^2(k), \qquad for\ k = s, b \tag{2}$$

where $\sigma_t^2(k)$ measures the time-varying volatility of stock and bond, respectively.

For its second step, there are several specifications for the DCC model. The most commonly used specification is the mean-reverting DCC (MDCC) model. We can write the MDCC(1,1) process as:

$$\rho_t = \rho + \alpha[z_{t-1}(s) z_{t-1}(b) - \rho] + \beta[\rho_{t-1} - \rho], \tag{3}$$

where ρ_t measures the time-varying conditional correlation of stock and bond returns at time t. On the other hand, ρ measures the constant unconditional correlation of stock and bond returns. ρ can be simply estimated through "correlation targeting" by the sample correlation over the entire sample period (see Engle, 2009). As done in the Engle's model (2002), we

assume that $r_t(s)$ and $r_t(b)$ are normally distributed with mean zeros and standard deviations $\sigma_t(s)$ and $\sigma_t(b)$, respectively. $z_t(s)$ and $z_t(b)$ are then the standardized normal residuals and defined as:

$$z_t(s) = r_t(s) / \sigma_t(s) \quad \text{and} \quad z_t(b) = r_t(b) / \sigma_t(b), \tag{4}$$

By looking at the MDCC(1,1) model, (3) we can easily notice that the time-varying conditional correlation, ρ_t moves around the constant unconditional level, ρ over time. The deviations of ρ_t from ρ at time t come from, if any, the news effects, $z_{t-1}(s) z_{t-1}(b)$ in the previous day and the persistence effects, ρ_{t-1} which are determined by $z_{t-2}(s) z_{t-2}(b)$, $z_{t-3}(s) z_{t-3}(b)$ and so on in a recursive fashion.

3 RESULTS AND DISCUSSION

In this section, we test three hypotheses using the data of the Korean economy.

Hypothesis 1 : The stock and bond returns correlation behaves in a distinctive manner in crisis periods as opposed to in non-crisis periods in an emerging market.

Hypothesis 2 : The sign of the stock and bond returns correlation depends on whether the emerging market crisis is originated from local risk or global risk.

Hypothesis 3 : The stock and bond returns correlation is systematically related to the changes in some macroeconomic variables.

3.1 Test of hypothesis 1

In order to test hypothesis 1, we divide the sample period of 2005-2017 into two sub-sample periods: crisis period of 2007-2012, and non-crisis periods of 2005-2006 and 2013-2017. We know from statistics inference that provided that the sample is large, difference in two sample means is normally distributed with mean of $\mu(1)$-$\mu(2)$, and standard deviation of $\sqrt{\frac{s^2(1)}{n(1)} + \frac{s^2(2)}{n(2)}}$, where $\mu(1)$ and $\mu(2)$ are the population means of sample 1 and sample 2, respectively. s(1) and s(2) are the standard deviations of sample 1 and sample 2, respectively. n(1) and n(2) are the sample observations of sample 1 and sample 2, respectively.

Table 1 (Panel A) reports that the mean and the standard deviation of IV are 24.58 %, and 11.71 %, in the crisis period of 2007 – 2012, respectively, while the mean and the standard deviation of implied volatility (IV) in the non-crisis periods of 2005 – 2006 and 2013 -2017 are 14.54 % and 4.29 %, respectively. We have the sample observations (daily) of 1,493 in the 6 years of the crisis period and the sample observations of 1,722 in the 7 years of the non-crisis periods, Then the difference in mean between in these crisis and non-crisis periods is normally distributed with mean of 10.04%(=24.58%-14.54%) and standard deviation of 0.32%= $\sqrt{\frac{(0.1171)^2}{1,493} + \frac{(0.0429)^2}{1,722}}$. Thus we can say at the 99% significance level that the stock market was, on average, more volatile in the crisis period than in the non-crisis periods in Korea.

Now we turn to testing the mean difference of the stock and bond returns correlation in crisis and non-crisis periods in Korea. Table 1 shows that the mean and the standard deviation of the correlation from the MDCC(1,1) model are -0.250, and 0.169 in the crisis period of 2007 - 2012, respectively, while those in the non-crisis periods of 2005 -2006 and 2013 -2017 are -0.093 and 0.066, respectively. Then the difference in mean between in these crisis and non-crisis periods is normally distributed with mean of -0.157 = [-0.250 – (-0.093)] and standard deviation of 0.0047= $\sqrt{\frac{(0.169)^2}{1,494} + \frac{(0.066)^2}{1,722}}$, respectively. Table 1 (Panel A) also shows that the

mean and the standard deviation of the correlation from the RWC in the crisis period are -0.264 and 0.309, respectively, while those in the non-crisis periods are -0.077 and 0.278, respectively. Then the difference in mean between in these crisis and non-crisis periods is normally distributed with mean of –0.187 [=-0.264 – (-0.077)] and standard deviation of 0.0105= $\sqrt{\frac{(0.309)^2}{1473} + \frac{(0.278)^2}{1,701}}$, respectively. The mean differences of the correlations from the RWC and the MDCC(1,1) models are both statistically significant at the 99% level. The mean difference (in absolute value) from the RWC is somewhat greater than that from the MDCC(1,1) model by the magnitude of 0.03.

In sum, during the global finance crisis of 2007 – 2009 and the European fiscal crisis of 2010 -2012, the stock market in Korea turned more volatile, and the investors' appetite for the riskier stock decreased. As the relatively safer government bond was substituted for the riskier stock locally, the stock and bond returns correlation in Korea decreased and became more negative. This phenomenon of the "flight to quality" across domestic assets in crisis periods in Korea was quite similar to that observed in advanced economies, albeit to a lesser extent (e.g., Connolly et al., 2005, and Andersson et al., 2008).

Panel A reports summary statistics of the stock-bond correlations estimated using the 22-day RWC and the MDCC(1,1) models, respectively. Panel B reports summary statistics of the correlations of log returns of KOSPI 200 spot index and yield changes of the 3-year corporate bond and the 1-year monetary stabilization bond, respectively using the MDCC(1,1) model.

Tab. 1 Summary Statistics of Stock-Bond Correlation

Panel A

	whole sample period (2005-2017)			crisis period (2007-2012)			non-crisis period (2005-2006)+(2013-2017)		
	DCC	RWC	IV	DCC	RWC	IV	DCC	RWC	IV
Mean	-0.168	-0.165	19.203	-0.25	-0.264	24.583	-0.093	-0.077	14.536
Maximum	0.254	0.621	101	0.297	0.579	101	0.122	0.621	33.300
Minimum	-0.551	-0.801	7.600	-0.633	-0.801	10.6	-0.306	-0.693	7.600
Std. Dev.	0.135	0.306	9.932	0.169	0.309	11.712	0.066	0.278	4.293
Observations	3216	3195	3216	1494	1473	1493	1722	1701	1722

Panel B

	kospi200 & 3-year corporate bond	kospi200 & 1-year monetary stabilization bond
Mean	-0.2701	-0.141
Maximum	0.281	0.152
Minimum	-0.745	-0.595
Std. Dev.	0.145	0.107
Observations	794	794

3.2 Test of hypothesis 2

Here we test hypothesis 2 that the sign of the stock and bond returns correlation depends on whether the emerging economy's crisis is originated from local risk or global risk. For that purpose, we will look at how the stock and bond returns correlation moved during the Asian financial crisis of 1997 – 1999 and compare it to the movement during the global financial crisis of 2007-2009 and the European fiscal crisis of 2010–2012 previously discussed.

In order to do that, we need to additionally estimate the stock and bond returns correlation during the Asian financial crisis of 1997-1999. Since the futures were not traded on exchange at that time in Korea, we are not able to use the futures prices of stock index and government bond to estimate the stock and bond returns correlation. Instead, we will use the spot price of stock index (KOSPI 200), and the yields on the 3-year corporate bond. The 3-year government bond was not actively traded in the market, and hence the government bond yields were not quoted on many trading days. On the other hand, the 3-year corporate bond were actively traded in the market.

In order to test hypothesis 2, we will specifically test that the stock and bond returns correlation was positive in Korea during the Asian financial crisis of 1997-1999. It is because we have already shown that the stock and bond returns correlation in Korea was (more) negative during the global financial crisis of 2007-2009 and the European fiscal crisis of 2010-2012 previously.

We know from finance theory that bond price is inversely related to bond yield. Hence we will test that the correlation between the stock return and the yield change was negative in Korea during the Asian financial crisis of 1997-1999. Table 1 (Panel B) shows that the stock return and the bond yield change correlation is normally distributed with mean of -0.270 and standard of $0.0051 = \sqrt{\frac{(0.145)^2}{794}}$. Given that bond price and bond yield are negatively related, the statistical test means that the stock and bond returns correlation is, on average, positive at the 99% significance level. During the Asian financial crisis of 1997-1999, the stock price and the bond yield (price) moved in the opposite (same) direction in Korea. There was a "flight to quality" phenomenon in Korea during the Asian financial crisis and that was away from domestic assets (denominated in Korean won) into foreign assets (denominated in foreign currency). This is contrasted with the "flight to quality" phenomenon in Korea during the global financial crisis and the European fiscal crisis in which the flight was away from stock into government bond domestically. One crisis was originated from local risk and the other was from global risk. We

believe that in an emerging market economy such as Korea, the origin of risk (i.e., local or global) affects how stock return is related to bond return.

3.3 Test of Hypothesis 3

We conduct regression analysis to test hypothesis 3 that the stock and bond returns correlation is related to the changes in some macroeconomic variables. Selection of macroeconomic explanatory variables for our regression requires some theoretical discussion. In finance, asset prices are determined by the present values of the future claims discounted at their respective discount rates. As discussed in the literature (e.g., Shiller and Beltratti, 1992, and Andersson et al. 2008), changes in discount rates affect stock and bond prices in the same direction and thereby the correlation between stock and bond returns becomes positive. The discount rate for stock is the sum of real interest rate, inflation rate and risk premium. The discount rate for (government) bond is the sum of real interest rate, inflation rate and term premium. While real interest rate and inflation are common components of the discount rates for stock and bond, the risk premium component for stock and the term premium component for bond are not same.

In our regression analysis, we distinguish between the effects of local risk and global risk in an emerging economy on the stock and bond returns correlation. Stock market uncertainty measured by the implied volatility (IV) affects the risk premium on stock, but not the term premium on bond. This captures the effect of the "flight to quality" across assets domestically and hence the effect of global risk on the stock and bond returns correlation in our model. On the other hand, country risk measured by the credit default swap (CDS) spread on an emerging market sovereign bond commonly affects the discount rates for stock and bond. This captures the effect of the "flight to quality" across countries and hence the effect of local risk on the stock and bond returns correlation in our model.

Upon our theoretical discussion above, we write our regression equation as:

$$ln[(1+\rho_t)/(1-\rho_t)] = a + bDCPI(t) + cDGDP(t) + dLBL(t)$$

$$+ eMG(t) + fLIV(t) + gLCDS(t) + z(t), \tag{5}$$

where DCPI = inflation, DGDP = real GDP growth, LBL= log of business leading indicator, MG = money supply growth, LIV = log of implied volatility, and LCDS= log of credit default swap spread.

Here we are dealing with a regression model with time series errors, z(t). By looking at (3), we know that z(t) does not follow a white noise process which is serially independent. It is because the correlation, ρ_t estimated using (3) includes the persistence effects which are determined by a series of past informations. We posit that z(t) follows the autoregressive moving-average (ARMA) model of order (p,q) introduced by Box, Jenkins, and Reinsel (1994). As a matter of fact, GARCH model and DCC model like (3) can be regarded as an ARMA model (Tsay, 2010).

$$z_t = g_0 + \sum_{i=1}^{p} g_i z_{t-1} + h_t - \sum_{i=1}^{q} k_i h_{t-1}, \tag{6}$$

where $\{h\_t\}$ is a white noise process and p and q are nonnegative integers.

Table 2 reports that business leading indicator (BL) is negatively related to the stock and bond returns correlation albeit it has a marginal statistical significance at the less than 10% level. It plays a role in the investors' portfolio decision in Korea. When they anticipate a good economy down the road in the future, their risk appetite increases, and stock is substituted for bond, Stock price rises while bond price falls. Hence the stock and bond returns correlation decreases. This "return to stock" phenomenon is exactly the opposite of the "flight to quality"

phenomenon although their negative effects on the stock and bond returns correlation are symmetrical. In terms of the asset pricing model, an increase in BL raises the future profitability of the firm and hence the future dividend payments. At the same time, it raises the long-term interest rate because of a higher expected short term interest rate. A higher discount rate pulls down stock and bond prices, cetris paribus. However, the dividend payment effect is likely to dominate the discount rate effect on the stock price when BL goes up. Hence stock price rises while bond price falls. In some way, BL and real GDP growth are the variables of same kind, but we find that BL has a better predictability for the future dividend payments.

Table 2 reports that implied volatility (IV) is negatively related to the stock and bond returns correlation and CDS spread is positively related to the correlation. IV is statistically significant at the 10% level, but CDS is not statistically significant. Here we distinguish between the effects of local risk and global risk when the flight to quality" occurs in an emerging market such as in Korea. During the time span of 2005–2017, the Korean economy experienced two crises originated from global risk: the 2007-2009 global financial crisis and the 2010-2012 European fiscal crisis. Stock market became more volatile in Korea, but the flight to quality occurred mostly from stock to bond domestically rather than it did across countries.

Table 2 report the results of the following regression equation of (5), using the DCC(1,1). estimates for for ρ_t,

$$\ln[(1 + \rho_t)/((1 - \rho_t)] = a + bDCPI(t) + cDGDP(t) + dLBL(t)$$
$$+ eMG(t) + fLIV(t) + gLCDS(t) + z(t). \tag{5}$$

Tab. 2 Regression Results of (5)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22.080	12.475	1.770	0.079
DCPI	7.540	8.246	0.914	0.362
DGDP	0.094	6.491	0.015	0.988
LBI	-4.838	2.693	-1.796	0.075
LIV	-0.187	0.106	-1.769	0.079
MG	0.229	0.624	0.367	0.714
LCDS	0.085	0.088	0.964	0.337
AR(1)	0.870	0.107	8.169	0.000
MA(1)	-0.112	0.148	-0.758	0.450
MA(2)	-0.403	0.126	-3.213	0.002
R-squared	0.514	Mean dependent var		-0.342
Adjusted R-squared	0.480	S.D. dependent var		0.254
S.E. of regression	0.183	Akaike info criterion		-0.487
Sum squared resid	4.815	Schwarz criterion		-0.271
Log likelihood	48.733	Hannan-Quinn criter.		-0.399
F-statistic	15.242	Durbin-Watson stat		2.004

CONCLUSION

In this paper, we studied the Korean economy with a special focus on the stock and bond relationship in crisis periods. In advanced countries such as the U.S., U.K, and Germany, it was well documented that the stock and bond relationship was negative in periods of market turmoil's (e.g., Andersson et al., 2008). Several authors attributed it to the "flight to quality" phenomenon as investors substituted relatively safer bonds for riskier stocks. In advanced countries, such a "flight to quality" occurred across assets domestically irrespectively of the origin of risk on the part of the underlying country, causing stock price to fall and bond price to rise.

The "flight to quality" effect in advanced economies qualitatively differed from that in an emerging economy. We found in this paper that the stock and bond relationship in crisis periods depended on whether the emerging market crisis was originated from local risk or global risk. Using the case of the Korean economy, we reported that the stock and bond relationship was, on average, positive during the 1997-1999 Asian financial crisis. We attributed it to country risk as investors substituted safer foreign assets for domestic assets. Indeed, the flight to quality occurred across countries, causing both stock and bond prices to fall. However, we also found that the stock and bond relationship was, on average, (more) negative in Korea during the 2007-2009 global financial crisis and the 2010-1012 European fiscal crisis (relative to that in non-crisis periods of 2005-2006 and 2013-2017). In these two crises, the flight to quality occurred across assets domestically more than it did across countries, causing stock price to fall and bond price to rise. On the part of the Korean economy, the Asian financial crisis was originated from local risk, but the global financial crisis and the European fiscal crisis were originated from global risk.

Johansson (2010) studied the stock and bond relationship in 9 Asian countries during the 1997 Asian financial crisis, and found that the relationship was positive. The positive relationship was attributed to country risk in the Asian emerging market economies in crisis periods. From these findings, it was concluded that stock and bond relationship might depend on the stage of economic development, indicating that the relationship was negative in advanced countries, but positive in emerging market economies. Judging from the Korean economy's experiences in crisis periods, however, the stock and bond relationship in crisis periods may depend on the origin of crisis in an emerging market economy.

The result may or may not be generalized to the case of other emerging markets. We believe that this subject warrants a further research in other emerging markets economies, including the countries in the Central and Eastern Europe (CEE)region.

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BEPS (Base Erosion and Profit Shifting) Action Plan Initiated by OECD/G20: Implementation Status in Czechia and Other CEE Countries

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Abstract: In 2013, OECD in cooperation with G20 indicated fifteen main topics that cause tax base erosion and profit shifting (BEPS) by transnational corporations. The profit is generally misaligned from high-tax jurisdictions to so-called tax havens. By 2015, working groups of OECD experts submitted 15 recommendations in their 'BEPS Action Plan' how these pressing issues should be tackled. OECD and G20 member countries agreed to adapt these into their domestic law, EU member states often through EU directives. In this paper, we provide an overview of the implementation status of OECD recommendations to domestic laws of Czechia and other Central and Eastern European countries by the end of 2018.

INTRODUCTION

The global economy becomes every time more interconnected and the barriers to the movement of capital decreases with the liberalization of the system in the long term (Dicken 2014). Large transnational companies (TNCs) seek ways how to increase their margins and profit and decrease costs, sometimes in ways that one might understand as being not very moral, if not sometimes even illegal, making use of differences between jurisdictions and their laws. Tax is avoided by clever 'international tax planning' due to complex ownership and payment structures, in particular thanks to the different location of entity (in residence country) and economic activity (in source country). OECD estimates the global tax avoidance could amount up to 100 – 240 billion EUR annually (OECD 2015) in what is collectively named as Base erosion and profit shifting (BEPS).

In 2013, an OECD working group pointed out several pressing issues, which was endorsed later the same year by finance ministers of OECD and G20 countries (OECD 2013), making it in its scale one of the most successful and collaborative actions taken on the global level. Within 2 years, OECD working groups came up with 15 'actions' and formed the so-called 'BEPS Action Plan' (OECD 2015) to tackle the problem of base erosion and profit shifting.

All representatives of OECD and G20 members have agreed that their governments will strive to activate the measures within their legislative systems and this effort has become open to all jurisdictions under the so-called BEPS Inclusive Framework. So far (by March 2019), 129 countries, or jurisdictions, have committed themselves to doing so and are eventually expected to implement at least the minimum standard in all 15 actions (OECD 2019a).

This article intends to analyze current implementation status in Czechia and monitor its evolution and possible full implementation date. By January 2019, only some of the BPES

actions were implemented in the Czech legal system. In the second part, the implementation status of Czechia with other jurisdictions in Central and Eastern Europe is compared.

1 LITERATURE REVIEW

BEPS Action Plan

In this section, a very brief overview of the BEPS Action Plan is provided, as proposed by OECD and approved by G20 (OECD 2015) with the latest measures proposed by the work groups of OECD.

There are three main objectives of the BEPS actions (OECD 2018): coherence, substance and transparency, with Action 1 (digital economy) and Action 15 (Multilateral instrument) being horizontal topics.

Action 1. Address the tax challenges of the digital economy

With the development of the digital economy characterized by very high mobility of products and services and very difficult determination of the location where value is created, several challenges like sharing economy, crypto-currencies or non-standard work arrangements arise - as pointed out by Task Force on Digital Economy (TFDE).

From the outcomes, OECD recommends value-added tax (VAT) to be charged at destination; irrespectively of its origin. The point of OECD policies is that no unilateral measures (namely significant economic presence nexus, withholding tax or equalization levies on activities) be adopted by single jurisdictions, which leads to a distortion of the global market and decreases its predictability. However, it needs to be prevented that TNCs abuse the exception of permanent establishment for auxiliary or preparatory tasks.

Action 2. Neutralise the effects of hybrid mismatch arrangements

Clever international tax planning by some TNCs makes use of the various tax laws among jurisdictions, often searching to exploit hybrid mismatch arrangements. Sometimes, they make use of the hybrid mismatch between two jurisdictions by including a third country. Subsequently, many entities exploit their dual residency status.

The solution is that jurisdictions' tax systems shall be coherent and exchange of data shall be increased, promoting further transparency. In particular, it is recommended not to provide any tax exemption in the source country if the residence country offers tax deductions for the same category.

Action 3. Strengthen controlled foreign company (CFC) rules

Thanks to opaque ownership arrangements, some TNCs can report very low levels of profit in their residence country, meanwhile their subsidiaries can benefit from tax havens or preferential regimes, reaching extremely low global effective tax rates.

The OECD recommendations request a minimum effective tax rate on the TNCs as a whole to be paid at the residence country, moreover strengthening the transparency in order to inform jurisdictions about the ownership arrangements of respective TNCs and their subsidiaries.

Action 4. Limit base erosion via interest deductions and other financial payments

TNCs can limit their profit by deducting interest paid over borrowed capital, be it from an external source or from a group member. In case of interconnected entities, the TNC can decide to set the interest rate and amount of debt according to their wishes - i.e. putting higher amounts of debt and higher interest rate to high-tax jurisdictions - and thus reducing the effective tax rate of the whole group.

There have been thin capitalization rules promoted by the OECD, e.g.:

- maximum of 30% of debt/profit ratio financiation
- limitation of interest expense to a certain amount

Action 5. Counter harmful tax practices more effectively, taking into account transparency and substance

Through the Forum on Harmful Tax Practices (FHTP), tax systems of all jurisdictions were peer-reviewed. 175 of tax regimes have been deemed as creating harmful tax competition and distorting the global tax governance system.

This policy has been presented as a minimum standard that shall be implemented. The rules on substantial activity criteria will be reinforced (based on expenditure), which is especially valuable for intellectual property taxation. In case of tax rulings, the information is being exchanged among jurisdictions, in order to increase the transparency.

As of December 2018, there are only three remaining harmful tax regimes (Italy, France and Turkey) - and all are concerning intellectual property rules. The rest of the harmful regimes has been abolished or is in the process of adjustment. By 2021, OECD expects all harmful regimes to be reviewed and abolished.

Action 6. Prevent treaty abuse

Some entities use clever tax planning structures to make use of the network of treaties - so-called treaty shopping, thanks to different rules in various jurisdictions. Cooperation on treaty design will help to prevent this behaviour.

The solution as proposed by the OECD is to adapt their double non-taxation treaties so it includes (OECD 2018):

- a new preamble statement that the common intention of the parties to the treaty is to eliminate double taxation without creating opportunities for non-taxation or reduced taxation through tax evasion or avoidance, including through treaty shopping arrangements
- an anti-abuse treaty provisions (one of the alternatives: the Principal Purposes Test (PPT); the PPT + a simplified Limitation on Benefits (LOB) provision; or a detailed LOB + anti-conduit rules) if requested to do so by another jurisdiction member of the OECD/G20 Inclusive Framework.

These adjustments are included in the Multilateral Instrument (MLI) proposal. New signatories have to decide which option will they apply.

Action 7. Prevent the artificial avoidance of permanent establishment status

Permanent establishment (PE) is a status in case of 'significant presence' of a foreign entity in a jurisdiction, when a local entity needs to be established and taxes from economic activity paid. Due to arising digital market challenges and increasing mobility of capital, it is every time more difficult to establish under which circumstances the presence is significant. Normally, the auxiliary and preparatory tasks are excluded from taxation.

There are several ways how entities avoid the necessity of PE status:

- commissionaire arrangements with distributors
- granting preparatory/auxiliary status to activities that do not have this nature
- other exceptions, like construction sites etc.

OECD recommends to adjust tax treaties according to its new Model Tax Convention, so the PE definition cannot be that open in order to include the cases of artificial arrangements with

distributors and/or fragmentation of tasks. In cases of jurisdictions signing the Multilateral instrument (MLI), these new provisions are directly included.

Action 8 - 10. Assure that transfer pricing outcomes are in line with value creation

The general conception holds that prices between group entities need to be set according to the arm's length principle - determined by various methods. There are several transactions with particular difficulty of determining the correct price, each of them having one Action:

- Action 8. intangibles
- Action 9. risks and capital
- Action 10. other high-risk transactions

After discussion with stakeholders and experts, new profit split guidance policy was endorsed by the OECD so it reflects the real value creation better. The same process of review is currently applied to the financial transactions, stakeholders have submitted their comments to the discussion draft (OECD 2018c).

Action 11. Establish methodologies to collect and analyse data on BEPS and the actions to address it

TNCs in its essence try to avoid to share their methods of tax planning and have little motivation to publish their tax balance, the less based on every country where they operate, unless it becomes a legal requirement. In order to make the authorities informed about the scale of the BEPS problem and enable them adjust their policies, precise data need to be collected.

In 2019, a new dataset called Corporate Tax Statistics was compiled by OECD (OECD 2019b) - including tax revenues, tax rates (with effective marginal tax rate and effective average tax rate) and tax incentives for every jurisdictions. In future, it is planned that country-by-country reporting (CbCR) outcomes based on Action 13 will be included as well.

Action 12. Require taxpayers to disclose their aggressive tax planning arrangements

This is another action with the transparency objective. TNCs develop new ways how to make use of the differences in tax systems over the course of time. It is the best intention that jurisdictions get informed of new arrangements as soon as possible so they can evaluate if the arrangements are legal or not and if new norms need to be put in place.

Thanks to outcomes agreed under this action, jurisdictions will be able to share the tactics that some TNCs are using to reach their tax planning needs aggressively. On the other hand, it has to be ensured the compliance costs for the entities do not end up being too high, further selectively supporting big players with large tax departments.

Action 13. Re-examine transfer pricing documentation

In order to provide transparency and enable analyses of the BEPS problem, entities from member jurisdictions are requested to provide data for the whole group country-by-country (CbCR) with data such as turnover, profit, number of employees, tax paid or assets. One of the most concise datasets with public data was collected by a team of Janský (2018).

Another OECD recommendation is publishing master file and local file to provide information on global value chains and transfer pricing within every group.

Action 14. Make dispute resolution mechanisms more effective

In selected cases of doubts on tax planning strategies, like incorrect transfer pricing, jurisdictions' authorities start procedures to re-evaluate and correct the decisions made by entities. Preferably, the solution is to mutually agree on a new solution rather than a simple

ruling. These procedures and decision making process are many times opaque from the side of authorities.

The minimum standard is to enable entities to access the MAP (mutual agreement procedures) handled by the jurisdictions. OECD is currently reviewing jurisdictions' mechanisms to see if reform is needed to make their system more effective and coherent.

Action 15. Develop a multilateral instrument (MLI)

Instead of an entangled and non-transparent network of double-taxation treaties, the OECD promoted creation of so-called 'Multilateral Instrument' (MLI). As of February 2019, 86 jurisdictions have signed the MLI, 6 of them are in the process of signing and for 21 of them it has already been ratified by national parliaments, which allowed for the MLI to enter into force (OECD 2019c). Every jurisdiction can decide which of its treaties to include in the MLI - so far, it has replaced around 1,360 treaties.

The text of the MLI is based on the OECD Model Tax Convention.

2 METHODOLOGY

In this paper, the measures taken by government of Czechia and the implementation status within the Czech law system, action by action, are analysed. First, current implementation status of BEPS Action Plan in Czechia is described with the outlook for future changes. In cases of actions that Czechia has not implemented yet and in cases where Czechia adheres to minimum standard, explanations will be provided. OECD/G20 provides several implementation levels of every action, based on the scale of implementation (OECD 2018):

- Minimum standard
- Reinforced international standard
- Common approach
- Best practice

After evaluating the implementation status for Czechia, in the following section, the status of other CEE countries is compared – the Visegrad Four, Austria and Slovenia. These are countries within the CEE area, although with different backgrounds and economy development.

The data is valid as of 25th January, 2019. It is worth noting that it evolves quickly as the whole plan was initiated only in 2013.

3 RESULTS AND DISCUSSION

3.1 BEPS Action Plan implementation status in CEE

Measures in Czechia

Action 1. Address the tax challenges of the digital economy

As part of the EU VAT Directive (EC 2006), the EU member states adhere to the rule that services are taxed in the destination of the consumer. This applies to the Czech Republic as of 1st January 2015.

Action 2. Neutralise the effects of hybrid mismatch arrangements

Parent-subsidiary directive (EC 2011) requests member states to deny exemption from tax on dividend income if in the other country this income is deductible. This directive is in force in Czechia since 1st May 2016 (Deloitte 2017).

Hybrid mismatches shall be covered by application of the Anti-tax avoidance directive - ATAD (EC 2016a). The provisions were supposed to enter into force as of 1st January 2019 into the Czech law system, but the ratification process is still undergoing, expected to enter into force in 2020. As of 21st December 2018 it was submitted to the Senate for approval (PSP 2018).

Action 3. Strengthen controlled foreign company (CFC) rules

Income of CFC in cases of 'empty box companies' is taxed to the mother company, which is covered by the ATAD (2016a), currently undergoing implementation into the Czech law.

Action 4. Limit base erosion via interest deductions and other financial payments

There have already been some thin capitalization rules in place, but not in accordance with the OECD recommendations. New rules as per the ATAD (EC 2016a) - debt limit of 30% to EBITDA - are part of the tax system reform that is undergoing ratification.

Action 5. Counter harmful tax practices more effectively, taking into account transparency and substance

Tax rulings are being exchanged among EU member states according to the Directive on administrative cooperation - DAC III (EC 2015) on a biannual basis. This directive is in place as of 2017 for all member states.

Action 6. Prevent treaty abuse

As part of the provisions of the Multilateral Instrument (MLI), treaty abuse measures are included. Czechia decided to choose the principles-purpose test for treaty abuse measures (EY 2017). The MLI is yet to be ratified, but it is more than likely it will be implemented at the minimum standard and vast majority of treaties will be deposited under it.

Some of the provisions are included in the parent-subsidiary directive (EC 2011) - such as the test whether an entity indeed has significant economic presence or it is just a box company. In cases of selling property to a group entity outside the jurisdiction, while this is for the purpose of aggressive tax planning, an exit tax is applied as per the ATAD - the test of substance is also applied.

Action 7. Prevent the artificial avoidance of permanent establishment status

Permanent establishment measures are also part of the MLI provisions.

Actions 8 - 10. Assure that transfer pricing outcomes are in line with value creation

According to Deloitte (2017), Czech law generally follows the recommendations set by OECD. According to the OECD, continuous updates and reforms are needed to ensure the goals of the action are met.

Action 11. Establish methodologies to collect and analyse data on BEPS and the actions to address it

Data has been collected by OECD directly and Czechia as a member state has provided its available data to it.

Action 12. Require taxpayers to disclose their aggressive tax planning arrangements

As of 2020, the cross-border arrangements of TNCs will have to be reported to the tax authorities, as has been approved by the DAC 6 Directive (EC 2018). This directive is yet to be implemented into domestic laws. The scope covers all TNCs or intermediaries that meet one of the 'suspicious' behaviours defined by the directive.

Action 13. Re-examine transfer pricing documentation

As obliged by EU DAC IV Directive (EC 2016b), all EU member states have to oblige entities with total turnover above 750 million EUR to provide country-by-country reporting data as of

fiscal year 2017. This data is not public, however. A more tighter approach is requested by the EU from financial institutions (EC 2013). These have to provide the data publicly already as of 2014.

By law, TNCs do not have to provide Master file or local file. However, in cases of audit on transfer pricing, the entity can be requested to deliver the data to the tax authority (KMPG 2018).

14. Make dispute resolution mechanisms more effective

In 2017, the EU Council Directive on tax dispute resolution mechanisms in the European Union (EC 2017) has been approved. The deadline to implement the measures into domestic law is June 2019.

With the implementation, EU member states will have obligation to provide a resolution in all cases with any issue related to tax treaties, within a period of 18 months with the possibility to recourse to the courts if needed.

Action 15. Develop a Multilateral Instrument

MLI has been signed by Czechia on 7th June 2017 and Czechia decided to deposit most of the tax treaties that were in place - although with some exceptions (OECD 2017).

"On 29 August 2018, the Ministry of Finance of the Czech Republic submitted a motion to the Czech Parliament regarding approval of the ratification of the MLI. Compared to the provisional positions submitted at the time of signing of the MLI, the number of CTAs was reduced. The Czech Republic intends to apply a minimalistic approach, i.e., basically only the preamble, principal purpose test (with a possibility to grant benefits upon discretion under article 7/4) and dispute resolution clauses are to be implemented." (EY 2018)

3.2 Comparison with other CEE countries

Below in Table 1, implementation of the BEPS Action Plan in Czechia is compared with other countries in Central and Eastern Europe. As all of the selected countries are EU member states, all recommendations transposed to the EU law in the form of directives will have similar implementation status. Some of the newer directives (ATAD, DAC 6, DRM) have not been ratified yet by all the CEE countries. In the case of ATAD, Slovakia and Slovenia were two of five member states who had their legislation already in accordance with the minimum standard at the time of the directive approval (Schmidt 2019). Some countries might have even 'best practice' approach. In this table, due to limited space, the scale will be as follows: not applied / in progress / applied.

Tab. 1 Implementation in selected CEE Countries

BEPS Action	Czechia	Slovakia	Poland	Hungary	Austria	Slovenia
Action 1 - VAT	🟩	🟩	🟩	🟩	🟩	🟩
Action 2 - PSD	🟩	🟩	🟩	🟩	🟩	🟩
Action 2 - ATAD	🟧	🟩	🟧	🟩	🟧	🟩
Action 3 - ATAD	🟧	🟩	🟧	🟧	🟧	🟩
Action 4 - ATAD	🟧	🟩	🟧	🟧	🟧	🟩
Action 5 - DAC III	🟩	🟩	🟩	🟩	🟩	🟩
Action 6 - MLI	🟧	🟩	🟩	🟧	🟩	🟩

Action 7 - MLI	🟧	🟩	🟩	🟧	🟩	🟩
Actions 8-10	🟩	🟩	🟧	🟩	🟧	🟧
Action 11	🟩	🟩	🟩	🟩	🟩	🟩
Action 12 - DAC 6	🟧	🟧	🟧	🟧	🟧	🟧
Action 13 - DAC IV	🟩	🟩	🟩	🟩	🟩	🟩
Action 13 - MF/LF	🟥	🟧	🟩	🟩	🟩	🟥
Action 14 - DRM	🟧	🟧	🟧	🟧	🟧	🟧
Action 15 - MLI	🟧	🟩	🟩	🟧	🟩	🟩

Legend: green – applied; orange - in progress; red - not applied

Source: own based on references below

CONCLUSION

The issue of base erosion and profit shifting is one of the pressing problems of global tax governance of today. The BEPS Action Plan as proposed by OECD and endorsed by G20 is one of the biggest efforts that managed to mobilize an important portion of global economy players and led them to a consensus - one with a solid and considerably detailed measures in most of the actions and not only vague in its nature.

Czechia, as all the other CEE countries as European Union member states, is acting as a responsible player of the world community. Czechia is in many decisions regarding the BEPS Action Plan recommendations driven by directives approved on the EU level. Although being in general compliant with the requirements as an EU member state, in some cases the ratification / implementation period is longer than in other CEE countries. In other cases, like the Action 13 master file / local file recommendation, Czechia did not opt for this measure, although some of the CEE countries did. In many cases, Czechia limits itself to the minimum standard.

Nonetheless, further work on exploring and updating the measures to tackle base erosion and profit shifting is needed. It will be a continuous process which will need global coverage if supposed to be successful.

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Cross-Cultural Examination of Online Advertising Effectiveness

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Abstract: Online advertising has become the important direct marketing channel. Therefore its effectiveness and influence on consumers' behavior and purchase decisions is crucial to be measured. In formulating advertising and marketing strategies, cultural values have been usually ignored. Little is known about the effects of national culture on consumers' attitude towards online advertising. The paper raises a proposed cross-cultural examination of online advertising effectiveness in the context of globalization and the widespread usage of online marketing communication. The purpose of this study is to investigate whether online advertising forms mirror differences in cultural values. On example of Polish customer experience the significant influence of cultural values connected with Hofstede's culture dimensions on online advertising perception and effectiveness has been confirmed. The findings of this study will not only be limited to describe how the cultural factors affect online purchasing decision and customers' behavior but also will provide tips and implications for formulating and launching online advertising strategies.

Keywords: online advertising, customer behavior, culture, culture dimensions, e-marketing, advertising effectiveness

INTRODUCTION

company posts an advertising massage online the message became automatically available to a worldwide audience of Internet users. This has facilitated globalization of business and has reduced the time, cost, and effort required to reach consumers in other countries. Similar to traditional advertising companies need to answer the question of whether to standardize or localize their messages across geographic and cultural boundaries.

Culture plays a central role in international advertisements, because ideas and concepts are created in a cultural context. Concepts and ideas in advertising are embedded in the culture in which they originate. Therefore cultural values are one of the most studied topics in cross-cultural advertising research. Studies show that cultural values are central to understanding differing behavioral patterns between people of various societies (Hofstede, 2001). Advertising is designed to influence attitudes that a consumer has toward a brand. Since cultural values have a significant impact on personal attitudes and behaviors and will logically lead to brand beliefs, it is important to investigate the extent to which advertising mirrors cultural values. Comparison of websites and online banner ads across countries also reveals significant cross-cultural differences. Understanding cultural differences is considered to be a necessity for successful international advertising. Currently, online advertising has emerged and become the important widely used direct marketing channel and customer communication tool. Therefore, how the impact of cultural differences on consumer response to online advertising is of great importance and will affect the marketers' strategy and then their success in advertising campaigns. In order to provide them with more valuable and credible information

required in their promotional schemes and decisions, this question will be answered not in general way, but through specific indexes behind which the hidden relationships between culture and online advertising effectiveness will be explored and revealed in the present study.

Setting against the current trend of globalization, the influence of culture has also drawn the attentions when targeting at how to maximize the effectiveness of international advertising (Terlutter et al., 2010). As a result, these two important factors, namely online advertising and culture should be examined in order to provide more valuable information for international companies. The little empirical evidence exists to indicate how the cultural differences affect the effectiveness of online advertising, especially in different countries. A limited number of studies have also examined the reaction of consumers from different countries toward online advertising.

The purpose of this study is to investigate whether advertising appeals, on example of online advertising, mirror predicable differences in cultural values. This study examine Hofstede's (2001) cultural dimensions including: individualism and collectivism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation and their influence on customers' attitude towards online advertisements. On example of Polish customer experiences the paper examines the influence of cultural values connected with Hofstede's culture dimensions on online advertising perception and effectiveness. This culture dimensions that are also important indicators of advertising appeals have not yet been systematically studied. Therefore, another purpose of this study is to analyze these cultural dimensions for a better understanding of the interplay of culture and advertising appeals in cross-cultural settings.

The study is structured as follows. After this introduction, the theoretical foundations and hypotheses that support the study have been described. Next section details the methodology or research, followed by an analysis of data and defines the dimensions of the proposed framework and its indicators. Than the results of research have been presented and discussed. Finally conclusion and suggestions for the continuation of the research have been presented.

1 LITERATURE REVIEW

Many studies have revealed that national culture is the determinant of advertising content (Gerpott et al., 2016; Sinkovics et al., 2012). Many businesses have had failures regarding their advertising strategies and techniques, therefore advertising messages should follow a localised and specified perspective towards each culture (Paek et al. 2009) and be aimed for certain consumer segment according to cultural diversity (Paek et al., 2009; Yeu et al., 2013). It is claimed that unsuccessful marketing strategies are the result of lack in proper attention to cultural factors. In this regard, culture is prevalent and its definition brings ambiguity (Yoo, 2014). But researchers have identified several key drivers of standardization in advertising.

Kanso and Nelson (2002) indicate that nowadays consumers have become more homogeneous, and basic human needs have also become more universal than before, thus standardized approaches in advertising campaigns can be used to in a global context. According to Gould (2014) global companies are less interested in cultural differences as they are in successful communication of a message. There has been a discussion concerning the role of local and global marketing, as well as the benefits derived from the standardization and individualization of international marketing strategies. Marketing activities focus very oft on international standardization and expansion, without appreciating the significance of cultural differences. This happened to some extent because globalization has often been mistaken for homogenization. The effect of this kind of approach is a very long list of examples of activities associated with the introduction of products and services to international markets, which ended

up with failure determined by the cultural background. Such failures have been experienced both by small enterprises, as well as global companies.

Cultures can be described according to specific characteristics or categorized into value categories or dimensions of national culture. Hofstede developed a model of five dimensions of national culture that helps to explain basic value differences. This model distinguishes cultures according to five dimensions: Power Distance, Individualism-Collectivism, Masculinity-Femininity, Uncertainty Avoidance, and Long-Term Orientation. This dimensions can be used to explain differences in people's needs and motives, communication styles, language structure, metaphors and concepts used in advertising across different countries (Hofstede, 2001).

Increasing interest in the impact of culture on advertising cause that Hofstede's cultural framework is frequently used to investigate and explain the influence of culture dimensions on advertising effectiveness and design of advertising appeals. This culture dimensions have their reflection in advertising. De Mooij (2003) distinguishes characteristic features of advertising messages according to different cultural dimensions. Characteristic features of advertising according to Hofstede's framework have been presented in the table 1.

Tab. 1 Characteristic features of advertising according to Hofstede's culture dimensions

Culture dimension	Characteristic features of advertising
Individualistic cultures of small power distance	Advertising style is direct explicit, and personal. The uniqueness of the person or the brand, and the importance of identity and personality are reflected in this style.
	These advertising styles are typical of the US and the countries of northwest Europe, which show a preference for direct and explicit forms of communication such as the personalized style in advertising.
	This is the type of advertising in which an identified presenter endorses the product. Ads are carefully directed to focus on the personality of the endorser.
Individualistic cultures of strong uncertainty avoidance	Advertising is more serious and structured. The execution of the visuals will be detailed, often including demonstration of how the product works. This is the style of Germanic cultures, where visuals are more exact and more information and data are provided than in weak uncertainty avoidance cultures.
Individualistic cultures of weak uncertainty avoidance	In the weak uncertainty avoidance cultures where ambiguity is tolerated, more humour is used in advertising.
Masculine cultures	In the masculine cultures (US,UK), known personalities or celebrities are used to present the product.
Feminine cultures	In the feminine cultures (Scandinavia, The Netherlands) the personality of the presenter is downplayed.
Cultures that combine high power distance and high uncertainty avoidance with individualism	Communication show a mix of direct and indirect implicit communication styles that express both uniqueness and inaccessibility (e.g. France and Belgium). Inaccessibility is recognized in the frequent references in advertising to other forms of communication such as films, art or even advertising by others.

Cultures that combine high power distance and high uncertainty avoidance with collectivism	Communication is less likely to offend and thus upholds public face. Meaning is in the context. Communication is subdued and works on likeability, not on persuasion. If celebrities are involved, they are not likely to address the audience directly; they play a more symbolic role, and are simply associated with the product rather than endorse in a direct way. Visual metaphors and symbols are used to create context and to position the product or brand
Collectivistic cultures of medium to large power distance and weak to moderate uncertainty avoidance	The advertising style must reinforce group norms and help maintain face. Visuals, wordplay, and symbolism are important in advertising in these cultures, but the audience can be directly addressed. Advertising in Hong Kong, Singapore and India tends to follow this style. These cultures prefer relatively direct modes of communication, which can be explained by low uncertainty avoidance.

Source: De Mooij, 2003

Hofstede's model is particularly useful for understanding consumer behaviour because his country scores can be used for statistical analysis of consumption data, opinions and attitude measures in consumer surveys. Thus, cross cultural differences of the various aspects that drive consumer behaviour and that are used in advertising – needs, motives and emotions – can be explained by these cultural dimensions (De Mooij, 2003).

Cross cultural differences in advertising expression and appeals are considered frequently because understanding of differences among different cultures have made valuable contributions for evaluating informational and emotional contents of advertising messages.

Cultural values are one of the most studied topics in cross-cultural advertising research. With the impact of culture recognized on online environments, most studies have examined the relationship of culture and different forms of online advertising. It has been found by Palanisamy (2005) that gender influences the relationships between online consumer characteristics and banner advertisement effectiveness. Baack and Nitish (2007) examine the web sites from 15 countries and conclude that consumers prefer the web sites reflecting their culture. Moreover, Möller and Eisend (2010) introduce and examine a framework to show the influence of national-level cultural variables on banner advertisement effectiveness.

Wang and Sun's (2010) cross-cultural study on customers' beliefs about online advertising also reveals that congruency with cultural values can positively influence ad clicks and online buying.

Cultural congruence of online advertising has a significant effect on the prosperity of international companies, plays a significant influence on consumer behavior (Li and Lo, 2015), and affects their attitudes towards advertisement (Yılmaz and Enginkaya, 2015). Nonetheless, it is argued that all these reasoning and theories regarding advertising and culture could be irrelevant and useless in global online environment (Ahuja, 2015). But, the Internet has changed the way of living, shopping habits, purchase behavior and has introduced new perspectives and values, and thus has influenced cultures (Sinkovics et al., 2012; Gerpott et al., 2016; Yeu et al., 2013). Cultural values are the most significant attributes of advertisements and many studies have revealed that national culture is the determinant of advertising content (Gerpott et al., 2016; Sinkovics et al., 2012). Advertising should take into consideration cultural diversity and follow an individual perspective towards each culture (Paek et al., 2009; Yeu et al., 2013). Advertising has developed its own particular systems of meaning. These are by no means universal across borders but are often culturally defined and frequently vary from country to country. This suggests a difference in the way advertising is

composed and percept by customers. Although online shopping is a global behavior, purchasing habits, determinants of

e-commerce website attractiveness and acceptance level of online advertisements remain culture dependent, therefore the recognition of cultural norms and value systems is necessary in global online environment, because cultural characteristics significantly influence customers' behavior. For this reason it is important to understand how cultural differences are expressed in online advertising and how they influence its effectiveness in particular countries. It is needed to integrate cultural values with practices and to describe the reflection of the culture in advertising and cultural determinants of online advertising effectiveness.

2 METHODOLOGY

Hofstede's cultural dimensions are of great importance because before that no cultural model was developed to study consumer behavior. The purpose of this study is to examine Hofstede's cultural dimensions including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation on attitude towards online advertisements. This study develop a theoretical, comprehensive, and measurable framework for assessing influence of cultural values in online advertising and their influence on customer satisfaction and advertising messages acceptance on example of Polish customers' experiences.

Poland is considered to be a country with an individualistic culture (with a score of 60). At

a score of 68, Poland is a hierarchical society with high power distance . A high score of masculinity (64) indicates that the society will be driven by competition, achievement and success. Poland scores 93 on uncertainly avoidance dimension and thus has a very high preference for avoiding uncertainty. Poland's low score of 38 in long term orientation dimension indicates that people prefer a short-term orientation focusing on personal stability (Hofstede, 2019).

Based on the literature review and the characteristic dimensions of Polish culture the following hypotheses for the causal relationship between the cultural value in online advertising and their influence on customer satisfaction and advertising messages acceptance have been proposed:

Hypothesis 1 (H1). Online advertisements that emphasize individualistic values are more effective among Polish customers than online advertisements that emphasize collectivistic value.

Hypothesis 2 (H2). Online advertisements that emphasize high power distance are more effective among Polish customers than online advertisements that emphasize low power distance.

Hypothesis 3 (H3). Online advertisements that emphasize masculine values are more effective among Polish customers than online advertisements that emphasize feminine value.

Hypothesis 4 (H4). Online advertisements that emphasize high uncertainly avoidance are more effective among Polish customers than online advertisements that emphasize low uncertainly avoidance.

Hypothesis 5 (H5). Online advertisements that reflect short time orientation are more effective among Polish customers than online advertisements that reflect long time orientation.

In order to test the hypotheses, a questionnaire survey will be carried out to collect empirical data. The online questionnaire set up for this study consists of two parts. The first part is demographic information, while the second part collects the main information required for running the main analyses. The first section of the questionnaire gathers personal information

about the respondents such as age, gender, and online shopping motivations. The second section of the questionnaire gathers information regarding the information related to all independent variables: individualism-collectivism, uncertainty avoidance, power distance, masculinity- femininity and long-term or short-term orientation.

The research was conducted on a group of 93 Internet users in January 2019, 84 respondents were included, which was 90,32% of the surveyed, because the rest of the questionnaires was uncompleted. The data was collected in the form of a survey carried out on the e-learning website. Each participant of the study was asked to answer the survey questions. Respondents included 31% males and 69% females. 32,14% of the respondents were ages 19-20, 54,76 % were ages 21-24, and 13,09% were over age 24. All respondents browse regularly e-commerce sites, have experience of online environment and online shopping. Indicating the causes of online shopping the respondents highlighted a lower price of the goods (90,47%), convenience and simplicity (96,42%), greater diversity of goods (82,14%), better opportunities of optimal product choice in the Internet (69,04%), and easy comparison of products and prices (92,85%).

In questionnaire, respondents determine the acceptance level and their attitudes to the assessed advertising message with a five-point Likert scale. Each measurement variable varies from 1 to 5, among which 5 means very positive, 4 positive, 3 neutral, 2 negative, 1 very negative.

To ensure the participants have the same type of banner advertisements in their mind when answering the questions, a sample banner advertisement will be given at the top of the questionnaire. Additionally, the banner advertisements reflecting each of five cultural dimensions will be mainly selected according to the banner text.

After viewing the banner advertisements, participants will complete a questionnaire containing several scales to indicate their responses. Since the objective of this study is to explore the role of cultural differences in effectiveness of online advertisements, the attitudes towards the advertisements will be measured by mentioned five-point scale. Correlation analyze was used to estimate the unique effect of cultural values in online advertisements on consumers' attitudes to advertising messages.

3 RESULTS AND DISCUSSION

Influence of cultural values reflected in online advertisements on their customer acceptance level have been analyzed with help of V-Cramer's Correlation Coefficient. The correlation between all investigated culture dimensions and online advertisements effectiveness is statistically significant, because the χ^2 – values are higher that critical value. The results have been presented in the table 2.

Tab. 2 Influence of cultural values on online advertisements effectiveness

Cultural values reflected in online advertisements (according to Hofstede's culture dimensions)	χ^2 – value	Critical value	V-Cramer's coefficient
individualistic values	11,3	8,57	V=0,837
collectivistic values	14,1	8,57	V=0,531
high power distance	9,3	8,57	V=0,786
low power distance	9,7	8,57	V=0,457

masculine values	12,4	8,57	V=0,679
feminine values	11,2	8,57	V=0,543
high uncertainly avoidance	9,6	8,57	V=0,953
low uncertainly avoidance	13,1	8,57	V=0,231
short term orientation	10,8	8,57	V=0,752
long term orientation	11,6	8,57	V=0,487

Source: own elaboration

Regarding the first analysed culture dimension online advertisements that emphasize individualistic values are more effective among Polish customers (V= 0,837) than advertisements, which emphasize collectivistic values (V=0,531). For surveyed consumers more attractive are advertisements, that emphasize high power distance (V=0,786) than online advertisements, which highlight low power distance (V=0,457). The results confirm that online advertisements that emphasize masculine values are more effective among Polish customers (V=0,679) than online advertisements that emphasize feminine values (V=0,543).

Essential for customer acceptance of online advertisements is consideration of values, which reflect high uncertainly avoidance (V=0,953). Such advertisements are more effective as advertisements, which stress values typical for low uncertainly avoidance cultures (V=0,231). The obtained result indicates that Polish customers prefer online advertisements associated with values connected with short term orientation (V=0,752), than advertisements that reflect long term orientation (V=0,487).

According to conducted analysis, consideration of cultural values, which reflect culture dimensions typical for particular customers group have positive influence on customer experiences, online advertisements effectiveness and their acceptance level. The difference in acceptance level, customers' positive attitudes and advertisements effectiveness is especially considerable in case of uncertainly avoidance. Poland is country with very high level of uncertainly avoidance and this fact has its manifestation in research results. The highest acceptance level among surveyed Polish customers have online advertisements that emphasize values connected with strong uncertainly avoidance. Therefore, the lowest correlation coefficient reflects small acceptance level and effectiveness in case of online advertisements that emphasize values connected with low uncertainly avoidance. In contrast, the high level of correlation coefficient in case of individualistic values shows the specific expectations of surveyed customers, because they prefer, characteristic for Polish culture, individualistic values. The high effectiveness of online advertisements that emphasize individualistic values is the consequence of customers' expectations, because they are created in cultural context. This examples related to high uncertainly avoidance and individualism confirm that cultural values reflected in online advertisements have significant influence on their acceptance level, customers' expectations fulfillment and online advertising effectiveness.

According to conducted analysis all considered culture dimensions, distinctive for Polish customers, have positive influence on online advertisements effectiveness. Therefore, all research hypothesis are accepted. There is a positive correlation between positive customer attitudes to online advertisements and individualistic values (H1), reflection of high power distance (H2), masculine values (H3), high uncertainly avoidance (H4), and short term orientation (H5). The results revealed that all the culture-dependent dimensions of online advertisements effectiveness evaluated in the study influenced customers' experiences.

The main limitation of this research is sampling. This limitation should be considered and reduced when conducting next more detailed and long-term study.

From the results of this study it can be inferred that culture does play a role in advertising effectiveness. There were differences in attitudes toward online advertisements when different cultural appeals were used.

But the current trend of globalization brings controversies about standardized versus localized advertising. Several key drivers of standardization in advertising have been identified. The most important are homogenization of consumers' needs, requirements and expectations as well as the convergence of global culture. According to Gould (2014), consumers are less interested in cultural values and differences as they are in successful communication of an advertising message. Additionally, ads which contain cultural appeals that are opposite to the cultural values of a country may be found interesting due to the fact that it is different from all of the other ads and their appeals which are normally utilized in that country. For example, in Poland, collectivistic appeals may create more positive attitudes toward ads because they are different from the individualistic appeals which are more widely employed. The study of advertising appeal effectiveness in Poland and the United States (Lepkowska-White et al., 2013) find that marketers can standardize advertising appeals since a functional advertising appeal is most popular in both countries regardless of product type. This study indicates that Polish consumers react to different ad appeals in a uniform manner, and product characteristics are better predictors of consumer responses to advertisements than cultural characteristics or appeal types. However, the argument that the homogenization of economic systems leads to the convergence of consumer behaviors is based on unreliable and subjective evidence. On the contrary, several successful global brands are increasingly favoring adaptation to the local market's environment, taste and habits (De Mooij 2013), because consumer behavior and fulfillment of customer expectations is influenced by the cultural background.

The findings from this study are consistent with previous studies related to cross-cultural differences in advertising, and show the role of cultural influences in the design of effective online advertisements. In a global market, the need for understanding different cultures and their values is necessary for formulating firm's marketing strategies and fulfillment of customers' requirements in online environment. Culture plays a central role in international advertisements, because ideas and concepts are created in a cultural context. The emergence of international advertising parallels the growth of the global market, and understanding cultural differences is often considered a condition for successful international advertising. Therefore, as an integral part of the execution, advertising appeals should be tailored to local culture to maximize the effectiveness of international advertising campaigns while minimizing cost, also in case of online marketing activities.

CONCLUSION

Cultural diversity across the world was inspiration to investigate the interactions between culture and online advertising. Cultural values can influence reality perceptions, attitude and behavior, as well as consumption choices and expectations regarding advertising. This article is an attempt to show that the ongoing process of globalization hasn't led to the homogenization of cultures. For this reason, taking into consideration cultural differences will be essential, also in case of online marketing activities.

This research investigated the impact of Hofstede's cultural dimensions, i.e. individualism-collectivism, uncertainty avoidance, power distance, masculinity-femininity and long-term orientation on consumers' attitude towards online advertising. On example of Polish customer experiences the significant influence of cultural values connected with Hofstede's culture dimensions on online advertising perception and effectiveness has been confirmed.

The findings suggest that Hofstede's framework and the value paradoxes provide a possible theory for testing the relationship of the society and its advertising content within a culture as well as across cultures.

Advancement of the global internet technology and consumer experience dynamics in the new global market has created a critical challenge for marketing managers, specifically for e-commerce and marketing activity in online environment. The findings of this study suggest that managers should consider cultural dimensions of each country, when they decide to formulate strategies about online marketing and advertising.

International companies should use these insights to develop culturally adapted websites and banner advertising, or analyze their existing global Internet advertising activity to measure the degree of adaptation targeted toward a particular culture.

There are some limitations in this study. There could be a limitation in the results as the empirical data were gathered in Poland. Further research is needed to examine the results of inter-cultural differences in other countries. There is still need to develop and adopt new aspects for future research. Because of the complexity of the considered problems, further research becomes imperative. A future study should try to validate and generalize the findings of this study by using a wider sample and taking into consideration other culture dimensions.

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The article attempts to systematize knowledge about the phenomenon of youth underemployment and unemployment, including their scale, dynamics and diversity. The analysis covers the period between 2008 and 2017, the main source of data using in the article is Labour Force Survey, downloaded from Eurostat database.

UNDEREMPLOYMENT AS A FORM OF LABOUR UNDERUTILIZATION

Underemployment is a relatively new phenomenon, which in recent years, due to its growing scale, has become the subject of interest of many researchers and international organizations. Despite this, there is still no single, universally accepted definition of this term. It is often identified with the underutilisation of the production capacity of an individual employee, resulting from various reasons. According to the International Labour Organization (ILO), underemployment exists when a person's employment is inadequate in relation to specified norms or another possible employment, taking into account his or her occupational skills (training and working experience) (ILO, 1998).

Two main forms of underemployment can be distinguished:
- time-related underemployment,
- inadequate employment situations.

Time-related underemployment exists when the hours of work of an employed person are insufficient in relation to an alternative employment situation in which the person is willing and available to engage. According to the resolution adopted by the 16th International Conference of Labour Statisticians in 1998, persons in time-related underemployment comprise all persons in employment who, during a short reference period, were:
- willing to work additional hours,
- available to work additional hours,
- worked less than a threshold relating to working time.

Thus, time-related underemployment concerns people who meet the three above-mentioned criteria simultaneously. It is related to the inadequate number of working hours to the aspirations and needs of employees, which means working part-time, despite the willingness and readiness to take up full-time work (involuntary part-time work).

The second form of underemployment - inadequate employment situations - is connected with the mismatch between the skills, education and experience of employees and the work performed. This category includes persons who, during a short reference period, were willing to change their current work situation in order to use their occupational skills more fully and were available to do so. This form of underemployment is much more difficult to measure, which is why the data on its scale and dynamics are not collected in a systematic way.

The consequences of underemployment are serious, both for the individual and for the economy and society as a whole. Among the most important, one should mention: the loss of income, the deterioration of qualifications, the decrease of motivation, the lack of job satisfaction, as well as the deterioration of the financial situation and the risk of poverty.

1 LITERATURE REVIEW

The problem of labour underutilization remains unresolved regardless of the efforts made by different countries in this area. This phenomenon includes three different groups of people (Bollé, 2009, Trapeznikowa, 2017, Baum & Mitchell 2010, Von Aerden. et al., 2017):

- unemployed,
- underemployed, mainly people who are part-time workers who are willing and available to work more hours,
- marginally attached to the labour force, people who are willing and available to work but have become discouraged and stopped looking for work. This group includes persons actively looking for work, who were not available to start work in the reference week, but were available to start work within four weeks; and discouraged job seekers - a group of people wanting to work and who were available to start work within four weeks; however their main reason for not looking for work was that they believed they would not find a job for labour market related reasons. The sum of these groups is called potential additional labour force (PAF).

Among them, both due to the size of the population and the consequences of underutilization, young people play a significant role.

It must be stated that there is no consensus regarding the limit of "youth" age. Youth is defined in a variety of ways (UN 1981, Furlong 2013, Skórska 2012). Difficulties in determining the age limits of youth arise from the differences between biological, mental and social age. For some researchers, the moment of transition to adulthood is the end of compulsory education or gaining the right to vote. In the economic context, the definition of youth is mainly related to the possibility of including them into labour resources, thus it is usually assumed that these are people aged 15-24. The age limit of 15 years is related to the statutory minimum age at which a young man can be employed. On the other hand, 24 years is the average age of graduates entering the labour market. The accepted age limits are conventional and they result from the age ranges used in official statistics (Skórska 2016, 89-90). Due to the ever-longer remaining in the education system and delayed entry into the labor market, age limits of young people are shifting. In an increasing number of studies, the age limit is shifting to 29 or even 34, using a wider definition of "young people". 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 young people on labour market to be 15-24.

Focusing on the first two groups (unemployed and underemployed), it is worth asking - which of these phenomenon is more threat for young people? What are the consequences of them?

The problem of youth unemployment, its causes and effects has been an important topic of economic, sociological and psychological research for many years (Bell & Blanchflower, 2011, Cinalli & Giugni 2013, Eurofound 2017, Duell et al 2016, European Court of Auditors 201, O'Higgins, 2012, Balcerowicz-Szkutnik et al., 2016). The phenomenon of underemployment has been recognized and studied to a much lesser extent, although its consequences, especially in the case of young people, are as negative as the consequences of unemployment.

Although this phenomenon was recognized decades ago as a form of labour underutilization, however the definitions adopted by various institutions (e.g. International Labour Organization (ILO) (1998), Australian Bureau of Statistics (ALS), US Bureau of Labor Statistics (BLS), Eurostat and many others) still differ significantly. In practice, this leads to a situation in which the same term is used to describe various phenomena (Skórska, 2017a).

Most often this term refers to a job that does not meet certain standards regarding wage, working time, level of education, qualifications or experience. Despite the lack of one common definition of underemployment, many researchers use the conceptualization of this concept,

based on the assumptions of LUF (Labour Utilization Framework), developed in the 1970s by Hauser (1974, s. 1-17, 1977, s. 10-25).

Underemployment may take a number of different forms; the two most prevailing of them are underutilization of skills (an invisible underemployment) and underutilization of labour (visible underemployment) (Wilkins & Wooden, 2011, s. 15-18, Thompson et al 2013, Sugiyarto 2008, Kulkarni et al. 2015) - see fig. 1.

The calculations of the scale of underemployment are based on the assumptions adopted in 1998 by the ILO (1998), according to which this category includes those who work:

- in a smaller way than assumed as a standard time,
- wants to work longer hours,
- is able to work longer hours.

Fig. 1 Forms of underemployment

overqualification, overeducation

- It includes workers with higher level of education and/or job experience who are employed in occupations that do not require such qualifications.
- It also may appear when individuals are employed in a field outside of their area of formal education or expertise whether or not the level of educational attainment is a good match to employment requirements.
- It is often called "an invisible underemployment" because the data collection tools do not gather information on the degree of matching between the level of individual's skills and the requirements of the job they perform

involuntary part-time work

- it occurs when workers are willing and able to supply their labour full-time, but work in part-time jobs as they could not find full-time employment.
- It is often called a "visible underemployment" as a number of indicators exist to capture this phenomenon

Source: own study based on: van Ham, Büchel, 2006, s. 345-357, Allen, van der Velden, 2013, s. 434-452.

There are many documents, research and analyses, both on national and international level, that present the problem of labour underutilization. For many years, actions of various scope and character aimed at limiting the scale of this problem, have been taken. The results are

still insufficient. However it should be emphasized that in recent years people have started to pay more attention to the fact that underemployment is an equally disturbing phenomenon as unemployment.

2 METHODOLOGY

The article has a descriptive and analytical character. The goal of the paper is to present diversity of youth unemployment and underemployment in the countries of Central and Eastern Europe, between 2008 and 2017. This is important, because growing underemployment (not only high unemployment rate) becomes one of the global problems in the 21st century.

Analyses of the literature studies and comparative methods are used in conducted research. Empirical analysis is based on data from Eurostat including the years 2008 – 2017. The analysis comprises 10 countries of Central and Eastern Europe. The analysis of the situation of young people on labour market needs application of various economic indicators, including unemployment and underemployment rates. Considering comparative character of the analyses and the access to statistical data from Eurostat, the paper adopts the age limit for young people on labour market to be 15-24.

Raising this subject area is associated with an attempt to answer the following research questions:

- what is the characteristic of underemployment?
- what is the scale and dynamics of youth uemployment and underemployment in 2008-2017?,
- how big are disparities of youth underemployment between the countires of Central and Eastern Europe?,
- is underemployment a greater threat than unemployment for young people?
- is there a relationship between high unemployment rate and underemployment?

3 RESULTS AND DISCUSSION

3.1 Youth unemployment rate

The scale and structure of unemployment is determined by many different factors. One of groups that are highly threatened by this phenomenon are young people, because of their age and lack of professional experience. Youth unemployment rate is much higher than in other groups, in every analyzed country, however the analysis of available data confirms large disparities among the EU Member States.

In 2017 the highest rate of unemployment among youth was characteristic for Croatia 27,4 % and was higher of 3,7 percentage points than in 2008. On the other hand, the lowest unemployment rate was in Czechia – it did not exceed 10%. Poland belongs to the group of countries where unemployment rate of youth is comparable to UE average, which is presented in Table 1.

The scale of youth unemployment was changing during the analyzed period. It increased sharply since the beginning of the economic and financial crisis. One of the reason of this situation is that during the economic crisis, young people lose their jobs faster and find it later than other age groups. The highest rate was measured in Croatia – it was 50% in 2013, and the lowest was in Malta (12,7%) in the same year. Decrease of unemployment was seen form 2013, however this indicator remained on much higher level comparing to other age groups. In 2017, in Czechia youth unemployment rate exceeded 8%, in Hungary and Malta – 11%.

The highest unemployment rate remained in Croatia (27,4%) and in Cyprus (24,7%). In Poland this rate did not exceed 15% and comparing to 2013 is lower about 13 p.p. It should be emphasized that in the same period the unemployment rate of people aged 15-64 in 2017 did not exceed 5%, while in 2013 was twice lower than in 2013.

Tab. 1 Unemployment rates of young people aged 15-24 between 2008-2017 (%)

GEO/TIME	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU-28	15,6	19,9	21,1	21,7	23,2	23,7	22,2	20,3	18,7	16,8
Bulgaria	12,7	16,2	21,9	25,0	28,1	28,4	23,8	21,6	17,2	12,9
Czechia	9,9	16,6	18,3	18,1	19,5	19,0	15,9	12,6	10,5	7,9
Estonia	12,0	27,4	32,9	22,4	20,9	18,7	15,0	13,1	13,4	12,1
Croatia	23,7	25,2	32,4	36,7	42,1	50,0	45,5	42,3	31,3	27,4
Cyprus	9,0	13,8	16,6	22,4	27,7	38,9	36,0	32,8	29,1	24,7
Latvia	13,6	33,3	36,2	31,0	28,5	23,2	19,6	16,3	17,3	17,0
Lithuania	13,3	29,6	35,7	32,6	26,7	21,9	19,3	16,3	14,5	13,3
Hungary	19,5	26,4	26,4	26,0	28,2	26,6	20,4	17,3	12,9	10,7
Malta	11,7	14,5	13,2	13,3	13,8	12,7	11,7	11,6	10,7	10,6
Poland	17,3	20,6	23,7	25,8	26,5	27,3	23,9	20,8	17,7	14,8
Romania	18,6	20,8	22,1	23,9	22,6	23,7	24,0	21,7	20,6	18,3
Slovenia	10,4	13,6	14,7	15,7	20,6	21,6	20,2	16,3	15,2	11,2
Slovakia	19,0	27,3	33,6	33,4	34,0	33,7	29,7	26,5	22,2	18,9

Source: Eurostat

Considering the level of unemployment rate, analysed countries of Central and Eastern Europe can be divided into 3 groups:

- countries of the lowest unemployment rate in 2017 (below 11%) – Czech Republic, Hungary, Malta,
- countries of medium unemployment level (11-15%) – Bulgaria, Estonia, Lithuania, Poland, Slovenia,
- countries of high unemployment rate (over 15%) – Croatia, Cyprus, Latvia, Romania, Slovakia.

It should be stated that the unemployment rate of young people in every analyzed country is 2-3 times higher comparing to other age groups and the dynamic of changes is also higher.

3.2 Youth underemployment

Underemployment as the form of labour underutilization is analyzed by Eurostat since 2008. It is the phenomenon that, just like unemployment, mostly concerns young people. It ought to be stated that, out of the 8,9 million underemployed part-time workers in the EU-28 in 2017, almost 16% (over 1,4 million) were aged 15-24, and it slightly increased (6p.p.) since 2008. While the average level of underemployment rate in EU-28 in 2017 is 6,4%, in Czechia it is lower by 5,2 percentage points, whereas in Cyprus, it is higher by 3,4 percentage points.

However, as seen in table 2, the highest increase of underemployment of this age group was in Czechia, Slovakia and Cyprus. On the other hand, Romania, Poland, Hungary, Latvia and Malta have less young underemployed part-time workers than in 2008. The diversity in the level of underemployment among young people in particular Central and Eastern Europe countries and occurring differences in this sphere should be stressed, which is presented in Table 2.

Considering the level of underemployment rate, analysed countries of Central and Eastern Europe can be divided into 3 groups:

- countries of the lowest underemployment rate in 2017 (below 2%) – Czech Republic, Hungary,
- countries of medium underemployment level (2-6%) – Estonia, Croatia, Lithuania, Poland, Slovakia, Malta,
- countries of high underemployment (over 6%) – Cyprus, Romania, Slovenia.

Tab. 2 Youth underemployed in European Union in 2008-2017 as percentage of total active population

Region/ Country	2008		2010		2012		2017		Changes 2008=100	
	thous.	%	thous.	%	thous.	%	thous.	%	thou	%
EU-28	1 359,0	5,1	1 529,9	6,1	1 573,5	6,5	1 439,9	6,4	80,9	105,9
Bulgaria	:	:	3,6	1,3	:	:	2,8	:	:	:
Czechia	0,9	0,2	2,4	0,6	3,4	0,9	3,9	1,2	3,0	433,3
Estonia	1,7	:	:	:	1,2	1,8	1,6**	2,8**	-0,1	94,1
Croatia	3,5	1,8	5,9	3,2	1,8	1,2	3,5	2,1	0,0	100,0
Cyprus	1,6	4,1	2	4,8	3,2	7,7	3,5	9,8	1,9	218,7
Latvia	2,5	1,7	4,8	4,1	4,2	4,1	1,6	2,2	-0,9	64,0
Hungary	6,2	:	7,6	2,6	9	3,0	4,0	1,2	-2,2	64,5
Malta	1,1	3,7	1,5	5,4	1,3	4,8	0,8	2,7	-0,3	72,7
Poland	34,5	1,9	52,1	3,0	63,4	4,1	33,7	2,5	-0,8	97,7
Romania	51,8	5,4	43,7	5,6	41,8	5,6	40,3	6,3	-11,5	77,8
Slovenia	5,2	4,8	7	7,3	5	6,5	6,8	8,8	1,6	130,8
Slovakia	2,0	0,7	4,4	1,8	5,9	2,7	4,7	2,3	2,7	235,0

*no available data for Lithuania

**data from 2016

Source: Eurostat

The analysis of available data and many studies allows for stating that young people are particularly vulnerable to this phenomenon (Green & Henseke, 2016, France 2016, p.p. 109-134, Kauhanen & Nätti 2015, Skórska 2017b). What is more important, in 2017, the proportion of young underemployed part-time workers among total part-time workers, confirms explicit disparities between individual countries, with the largest shares observed in Romania (63,8%)

and Cyprus (53,%) and the smallest in Czechia (7,3%). Between 2008 and 2017 the largest increase in underemployment among youth was observed in Cyprus (14,5 percentage points), whereas the largest decrease characterised Slovakia (11,4p.p.), Malta (10 p.p.) and Hungary (7,5p.p.).

Fig. 2 Involuntary part-time employment as percentage of the total part-time employment, aged 15-24 (%)
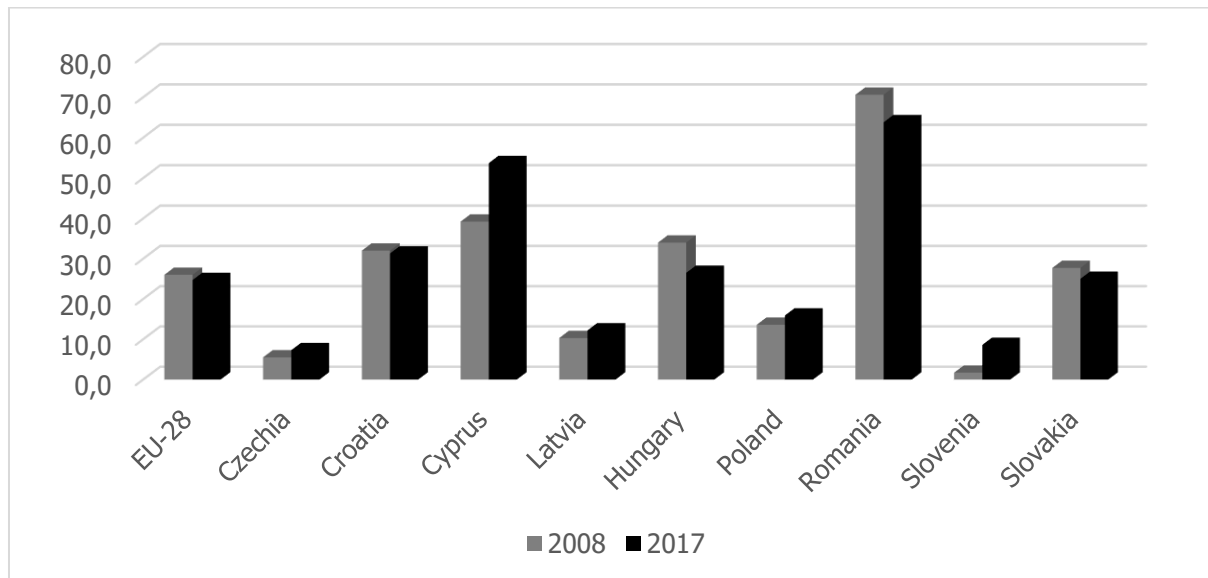
*no available data for Lithuania

Source: Ibidem

The importance of the reasons for taking part-time work should be emphasized, because not every part-time worker automatically becomes underemployed Part-time employment can be caused by economic and social determinants. The lack of demand on full-time work can result from economic, technological, organisational and structural determinants. For the workers, this represents the inability to get full-time work even though they want and look for such employment. The situation is different in the case of social factors determining part-time work that result from labour preferences. People are interested in taking part-time work and they look for such employment in various periods of life (Skórska 2017 b).

In the case of young workers, it is usually related to the education - 60% of young people in the UE declared staying in education or training as the reason for part-time employment, while 25% pointed out the inability to get full-time work. As it can be seen in fig. 2, young inhabitants of Romania and Cyprus are in a particularly difficult situation. In 2017 almost 64% of people aged 15-24 in Romania indicated the inability to get full-time work as a reason for becoming a part-time worker. Slightly less, but above the EU average, such replies were given by young inhabitants of Cyprus or Croatia. The relatively good situation on the labour markets of the Czechia, Latvia and Poland is also confirmed by the low percentage of young people taking part-time work because of economic reasons.

3.3 Unemployment or underemployment?

The attempts to distinguish and identify the scale of labour underutilisation of youth encourage asking the following question: is there a relationship between high unemployment and underemployment?

The number of unemployed aged 15-24 in the whole EU-28 in 2017 exceeded 3,8mln and underemployed part-time workers – 1,4mln, which means that the share of unemployed in the population of young people was 6,8% and underemployed – 2,6% - see table 3. It means that almost 10% of youth population belongs to the category of labour underutilization. While in most of the countries share of unemployed young people slightly decreased since 2008, there are some exceptions: Estonia, Croatia, Cyprus, Latvia and Lithuania. The proportion of underemployed part-time workers in the population of people aged 15-24 has grown slightly from 2,2% in 2008 to 2,6 % in 2017, but the higher share was in 2013 (3%). It can be stated that it is not a big increase, however it should be stressed that almost 338 thous. more young people became underemployed.

Tab. 3 Unemployment and underemployment of young people aged 15-24 in 2008 and 2017

	Population of young people (thous.)		Number of unemployed (thous.)		Number of underemployed (thous.)		Percentage of unemployed (%)		Percentage of underemployed (%)	
Geo/Time	2008	2017	2008	2017	2008	2017	2008	2017	2008	2017
EU-28	61866,9	55996,8	4181,0	3802,3	1362,9	1439,9	6,8	6,8	2,2	2,6
Bulgaria	964,5	659, 6	38,3	22,1	3,6	2,8	4,0	3,4	0,4	0,4
Czechia	1 326,1	1012, 4	41,3	25,1	0,9	3,9	3,1	2,5	0,1	0,4
Estonia	193, 5	129, 9	9,4	7,1	1,6	1,7	4,9	5,5	0,8	1,3
Croatia	531, 2	466,5	45,7	45,4	3,5	2,5	8,6	9,7	0,7	0,5
Cyprus	125, 7	116,8	3,5	8,7	1,6	2,5	2,8	7,4	1,3	2,1
Latvia	338,1	188, 3	19,5	12,1	2,5	1,6	5,8	6,4	0,7	0,8
Lithuania	479, 4	335, 6	19,2	15,0	:	:	4,0	4,5	:	:
Hungary	1 273,3	1089, 7	60,0	36,3	6,2	4,0	4,7	3,3	0,5	0,4
Malta	56,9	53, 9	3,5	3,0	1,1	0,8	6,2	5,6	1,9	1,5
Poland	5907, 7	4195, 1	309,0	197,4	34,5	33,7	5,2	4,7	0,6	0,8
Romania	1 211,1	1096, 7	177,3	117,1	51,8	40,3	14,6	10,7	4,3	3,7
Slovenia	246,2	195, 8	11,4	8,7	5,2	6,8	4,6	4,4	2,1	3,5
Slovakia	819,1	610, 5	51,5	38,3	2,0	4,7	6,3	6,3	0,2	0,8

Source: Eurostat

Considering the share of unemployed and underemployed among youth, the analysed countries can be divided into 3 groups:
- countries of the lowest share in 2017 (below 4%) – Czechia, Hungary, Bulgaria
- countries of medium unemployment and underemployment level (4-7,5%) – Estonia, Croatia, Lithuania, Poland, Slovakia, Malta,

- countries of high share (over 7,5%) – Cyprus, Romania, Croatia, Slovenia.

The analysis of available data confirms high level of underutilization of labour and spatial diversity of the situation of young people on labour markets in Central and Eastern Europe. However, it should be stressed that high unemployment is not always related to high underemployment, which is presented in table 3.

This phenomenon, as well as unemployment, causes many negative consequences. They can significantly influence the financial, personal and social lives of both individuals and their families. From a social viewpoint, there is concern that people, particularly young, whose aspirations for work are not being realised may suffer in a number of ways - personally, financially and socially. From an economic perspective, there is interest in the capacity for growth in the labour force now, and the future labour supply and its potential to contribute to the production of goods and services. For employers, labour underutilisation and especially underemployment of workers leads to higher personnel turnover and a growing challenge in developing and retaining human capital and corporate knowledge (Nunley et all, 2016, Skórska 2015).

CONCLUSION

It is widely acknowledged that the unemployment rate does not reflect the 'true' extent of the employment problem, it understates the extent to which labour is 'underutilised'. An important component of underutilisation that is not captured by unemployment statistics is underemployment, which occurs e.g. when employed persons would like to work more hours at the prevailing wage rates than they actually work. Combining information about the unemployed and underemployed provides a more complete picture of the underutilised labour resources. The presentation of these phenomenon was one of the aims of this article.

One of the groups that are threatened in a particular way not only by unemployment, but also by underemployment, are young people. There are no enough jobs adequate to the level of education and expectations of young people and available places of employment are often low-paid and do not guarantee an acceptable standard of living.The youth employment rate, despite its diversification in individual EU member states, is much lower than in other age groups, and the level of labour underutilization among young people is relatively high.

Considering the share of unemployed and underemployed among young people, there are countries where these proportions are rather low (below 4%) such as: Czechia, Hungary, Bulgaria, but on the other hand in Cyprus, Romania, Croatia, Slovenia they exceed 7,5%. In 2017 the highest rate of unemployment was in Croatia (27,4%) and Cyprus (24,7%) and the lowest in Czechia (7,9%). Cyprus was also the country with very high underemployment level (9,8%) and one of the highest share of involuntary part-time employment among young people (53,%). The analysis of available data confirms high level of underutilization of labour and spatial diversity of the situation of young people on labour markets in Central and Eastern Europe. However, it should be stressed that high unemployment is not always related to high underemployment.

The consequences of labour underutilisation are experienced mainly by individuals, but may also spill over and affect the economy and society. The consequences of unemployment and underemployment for an individuals, especially young people, may appear through the erosion or loss of skills and abilities, reduction of current and future income, job dissatisfaction and emotional distress. It is not only a problem for employees, but also employers who should be aware that chronic underutilization of education, skills, and human capital engenders workplace frustration and low morale. At macro scale, unemployment and underemployment

reduce the potential level of the nation's well-being as the level of utilization of labour's skills, experience and availability to work remains at sub-optimal levels.

Effective policy and actions responding to labour underutilisation require appreciation of its causes and consequences and preparation of appropriate activities directed to those groups – youth unemployed and underemployed. The role of globalization, new technologies development, automation and robotization processes as well as demographic changes should be emphasized, while indicating challenges of the labour market in XXI century.

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Granting License to Perform the Activities of a Supplementary Pension Asset Management Company in Slovakia and the Pension Funds Company in Austria

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Abstract: The supplementary pension saving is the third social security pillar in Slovakia. Its main objective is to allow those who participate in it an increased pension, in particular through the employer's contribution. The principle of supplementary pension savings is based on the collection of contributions by the participant and the employer and the management of these contributions. Subsequently after the fulfillment of the specified conditions and at the request of the participant, one of the supplementary pension savings benefits will be paid. In this area the supplementary pension asset management company carries out its activities. A pension funds company represents a form of occupational pension provision in Austria. The paper focuses on the legislation regulating the process of granting license to perform the activities of a supplementary pension asset management company in Slovakia and the pension funds company in Austria.

Keywords: supplementary pension saving, licensing, financial market supervision, pensions

JEL Classification codes: K20, K23

INTRODUCTION

The theory of systems defines law as a subsystem of the social system that comes alongside other subsystems, such as politics or economics (Wendehorst, 2016). Law also represents a factor which determines how people will be secured in post-productive age. Financial security in old-age is a demand of every individual. The demographic evolution shows that not only the state, but also a natural person must become responsible for the income in post-productive age. A logical consequence of this fact is the establishment of private pension asset management companies.

According to Farny and Wöss (1992) a pension is not in principle a relief of a transition from an active income into a lower pension, it is a securing an upscale standard of living for the entire duration of the retirement. Wiese states that a growing sense of security among the population also reflected in the fact that company pension benefits were also a calculable component of old-age security (1990). Höfer claims that benefits from the pension schemes include pensions which are paid to the entitled, his survivors or capital payments (1976).

Central risks of private pension provisioning arise from the miss of the return expectation and the loss of capital (Roth, 2009). Therefore it is necessary that the state regulates and supervises the entrepreneurship of private pension asset management companies. In Austria, we find relevant regulation in the Federal Act of 17 May 1990 on the establishment, administration and supervision of pension funds companies (hereinafter only "Act on Pension Funds Companies").

In Slovakia, the Act No 650/2004 Coll. (hereinafter only "Act on Supplementary Pension Saving") sets the rules for performing the activities of a supplementary pension asset management company. From the various aspects of the currently valid regulation it is being focused on the granting of the license to perform the activities of a supplementary pension asset management company in Slovakia and the pension funds company in Austria.

1 LITERATURE REVIEW

The supplementary pension asset management company and the pension funds company are operating on the financial market. Financial market can be defined as a system of relationships, tools, entities as well as institutions for collecting and distributing temporarily disposable funds based on supply and demand (Bakeš et al., 2006). The financial market is a set of entities, instruments and transactions with the instruments in question and between the entities in question, bringing an indirect intermediation of financing connected with a risk of return (Sidak, Duračinská et al., 2014). The financial market as a sum of tools, institutions and relationships between them, through which the free resources are transferred (Pavlát, 2013). Financial markets are one of the core components of the financial system, along with financial institutions, financial instruments, financial transactions, borrowers and creditors in each market economy (Belás et al., 2013).

The pension funds company and the supplementary pension asset management company in both countries, belong to the supervised entities of the financial market. In Austria, pension funds companies are being supervised by the Financial Market Authority.

In Slovakia, the supplementary pension asset management company is being supervised by the National Bank of Slovakia. Supervision is a form of state supervision, the specificity of which is that the supervision is not carried out by the state or by the state authorities, but is entrusted to entities other than the state (Šimonová, 2012). Supervision is the activity of the supervising body, consisting in verifying whether regulated entities in the financial sector comply with applicable laws, regulations and rules set by the regulator, enforcing them and forcing entities to comply with them and imposing sanctions in case of non-compliance (Pavlát, Kubíček, 2010).According to Sidak, Slezáková et al. the objective of financial market supervision is to contribute to the stability of the financial market as a whole as well as to the safe and sound functioning of the financial market in order to maintain financial market credibility, protection of financial consumers and comply with competition rules (2014).

An important aspect in understanding the supervisory role has been its division which began to be applied in practice after the outbreak of the global financial crisis in 2008, when the organization of supervisory work and the organizational and institutional structure of individual authorities supervising the financial market (mainly central Member States' banks) in connection with the introduction of a new EU supervisory architecture has begun to adapt and distinguish between macroprudential and microprudential supervision(Sidak, Slezáková et al., 2014). Raschauer defines microprudential supervision as the maintenance of certain standards, in particular own funds standards and liquidity standards of the subject, taking into account the specificities of its business model and this by direct impact on the supervised entities (2015).Supervision therefore also represents the upholding of the ability to function of supervised entities (Braumüller, 1999). Raschauer also describes macroprudential supervision as taking into account of general economic factors such as the economy, interest rates and the external value of the currency, from the perspective of the stability of the financial system, in order to derive recommendations for corresponding provisions (2015). Meaning supervisors should take into account the potential impact of their decisions on financial stability in the performance of their duties (Balogh-Preiniger, Saria et al., 2016).

2 METHODOLOGY

The doctrinal method will be used. Within this method the current Austrian legal situation is being determined on the basis of the analysis of opinions in the doctrine, by legal regulations and by the jurisprudence. The Austrian regulation will be then subsequently compared with the Slovak one.

The legal orders of both countries, Slovakia and Austria are part of the legal system of continental Europe. The main source of knowledge of law in both countries is the statutory law. Therefore, these legal systems are suitable for the application of the comparative law method. It is a method that sets the law of one or more foreign states in relation to the law of other foreign states or of one's own state (Junker, 2017).With this method, the Austrian law is set in relation to the Slovak. The comparative method can capture the major lines of legal systems or even rights related to legal families or legal circles and thereby conclude on the social and economic functions of law in society (Rauscher, 2017). However, as a comparison of individual institutions in different legal systems, it can also lead to concrete individual results and models for one's own legal system (Rauscher, 2017). The comparative method is linked to the possibility of understanding the state of a foreign law (Kischel, 2015). In order to reach knowledge about the most important common features in the regulation of granting license to perform the activities of a supplementary pension asset management company in Slovakia and the pension funds company in Austria, it is necessary to use the micro-comparative method.

The inductive method will be also applied. The conditions set by the Austrian law and the law in Slovakia will be examined. The analysis of the common features includes that the relevant law of both countries will be spread into elements. Then the interrelationships of these partial elements will be examined. The analytical method will be used in learning about the current state of regulation.

3 RESULTS AND DISCUSSION

The Supplementary Pension Asset Management Company, the Pension Funds Company and their Supervisory Bodies which Grant the License

Regulation, in both countries plays an important role as it defines the conditions for granting a license. In general, regulation involves setting, checking and enforcing certain rules (Kopfová, Tomášková, 2013). Regulation means a set of legal mechanisms and tools through which the regulator implements its influence on the financial market, respectively to its particular segment. By regulation we mean the legal regulation of economic processes taking place in the financial sphere (Pavlát, 2013). Regulation is intended to prevent potential negative effects on markets, their failure, which is a possible consequence of natural monopolies, state regulation is supposed to ensure a functioning competition (market making), while at the same time correcting unwanted social and political side effects of functioning markets (market correction) (Frach, 2008).The legislator usually reacts late when regulating a certain subject matter.

According to Jopek a minimum level of regulation will always be necessary, as some entities may not withstand the temptation to improve their market position by harming other competitors over time (2012).

Before entering the market, according to the valid regulatory framework, both entities need a license to operate, granted by the competent supervisory body. In Slovakia it is the National Bank of Slovakia. In Austria it is the Financial Market Authority.

3.1 The National Bank of Slovakia

From the point of view of creating supervisory authorities, we can encounter three types in practice:

- A full integration model foreseeing one single authority and integrated institution;
- A model designed by sectors in which the authorities focus on the supervision of individual sectors, e.g. insurance, banking, etc.;
- A functional model creating different authorities according to areas of potential market failures such as prudential business, creditor protection, protection of competition (Horváthová, 2009).

In Slovakia, within the structure of the National Bank of Slovakia, the Financial Market Supervision Unit has been established. This organizational unit is in charge of the performance of defined tasks set by law in the supervision of supervised entities within the financial market. The Financial Market Supervision Unit is also in charge of the first-instance proceedings. This competence rises for the Act No. 747/2004 Coll. On Financial Market Supervision and Amending and Supplementing Certain Laws. This Act also sets out the cases in which the Bank Board of the National Bank of Slovakia or another professionally competent organizational unit of the National Bank of Slovakia will take action and decide at first instance. These are when:

- The Financial Market Supervision Unit has not commenced proceedings or proceeds in violation of the law;
- The Financial Market Supervision Unit did not decide within the time limit for a decision set by the Act or specific regulations regulating individual sectors of the financial market;
- There are other serious shortcomings in the proceedings or decisions of the Financial Market Supervision Unit;
- The need to deal with a crisis situation threatening the stability of the financial system; the remedy in the matter cannot be achieved otherwise.

The Financial Market Supervision Unit of the National Bank of Slovakia:

- Performs the on-site and the off-site supervision;
- Safeguards the protection of financial consumers;
- Conducts proceedings at first instance in matters relating to the supervision of the financial market;
- Prepares, in accordance with the rules determined by the Bank Board of the National Bank of Slovakia, proposals for regulation of the financial market, which means proposals
- of generally binding legal regulations of the National Bank of Slovakia for the implementation of special laws in the field of financial market, as provided by these laws, especially proposals for establishing prudential rules, rules on safe operation and other business requirements for supervised entities;
- Performs other tasks entrusted to the National Bank of Slovakia in the supervision of the financial market, if their performance does not fall within the competence of other organizational units or bodies of the National Bank of Slovakia.

3.2 The Financial Market Authority in Austria

In general, the supervision of the financial market is Austria is being performed by three independent authorities. The Austrian National Bank is in charge of macroprudnetial supervision. The Austrian Federal Ministry of Finance sets the legal frame, which is being

passed through the Austrian Parliament. Last but not least, the Financial Market Authority carries out microprudential supervision.

At the beginning of the first decade of the 2000s, the model of an all-financial supervisory authority in Europe seemed to prevail; starting with the creation of the Financial Services Authority (FSA) in the United Kingdom in 1997, the evolution of an all-financial supervision of banking, insurance and securities supervision under one roof has begun (Veil et al., 2014). Austria has also followed this trend.The Financial Market Authority in Austria is a public institution with legal personality (Baran, Peschetz, 2015). It is also an all-financial supervisory authority. When exercising powers, the Financial Market Authority, this institution is not bound by any instructions (Oppitz, 2018).

The organization and the tasks of the Financial Market Authority in Austria are set by the federal Law on the Establishment and Organization of the Financial Market Authority (Bundesgesetz über die Errichtung und Organisation der Finanzmarktaufsichtsbehörde).

The tasks of the Austrian Financial Market Authority can be divided into several areas, namely:

- Contributing to the stability of the financial market in Austria;
- Securing of compliance with financial standards;
- The sanctioning of offenders;
- Strengthening trust in the Austrian financial market;
- Protection of financial consumers.

The Financial Market Authority supervises banks, insurance undertakings, pension companies, stock exchange companies and other subjects defined by law. It monitors whether the supervised subjects comply with legal requirements. This authority enables "One-Stop-Shopping", so that all procedures to be conducted and handled under one roof. The Financial Market Authority disposes of sovereignty. It is empowered to issue binding standards.

3.3 Regulatory Conditions for Granting a License

The licensing proceeding can be characterized as a procedure of the supervisory body, the parties to proceedings and third parties involved in the process of issuing, reviewing and implementing individual administrative acts, which is governed by procedural financial standards. One of the goals of licensing is the reducing systemic risk resulting from causing damage to clients by improper performance of this kind of business.

The Canadian Fraser Institute conducts annual research on the basis of an economic freedom index (Kopfová, Tomášková, 2013). It consists of several indicators that are further divided into 42 variables (Kopfová, Tomášková, 2013).One of the evaluated areas is regulation, consisting of a total of three components; the first determinant evaluates the conditions on the domestic credit market, the second labor market and the third concerns business regulation assessing how regulations and bureaucratic procedures can restrict market entry and competition (Kopfová, Tomášková, 2013). The regulatory framework imposing the duty to obtain a license can be seen as a restriction of the entry to the market. But this kind of regulation is needed. Especially due to the fact that pensions are being are being considered as a sensitive area.

The outputs of the licensing procedures in both countries are individual administrative acts. Meaning they are unilateral acts issued by the executor of public administration on the basis of law incorporating individual binding rules issued as a reflection of the administrative regulation of relations (Jemelka, Pondělíčková, Bohadlo, 2013). These individual administrative acts enable the beginning of activities (Diwok, Göth, 2005).

The Supplementary Pension Asset Management Company

According to Article 23 of the Act on Supplementary Pension Saving the fulfillment of the following conditions must be proved for licensing:

- Payment of the supplementary pension asset management company's registered capital of at least 1 650 000 Euro in cash to a current account or deposit account held at a bank that fulfills the conditions for carrying on depository activity and with which the founder has concludeda contract about a future contract about the performance of depository services as at the date of licensing;
- A transparent, credible and lawful origin of the registered capital and other financial means of the supplementary pension asset management company;
- The suitability of persons with a qualified shareholding in the supplementary pension asset management company and transparency of these persons' relations with other persons, in particular the transparency of shares in the registered capital and voting rights;
- The professional qualification and trustworthiness of persons who are in charge of activities defined by the Act on Supplementary Pension Saving (for example members of the board of directors, members of the supervisory board);
- Transparency of a closely linked group, which includes also a shareholder with a qualified shareholding in the supplementary pension asset management company;
- The performance of supervision is not hindered by close links within a group;
- The registered office the place where the company is managed and where its strategic decisions are taken is in the Slovak Republic;
- The articles of association of the supplementary pension asset management company are in accordance with Act on Supplementary Pension Saving;
- The material prerequisites for the operation of the supplementary pension asset management company are in place;
- The organizational prerequisites for the operation of the supplementary pension asset management company are in place, where these comprise rules of prudent business conduct and rules of operation in the management of supplementary pension funds;
- The selection of depository is in accordance with the Act on Supplementary Pension Saving;
- The statute of the supplementary pension fund is in accordance with Act on Supplementary Pension Savingand provides for sufficient protection of participants and beneficiaries with regard to the investment strategy and risk profile of the supplementary pension fund; the risk profile of the supplementary pension fund is an expression of the degree of risk connected with investing assets in the supplementary pension fund;
- The professional qualification and trustworthiness of members of the board of directors, depositary proxies and senior depositary staff who perform the depositary's activities;
- The founder of the supplementary pension asset management companyis a person of good repute;
- The shareholder of the supplementary pension asset management company is a person of good repute;
- In the organizational structure of the supplementary pension asset management company, are at least two employees responsible for the management of investments;
- The employee responsible for the management of investment management is in direct management of the board of directors of a supplementary pension asset management company;
- The professional qualification of the employee who is in contact with the unprofessional client according to the Act No 186/2009 Coll. on financial intermediation and financial

advisory and on and on amendments to certain laws has been proven in accordance with this act.

The Pension Funds Company

The Act on Pension Funds Companies requires from the pension funds company to conduct the repurchase agreements in the interests of the beneficiaries, paying special attention to security, profitability, the need for cash, and adequate collateral and diversification (Radner, Jud, Hauser, 2005). The legislation divides the pension funds companies into inter-company pension fund and occupational pension fund.

In accordance with Article 9 of the Act on Pension Funds Companies, the license is to be granted if:

- Neither the articles of association nor the business plan contain provisions which do not guarantee the fulfillment of the pension funds companies obligations or the proper administration of the pension funds company;
- The shareholders, who hold at least 10% of the share capital of the pension funds company, meet the requirements to be met in the interest of a sound and prudent management of the pension funds company;
- The structure of a group to which shareholders holding at least 10 % of the share capital of the pension funds company do not hinder effective supervision of the pension funds company;
- The pension funds company is intended for a circle of at least 1,000 beneficiaries;
- The registered capital for pension funds company is in accordance with a special law, meaning the minimum nominal amount of the registered capital is 70,000 Euros;
- The place of the head office of the pension fund company is in inland;
- The pension funds company is operated in the legal form of a joint-stock company;
- The professional qualification and trustworthiness of the members of the board of directors and of persons in charge of key functions is given;
- The members of the board of directors are professionally qualified on the basis of their educational background and have the necessary qualifications and experience for the operation of the pension funds company; the professional qualification of a member of the board of directors presupposes that he has sufficient theoretical and practical knowledge in the requested business, as well as management experience;
- At least one member of the board of directors is in command of the German language;
- The pension funds company has at least two members of the board of directors and the articles of association preclude the granting of an individual power of attorney, a single power of proxy and a power of attorney for the entire business;
- No member of the board of directors of an inter-company pension fund pursues another main occupation outside of the pension fund, banking or insurance sector as well as the pension fund advisory service.

CONCLUSION

Regulation in general can serve to promote public benefit, to correct market failures and to reduce social risks. The regulation of supplementary pension saving is necessary due to the sensitivity of this area. The legal framework in both countries requires from subjects intending to provide supplementary pension saving the obtaining of a license. The licensing proceeding can be characterized as a procedure of the supervisory body, the parties to proceedings and third parties involved in the process of issuing, reviewing and implementing individual administrative acts, which is governed by procedural financial rules. One of the goals of licensing is the reducing of systemic risks resulting from causing damage to clients by improper performance of this kind of business.

The control function and the regulatory function belong to the group of functions of licensing in Austria and Slovakia. The essential common features of licensing in both countries are:

- Decision-making on rights and obligations of applicants;
- The parties have procedural rights and, in order to ensure the course and purpose of the licensing proceedings, they also have procedural obligations;
- In proceedings, the National Bank of Slovakia/ the Financial Market Authority is the holder of the rights and they are authorized to carry out them in order to ensure the fulfillment of the tasks resulting from specific legal regulations;
- Proceedings run in forms that are being foreseen by the law.

The aim of licensing in both countries is to enable the performance of business on the financial market only for subjects that are prepared and met the conditions set by the Act on Pension Funds Companies and the Act on Supplementary Pension Saving. At the same time, the licensing procedure is a means which reflects, the need to protect the market from entities who are not prepared for the performance of activities in the area of pension saving. Entrepreneurs on the financial market are required to meet a set of conditions that enable them to conduct business in accordance with specific legislation. Access to business on the financial market has been set up in a way that the applicant complies with regulatory requirements from the beginning. An entity not fulfilling the conditions for the granting of the license would also fail to comply with the obligations to carry out the business; logically it cannot be allowed to start business.

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Social Responsibility of Banks in the Context of Mis-Selling and Financial Morality of Poles

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Abstract: The purpose of the article is to present the quality of determinants of mutual bank-client relations, i.e. financial morality of an individual/society and mis-selling, which contradicts the idea of corporate social responsibility. It was necessary to illustrate the level of financial morality of Polish society and diagnose the percentage of Poles who experienced mis-selling and the reasons for their sense of injustice in relations with a bank. The research methods are: subject literature critical analysis, statistical methods and a diagnostic survey conducted in 2017 in a sample of 804 Poles. The obtained results show that 39% respondents experienced mis-selling, however, the Index of Unethical Financial Behaviour Acceptance was 21.7, indicating Poles' willingness to justify violating legal or ethical standards by consumers in the financial sphere in over every fifth situation.

Keywords: corporate social responsibility, mis-selling, financial morality, consumer behaviour, financial institution

JEL Classification codes: D10, G21, M14

INTRODUCTION

Dynamic socio-economic changes related to the globalization process, including the increasing expectations and the power of a diverse group of stakeholders, force enterprises to search for new, effective methods allowing long-term development. The implementation of the assumptions of the corporate social responsibility (CSR) concept is an important challenge in this respect. This idea is not unknown to the banking sector, but indeed raises greater public interest, especially in the context of the decline in confidence, which occurred as a result of the financial crisis. The crisis revealed that focusing only on a short-term profit, as the overriding objective in business, distorts the financial institution's relationship with the client by offering him/her inadequate financial products and services. These practices, referred to as mis-selling, affect negatively bank's relations with the environment.

The analysis of business entities' ethics and disregarding the influence of the morality of products' and services' buyers on the market functioning reflects only one-sided view of economic reality. Such traits as justice, honesty and responsibility should be shared by both banks and their clients - members of the society, as they guarantee establishing proper mutual relations. In this context financial morality can be discussed, the essential component of which is the consent to unlawful consumers' activities or violating ethical standards in the sphere of finance (moral permissivism). The moral component of market functioning is one of the factors affecting the decisions made by the parties to economic transactions.

The observed phenomena became an inspiration for preparing a scientific article which purpose is to present the determinants of the quality of mutual bank-client relations, i.e. financial morality of an individual/society and mis-selling, which contradicts the idea of

corporate social responsibility. It was necessary to illustrate the level of financial morality of Polish society and diagnose the percentage of Poles who experienced mis-selling and the reasons for their sense of injustice in relations with a bank.

1 LITERATURE REVIEW

Diverse approaches to corporate social responsibility were analysed by A. Dahlsrud (2008), who presented 37 CSR definitions formulated between 1980 and 2003. As a result of his analysis, five common elements of these definitions were distinguished: voluntary CSR initiatives taken by business environment, the aspect of engaging in a dialogue with stakeholders as well as the social, economic and environmental aspect. The most frequently quoted definition was the one presented by the Commission of the European Communities (2001) according to which CSR is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.

Banking system is an important area of CSR principles implementation. The stakeholders of banking institutions include: shareholders, clients, bank employees, the society in which these entities function. The difficulty of the socially responsible management of a banking enterprise consists in the fact that the expectations of individual stakeholder groups are divergent, whereas banks have to fulfil two roles in the economy and society, i.e. the commercial and the service oriented role (Korenik, 2009).

The academic debate on the social responsibility of financial institutions intensified after the financial crisis, when the decline in confidence in banking sector entities was clearly observed worldwide (e.g. Fassin, Gosselin, 2011; Moon, Herzig, 2013; Paulet, Parnaudeau, Relano, 2015). The crisis revealed that focusing only on short-term profit, as the overriding objective in business, distorts the relationship between the financial institution and the client. The society expects banks to follows the social responsibility principles, both in a positive sense and thorough preventing negative effects of their activities (Łukasiewicz-Kamińska, 2011). Positive responsibility should be demonstrated by establishing adequate conditions for equal, fair access to infrastructure and to banking offer, tailored to the needs expressed by households and enterprises. Preventive responsibility, in turn, refers to searching for methods helpful in avoiding or reducing the risks associated with financial exclusion or victimization occurring on the banking market, including mis-selling.

A. Reurink (2016) describes the world of financial scam covering: financial statement fraud, financial scams and fraudulent financial mis-selling. The latter term is used here to refer to the deceptive and manipulative marketing, selling, or advising of a financial product or service to an end user, in the knowledge that the product or service is unsuitable for that specific end user's needs. Contrary to financial statement fraud and financial scams, mis-selling cases do not necessarily involve false representations of facts. At the heart of fraudulent financial mis-selling are deceptive sales practices in which the seller of a financial product or service or the financial adviser advising on it makes misleading and highly speculative statements with regard to the future performance of the products or service or fails to communicate in a "fair and balanced manner" the suitability of the financial product or service for the specific end user.

Mis-selling represents the phenomenon which has been well-known on financial markets for many years, but the term itself appeared only recently in the subject literature in connection with the insurance scandal in the UK, i.e. offering Payment Protection Insurance to clients (Ashton, Hudson, 2013). While reviewing the existing research, it can be noted that the mis-selling problem is addressed by the authors of publications representing various fields:

- Economics and finance, primarily in the area of financial intermediation and consulting – e.g. (Inderst, Ottaviani, 2009; Ackermann, 2011; Mitchell, Smetters, 2013; Stolper, 2018);
- Business ethics – e.g. (Teak Yi, Dubinsky, Un Lim, 2012; Ashton, 2015; Mulki, 2015; Brannan, 2017);
- Law, predominantly in the field of consumer – e.g. (Campbell et al., 2011; Paterson, Brody, 2014; Sane, Halan, 2017; Benohr, 2018).

In addition, the European Parliament has been interested in the problem of mis-selling for several years. W 2018 r. the European Parliament's Committee on Economic and Monetary Affairs (ECON) has requested five studies to gain a better understanding of recent cases and remedies associated with selected questions of mis-selling of financial products in the EU. The overarching objective is to analyse the causes of complaints and petitions made in the view of the existing EU regulation of the conduct of business of financial institutions when they offer financial products to retail investors (Onnefelder, Rakic, 2018).

The authors of the quoted publications define the concept of mis-selling differently, however, a statement frequently appears in this context that a client experiencing mis-selling feels cheated and disadvantaged by financial institutions. The problem of mis-selling results from e.g. commission-based remuneration of employees in commercial financial institutions, who play a double role in financial transactions, i.e. of a seller and an advisor. Using their information advantage, they provide partial advice, use aggressive and manipulative marketing strategies to persuade clients to buy a financial product. Such behaviour results in clients' financial losses and in undermining their confidence in financial institutions.

Ethical consumer standards, manifested in attitudes against any scam committed by the weaker side of market transactions, remain the components of the so-called economic morality. This concept was proposed by E.P. Thompson (1971), who assumed that market laws are based on a sense of honesty, fairness, recognized roles and principles as well as accepted behaviours, but who also indicated that economic changes transform economic morality and, in particular, the relations between market power and moral requirements.

In a broad sense, economic morality is approached as a social perception of the rules of justice and the moral aspect of economic order, influenced by the economic context and cultural dimension and manifested in individual behaviours (Lopes, 2010). An important contribution to research on consumer ethics was made by J. Muncy and S. Vitell (1992). Consumer ethics is understood, according to the original proposal of these researchers, as all standards and principles guiding the behaviour of individuals in the sphere of purchasing, using and disposing of products and services. The tool developed to study these standards and principles – Consumer Ethics Scale – was applied in analysing consumer attitudes and their determinants in different countries (Muncy, Eastman, 1998; Lewicka-Strzałecka, 2016), and also in comparative research between individual countries and groups of countries (Al-Khatib et al., 1997, Priem et al., 1998; Polonsky et al., 2001).

The financial perspective is of particular significance in economic morality analysis, as financial aspects are gaining increasing importance in the lives of contemporary consumers. Financial morality is a kind of economic morality, approached as the set of standards and principles recognized and implemented by consumers and the business sector in the area of activities directly or indirectly related to the sphere of finance. Institutional Anomie Theory constitutes the theoretical basis for the analysis of financial morality. Karstedt and Farrall (2006) showed that the market anomy syndrome increases the readiness of average citizens to engage in everyday scam. It was also adopted that the syndrome of market anomy at an individual level determines the perception of market imbalance, manifested in the sense of asymmetry of power between consumers and business entities, and also such dominance of the latter's motive of profit which drives the other party to take up immoral and risky activities. Market

anomie was described as a construct resulting from the lack of confidence in the market, the fear of market transactions and moral cynicism.

2 METHODOLOGY

The adoption of certain research methods is required to carry out the research purpose defined in the article introduction. One of the methods to measure the scale of mis-selling on the banking market is the analysis of the number of complaints filed by clients for dishonest practices performed by financial institutions in Poland that end up in the Bank Consumer Arbitration (BCA) or the Financial Ombudsman (FO). The aforementioned institutions publish the reports containing relevant statistical data on a regular basis. These are respectively: "Information on the activities of the Bank Consumer Arbitration" and "The Report of the Financial Ombudsman and his office activities" covering the particular years.

The results of own research will also be used to diagnose the percentage of Poles who experienced bank mis-selling, which allow determining the reasons underlying the sense of disservice and injustice in relations with a credit institution. The surveys using the CAWI (Computer-Assisted Web Interview) method were carried out in May 2017 in cooperation with the SW Research Agency for Market and Opinion Research.

The surveys were conducted on a representative sample of 804 Poles (the obtained results were corrected by analytical weights to the population of Poland, ensuring representativeness by gender, age categories, size of the place of residence and education), where women accounted for 53.1% of the surveyed population, and men 46.9%. The second of the parameters characterizing the research sample, i.e. age, indicates that the questionnaire was filled in by 100 people aged up to 24, 152 aged 25-34, 195 aged 35-49 and 357 respondents aged 50 and over. The smallest number of respondents (2.2%) indicated that they completed primary or lower secondary education, 9.8% - basic vocational education, whereas 44% secondary and higher education in each group. The majority of respondents (40%) declared a village as their place of residence, and the smallest number of respondents (8%) lived in a city with 200 to 499 inhabitants.

The next characteristics describing the research sample, i.e. monthly net income achieved, indicates that 8.7% of the respondents earn less than PLN 1000, 170 people out of 800 surveyed declared that their income ranges from PLN 1001 to 2000, whereas 20.6% of the respondents achieve monthly income at the level of PLN 2001-3000, 15.7% of the population indicated the salary range PLN 3001 - PLN 5000, and 49 respondents answered that their earnings exceed PLN 5000 per month. Unfortunately, as many as 27.7% of the respondents refused to provide an answer to the question about the amount of their income.

In the first stage of the survey, the respondents were asked to answer the question whether they had ever been or felt victimised by a bank. In the second stage, the respondents of the first group were asked to indicate a maximum of four reasons for their sense of disservice or injustice in dealing with a bank.

Carrying out the purpose of the presented scientific article requires the compilation of data on mis-selling in Polish banks and the financial morality of the society. To illustrate the level of morality, the Index of Unethical Financial Behaviour Acceptance developed by A. Lewicka-Strzałecka (2016) was used, which represents a synthetic measure of social consent to consumer violation of legal norms or ethical standards in the area of broadly understood finance. The answers to questions reconstructing the image of financial morality were obtained in a telephone survey (CATI method), conducted in April 2017, on a nationwide, representative 1000-person sample of Poles aged over 18.

The consent to actions, either unlawful or violating ethical consumer standards remains an important component of the financial morality of Poles. It was adopted that the scope of consent to such violation, i.e. the level of unethical financial behaviour acceptance (moral permissivism), is determined by the occasional, more or less frequent, justification for consumer abuse. Respectively, the absence of consent, i.e. the lack of unethical financial behaviour acceptance (the level of moral rigorism), is determined by indicating that a given violation can never be justified (Lewicka-Strzałecka, 2018).

3 RESULTS AND DISCUSSION

In accordance with the data provided by Bank Consumer Arbitration (2018), in the period 2002 – 2017, Poles submitted over 16.7 thousand applications, of which 1046 in 2017. In the last year of the analysed period, the substantive scope of complaints was as follows: bank accounts and deposits – 241, bank loans – 603, payment transactions, including various types of bank cards – 107, other – 195. In 2017, the majority of cases concerned loan agreements. Three-fourth of these complaints were related to mortgage loans. The most frequent reasons for disputes in this matter were abusive clauses included in the contracts and rules for establishing collateral, in particular regarding insurance. The applicants raised the insurance structure inadmissibility of a low own contribution, as well as unclear contractual provisions regarding the premium calculation method. The complaints also concerned the return of some incidental dues by banks in the case of early loan repayment and incorrect loan settlement in the event of consumer's using promotional terms of debt repayment (BCA, 2018).

Clients of banking institutions also file complaints about dishonest bank practices to the Financial Ombudsman, an institution aimed at supporting them in disputes against financial market entities. In 2017 the Financial Ombudsman received 4401 written applications submitted in individual cases and related to the issues of banking and capital market. The majority of them, i.e. 2829 applications concerned loans. Not all applications (approx. 28.6%) submitted to FO (2018) require his intervention, which primarily results from the absence of adequate competencies or the lack of substantive basis.

The number of applications regarding unfair bank practices, submitted by clients to the Bank Consumer Arbitration or the Financial Ombudsman is a measurable, however, an imperfect parameter illustrating the scale of mis-selling on the banking market. This hypothesis is confirmed by the above presented statistics showing that a significant part of complaints submitted by customers remains unfounded. In turn, many people who suffered or have the sense of injustice in dealing with a bank, decide not to report such fact formally. Therefore, in May 2017, in cooperation with the SW Research Agency for Market and Opinion Research, the author's own research was carried out. The obtained results indicate that 39% of Poles suffered or had a sense of injustice in dealing with a bank. Among them there were mainly young people, i.e. individuals aged 25-34 (42.8%), which provides valuable information for further analysis.

In the second research stage the respondents were asked to indicate a maximum of four reasons for their sense of disservice or injustice in dealing with a bank. The collected responses are presented in Tab. 1.

The obtained responses indicate that the majority of respondents complain about the unsatisfactory offer of bank products and services, perceived through the prism of bank's pricing, product, sales and marketing policy. More than half of the respondents believe that banking institutions set prices inadequate to their offer quality, and about 41% feel uncomfortable when they are sold package products. Package sales means that e.g. the condition for receiving a loan is taking out insurance. The presented situation is an example of a typical mis-selling. It is considered unfair to treat the existing customers worse than the

new ones, to which a more attractive offer is addressed. Every third respondent experiences discomfort as a result of an aggressively conducted sales policy manifested e.g. in persistent harassment by phone calls or persuading clients during direct sales to purchase products they are not interested in.

Tab. 1 The reasons for experiencing the sense of disservice or injustice in dealing with bank

No.	I had a sense of injustice in my dealings with a bank because:	Responses
1	In my opinion banks charge too much (fees, commissions, interest) in relation to the quality of offered products	50,6%
2	I believe that the offer is often only for the purposes of carrying out bank's needs and not for client's ones (e.g. selling bank products as packages, more attractive offer for new clients)	40,6%
3	I am dissatisfied with the aggressively sales policy (e.g. harassment by phone calls)	34,3%
4	Bank employee did not provide me with all the information essential to make the right decision about the bank product purchase	29,5%
5	I experienced inconveniences of formal nature (e.g. changing contract terms, using abusive clauses, burdensome complaint procedures)	25,6%
6	I was subject to technical inconvenience (e.g. failure of ATMs, banking websites)	25,5%
7	I believe that an employee took advantage of my incomplete financial knowledge and sold me a product that does not meet my needs	19,0%
8	I took the decision of buying a banking product under the influence of a misleading advertisement	12,5%
9	I experienced discrimination as a result of my low digital competences or reluctance to use modern technologies (Internet, smartphone)	6,8%
10	Other reason, what kind?	3,4%

Source: author's compilation based on the survey results

The next survey question concerned the violation of ethical standards and legal norms that sometimes accompany sales processes. Approx. 26% of the respondents declared having experienced formal disadvantages in dealing with a bank, such as changing contract terms, using abusive clauses or burdensome complaint procedures. However, the most controversy referred to the customer's direct relation with the bank employee. Approx. 30% of the respondents admitted that they felt cheated because they decided to buy a certain bank product without receiving comprehensive information from the bank employee. In this case, the problem is quite complex, as it may result from such employee lack of competence or from deliberate misleading of the customer.

The probability of selling a product that does not suit customer's expectations increases directly proportional to the declining level of consumer financial awareness. 19% of the respondents admitted explicitly that the bank employee took advantage of their incomplete financial knowledge and sold them a product that did not match their needs. The problem of information asymmetry on the banking market is quite common. It is additionally aggravated by the misleading bank advertisements encouraging the purchase of bank products – 12.5% of respondents considered such actions to be harmful.

Mis-selling in banks contradicts the idea of CSR, because it negatively affects the relationship between a credit institution and a client. Nevertheless, the mutual nature of these relations also depends on the financial behaviour of the society members – potential clients or employees of banking institutions. The Index of Unethical Financial Behaviour Acceptance (moral permissiveness) will be used to illustrate the level of morality, which in 2017 amounted to 21.7, which means that Poles are willing to justify violating legal norms or ethical standards by consumers in the sphere of finance in over every fifth situation (Lewicka-Strzałecka, 2018).

Figure 1 illustrates the aggregated data (the sum of responses sometimes, often or always, to the question of the possibility for individual actions' justification), creating a specific map of consumers' moral permissivism in the financial sphere. The presented data reflect a significant degree of ethical standards' diversification regarding the assessment of consumer behaviour in particular situations, ranging from behaviours that are almost unconditionally condemned to the ones justified by almost a third of the respondents. The respondents are most rigorous about such consumer frauds that consist in extorting money by means of using false documents – they are justified by 2.8% of respondents. Approx. 15% of the respondents agree to overvaluation of the incurred damages to obtain undue compensation, whereas more than 18% to hide information preventing taking out a loan. Almost one fifth of the respondents justifies changing bank accounts frequently to avoid their funds seizure by a bailiff. In turn, almost every fifth surveyed Pole does not see anything wrong in signing over the assets to family members thus escaping creditor's claims, paying cash without an invoice and thus avoiding VAT payment, or taking advantage of an opportunity such as cashier's error, who was wrong to his/her disadvantage. Approx. 30% of the respondents do not condemn people who take up undeclared work (without signing a contract) to avoid paying debts from their wages. Finally, the highest level of tolerance showed by the respondents concerns the behaviour that is not legally sanctioned in any way, but has an ethical dimension. It can, however, be approached as betraying the duty of being a responsible consumer. 31.5% of the respondents claim that the behaviour of a person who takes out a loan without paying careful attention to repayment terms can be justified (see Fig. 1).

Fig. 1 The map of consumer moral permissivism in the financial sphere
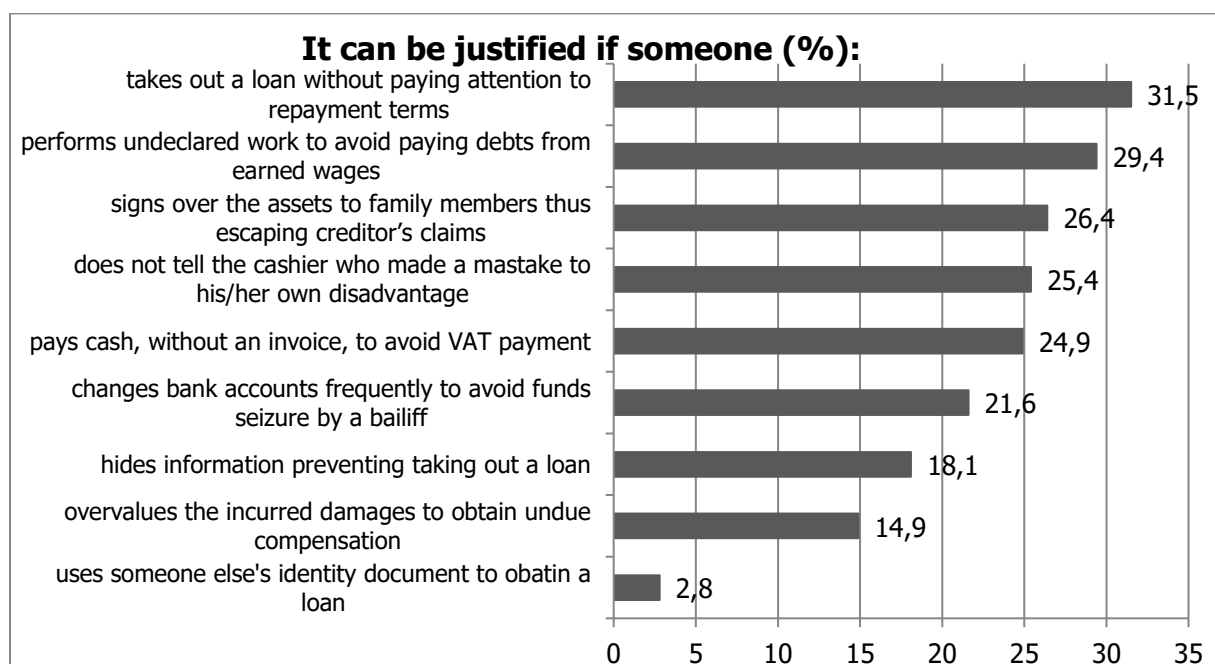
Source: Lewicka-Strzałecka, 2018, p. 10

Among the justifications of consumer violations listed as first by the respondents was the argument indicating dishonesty of the institutional market participants operating in the sphere of finance, namely creditors, insurance institutions, bailiffs. For example, the people justifying concealing information that prevent taking out a loan, when asked about the reason for their opinion, predominantly indicated dishonesty of the other party in the market exchange, i.e. creditors (50.8%), over two fifths of the respondents claimed that the urge to meet an important need (41, 3%) could be a good explanation and almost 8% indicated a social standard (many people behave like that). In turn, among the reasons underlying the absence of justification for consumer violations, the most commonly cited argument was legalism, i.e. recognizing that a given action is unacceptable because it is illegal (Lewicka-Strzałecka, 2018).

A higher level of acceptance for unethical financial behaviour is expressed by men than women (22 to 21, respectively). Moral requirements in the sphere of finance clearly grow with age. The Index of Unethical Financial Behaviour Acceptance amounted to 24 in the 18-29 age group, whereas among the respondents aged 65 and over this indicator presented the level of 17 (Lewicka-Strzałecka, 2017). Older people are less likely to justify consumer violations than the younger ones. It may be a function of the natural moral development process or an effect of the difference between generations caused by functioning in different economic systems.

CONCLUSION

The proper relationship between a bank and a customer should be characterized by reliability, honesty and mutual trust. The realisation of such intentions is, on the one hand, a part of the corporate social responsibility image implemented by a bank which does not accept mis-selling procedures, and on the other refers to a responsible consumer whose behaviour is characterized by a high level of financial morality. The research results show that 39% of Poles experienced mis-selling in their relations with a bank and, at the same time, the Index of Unethical Financial Behaviour Acceptance presented the level of 21.7, i.e. Polish citizens are inclined to justify consumer violations of legal norms or ethical standards, related to the financial sphere, in over every fifth situation. Moreover, they explain their opinions by the conviction that since financial institutions remain unfair in relations with their clients, they are also allowed to do so. The perception of a consumer as a victim develops retribution morality which justifies committing violations as the form of seeking compensation. This type of justification is the manifestation of reciprocity rule described by social psychologists. The rule of reciprocity, firmly rooted in culture, in its negative version requires paying back with evil for the evil suffered (Lukasinski, 2014). In relations with financial institutions, the evil did not have to be experienced personally, but its sense is transferred and perpetuated by a sensational media message.

The analysis of the research results allowed putting forward one more important conclusion, namely the worst and the most difficult relations between banks and clients occur within the generation of young people. On the one hand, they feel most disadvantaged in dealing with financial institutions (42.8% of them experienced mis-selling), and on the other they are part of the society characterized by a relatively low financial morality, thus they are willing to justify consumer violations of legal norms or ethical standards in the area of finance in almost every fourth situation (Index of Unethical Financial Behaviour Acceptance – 24). Focusing attention on the Y generation and deepening analyses in this area may be an interesting direction for further research on the social responsibility of banks in the context of mis-selling and financial morality.

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Consumer Decision Making Styles of Young-Adult Consumers in Slovakia

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Abstract: Understanding consumer decision making process is valuable for any business because it means understanding how and why consumers shop. Consumers have a different style or rules to make decisions when they are faced with the choice on the market. Experts in marketing and related behavioural sciences have identified various consumer motives for buying. Sproles and Kendall developed the instrument Consumer styles inventory (CSI) to measure general orientations towards shopping and buying. They have profiled consumer decision making styles into eight basic categories. The aim of this paper is to identify decision making styles with respect to shopping behaviour of young-adult Slovak consumers, focusing on fashion wear, using modified CSI. The empirical analysis is based on data collected from Slovak students at the University of Economics in Bratislava. Findings indicate seven decision-making styles, from which are three dominant: quality conscious, impulse driven and price conscious.

Keywords: decision-making, consumer styles inventory, shopping style, young-adult consumers

JEL Classification codes: M31, D90

INTRODUCTION

Increased number and range of products, channel proliferation with increased retail stores, shopping malls, electronic commerce, and abundance of information through marketing communication and other traditional and new electronic sources have broadened the choice for the consumer. In addition, it increased the complexity of consumer decision-making (Ghodeswar).

Consumer decision-making is a complicated process due to the presence of many hidden and seemingly unrelated variables. Understanding this process is valuable for any business as it uncovers how decisions can be influenced by marketers. The consumer generally develops a certain set of criteria against which he will base his decision.

Having a reliable and valid tool is a prerequisite for construction of shopping profiles. The aim of this paper is to examine the applicability of the modified Consumer styles inventory (SCI) on young-adult Slovak consumers, focusing on fashion wear. The objective is to assess the reliability and validity of the modified CSI construct.

1 LITERATURE REVIEW

Consumers make decisions to reach their goals, which include making the best choice among alternative possibilities, reducing the effort in making the decision, minimizing negative emotions, and maximizing the ability to justify the decision. Understanding consumer decision-making styles is important due to their inextricable relationship with buying behavior (Dash &

Kumar, 2014). Motives for buying and consuming are a function of numerous variables many of which are unrelated to the actual buying of products (Pilai & Srivastava, 2015). Attributes which plays on emotions weight the heaviest in decision making processes (Narang & Mishra, 2014). Consumers have various reasons why to go shopping. Main motivation can be (Kotzé et al., 2012) socializing with others or shopping for bargains, gratification, entertainment or sensory stimulation, etc. Therefore, it has become more difficult to define and predict a particular shopping behavior.

Researchers and marketers show a growing interest in the research of shopping styles to understand why and how consumers shop. Attempts at developing buyer behavior theory have taken various forms. The underlying assumption is that all consumers are thought to approach the market with certain fundamental decision-making styles. Mandhlazi et al. (2013) classify shoppers into four groups, namely economic, the personalizing, the ethical and the apathetic shopper. Typical for economic shopper is a careful approach, giving heightened attention to price, quality and merchandising, while personalizing shopper is seeking personal relationship with personnel. Ethical shopper is trying to behave consistently with moral beliefs and therefore is willing to sacrifice lower prices and broad selection of goods. Apathetic shopper is not interested in the shopping activity and is shopping largely out of necessity.

Some research studies focus on segmenting consumers into meaningful groups by their responses to decision-making style inventories. Several concepts have been developed in order to understand cross-cultural consumer behavior. One of the widely used frameworks was developed by Sproles and Kendall in 1986.

Sproles and Kendall conceptualized the Consumer Styles Inventory (CSI), which is one of the first attempts to systematically measure shopping styles. One of the assumptions of this approach is that each individual has a specific decision-making style resulting from a combination of individual decision-making dimensions (Anić et al., 2010). Sproles and Kendall validated from 482 US high school students eight different shopping styles with the following characteristics (Bearden & Netemeyer, 1999):

High Quality Conscious/Perfectionist – the degree to which a consumer searches carefully and systematically for the best quality in products.

Brand Conscious – a consumer´s orientation toward buying the more expensive, well-known brands.

Novelty and Fashion Conscious – consumers who appear to like new and innovative products and gain excitement from seeking out new things.

Recreational and Shopping Conscious - the extent to which a consumer finds shopping a pleasant activity and shops just for the fun of it. Some authors named this style Hedonistic.

Price Conscious/Value for the Money – a consumer with a particularly high consciousness of sale prices and lower prices in general.

Impulsiveness/Careless – one who tends to buy on the spur of the moment and to appear unconcerned about how much he or she spends

Confused by Overchoice – a person perceiving too many brands and stores from which to choose and who likely experiences information overload in the market.

Habitual/Brand Loyal – a characteristic indicating a consumer who repetitively chooses the same favorite brands and stores.

Shopping styles are affected by variety of internal (personality, motivation, etc.) and external (cultural differences, type of retail stores, etc.) factors. As it vary from person to person, the study of decision-making attempts to draw certain generalization. The generality can be established by testing the decision-making traits on different groups and different countries

(Pilai & Srivastava, 2015). The original Sproles´s and Kendall´s CSI has been adapted and applied in different cultures to understand consumer shopping behavior. Some studies did not find all 8 shopping styles (Ghodeswar; Mokhlis), but found new styles as Shopping avoidance -Time server (Tanksale et al., 2014), or Bargain seeking, Reference group oriented, Convenience seeking, Socially desirable and Information seeking (Pilai & Srivastava, 2015), or Ecology (Sarabia-Sanchez et al., 2012).

Some researchers examined the relationship between shopping style and consumer personality, motives or values. Indonesian study (Helmi, 2016) proved that each shopping style is unique as is the expression of various personal values. For example Brand conscious is a manifestation of these personal values: A sense of belonging, fun and enjoyment, security or self-fulfillment. US and Pakistani studies (Park et al., 2010; Batool et al., 2015) came to conclusion that cognitive type of consumers are inclined to shopping styles such as Quality conscious, Price conscious and Confused by overchoice. Sensory type of consumers are inclined to the remaining five Sproles and Kendall shopping styles.

2 METHODOLOGY

In order to determine the dominant consumer shopping style a quantitative research was conducted. As it was not possible to collect data from a representative sample, the research sample was formed with 144 students aged 21 to 24 and studying at the Faculty of Commerce in Bratislava. 64% of the respondents were females.

Some items used in the questionnaire were taken from the Sproles and Kendall Consumer Style Inventory, to which were added new items used in several studies (Pilai & Srivastava, 2015; Bearden & Netemeyer, 1999). The final questionnaire contained 44 scaled items, ranging from 1 to 7, where 1 equals "absolutely characteristic" and 7 equals "absolutely uncharacteristic". The items were randomly ordered to counterbalance possible order effect. The survey was carried out using CAWI and questionnaire was available on Google website since November 28 to December 07 2018. The data were analyzed using factor analysis and Cronbach´s alpha.

3 RESULTS AND DISCUSSION

3.1 Testing the inventory - scale development

Forty four items measuring consumer shopping style were subjected to exploratory factor analysis using the principal component analysis method with varimax rotation. Eleven factors were extracted explaining 68,3% of the variance. Factors were named based on the items that loaded highly on them and in line with those proposed by Sproles and Kendall and other researchers: Quality conscious, Shopping avoidance, Brand conscious, Novelty-fashion conscious, Hedonistic oriented, Price conscious, Impulse driven, Confused by overchoice, Habitually oriented, Reference group oriented and Socially desirable oriented. Items which did not load highly on any of the factors were deleted from further analysis.

Remaining data was used for the second run factor analysis. Seven factors were extracted explaining 80,4% of the variance (Tab. 1).

Factor 1 labeled Brand conscious - consumers who scored lowly on this factor are more likely to purchase expensive global brands.

Tab. 1 Total variance explained

Factor	Eigenvalues	% of Variance	Number of items
1	8,640	33,230	4
2	3,763	14,474	4
3	2,683	10,319	4
4	2,043	7,857	5
5	1,531	5,890	4
6	1,191	4,581	3
7	1,062	4,085	4
Total		80,436	28

Factor 2 labeled Hedonistic oriented – consumers perceive shopping as enjoyable and pleasant activity.

Factor 3 labeled Quality conscious – when making purchase, quality is the major consideration factor

Factor 4 labeled Novelty-fashion conscious – consumers are likely to look for novelty and fashion products

Factor 5 labeled Impulse driven – consumers are careless and impulsive in making purchases

Factor 6 labeled Shopping avoidance – consumers want to shop easy and quickly

Factor 7 labeled Price conscious – consumers seek the best value for their money.

Each shopping style, represented by factor, is composed of several items. The items work together as a set and should be capable of independently measuring the same construct. The items should be consistent in what they indicate about the concept being measured (Mokhlis). Reliability of eleven shopping style scales was tested to ascertain the degree to which the measures yielded consistent results. as the Cronbach´s alpha did not exceed the recommended coefficient alpha value 0,7 (Tavakol & Dennick, 2011), resp. 0,65 (University of Virginia) for acceptability. The alpha coefficient for four shopping styles Confused by overchoice, Habitually oriented, Reference group oriented and Socially desirable oriented had very low reliability, indicating that they may not be the real factors in identifying decision-making styles.

Scale evaluation indicated only one inconsistent scale construct (Tab. 2). One item in the Quality conscious construct did not justify the model fit and was removed from this construct. This action led to increasing Cronbach´s alpha from value 0,635 to 0,779. Even Price conscious construct exhibited acceptable internal consistency, removal one of its items led to improvements of its reliability. Cronbach´s alpha value then increased from 0,709 to 0,807. Both modified constructs were used for further analysis.

Reliability analysis of seven shopping style scales (Brand conscious, Hedonistic oriented, Quality conscious, Novelty-fashion conscious, Impulse driven, Shopping avoidance and Price conscious), consisting of twenty six items, yielded favorable results. The final constructs exhibited good internal consistency, as the Cronbach´s alpha values exceed the recommended coefficient alpha value>0,65 for acceptability (Tab. 3).

Tab. 2 Reliability analysis for scales from which an item was removed

Shopping style	Cronbach Alpha	Item	Cronbach Alpha if item deleted
Quality conscious	0,635		
		My standards and expectations for products I buy are very high	0,419
		Getting very good quality is very important to me	0,446
		I make a special effort to choose the very best quality products	0,610
		If I do not find exactly what I´m looking for, I´d rather not buy anything*	**0,779**
Price conscious	0,709		
		I won't buy a more expensive product if a similar product is available at a lower price	0,603
		The lowest price products are usually my choice	0,571
		I look carefully to find the best value for the money	0,560
		I buy as much as possible at sale prices*	**0,807**

*item was removed

Tab. 3 Final Reliability analysis (scale development)

| Shopping style	Cronbach´s Alpha	Items
Brand conscious	0,916	Even though it may be costly, I will buy a popular brand
		Brand do not matter*
		I would rather buy popular brand than no name product
		The well-known brands are for me
Hedonistic oriented	0,776	Going shopping is one of the enjoyable activities
		I like to spend my leisure time in shops
		I shop quickly*
		I enjoy shopping just for the fun of it
Quality conscious	0,779	see Tab. 1
Novelty-fashion conscious	0,835	I am aware of fashion trends and want to be one of the first to try them
		I keep my wardrobe up-to-date with the changing fashions
		I don´t know as much about fashion as others*

Shopping style	Cronbach´s Alpha	Items
		I don´t care about fashion trends, buying novelty products is a waste of money
		Even if the latest fashion is costly, I would still like to buy it
Impulse driven	0,688	I like to shop spontaneously
		I don't buy things which I have not planned*
		If I find something interesting I buy it no matter what the consequences
		I am impulsive when purchasing
Shopping avoidance	0,735	I usually buy from the shops which are closest
		I like to buy all my things from one shop
		I prefer shops which sell almost everything
Price conscious	0,807	see Tab. 1

*item was reversed coded

3.2 Comparison of shopping styles

Final 26 items and 7 reliable shopping styles were used for further quantitative analysis. Average score for each shopping style was calculated to identify dominant one/s (Fig. 1). As lower value expresses more typical for consumer, it seems that the most dominant shopping style of young people is Quality conscious and least one is Novelty-fashion conscious.

Fig. 1 Average scores for shopping styles
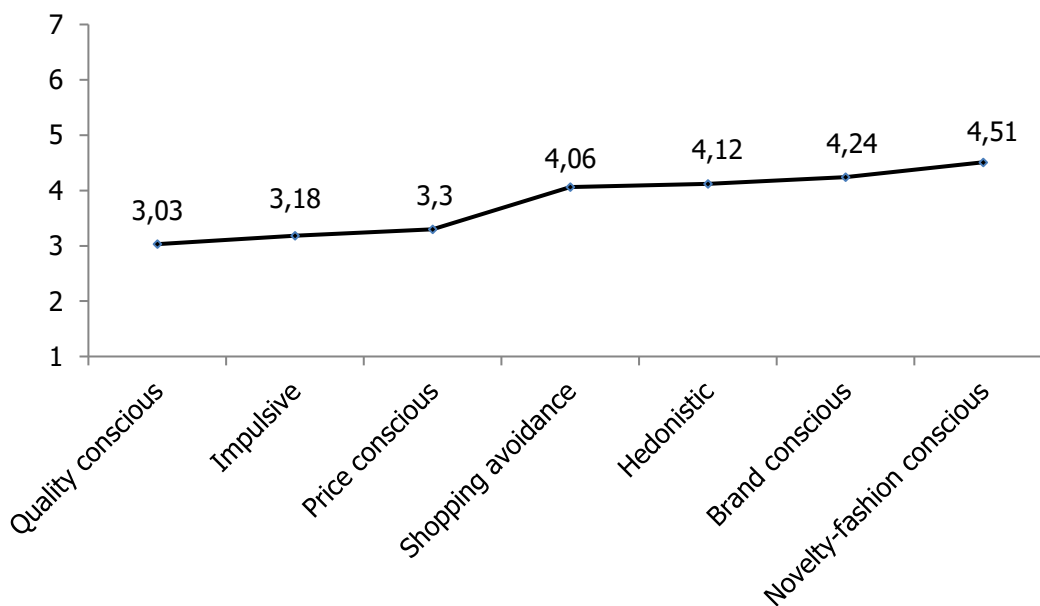
Average score differences among several shopping styles seemed to be not very high. Therefore, to make order of shopping styles based on the statistically significant differences, the t-test for paired comparison was used (Tab. 4).

Tab. 4 Results of t-test

sig. level	QC	SA	BC	NFC	H	PC	ID
Quality conscious (QC)		0,00	0,00	0,00	0,40	0,28	0,29
Shopping avoidance (SA)			0,44	0,04	0,77	0,00	0,00
Brand conscious (BC)				0,05	0,62	0,00	0,00
Novelty-fashion conscious (NFC)					0,00	0,00	0,00
Hedonistic (H)						0,02	0,00
Price conscious (PC)							0,58
Impulse driven (ID)							

The results of t-test suggest that there are no significant differences among shopping styles Quality conscious, Impulse driven and Price conscious, and among Shopping avoidance, Hedonistic oriented and Brand conscious. Only Novelty-fashion conscious shopping style statistically significantly differs from all the others styles.

Based on the average scores and results of the t-test we can conclude that there are three dominant shopping styles (Tab. 5): Quality conscious, Impulse driven and Price conscious. These shopping styles significantly differ from others and do not differ with one another. Novelty-fashion conscious is the least typical style for young-adult Slovak consumers.

Tab. 5 Final rank for shopping styles

Final rank	Shopping style	Average score
1	Quality conscious	3,03
1	Impulse driven	3,18
1	Price conscious	3,30
4	Shopping avoidance	4,06
4	Hedonistic oriented	4,12
4	Brand conscious	4,24
7	Novelty-fashion conscious	4,51

CONCLUSION

This study was an attempt for verifying the modified CSI instrument. Construct validity and reliability was assessed by using factor analysis with varimax rotation and Cronbach´s alpha coefficients.

Research results indicate that the instrument did not seem to be fully applicable to young-adult Slovak consumers, as only 26 out of 44 examined items loaded onto seven factors,

exhibited acceptable validity and reliability. Seven-factor model was confirmed, indicating that young-adult Slovak consumers express seven decision-making styles: Brand conscious, Hedonistic oriented, Quality conscious, Novelty-fashion conscious, Impulse driven, Shopping avoidance and Price conscious.

Results of t-test suggested three dominant shopping styles: Quality conscious, Impulse driven and Price conscious. Therefore, high quality products, incentives in the stores and low price are important driving shopping forces for young people.

Surprisingly, it was found that novelty-fashion is not a priority for young-adult consumers.

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Current Development Tendencies in High Technology Exports of the EU Countries

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Abstract: Countries' positions in the new international division of labor and their competitiveness in the worldwide economy depend on their capacity of manufacturing and exporting science-intensive, technically complex goods and services. As a result of the recent research the great differentiation in high technology exports volume and its influence on GDP among the EU countries has been discovered. Decline in the absolute export index since 2015, unstable growth rate on the whole in the EU within the period from 1997 to 2017, and also uneven growth rate of high technology exports in member-countries have been identified as current development tendencies in high-tech exports of the EU countries. By degree of high technology product export influence on the GDP, the EU countries have been divided into 4 groups. For the majority of member nations, this influence is of great importance, but has different closeness of cohesion and does not depend upon the level of development, the size of the economy or the period of membership in the EU. It has been justified that the countries of the last waves of the European Union enlargement are aiming at rapid elimination of the technological underdevelopment and export effectiveness increase by the rise of its technological sophistication.

Keywords: high technology exports, GDP, the EU, high technology products

JEL Classification codes: F14, O19, O33

INTRODUCTION

Countries' positions in the new international division of labor and their competitiveness in the worldwide economy depend on their capacity of manufacturing and exporting science-intensive, technically complex goods and services.

In 2016, the export volume of high technology products in the world amounted to 1.988 trillion dollars. In general, the EU shows an increase in the high technology product export volume. Within the period from 1995 to 2014, it doubled from 247.655 billion dollars to 693.205 billion dollars. However, since 2015 there has been a tendency for a decline and in 2017 the value of high technology exports of the EU dropped to 613.302 billion dollars. The EU share in the world high technology exports rose from 25% to 32% (World Bank).

In 2017, high technology export accounted for 17.85% of the aggregate volume of goods exported beyond the boundaries of the EU. Yet there is great differentiation among the EU countries in export volume of high technology products and their shares in the aggregate export: 34.3% (Ireland), 21.6% (the Netherlands), 20.5% (France), 18.1% (Great Britain), 14.8% (the Federal Republic of Germany), 15.3% (the Czech Republic), 4.3% (Greece).

The importance of increase in production and export of high technology goods is conditioned by three reasons: 1) manufacturing of high technology products is carried out by using state-of-the-art knowledge and technologies, which are the main source of their added value; 2) high technology production creates goods with higher added value; 3) high technology export

provides country with much higher profit compared to revenue from the exports of average- and low technology goods.

Therefore, high technology product exports create incentives for the development of the country's economy and the growth of its GDP.

In this regard, the objective of the article is the research on the current tendencies for high technology export development in the EU countries and evaluation of its connection with GDP of the EU countries as a resulting indicator of the development of its national economies.

1 LITERATURE REVIEW

There are three known approaches in the scientific literature and international practice to define the high technology product: the sectoral, the technological and the patent approaches. The sectoral approach is based on the definition of the degree of the research and development intensity (R&D) in the material production and service sectors. The share of costs spent on research and development in production is the indicator of the high technology in the sectors of material production.

In the service sector, the science-intensive services include: consultations on intellectual property, technologies that are directly connected with innovations in business management and can be crucial for the innovation implementation (OECD, 2006). The share of the employees with higher education among the overall number of employed people in the sector is posed as the measurement.

Since 1997, The Organization for Economic Co-operation and Development (OECD) has been using the technological approach to define the high technology product. According to the approach, the export of goods is divided into 4 categories: high technology (the most science-intensive export), average-technology (average-high, average-low) and low technology.

High technology products fall into nine groups according to Standard International Trade Classification (SITC - Rev. 4): aircraft, space and pharmaceutical goods, computers, office equipment, telecommunications equipment, electronics, medical, precision and optical instruments. (OECD, 2011). The classification criterion here is the share of direct costs on R&D in added value and gross output.

The patent approach originates from classification of high technology patents (based on The International Patent Classification).

In the EU belonging to Eurostat high technology product on the whole corresponds to the technological approach and includes aerospace machinery, computers, office equipment, electronic and telecommunication goods, pharmaceutical devices, non-electric machinery, armament (Eurostat).

Therefore, despite the existing differences in definition of high technology export, they are not substantial for the research results.

The St.Sandua and B.Ciocanelb's study points at the direct dependence between the expenses on R&D/innovations and the export of the high technology. At the same time, the influence of the frequent financing of R&D affects more the volume of the high technology export than government spending. (Sandua St., Ciocanelb B., 2014).

Several publications discover the factors defining the volumes of high technology sector in the EU countries. Considerable and positive influence of expenses on intellectual capital in the EU countries on volumes of high technology export is revealed by Lubacha-Sember J. At the same time, author states that the aforementioned dependency is present in every EU country except for the European Quartet. Because of the presence of the developed national innovation

systems, these countries export more high technology goods to the domestic market of the EU rather than abroad. (Lubacha-Sember J., 2013).

The positive impact on the countries' economies is explained by Falk M. Having analyzed 22 industrialized countries, he concluded that the intensity of R&D in business and the growth of high-tech exports are undoubtedly related with the growth of GDP per capita. At the same time, the intensity of R&D is more important determinant of this growth (Falk M., 2009).

The main objects of the research done by Grossman and Helpman (1995) are the initial conditions of technological capabilities and the accumulated technological experience. A change in growth rates is caused by a change in the intensity of research and development. Therefore, high rates of innovation are crucial for the growth of high-tech manufacturing and exports (Grossman, G. y E. Helpman, 1995).

The high-tech goods export significantly influences economic growth. The growth rate of high-tech export in the EU countries is ahead of the growth rates of countries' exports. Even during the global financial and economic crisis and the post-crisis period, the high-tech sector in Europe showed a higher dynamics compared to the medium- and low-tech industries. (Ekananda M., Parlinggoman D.J., 2017).

2 METHODOLOGY

In this article the authors use the technological approach to the definition of the high technology product according to the Standard International Trade Classification (SITC-Rev.4).

The exports of computers and office equipment, telecommunications equipment, electronics, medical, precision and optical instruments, outputs of aircraft, space and pharmaceutical industries, are considered as the high technology product exports.

The article is logically divided into the following parts: the first one outlines the objective and the methodology of the research; the second part includes the review, based on a study of monographs, of the modern scientific literature on high technology export and its influence on a national economy, and the results of the previous researches in this area.

Then, based on the analysis of the statistical database of The World Bank and Eurostat, conclusions related to current tendencies in the high technology exports of the EU countries and the considerable differentiation between the countries' growth rates are presented.

The next stage presents the results of the EU countries' grouping according to the degree of the connection closeness between the high technology exports and GDP obtained by using the economic statistical methods.

The main findings regarding the results of the carried out research are formulated in the conclusion.

The object of the research is the EU countries. The researched period is from 1995 to 2017.

The methodology of the research is based on identification of the tightness of the interdependence between the countries' high technology exports and the GDP of the EU countries in absolute values by calculating correlation coefficients using the software package Statistika.

The special statistical indicator - correlation coefficient r - is used for the quantitative evaluation of the existence of the connection between the studied combinations of the random numbers. Coefficient r is non-dimensional value, it can vary from 0 to ±1. The closer the value coefficient is to 1, the more correct is the statement that there is the linear connection between two examined aggregates of the variables.

3 RESULTS AND DISCUSSION

Considering the global economy interdependence, it should be stated that sustainable economic development of countries and the growth of their competitiveness could be achieved only if the manufacturing of the high-tech industries importance increases.

The EU's competitiveness in the world depends on the dynamic development of the high-tech sector and the increase of the high-tech goods share in exports.

However, it is not a good period for the high-tech development in Europe. There has been a decrease in its absolute performance since 2015. This dynamics is conditioned by the global tendencies and caused by the oil world prices decline and the slowdown in economic growth in many countries, which has a direct control over the industrial production (fig.1).

Fig. 1 Dynamics of high-tech exports (billion dollars) of the EU countries and the growth rate in 1996-2017, %
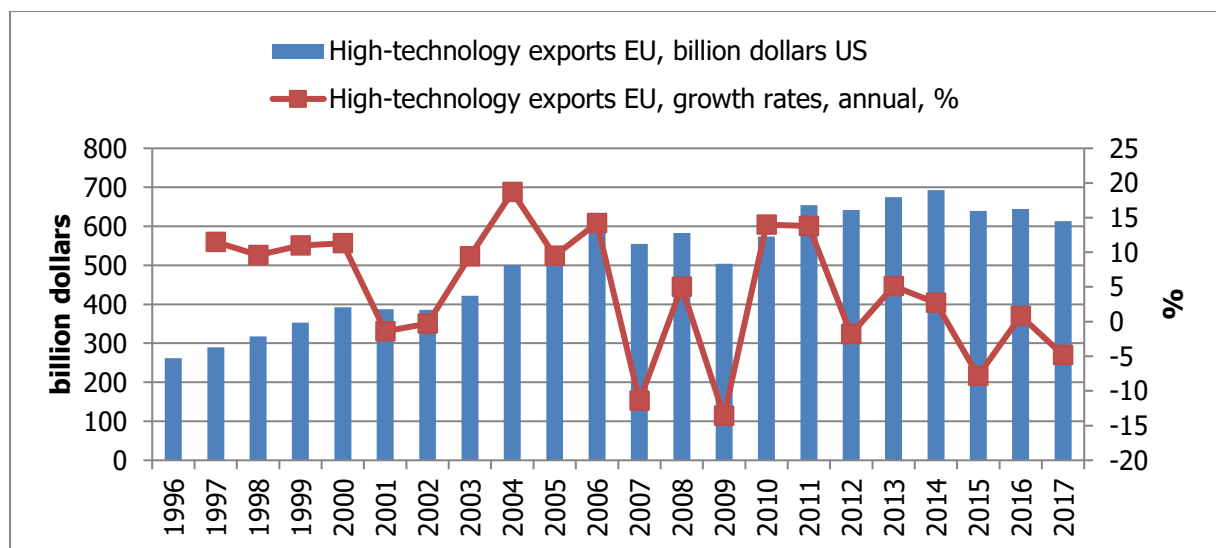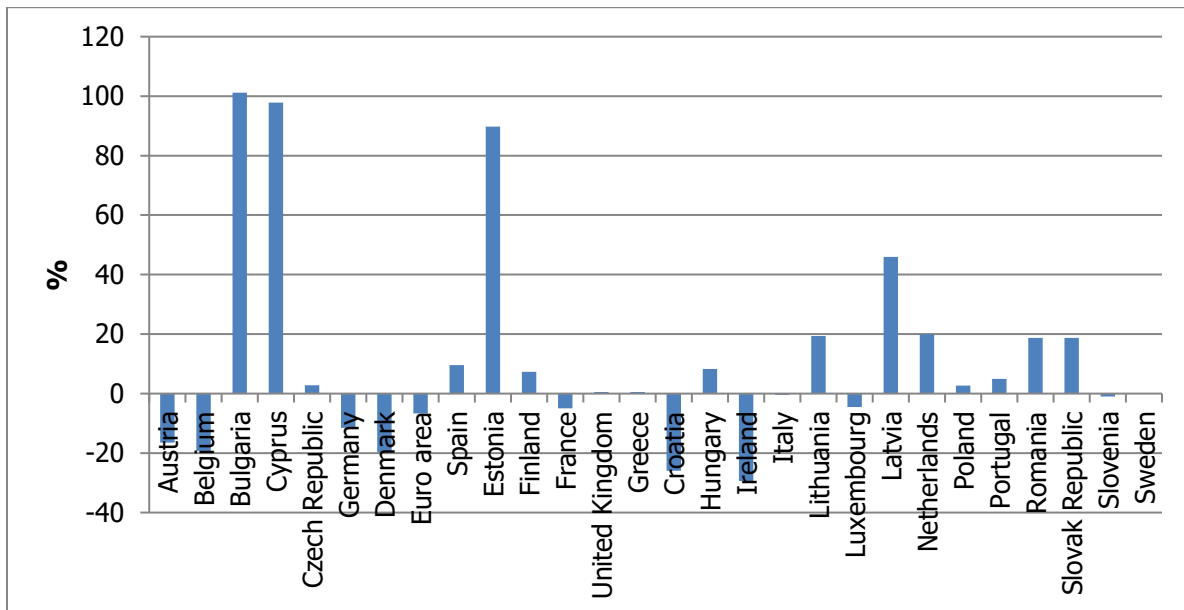

Source: calculated and compiled by the authors according to World Bank Indicators Online Database

Concerning the differentiation of EU countries by the high-tech export level growth rates in 2017, it should be admitted that it is significant (fig.2). There are the highest results in Bulgaria (101.2%), Cyprus (97.8%) and Estonia (89.8%). Latvia showed a rather high growth of 45.9%, Lithuania's result is 19.4%, the Netherlands showed the growth of 19.9%, Slovakia's and Romania's results are 18.7% each. The largest decline among the EU countries was in Ireland, it amounted to minus 29.4%.

In many ways, this differentiation is explained by the process of deindustrialization in most developed European countries that are moving industrial production to other countries (including Eastern European), and exports are shifting from goods to the provision of high-tech services.

Fig. 2 Growth rates of high-tech exports of EU countries in 2017, %.

Source: calculated and compiled by the authors according to World Bank Indicators Online Database

In addition, the countries of the recent waves of EU enlargement (2004, 2007) are seeking to get rid of the technological backwardness and increase export efficiency by increasing its technological sophistication. The highest increase in exports of high-tech products in the 1995-2017 period was showed by the following countries: Romania (64.5 times), Slovakia (38.4 times), Lithuania (37.8 times), Latvia (34 times), Poland (32 times), Estonia and Bulgaria (22.5 times), the Czech Republic (20 time).

As the result of research, the authors of the article calculated the correlation coefficient of the EU countries' GDP depending on the volumes of high-tech exports from 1995 to 2017 and presented a classification of countries according to the degree of closeness of the dependence between these indicators (tab. 1).

Tab. 1 Classification of EU countries by the correlation coefficient between the coefficient of high-tech export and GDP

	Correlation coefficient	Country Name
Group 1	0,9-1	Slovenia, Czech Republic, Lithuania, Hungary, Italy, France
Group 2	0,8-0,9	Germany, Poland, Austria, Romania, Slovak Republic, Bulgaria, Cyprus, Belgium, Croatia, Netherlands
Group 3	0,6-0,8	Spain, Latvia, Greece, Denmark, Estonia, Sweden, Portugal
Group 4	-0,7-0,4	Ireland, United Kingdom, Luxembourg, Malta, Finland

Source: calculated and compiled by the authors according to World Bank Indicators Online Database

The first group includes countries with a correlation coefficient in the range from 0.9 to 1. It means that the influence of high-tech exports on the GDP of these countries is too high. This group includes Slovenia, Czech Republic, Lithuania, Hungary, Italy and France.

The second group is the most numerous one. It includes countries with a correlation coefficient in the range from 0.8 to 0.9, which also indicates a high degree of influence of high technology exports on the GDP of these countries. The group includes Germany, Poland, Austria, Romania, Slovak Republic, Bulgaria, Cyprus, Belgium, Croatia and Netherlands.

The third group consists of the countries with a correlation coefficient from 0.6 to 0.8. This value of the coefficient indicates a significant dependence between considerable indicators. The coefficients in this group are surely lower than in the previous ones, but they are still high. The group includes Spain, Latvia, Greece, Denmark, Estonia, Sweden, and Portugal.

The fourth group involves countries that have correlation coefficients, which show the absence of a significant connection between high-tech imports and GDP, such as Ireland (0.303) and United Kingdom (0.266). There is also a minor negative dependence in Malta (-0.189) and Finland (-0.174), as well as Luxembourg with a coefficient of -0.654. From the point of view of statistical analysis, these results indicate a sufficiently strong feedback from high-tech exports and the country's GDP, that, definitely, has no logic. As for Luxembourg, its result can be explained by the fact that the country's economy and its exports are based on the services sector, and the country's economy does not depend on the production and export of high-tech industrial goods.

For a further investigation, the authors presented a scatter diagram created by using the Statistica software in order to demonstrate the dependence between the high-tech exports and GDP in different European countries in 2017 (fig. 3).

Fig. 3 Scatter diagram for GDP and high technology export, 2017
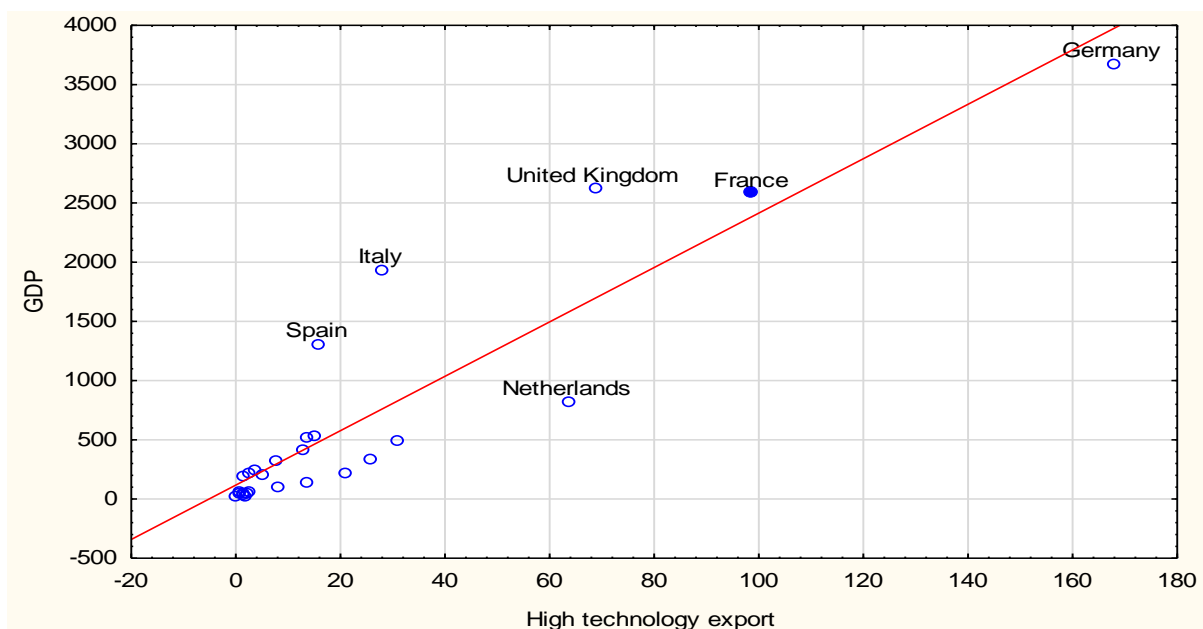
Source: calculated and compiled by the authors according to World Bank Indicators Online Database

The highest rates of high-tech exports and GDP were observed in Germany, which is far ahead of the others in number of mergers, but the deviation from the trend line is not significant. According to absolute results, France is in second place with a slight deviation from the

average. A substantial deviation from the trend line is shown by the UK, Italy and Spain, which have a comparatively higher GDP than the average ratio, with less high-tech export volume. There is the opposite situation in the Netherlands. The deviation from the average is caused by increase of the high-tech export.

As the submitted results show, the differentiation between the EU countries in terms of high-tech export and its impact on national GDP is too strong.

CONCLUSION

Therefore, taking into account the results of this research the following conclusions can be made:

- Strong differentiation between the EU countries in terms of high-tech export and its impact on national GDP has been revealed.
- In the context of current trends in the development of high-tech exports to the EU, there has been a reduction in its absolute indicators since 2015; unstable growth rates in the period 1997-2017 in the whole EU; and the uneven growth rate of high-tech exports among the member countries.
- According to the degree of influence of high-tech product export on the GDP of the EU countries, the classifications of four groups has been presented. For the majority of the union's members this influence is significant, but it has different closeness of cohesion and does not depend upon the level of development or size of an economy since the 1-3 groups include the so-called 'old' EU states with a high level of economic development and 'new' participants of the union that joined it as a result of the last waves of the European Union enlargement.
- The countries of the last enlargement aspire to catch up technological progress and to increase the efficiency of exports due to the growth of its technological effectiveness.

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Visegrad Group: Analysis of Agricultural Trade in the Russian Market Using Mirror Statistics and Foreign Trade Indices

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Abstract: Traditionally, the analysis of a country's exports is based on national statistics. However, the analysis of the same stream on the basis of the host country's mirror statistics in the form of its imports is no less important. Statistically these flows differ (on average 5-6%) by the size of insurance and transportation expenses.

In general mirror statistics is closer to the real conditions of the sales market. This allows quantifying the competitive position insurance and transportation of foreign goods in the market of the host country taking into account prices and volumes of supplies. It's also possible to study the logistic components of commodity supplies.

In the publication trade supplies of agricultural products and foodstuffs (APF) to the Russian market from V4 on the basis of data from customs statistics of Russiawill be analyzed. The state, dynamics and prospects of trade in the conditions of Russia's sanctions for the supply of agricultural products from EU (2012-2017) will also be analyzed. Using the foreign trade indices (FTI) toolkit on the example of the Czech Republic, the possibilities of restoring and expanding exports of agricultural products from V4 to Russia after the introduction of Russian sanctions (2015-2017) will be assessed taking into account the behavior of competitive groups of goods that ensure growth and expansion of trade on the Russian market.

Keywords: export, import, agricultural products and foodstuffs, mirror international statistics, foreign trade indices

JEL Classification codes: C43, F14, Q17

INTRODUCTION

The Russian market is the largest market for sales of goods from all European countries, including for V4 countries. Therefore, a practical analysis of the state, conditions of sales and prices of goods exported to the Russian market is demanded and relevant for each country trading with Russia, including V4 countries.

Traditionally the analysis of a country's exports is based on national statistics. However the analysis of the same stream on the basis of the host country's mirror statistics in the form of its imports is no less important.

In general mirror statistics is closer to the real conditions of the sales market, as it captures the receipt of goods for sale in the domestic market of the importing country. This allows using the tools of foreign trade indices quantifying the competitive positions of foreign goods and

their dynamics in the market of the host country, taking into account prices and volumes of supplies, which are carefully fixed by the customs service for calculating budget payments.

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.

In previous publications (Yurik, 2017; Pushkin, 2018; Yurik, 2018) the possibility and features of the use of mirror statistics for the analysis of foreign trade were considered, and also methods for calculating foreign trade indices with the selection of groups of significant goods were proposed.

This publication, continuing the study of mirror statistics and index methods in the practical analysis of foreign trade, contains the analysis of a state and dynamics of APF deliveries of V4-countries (2012-2017) during imposition of sanctions of the Russian Federation on deliveries from the European Union and an assessment of the possibilities for the growth of APF sales volumes in the Russian market. The main positions of the Czech APF in the Russian market were also studied in detail with the selection of four groups of goods of growth and the assessment of the competitive positions of the main of them in other countries environment of similar goods.

1 METHODOLOGY

Mirror statistics

As known, international trade between two countries is simultaneously monitored by the customs services of these countries. The result is a two-sided display of trade data, which is commonly referred to as mirror statistics. Theoretically in mirror statistics export of goods of one country to the other one should be equal to the import of goods of the latter country from the former one, whereas import of the former country from the latter one should be equal to export of the latter country to the former one. In practice, however, the mentioned trade volumes usually differ.

First of all, this is due to the difference in prices of the recorded flows. As is known, according to customs statistics methodology (WITS, 2010), the value of exporting goods of a country A to the market of a country B is represented by statistics of country A in FOB prices, while imports of goods from country A to country B are represented by statistics of country B at CIF prices, which additionally include the costs of insurance and transportation of goods.

According to the IMF, the world average CIF/FOB value is 1.06 (Bogdanova, 2010). For Russia the average conversion rate was 1.04 (Seltsovsky, 2004). Currently, the Central Bank of Russia at the mirror comparing statistics for non-CIS countries applies coefficient 1.0588 (BOP, 2018, c.40). In general, as experts note (MASR, 2015, p.7) the reasons for the asymmetry of the data (discrepancies in the mirror statistics) should be considered separately in each case.

Regarding the accuracy of registration of exports and imports, the UN statistics experts point out that for a given country, imports are usually recorded with more accuracy than exports because imports generally revenues while exports don't (WITS, 2010).

Overall the general view on the accuracy of data collected by customs offices is that import data are more reliable than export data because customs services are more serious about recording imported goods for purposes of tariff revenue collection, taxes, and other regulatory controls (Hamanaka, 2011, p.1).

The conclusion about a smaller asymmetry of import flows of mirror statistics was practically confirmed when comparing Czech export statistics on APF and mirror statistics on the import of Czech goods to Belarus (Yurik, 2017). Indeed, the mirror data of Czech imports from Belarus and Belarusian exports to the Czech Republic had rather large differences, while data on the opposite flow to Belarus, by contrast, differed slightly.

Foreign trade indices

Foreign trade indices (FTI) 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. 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. 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)

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 calculates foreign trade indices for the enlarged commodity sections of the HS.

For the analysis, we additionally calculated indices of 32 main Czech goods of groups 01-24 using the Laspeyres formula (1) for 2015-2017. Then, depending on the price-quantity-value indices, we divided the 32 main goods into 4 groups and calculated the corresponding group indices, as well as the indices of other goods (Pushkin, 2018; Yurik, 2018). In addition, to assess the competitive positions of separate Czech goods leaders, we used the customs statistics of the distribution of goods by importing countries and calculated the average price and share of each country in the market for the corresponding goods.

When analyzing the dynamics of APF import of V4-countries, statistical series by commodity groups 01-24 for each country from the database of the Federal Customs Service of the Russian Federation for 2012-2017 were also used (FCSR, 2018).

2 RESULTS AND DISCUSSION

2.1 Dynamics of agricultural products and foodstuffs trade of V4-countries in the mirror of Russian statistics

Trading on the Russian APF market for V4 is traditionally included in the foreign trade as one of the most popular business destinations. The share of APF trade in total V4 trade from the

Russian Federation in the last three years has remained at 6–7%, although before the introduction of Russian sanctions in 2014, it was higher (9–10%).

Tab. 1 Dynamics of APF supplies (HS 01-24) of V4 to the Russia Federation in 2012-2017

		2012	*2013*	*2014*	*2015*	*2016*	*2017*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	2017/ 2012,%	2017- 2012, million $
		\multicolumn{6}{c}{*Value, million $*}		\multicolumn{6}{c}{*Share, %*}			
V4	Total	19 646	20 189	17 583	10 418	10 055	12 428							63,3%	-7 218
	01-24	1 805,2	2 163,9	1 602,6	713,9	702,2	831,6	100%	100%	100%	100%	100%	100%	46,1%	-974
	- share, %	9,2%	10,7%	9,1%	6,9%	7,0%	6,7%								
CZECH REPUBLIC	Total	5 354	5 318	4 898	2 846	2 766	3 422							63,9%	-1 932
	01-24	124,5	134,6	154,9	100,5	109,3	125,5	6,9%	6,2%	9,7%	14,1%	15,6%	15,1%	100,8%	1
	- share, %	2,3%	2,5%	3,2%	3,5%	4,0%	3,7%								
SLOVAKIA	Total	3 715	3 538	2 864	1 760	1 666	2 007							54,0%	-1 708
	01-24	35,4	35,2	24,3	19,8	17,4	18,6	2,0%	1,6%	1,5%	2,8%	2,5%	2,2%	52,5%	-17
	- share, %	1,0%	1,0%	0,8%	1,1%	1,0%	0,9%								
HUNGARY	Total	3 103	3 007	2 740	1 715	1 662	2 091							67,4%	-1 012
	01-24	308,7	369,5	298,2	180,0	196,2	262,6	17,1%	17,1%	18,6%	25,2%	27,9%	31,6%	85,1%	-46
	- share, %	9,9%	12,3%	10,9%	10,5%	11,8%	12,6%								
POLAND	Total	7 474	8 326	7 081	4 097	3 960	4 908							65,7%	-2 566
	01-24	1 336,6	1 624,7	1 125,2	413,6	379,3	424,9	74,0%	75,1%	70,2%	57,9%	54,0%	51,1%	31,8%	-912
	- share, %	17,9%	19,5%	15,9%	10,1%	9,6%	8,7%								

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

In each of the V4 countries are the following indicators. Thus, in the Czech Republic and Slovakia, APF trade in the Russian Federation in 2017 amounted to 3.7% and 0.9% of the total foreign trade with Russia, although before the introduction of Russian sanctions in the pre-crisis 2013, its share was 2.5% and 1%, respectively. APF trade is more important for Hungary and Poland, where in the general results of trade on the Russian market its share from 2013 to 2017: for Hungary, it grew from 12.3% to 12.6%; for Poland, it decreased from 19.5% to 8.7%. As follows from Table 1, in 2012–2017, the share of each country of V4 in APF deliveries to the Russian market changed as follows: for the Czech Republic - increased from 6.9% to 15.1%, for Slovakia - slightly increased from 2% to 2.2%; for Hungary, it increased significantly from 17.1% to 31.6%; for Poland, it decreased from 74% to 51.1%.

Fig. 1 Russian import from V4-countries
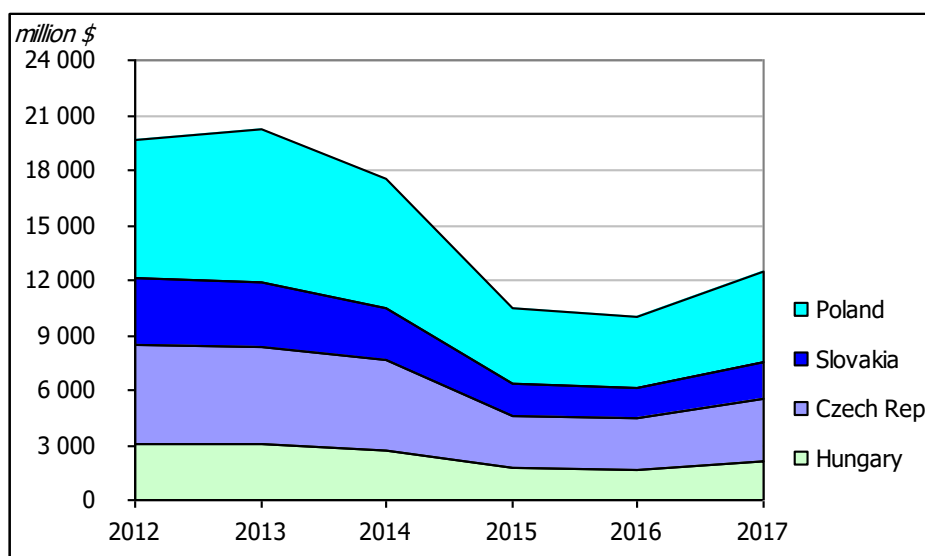
Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

Fig. 2 Russian APF (HS 01-24) import from V4
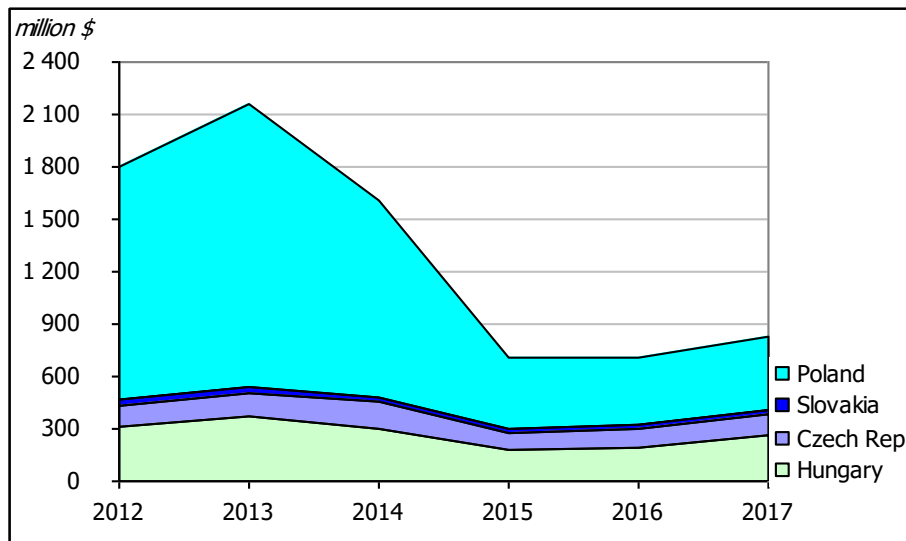
Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

APF trade in V4 countries, as follows from Table 1, in the considered period of 2012-2017 as a whole decreased by more than half (by 54% or 974 million dollars). The most significant reduction in the trade volume has been recorded since 2014. At this time, Russia imposed reciprocal trade restrictions on APF trade for EU countries (List of Russian counter sanctions, 2014), which led to an unprecedented reduction in the volume of supplies of V4 countries to the Russian Federation as a whole (Fig. 1), including APF supplies (Fig. 2).

Russian sanctions on deliveries to the Russian Federation had a different impact on each of the V4 countries, but everywhere in each of the countries they caused a drop in the supply of goods to the Russian market. Thus, the greatest total losses due to the sanctions were recorded in Poland. Here, from 2012 to 2017, the supply of Polish products to the Russian market as a whole declined by 34% or 2.6 billion dollars. The second place in the list of total losses was occupied by the Czech Republic with a reduction in deliveries to the Russian Federation from 2012 to 2017 by 36% or 1.9 billion dollars. In Slovakia and Hungary, total shipments to the Russian market also decreased by 46% and 32%, or by 1.7 and 1 billion dollars respectively.

As for the loss of APF supplies (Table 1), Poland was also the leader here (a decrease of 68% or 912 million dollars), while Poland's share in the APF supplies for the whole V4 significantly decreased from 74% to 51.1%. Hungary and Slovakia managed to stop the fall and get closer to the level of 2014. In Hungary, the APF supplies (Table 1) decreased by 15% or $ 46 million, and in Slovakia - by 47% or $ 17 million. At the same time, as noted above, the share of these two countries in the APF supplies structure increased all over: in Hungary - from 17.1% to 31.6%, in Slovakia - from 2% to 2.2%. We note that of the V4 countries, only the Czech Republic was able to stop the decline and in 2017 to exceed the level of APF supplies 2012 by 1 million dollars (an increase of 0.8%).

2.2 Analysis of the reduction in APF supply of V4-countries to the Russian market in 2014-2017 taking into account the sanctions restrictions on product groups

As is known the counter sanctions of Russia in the form of a list of prohibited goods (List of Russian counter sanctions, 2014) were introduced in August 2014 and included a ban on the

supply of products from EU countries and some other countries for most product subgroups (four positions of HS code) from product groups 02 (meat and offal), 03 (fish and shellfish), 04 (dairy products, birds' eggs), 07 (vegetables and roots), 08 (fruits and nuts), 16 (sausages and similar prepared foods), 19 (cheeses and cottage cheese with vegetable fats), 21 (finished products with milk and vegetable fats). In October 2017, this list was expanded at the expense of commodity group 01 (live animals) with a ban on the import of live pigs, except the purebreds. In addition, at the end of 2018, the sanctions of the Russian Federation were extended until the end of 2019.

Consider how the imposed sanctions of the Russian Federation reflected on the dynamics of the value of APF supplies volumes of V4 countries by product groups 01-24 in 2014-2017. We presented these indicators graphically by V4 countries in figures 3-6.

Fig. 3 Russian APF (HS 01-24) import from V4-countries: Poland
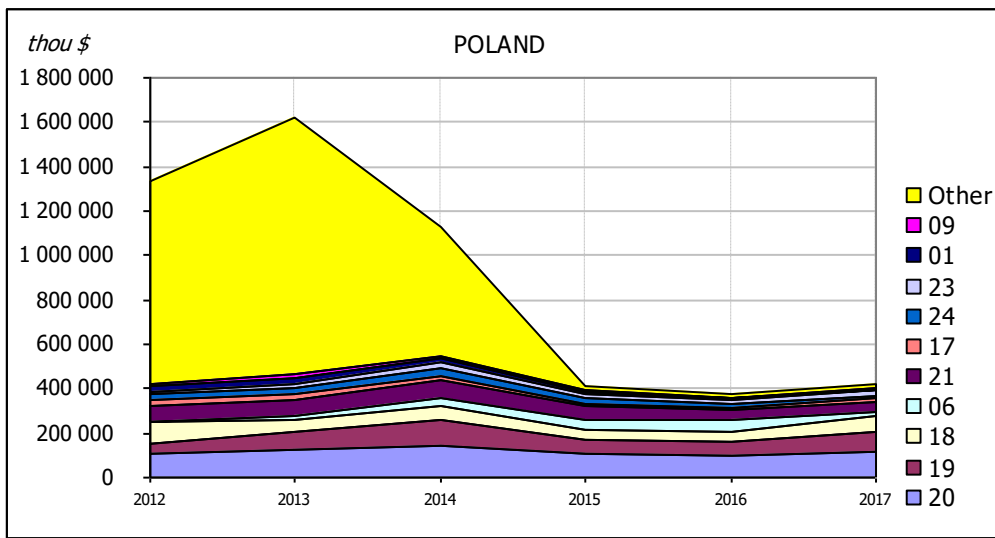
Source: Federal Customs Service of Russia (2019)

Fig. 4 Russian APF (HS 01-24) import from V4-countries: Hungary
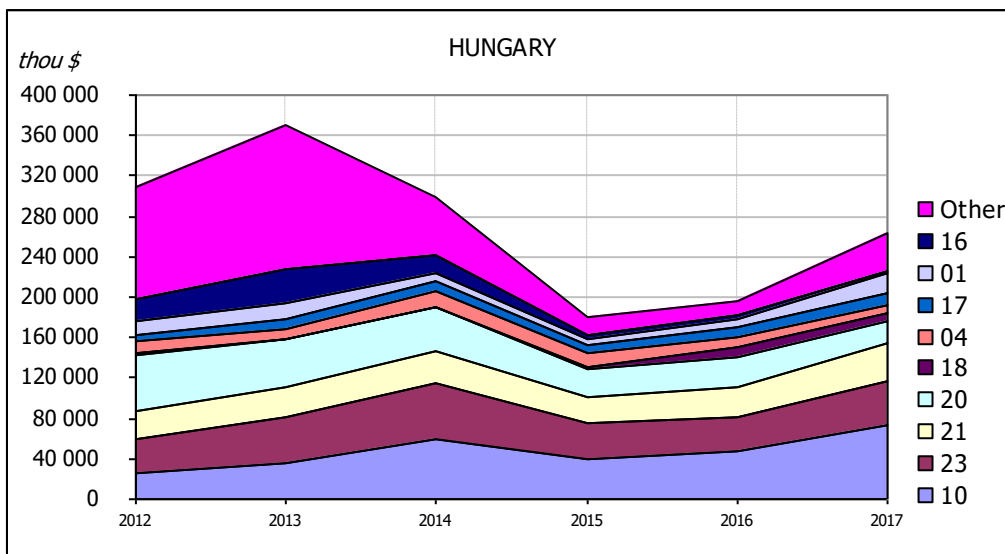
Source: Federal Customs Service of Russia (2019)

As Figure 3 shows for Poland the greatest reduction in the APF supplies falls to Other goods, which included commodity groups 04 (dairy products, birds' eggs), 07-08 (fresh fruits and vegetables) in 2012-2014. In the past three years (2015-2017), these goods have not been supplied due to the sanctions of the Russian Federation, and import from Poland have stabilized at an average level of $ 400 million. For Hungary, the largest cuts in APF supplies after the imposition of sanctions were given by Other products (Fig. 4) due to the cessation of supplies of meat and offal (from group 02). In the last three years, there has been an increase in the supply of goods from group 10 (cereals, seeds), as well as goods not included in the sanction list from groups 02 (meat and offal). We also note a noticeable increase in the supply of goods from group 01 (live animals), according to which an import ban was imposed on live pigs (subgroup 0103) in October 2017, which could affect future supply trends.

For Slovakia (Fig. 5) the Other products group was also a source of supply cuts and included sanctions groups 21 (finished products with milk and vegetable fats) and 16 (sausages and similar prepared foods). For the Czech Republic (Fig. 6), as follows from Figure 6, a noticeable reduction can be noted only in the unauthorized group 22 (alcoholic and non-alcoholic beverages), as well as in the sanction group 02 (meat and offal) with the supply of goods not included in the sanction list.

Fig. 5 Russian APF (HS 01-24) import from V4-countries: Slovakia
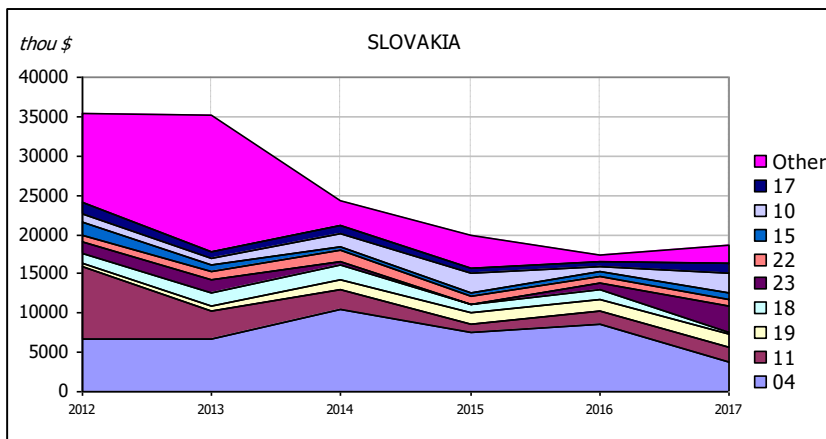
Source: Federal Customs Service of Russia (2019)

Fig. 6 Russian APF (HS 01-24) import from V4-countries: Czech Republic
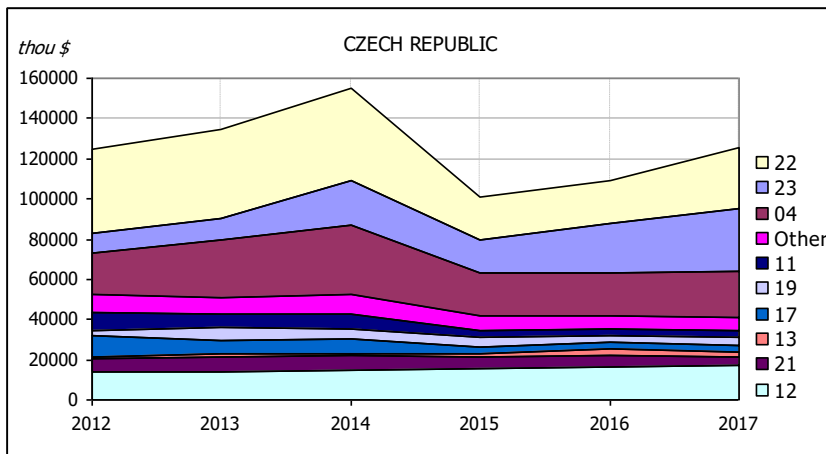
Source: Federal Customs Service of Russia (2019)

Table 2 shows the distribution of supply reductions by APF product groups in each country of V4, while for convenience, sanctions groups are marked with a yellow fill.

Tab. 2 Changes in the volume of APF supplies of V4 countries by HS 01-24 product groups

CZECH REP.		SLOVAKIA		HUNGARY		POLAND	
HS	*2017-2012 thou $*	*HS*	*2017-2012 thou $*	*HS*	*2017-2012 thou $*	*HS*	*2017-2012 thou $*
01-24	1 010	*01-24*	-16 834	*01-24*	-46 034	*01-24*	-911 690
Reduction		Reduction		Reduction		Reduction	
22	-10 743	11	-7 197	02	-48 996	07	-234 032
17	-6 790	16	-6 021	20	-34 267	04	-113 654
11	-5 484	04	-2 884	16	-18 881	02	-99 586
21	-2 320	01	-2 814	08	-11 494	03	-99 586
01	-1 730	18	-1 026	19	-7 431	18	-30 042
08	-728	15	-705	22	-5 558	21	-24 183
16	-353	17	-365	04	-4 841	01	-18 582
20	-263	21	-174	07	-4 116	16	-11 583
07	-177	20	-76	09	-530	17	-10 712
18	-116	Growth		15	-299	24	-9 856
24	-35	23	1 648	06	-189	09	-6 829
Growth		10	1 511	11	-104	22	-1 460
23	21 307	19	1 127	Growth		11	-1 308
12	3 364	22	89	10	47 116	15	-1 217
19	1 882			23	21 307	13	-264
04	1 869			23	10 813	05	-91
13	717			21	9 122	Growth	
15	307			18	8 346	19	49 126
10	164			17	6 655	06	12 768
06	54			01	4 430	23	11 439
02	50			12	3 222	20	7 888
09	35			24	966	12	1 383
05	0					10	510
						14	62

Note: yellow highlighted product groups from the List of Russian counter sanctions, 2014.

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019.

First, we consider the distribution of supply reductions by product groups HS 01-24 for V4 countries (Table 2). As follows from Table 2, of course, Russian sanctions affected all V4 countries, and the volume of APF trade in 2012–2017 declined in many product groups.

Thus, in the Czech Republic, of the total amount of the reduction in APF deliveries of 28.7 million dollars in the sanctioning groups (21, 01, 08, 16, 07) the reduction amounted to 5.3 million dollars. On the other hand, in the total volume of growth in deliveries by 29.7 million dollars deliveries of sanction groups increased by 3.7 million dollars. As a result, by 2017 compared to 2012, the Czech Republic was the only V4 country able to increase by $ 1 million the volume of APF supplies to the Russian market, including through the expansion of supplies within the framework of sanctions groups by subgroups of goods that were not included in the sanctions list. Here we also mention Slovakia and Hungary, which, within the framework of sanctions groups 19, 21, 01, increased the supply of goods that were not banned.

Several different situation can be noted for Poland, where the trade reduction took place practically on all sanctions groups of the list (List of Russian counter sanctions, 2014), and growth of deliveries of not forbidden goods within sanctions groups it is not noted in general. As a result, Poland still suffers significant losses, and the volume of APF supplies to the Russian market practically does not grow.

Thus, we can conclude that Russian sanctions to one degree or another caused a reduction in APF supplies to the Russian market of all V4-countries. But some countries were forced to completely stop the supply of sanctions products (Poland), others (the Czech Republic, Slovakia and Hungary), stopping the supply of sanction goods, reoriented to the supply of other products not included in the sanction list, as well as increase the supply of goods from unsanctioned groups.

Let us consider the post-sanctional status, features and prospects of APF trade on the Russian market for the Czech Republic, taking into account the results of statistics for 2015-2017.

2.3 Deliveries of Czech APF to the Russian market: post-sanctional continuation

As can be seen in Figures 3-6, after the introduction of sanctions, the trade volumes of the V4 countries, although they have significantly decreased, but in 2015-2017 for each country stabilized at their new level. Let's consider and analyze these new realities of trade in the Russian APF market using the example of the Czech Republic, which is the only non-CIS country after the introduction of Russian sanctions in 2014 against the EU by 2018 was able to halt the decline in APF trade and exceed 2015 trade volumes. The analysis will be carried out on the basis of specific goods, the receipt of which is recorded by statistics in the customs base (FCS, 2019). For the analysis, we will use index aggregation methods within the relevant groups of goods (Yurik S., 2018; Pushkin N., 2018).

The value of APF of commodity groups 01-24 in 2015 and 2017 amounted to 100.5 and 125.5 million dollars respectively and within three years it grew by 25% or 25 million dollars. For the calculation of foreign trade indices (FTI), taking into account the requirements of the FTI calculation methodology, we generated a list of the main Czech imported goods from 32 main products, which we divided into a group of 11 products with the greatest value weight and the remaining 21 products. The first group of 11 heavyweight goods had a share in the total volume of Czech imports in 2015 and 2017, respectively, 85% and 92%. Its commodity composition is presented in Table 3 along with the calculated indices, including for the selected groups of goodsThe calculations were carried out using the algorithms discussed in detail in our publication (Yurik S., 2018; Pushkin N., 2018).

As follows from Table 3, a group of 11 main goods ensured an increase in Czech APF import in 2015-2017 in the amount of 29.8 million dollars or 35%. At the same time, the remaining goods reduced the volume of deliveries by $ 3.7 million or by 31%. As a result, the total supply of 32 main goods increased by $ 26.1 million or by 26.8%. Here the leaders were the following subgroups: 2309 (animal feed) with an increase in supplies of $ 14.1 million; supplies of 22 alcoholic and other beverages in the total amount of 10.8 million dollars - this is a subgroup of 2203 (beer) and 2208 (spirits and liqueurs); subgroup 0407 (birds' eggs) with an increase in supplies of 1.8 million dollars. The latter subgroup has good growth rates and is not yet included in the Russian sanction list (List of Russian counter sanctions, 2014), which includes quite a few subgroups of dairy products from commodity group 04.

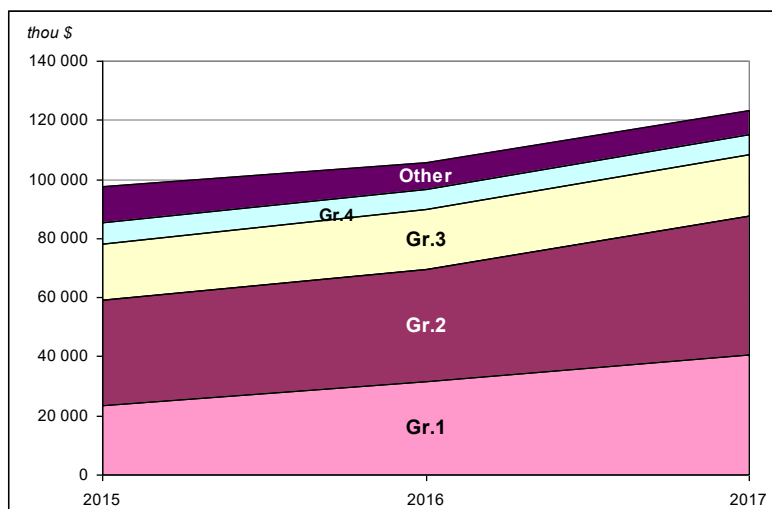**Tab. 3 Russian APF import from the Czech Republic: set of main goods with the largest share of value**

№	HS		2015		2017		2017-2015, thou $	Indices 2017/2015		
			Value, thou $	Share	Value, thou $	Share		price	volume	value
	01-24	Agricultural products and foodstuffs	100 532	100%	125 500	100%	24 968			1,248
	32 main goods		97 339	96,8%	123 429	98,4%	26 091	1,053	1,204	1,268
		- 11 main goods with the largest share of value	85 438	85,0%	115 233	91,8%	29795	1,064	1,267	1,349
1	2309	Animal feed	17 056	17,0%	31 160	24,8%	14105	1,179	1,550	1,827
2	2203	Beer	14 570	14,5%	23 814	19,0%	9244	0,933	1,751	1,634
3	0407	Birds'eggs	21 308	21,2%	23 127	18,4%	1819	0,812	1,337	1,085
4	1207	Other oil seeds and oleaginous fruits	11 618	11,6%	11 646	9,3%	27	1,009	0,993	1,002
5	2208	Spirits, liqueurs and other spirituous, beverages	3 596	3,6%	5 181	4,1%	1585	1,110	1,298	1,441
6	1210	Hop cones	2 778	2,8%	4 503	3,6%	1725	1,222	1,326	1,621
7	2106	Reparations not elsewhere specified or included	3723	3,7%	4100	3,3%	378	2,084	0,529	1,101
8	1704	Sugar confectionery (including white chocolate)	3 684	3,7%	3 568	2,8%	-116	1,093	0,886	0,968
9	1107	Malt; whether or not roasted	3 525	3,5%	3 265	2,6%	-260	0,926	1,001	0,926
10	1905	Pastry, cakes, biscuits and other bakers'wares	2 016	2,0%	2 720	2,2%	704	1,644	0,821	1,349
11	1302	Vegetable saps and extracts	1 564	1,6%	2 149	1,7%	585	1,582	0,869	1,374
		- other 21 main goods	11901	11,8%	8197	6,5%	-3705	1,064	0,647	0,689

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

We noticed that 11 heavyweight goods have different index characteristics, according to which additional groups can be formed: 1st group of goods-leaders, whose value supplies grow simultaneously with the rise in prices and quantity of goods (all indices are greater than one); 2nd group, where the value of the supply of goods is growing, but prices are falling (the average price index is less than one, the other indices are more than one); 3rd group, value deliveries of goods grow along with price increases with a decrease in volumes of supplies (quantity index is less than one, other indexes are more than one); 4th group with a final fall in value volumes (the value index is less than one, and so one of the remaining indices is also less than one).

It should be noted that the first three groups of products with a growing value provide 86% of the value of supplies with its growth compared to 2015 by $ 30.2 million. The structure of Czech APF import to Russia by selected groups is presented in Figure 7 and Table 4.

Fig. 7 Groups of Czech APF imported to Russia

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

Tab. 4 Russian APF import from the Czech Republic: set of main goods with rising and decreasing of value

HS		2015 Value, thou $	2015 Share	2017 Value, thou $	2017 Share	2017-2015, thou $	Indices 2017/2015 price	Indices 2017/2015 volume	Indices 2017/2015 value
01-24	Agricultural products and foodstuffs	100 532	100%	125 500	100%	24 968			1,248
	32 main goods	97 339	96,8%	123 429	98,4%	26 091	1,053	1,204	1,268
	- 11 main goods *with the largest share of value*	85 438	85,0%	115 233	91,8%	29 795	1,064	1,267	1,349
	- GROUP 1 *(increase in price, quantity, value)*	23 430	23,3%	40 844	32,5%	17 414	1,173	1,486	1,743
2309	Animal feed	17 056	17,0%	31 160	24,8%	14105	1,179	1,550	1,827
2208	Spirits, liqueurs and other spirituous, beverages	3 596	3,6%	5 181	4,1%	1585	1,110	1,298	1,441
1210	Hop cones	2 778	2,8%	4 503	3,6%	1725	1,222	1,326	1,621
	- GROUP 2 *(increase in value, decrease in price)*	35 878	35,7%	46 941	37,4%	11 064	0,861	1,519	1,308
2203	Beer	14 570	14,5%	23 814	19,0%	9244	0,933	1,751	1,634
0407	Birds'eggs	21 308	21,2%	23 127	18,4%	1819	0,812	1,337	1,085
	- GROUP 3 *(increase in value, decrease in quantity)*	18 921	18,8%	20 615	16,4%	1 694	1,336	0,816	1,090
1207	Other oil seeds and oleaginous fruits	11 618	11,6%	11 646	9,3%	27	1,009	0,993	1,002
2106	Reparations not elsewhere specified or included	3723	3,7%	4100	3,3%	378	2,084	0,529	1,101
1905	Pastry, cakes, biscuits and other bakers'wares	2 016	2,0%	2 720	2,2%	704	1,644	0,821	1,349
1302	Vegetable saps and extracts	1 564	1,6%	2 149	1,7%	585	1,582	0,869	1,374
	- GROUP 4 *(decrease in value)*	7 209	7,2%	6 833	5,4%	-377	1,011	0,937	0,948
1704	Sugar confectionery (including white chocolate)	3 684	3,7%	3 568	2,8%	-116	1,093	0,886	0,968
1107	Malt; whether or not roasted	3 525	3,5%	3 265	2,6%	-260	0,926	1,001	0,926
	- 21 other main goods *(decrease in value)*	11 901	11,8%	8 197	6,5%	-3 705	1,064	0,647	0,689

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

As shown in Table 4, by weight in the value of supplies is leading the second group of goods (beer and birds' eggs), with the most significant share (37.4%) in the total volume of APF supplies in 2017. In this group the increase in the value by 30.8% or $ 11.1 million is due to the growth in volumes with a decrease in average prices. Thus, the natural supply of beer increased by 75.1% while prices decreased by 6.7%, while the value increased by 63.4% or $ 9.2 million. Natural supply of eggs increased by 33.7%, the average price decreased by 18.8%, as a result, the value increased by 8.5% or $ 1.8 million.

Tab. 5-6   Data on price and market share of Russian import from non-CIS countries in 2017

	L	$/L	Share		t	thous, $	$/kg	Share
2203 Beer made from malt				**0407 Birds' eggs**				
non-CIS	153 835 151	1,09	100%	non-CIS	33787	178561,3	5,28	100%
DE	62 968 072	1,03	41%	NL	12444	49055,9	3,94	37%
CZ	27 037 780	0,88	18%	CZ	6728	23127,1	3,44	20%
BE	14 941 712	1,39	10%	DE	6175	33516,4	5,43	18%
LT	8 048 022	0,69	5%	FR	2205	26828,3	12,17	7%
GB	7 456 429	1,36	5%	PT	1349	6390,4	4,74	4%
IE	6 748 694	1,97	4%	ES	1284	6329,8	4,93	4%
MX	6 653 370	1,13	4%	SK	1034	3840,1	3,71	3%
CN	3 880 122	1,02	3%	CA	885	12593,9	14,23	3%
KR	2 807 170	0,76	2%	HU	783	7921,6	10,12	2%
FI	1 920 810	1,23	1%	BE	247	1060,8	4,29	1%
NL	1 810 921	1,65	1%	SE	240	1117,1	4,65	1%
PL	1 719 673	0,66	1%	GB	123	5097,7	41,44	0%
JP	1 528 475	1,07	1%	IT	107	737,6	6,89	0%
US	1 513 274	1,42	1%	DK	91	444,9	4,89	0%
FR	1 461 029	0,84	1%	PL	61	226,8	3,72	0%
Other	3 339 598	1,33	2%	IE	19	88	4,63	0%
				BR	12	185,1	15,43	0%

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2019

In general, the second group of products demonstrates a good example of adaptation to market conditions, when the supply of eggs (subgroup 0407) in the sanctions group of goods 04 began to expand at affordable prices, which led to an increase in the presence of these goods on the Russian APF market. Data on price conditions and market share of natural supply of beer and eggs we present in Tables 5–6.

Thus, compared to other V4 countries, in 2017 the average price of Czech eggs deliveries was 3.44 dollars / kg lower than in other V4 countries (in Hungary, Poland and Slovakia, the price of eggs was respectively 10.12; 3.72; 3.71 dollars / kg). At the same time, in natural supplies, the share of the Czech Republic among non-CIS countries on the Russian egg import market is significantly higher than other V4 countries - 19.9% versus 2.3%, 0.2%, 3.1%, respectively, of Hungary, Poland and Slovakia. In this case, the Czech Republic occupies the second position in the Russian market of imported eggs, behind the Netherlands (37% of the market with a price of $ 3.94 / kg) and ahead of Germany (18% of the market with a price of $ 5.43 / kg). Thus, the competitive position of the Czech Republic on the Russian market for imports of eggs from non-CIS countries is the highest among the V4 countries, which determined the final result. Prospects for further growth in the supply of Czech eggs are quite optimistic and the price allows winning a large market share.

As for subgroup 2203 (beer), its position in the Russian market can be called stable, since among non-CIS countries in 2017 Czech beer occupied 18% of the market, and this is the second place after Germany (41%) with a noticeable margin from third place Belgium (10% of the market of non-CIS countries). The average beer price per liter for Germany, the Czech Republic and Belgium was 1.03; 0.88 and 1.39 dollars / l. According to our estimates, the demand for original Czech beer in the Russian market will continue with a tendency of growth in both the number of deliveries and prices, since the closest competitors from non-CIS countries have a noticeable gap in prices from the Czech Republic. In addition, it is possible to recommend the expansion of the supply of premium Czech beer. Judging by the prices for German and Belgian beer, the Russian market is ready to pay more for high-quality original beer brewed and bottled in the Czech Republic.

The 1st group combined three main products with indices greater than one. Although the share of this group (32.5%) in APF import in 2017 is less than the second group, the first group is in first place in terms of the increase in supply: its deliveries increased by 74.3% or $ 17.4 million. The leader of the first group is the subgroup 2309 (animal feed), the volume of supplies of which increased in value by 83% or 14.1 million dollars, including volumes and average prices increased by 55% and 18% respectively. This most dynamic product subgroup has good growth prospects in the Russian market, where the demand for this product is high, especially in the area of first-class modern pet food, whose production in Russia is underdeveloped or absent. Further, supplies of subgroup 2208 (spirits and liqueurs) are growing steadily, with a forecast of positive growth in value due to the consistently high demand for Czech alcohol in the Russian Federation. The next subgroup of 1210 (hop cones) has good growth prospects: the value of supply increased by 62% or 1.7 million dollars. with an increase in prices and volumes, respectively, by 22% and 33%. In the Russian import market in 2017 hops from the Czech Republic ranks second after Germany (the market share of volumes is 11% and 73%, respectively), but the price of Czech hops is higher than Germany's - $ 12.3 / ton against $ 10.4 / ton. It is clear that product quality can be different, but the issue of price as a factor in expanding the presence of Czech hop suppliers in the Russian market must be under control.

The 3rd group, consisting of four products, ensured a 9% increase in value or $ 1.7 million, with a decrease in the supply of products by 18.4% and a rise in prices by 33.6%. Here the greatest increase in value by 35% or by 0.7 million dollars was provided by the subgroup 1905 (pastry, cakes, biscuits, other bakers' wares), the prices of whose products increased 1.6 times with a decrease in supply volumes by 17.9%. Supplies of subgroup 1302 (vegetable saps and

extracts) increased by $ 0.6 million or 37.4% due to a 1.6-fold increase in prices, while supply volumes decreased by 13.1%. Subgroup 2106 (food preparations not elsewhere specified or included) was able to increase the cost of supply by 10.1% or by $ 0.4 million, with prices rising 2.1 times and reducing natural supply by almost half (48%). Subgroup 1207 (other oil seeds and oleaginous fruits) demonstrates stability: the cost increased by 0.2%, the price by 0.9%, the amount decreased by 0.7%. For the time being it is difficult to predict the future behavior of the 3rd group in view of a rather wide range of supplies within the group's goods. But one thing is for sure - this is a group of growth in supply, although more modest than in previous groups.

The 4th group combines 2 products (of the remaining 11 main ones), the value of deliveries of which in 2015-2017 decreased by 5.2% or 0.4 million dollars due to a decrease in natural supply by 6.3% and a rise in prices by 1.1%. These are the general indices of group 4, although, as follows from Table 4, the reasons for the decrease in the value of the goods are different. Thus, in terms of deliveries of subgroup 1704 (sugar confectionery), the value reduction occurred against the backdrop of rising prices (by 9.3%), while the volume of natural supplies decreased by 11.4%. At the same time, in the other product group 1107 (malt), on the contrary, the value of supply decreased by 7.4% or by 0.26 million dollars due to a decrease in prices by 7.4% with an almost unchanged volume of natural supplies. Note that the price of Czech malt in the Russian market is lower than the average for non-CIS countries ($ 0.51 / kg versus the average $ 0.52 / kg). At the same time, Czech malt occupies 10% of the non-CIS supply market, second place after Germany (20.5% at a price of $ 0.65 / kg). With proper product quality, it can be assumed that the price of Czech malt may well grow along with the cost of supply.

In general, it can be noted that Czech products of the 4th group and others (outside the four selected groups) do not have a sufficient level of competitiveness and so far do not have a noticeable impact on the overall results of APF trade on the Russian market. Here, the center of trade interests is undoubtedly concentrated in the first three groups of Czech goods (Table 4), which have significant volumes of trade and have promising growth characteristics for expanding their presence in the Russian market.

CONCLUSION

1. Traditionally the analysis of the country's exports is based on national statistics. However the analysis of the same stream on the basis of the host country's mirror statistics in the form of its imports is no less important. In general mirror statistics is closer to the real conditions of the sales market, as it captures the receipt of goods for sale in the domestic market of the importing country. This allows using the tools of foreign trade indices quantifying the competitive positions of foreign goods and their dynamics in the market of the host country, taking into account prices and volumes of supplies, which are carefully fixed by the customs service for calculating budget payments.

2. According to the Federal Customs Service of the Russian Federation APF imports from V4 countries to Russia in 2012-2017 as a whole declined by more than half (by 54% or $ 974 million). The most significant decline in imports has been recorded since 2014. At this time Russia imposed reciprocal trade restrictions on APF trade for the EU and some other countries.

Russian sanctions had a different impact on each of the V4 countries, but in each of the countries they caused a drop in APF supply volumes to the Russian market. Here Poland was the leader (a decrease by 68% or $ 912 million). Hungary and Slovakia managed to stop the fall and get closer to the level of 2014. In Hungary APF deliveries decreased by 15% or $ 46 million, and in Slovakia - by 47% or $ 17 million. We note that of the V4 countries, only the

Czech Republic was able to stop the decline and in 2017 to exceed the level of APF supplies 2012 by 1 million dollars (an increase of 0.8%).

Analysis at the level of HS product groups showed that some countries (Czech Republic, Slovakia and Hungary), to stop supplying subgroups sanctions goods, shifted to the supply of other products not included in the sanctions list. Others (Poland) have completely stopped the supply of sanctions goods to the Russian market. However, as is known from press reports, Polish exports of apples and other vegetables and fruits are carried out to Russia through Belarus, where there are no sanctions bans on imported products and there is no customs border with Russia. In general the particularities of trade in each V4 country after the introduction of sanctions, of course, should be studied separately.

3. A detailed analysis of post-sanction trade (2015-2017) using FTI was carried out using the example of the Czech Republic. For FTI calculations, a list of the main 32 goods of Czech imports to the Russian Federation (share in the total volume of 98-99%) with data on cost and quantity was compiled. The analysis showed that the group of the main 11 products (92% of deliveries) provided an increase in deliveries by 35% or $ 30 million, and the remaining 21 goods reduced deliveries by 31% or 4 million dollars. Further, according to index characteristics, of the 11 main products, three groups of products were identified with an increase in supply (86% of supply) and one group with a reduction in supply (5%).

4. The largest weight in 2017 (37.4%) had the second group, which included subgroups 2203 (beer) and 0407 (eggs). These products successfully adapted in the post-sanction period, slightly lowering the price of the products, which made it possible to expand the volume natural supplies and obtain an increase in value. In the Russian market, these products occupy a significant market share among non-CIS countries and have prices lower than those of the main competitors from non-CIS countries. It is obvious that reducing the average price for the supply of these goods is impractical, and the average price for them should rise while maintaining product quality. In particular it is recommended to expand the supply of premium beer, which will bring the average price of Czech beer (0.88 dollars / l) closer to the average price of the closest competitors of Germany and Belgium (1.03 and 1.39 dollars/l).

The first group of growth (33% share) with price and volume indices greater than one included the leading product - subgroup 2309 (animal feed). Volumes of supply here increased in value by 83% or 14.1 million dollars, including volumes and average prices increased by 55% and 18% respectively. This most dynamic product subgroup has good growth prospects in the Russian market, where the demand for this product is high, especially in the area of first-class modern pet food, whose production in Russia is underdeveloped or absent. The growth prospects for the rest of the goods of this subgroup were positively assessed - 2208 (spirits and liqueurs) and 1210 (hop cones).

The third group with an increase in value and price and a decrease in volumes of natural supplies, included goods of subgroup with a small proportion and increase in sales, which was associated with a decrease in price and expansion in natural supplies. It is difficult to predict the behavior of goods of the third group in view of the rich assortment of its products. Here the value increase is possible due to lower prices or access to new products.

5. In conclusion noted the center of trade interests is undoubtedly concentrated in the first three groups of Czech goods, which have significant volumes of trade and have promising growth characteristics for expanding their presence in the Russian market. Czech products of the 4th group and others (outside the four selected groups) do not have a sufficient level of competitiveness and so far do not have a noticeable impact on the overall results of APF trade on the Russian market.

In further studies, we propose to continue the analysis of post-sanctioned trade of other V4 countries in the Russian APF market.

ACKNOWLEDGEMENT

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