20th International Joint Conference

CENTRAL AND EASTERN EUROPE IN THE CHANGING BUSINESS ENVIRONMENT

Proceedings

Prague, Czech Republic and Bratislava, Slovakia

October 26–27, 2020

Prague University of Economics and Business

Faculty of International Relations, Department of International Business

Faculty of Business Administration, Department of Marketing

and

University of Economics in Bratislava

Faculty of Commerce, Departments of Marketing and International Business

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The conference is jointly organized by Prague University of Economics and Business (namely the Dept. of International Business of the Faculty of International Relations and the Dept. of Marketing of the Faculty of Business Administration) and the University of Economics in Bratislava (namely the Depts. of Marketing and of International Business of the Faculty of Commerce). The conference is held in Prague and Bratislava every May, yet given the COVID-19 pandemic, the conference was postponed to October 2020. Due to the currently severe pandemic situation, it was decided to convene the conference on-line while fully respecting its original programme.

The conference focuses on the whole Central and Eastern European region, for it plays an increasingly important role in the economic development of Europe. The main objectives of the conference consist in identification and analysis of ways and strategies whereby globally operating businesses can maintain and raise their competitiveness regarding foreign competitors. For the last 20 years, the conference has constituted a valuable platform linking together excellent researchers from the CEE region (and other countries) and business representatives.

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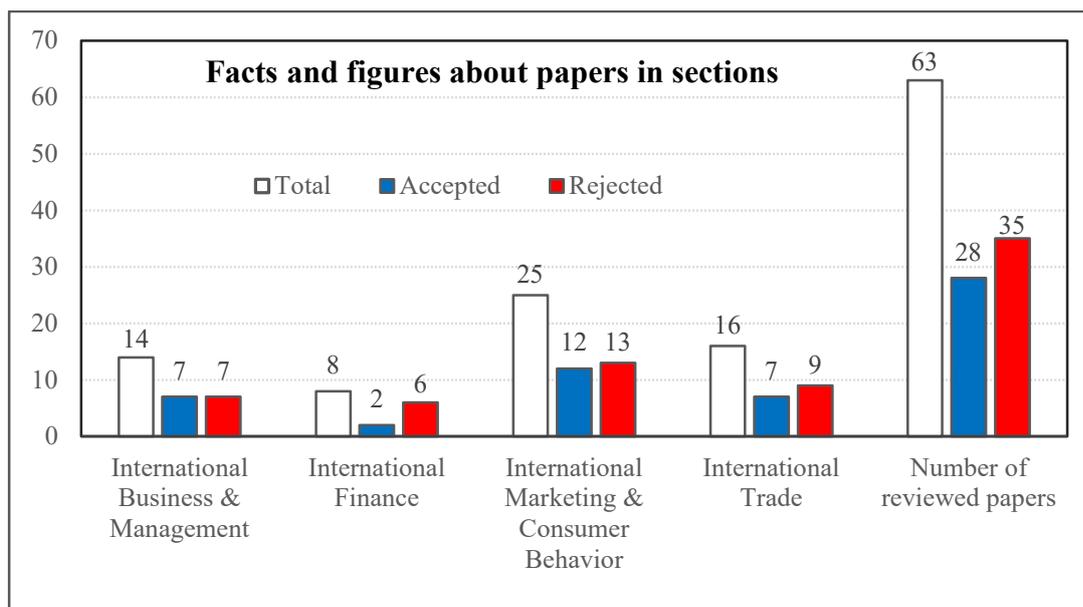
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Profiling Czech loyalty program users based on sociodemographic factors

Filip Beneš – Václav Stříteský
benf02@vse.cz, vaclav.stritesky@vse.cz
Prague University of Economics and Business, Faculty of Business Administration,
Department of Marketing
Prague, Czech Republic

Abstract: The academic community in the Czech Republic has access to a vast amount of literature that describes the theoretical underpinnings of loyalty programs. However, the literature seldom focuses on Central Europe and lacks in defining the typical Czech loyalty program user. Thus, the aim of this research is to profile Czech loyalty program users according to sociodemographic factors. Also, taking into account the specifics of selected market sectors, identifying the users by industry. To do so, it was necessary to collect information by data mining. Utilizing primarily Market & Media & Lifestyle (MML-TGI) database allowed to analyze a sample of 15,000 respondents from the Czech Republic. The profiles of Czech loyalty program users illustrate key sociodemographic factors that are typical for the loyalty program users. The availability of the profiles can serve businesses to launch or refine their loyalty programs with more accurate targeting.

INTRODUCTION

Marketing uses various marketing strategies that incorporate segmentation and targeting to narrow their scope and thus concentrate their efforts on the most gainful target group. Hence why shouldn't similar practice be conducted while implementing loyalty programs? The profiling of loyalty program users according to sociodemographic factors can generate data parallel to marketing segmentation. The profile of engaged groups of loyalty program members can consequently be used as a tool for efficient targeting of future members.

The aim of this research was to profile Czech loyalty program users according to sociodemographic factors. Also, taking into account the specifics of selected market sectors, identifying the users by industry.

1 LITERATURE REVIEW

Loyalty programs, as defined by Breugelmans (2015), are a way for consumers to benefit for their purchases by receiving rewards as well as for companies to gain more repeated business. At the same time, it allows the companies to collect vast amount of information about their customers to further improve targeting and overall marketing activities. Although the goal of loyalty programs is generally accepted, what defines a loyalty program is still debatable. Henderson et al. (2011) explains, that it became publicly accepted that loyalty programs can be one of many marketing initiatives such as rewards cards, dedicated support contacts,

discounts or more. Nonetheless, just because something is called a loyalty program, does not necessarily mean it is one.

Dorotic et al. (2012) propose five criteria for a general definition of loyalty programs. Firstly, it is necessary for the program to induce loyalty that leads to higher sales. Secondly, a loyalty program should have a formal structure that requires some sort of official registration to allow communication and relationship management. Thirdly, a loyalty program should be created in such a way that it promotes long term relationship so it cannot be used solely in times of promotions. Fourthly, the program should in some way reward members for loyal behavior. Lastly, loyalty programs should be accompanied by continuous marketing effort to manage members' demands and expectations.

Regarding preferences of loyalty programs, Tahal (2015) has conducted a study focusing on what types of loyalty programs Czech and English people prefer, finding out that Czechs mostly favor loyalty programs with immediate financial discounts. Concerning the drivers that make people join loyalty programs, García Goméz et al. (2012) suggests that it is those who solely view those programs positively that join, explaining that for example price sensitivity and search for variety have little to none effect.

On the subject of profiles of loyalty program users, there are far less studies that would provide a comprehensive insight. Nonetheless, some were conducted, for example by Tanford and Baloglu (2013), who investigated members of a casino loyalty program in the United States in Las Vegas. Finding that most members were female, married, high school graduates, in the age range of 41 to 50 years old, were African American, spoke English and earned between thirty to forty-five thousand US dollars a year. Bedford (2019) as well claims that loyalty program members are predominantly female, however, states, that the age range for members is for the most part rather fifty-five to sixty-five years old. Meyer-Waarden (2015) finds that loyalty program members in France are also in majority female and for grocery stores are thirty-one to forty-five years old while for perfumeries they are forty-six or older. Whereas Sabanoglu (2020) claims, that in the UK, loyalty cards are mainly always used by those who are sixty-five or older. García Gómez et al. (2012) expands those findings by views and lifestyle choices. They found out, that supermarket loyalty program members in Spain, have generally positive view of loyalty programs and that they do not have a strong desire for privacy.

In general, Meyer-Waarden (2015) states that loyalty program membership has a positive impact on customer purchase behavior. Not coincidentally, are those effects studied over a period of time in the long term by for example Liu (2007) and Chaudhuri et al. (2019). Yet there is lack of studies that would solely focus on profiling loyalty program users. Especially there is no key study that would profile Czech loyalty program users. Thus, the need for this study to profile Czech loyalty program users according to sociodemographic factors exists. Also, taking into account the specifics of selected market sectors, to identify the users by industry.

2 METHODOLOGY

Information was collected by data mining. Utilizing primarily Market & Media & Lifestyle (MML-TGI) database with data from 2017 to analyze a sample of 15,123 respondents from the Czech Republic. Equality of means test was conducted with the result of p-value < 0.05, implying statistical significance.

To better showcase, which sociodemographic factors are most representative of loyalty program users, data was organized into tables with three primary values, r %, c % and affinity index. R % and c % stand for row and column percentage. The affinity index is predominantly used to highlight which sociodemographic factors make one a better fit for a loyalty program.

The factors that have a value of affinity index 100 are an average fit, those bellow 100 are below average while those above 100 are above average. Hence factors with affinity index over 100 represent respondents that are more sensitive to loyalty program membership, making them a good fit. The affinity index is calculated by independently dividing the percentage of an interested target group by the percentage of an interested whole population and then multiplying it by a hundred. Nonetheless, just because certain factors have very high affinity index, does not mean that they have a numerous representation in the population. To have a better idea of representation, one should interpret affinity indexes with the row and column percentages.

3 RESULTS AND DISCUSSION

Prior to constructing the profile of Czech loyalty programs users, it is not out of question to first investigate the advancement of market penetration of loyalty programs. Although loyalty programs have been around the world for well over a hundred years, available data for the Czech market ranges from 2012 to 2017 with an extra entry for 2008. Starting with the year 2008, market penetration of loyalty programs in the Czech Republic was 15.8 %. As shown in Figure 1, by 2012 the level of penetration was already at 35.6 % and growing to 53.4 % by 2017, tripling in amount over the course of 12 years. This demonstrates that loyalty programs are a growing and most likely demanded marketing tool in the Czech Republic.

This mean that in the year 2017 (the year the used data represents), 53.4 % of people in the Czech Republic were or have been members of a loyalty program in the past 12 months. That indicates that majority of respondents do take part in those programs. This is important to keep in mind, as the following key sociodemographic factors of loyalty program users are referring to approximately half of the respondents.

Fig. 1 Loyalty program penetration in the Czech market
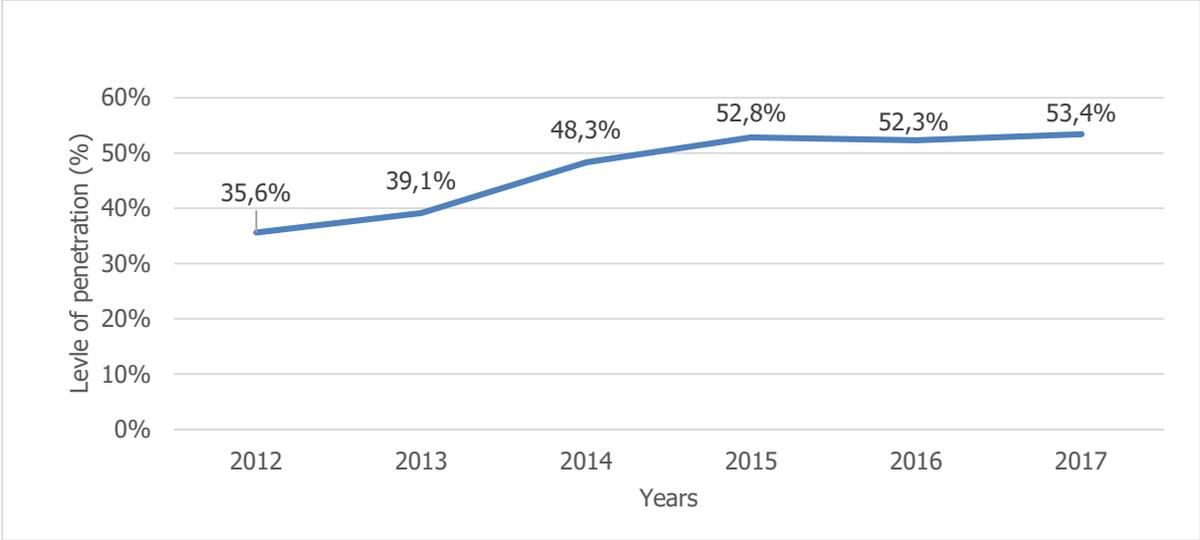
Source: Retrieved from MML-TGI, 2012 – 2017

Members and non-members of loyalty programs were examined by sex to reveal which of the two genders is a better fit. Table 1 shows that out of all of the respondents that are or were members of a loyalty program in the past 12 months, 57.2 % are female. Taking only females into consideration, 60.6 % of them are or were members of a loyalty program, while only 46 % of males are or were members, suggesting that loyalty program membership is more

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relevant for females than males. This is further supported as the affinity index is over 100 for females in category of being a member, while for males it is below. Thus, it is also the opposite in the category of not being a loyalty program member.

To further investigate the sociodemographic factors of Czech loyalty program users, it was necessary to profile members and non-members according to age. Table 1 shows members and non-members in detailed age groups. Prior to examining them in detail, they were analyzed in broader categories. That revealed that loyalty program members in the age range of 30 to 49 years old have the highest affinity index of 117.3 and are the only members group whose index is greater than 100. This age group also represents the most amount of loyalty program members out of all the respondents. Regarding non-users of loyalty programs, most of those respondents are in the age range of 50 to 79 years old (and have an affinity index over 100). However, the highest affinity index for non-members is for the age group of 12 to 29-year olds. Suggesting, that the most numerous and best fitted Czech loyalty program members are in the age range of 30 to 49 years old, while the ones who do not use loyalty programs are mainly in age range of 12 to 29 and 50 to 79 years old.

Tab. 1 Loyalty program members vs. non-members in the Czech Republic according to gender, age and education

		Are you or were you a member of a loyalty program in the past 12 months?								
		Yes			No			Total		
		r %	c %	Index	r %	c %	Index	r %	c %	Index
Gender of respondent										
	Male	46.0	42.8	86.2	54.0	57.4	115.7	100.0	49.6	100.0
	Female	60.6	57.2	113.5	39.4	42.6	84.5	100.0	50.4	100.0
Age of respondent										
	12-19 years old	18.2	2.9	34.1	81.8	15.1	175.4	100.0	8.6	100.0
	20-29 years old	53.8	14.9	100.8	46.2	14.6	99.1	100.0	14.7	100.0
	30-39 years old	59.0	20.6	110.6	41.0	16.4	87.9	100.0	18.6	100.0
	40-49 years old	66.2	22.5	124.1	33.8	13.1	72.4	100.0	18.2	100.0
	50-59 years old	55.1	15.5	103.2	44.9	14.4	96.3	100.0	15.0	100.0
	60-69 years old	55.9	16.6	104.8	44.1	15.0	94.5	100.0	15.8	100.0
	70-79 years old	41.4	7.0	77.6	58.6	11.4	125.6	100.0	9.1	100.0
Education of respondent										
	Primary education	34.9	13.6	65.3	65.1	29.1	139.7	100.0	20.9	100.0
	Vocational certificate/high school without "maturita"	50.8	31.6	95.1	49.2	35.1	105.6	100.0	33.2	100.0
	High school with "maturita"	61.7	37.7	115.6	38.3	26.8	82.2	100.0	32.6	100.0
	University degree	68.5	17.1	128.4	31.5	9.0	67.5	100.0	13.3	100.0

Source: Retrieved from MML-TGI, 2017, N = 15 123, p-value < 0.05

To gain a better understanding of the loyalty program members and non-members according to age, it was necessary to analyze the age groups in more detailed categories as seen in

Table 1. This table reveals that membership in loyalty programs is relevant to respondents from the age of 20 to 69 years old as those categories have affinity index of over 100. However, the strongest affinity index of 124.1 is for the age group of 40 to 49 years old, while the highest (and over 100) affinity index for non-members belongs to the age group of 12 to 19 years old followed by 70 to 79 years old. This suggests that loyalty programs are best fitted to 40 to 49 years, while the worst fitted are 12 to 19 and 70 to 79 years old.

Education of loyalty programs members and non-members in Table 1 is divided into four categories. The first and last category, primary education and university education, are self-explanatory. The two middle categories involving high school have a mention of "maturita", a Czech state exam that is administered as high school leaving exam. With that in mind, Table 1 showcases a very consistent growth in the affinity index of loyalty program members. The least educated members having an index of 65.3 while the most educated members have an index of 128.4. Showing, that the more educated the respondents are, the better they are fitted for a loyalty program as they most likely see its benefits. Understandably, that is why university students are according to affinity index value best fitted for loyalty programs. High school graduates with "maturita" are well fitted as well. It is worth to mention that with the non-members one can logically see the opposite trend.

It is equally important to also evaluate what levels of income influence membership in loyalty programs. Table 2 displays the effect of net monthly income divided in eight brackets (including a category of respondents, 18 %, that refused to disclose their income). It shows, that loyalty program members earning 75,001 CZK or more, have the highest affinity index, thus making them the best fitting for loyalty program membership. Nonetheless, it is important to also take into to consideration the size of the group. As for example the highest earners with the highest affinity index represent only 0.3 % of respondents. Additionally, respondents earning in the range of 10,001 CZK to 75,000 CZK are also a good fit for membership as their affinity index is over 100. Surprisingly though, the most likely non-members are those earning below 10,000 CZK a month. In regards to non-members, those earning 75,000 CZK or more have an error in calculation, as they represent no respondents. It is also worth to mention, that the net monthly income follows the same pattern of increasing affinity index as the level of education, suggesting that the more one earns, the more likely they are to enroll in a loyalty program.

Concerning lifestyle of respondents, there are various ones that define and separate members of loyalty programs from non-members. Table 3 shows that the greatest affinity index, 139, belongs to those whose lifestyle can be defined as action. That suggests that those respondents are most sensitive to loyalty program membership. Additionally, lifestyles that are defined as educated, pro-family and informed all score above 100 in affinity index and suggest that they as well are a good fit for loyalty program membership. On the other hand, respondents least fitted for membership can be defined by lifestyle of modern, independent, consumer and settled. Incorporating mean value match analysis, it is interesting to notice the similar approach to loyalty program membership that some lifestyle types have with other. Most notably, those with action lifestyle with educated and pro-family with informed. Regarding non-members, those with independent lifestyle have a similar approach those that are settled.

Additionally, psychological traits also define and separate members of loyalty programs from non-members. Figure 2 shows a selection of various psychological traits of loyalty program members and non-members and their averages of scores on a scale of 1 to 10. For loyalty program members, the highest scoring one is conscientiousness, followed by family adaptability, friendliness and activity. While non-members highest scoring traits are accustomed and masculinity.

Tab. 2 Loyalty program members vs. non-members in the Czech Republic according to net monthly income

	Are you or were you a member of a loyalty program in the last 12 months?					
	Yes			No		
Net monthly income	r %	c %	Index	r %	c %	Index
No income to 10.000 CZK	41.3	15.4	77.4	58.7	25.1	125.8
10.001 CZK to 20.000 CZK	56.3	42.0	105.5	43.7	37.3	93.7
20.001 CZK to 30.000 CZK	59.1	17.2	110.8	40.9	13.6	87.7
30.001 CZK to 40.000 CZK	66.4	4.8	124.5	33.6	2.8	72.0
40.001 CZK to 50.000 CZK	73.7	1.4	138.1	26.3	0.6	56.4
50.001 CZK to 75.000 CZK	80.0	0.8	150.0	20.0	0.2	42.8
75.001 CZK and more	88.0	0.3	165.0	12.0	0.0	25.7
Not specified	50.4	18.1	94.5	49.6	20.4	106.3

Source: Retrieved from MML-TGI, 2017, N = 15 123, p-value < 0.05

Tab. 3 Loyalty program members vs. non-members in the Czech Republic according to lifestyle typology

Are you or were you a member of a loyalty program in the last 12 months?	Lifestyle typology							
	Modern	Independents	Action	Education	Pro-family	Consumer	Informed	Settled
	Index	Index	Index	Index	Index	Index	Index	Index
Yes	62.7	77.7	139.0	134.9	110.6	90.9	119.0	73.4
No	142.6	125.5	55.4	60.1	87.9	110.4	78.2	130.5

Source: Retrieved from MML-TGI, 2017, N = 15 123, p-value < 0.05

Additionally, psychological traits also define and separate members of loyalty programs from non-members. Figure 2 shows a selection of various psychological traits of loyalty program members and non-members and their averages of scores on a scale of 1 to 10. For loyalty program members, the highest scoring one is conscientiousness, followed by family adaptability, friendliness and activity. While non-members highest scoring traits are accustomed and masculinity.

As all the available sociodemographic factors were covered, it is necessary to also put them into perspective with the industries that offer loyalty programs. Figure 3 shows the level of penetration of loyalty programs in the Czech Republic across various industries. So far, the most dominating one are hypermarkets and supermarkets. 43.5 % of respondents said they are part of such loyalty program. The second most used loyalty programs fall into the category of other and represent the various programs that were not listed as an option. The third is the drugstore and cosmetics category. The lowest participation occurs with telephone service providers.

Further on, Table 4 showcases sociodemographic factors with the highest affinity index for each industry. At first glance, it does seem that all the industries yield the same results. However, there are two differences. Gas station loyalty programs are dominated by males and loyalty programs of drugstores and cosmetics stores are dominated by lower earning respondents. For instance, the most penetrated industry, hypermarkets and supermarkets, is the best fitting membership for females, 40 to 49 years old, with university education and earning 30,001 CZK a month or more. It is important to keep in mind though that Table 4 includes only the highest affinity indexes, meaning those respondents who are most sensitive to loyalty program membership. Yet, there are other factors that also have affinity index value of 100 and above.

Fig. 2 Psychological traits of loyalty program members and non-members
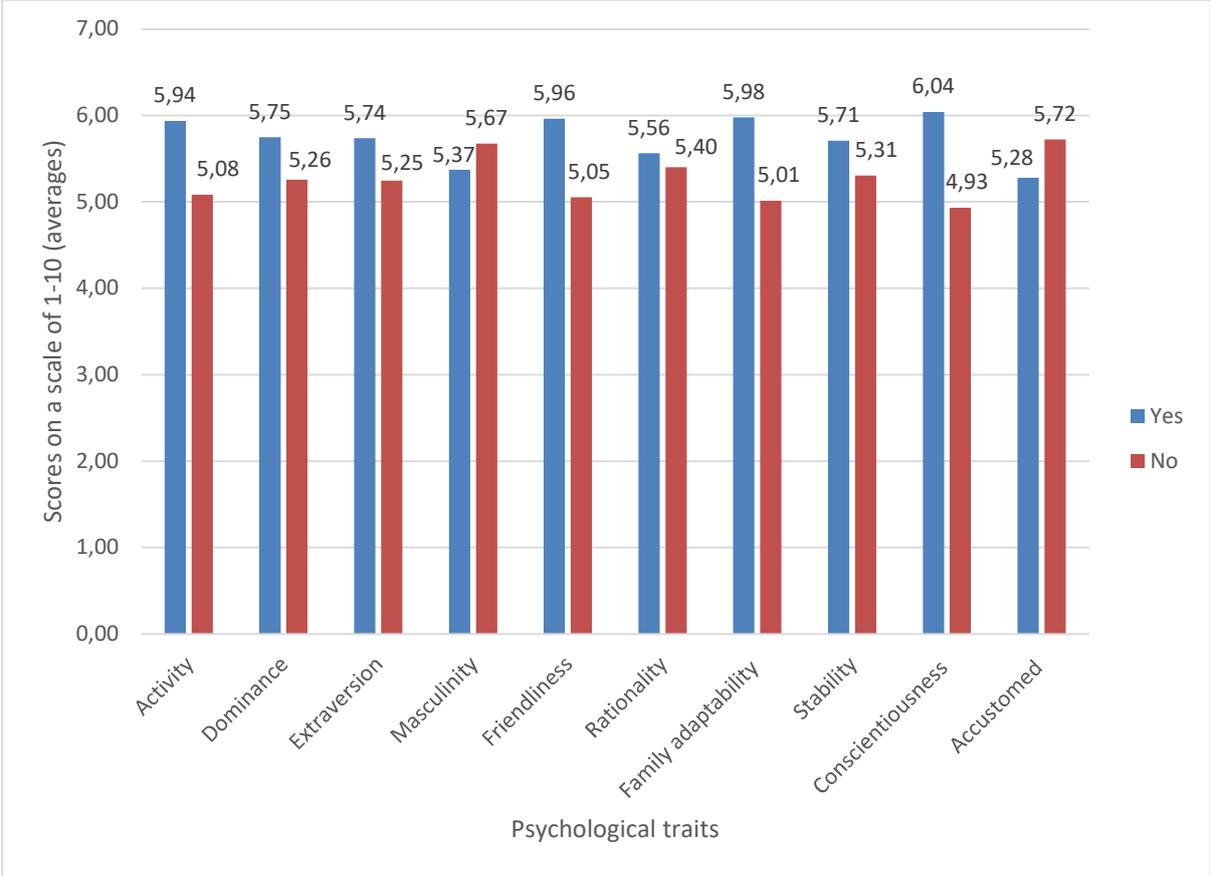
Source: Retrieved from MML-TGI, 2017, N = 15 123, p-value < 0.05

This makes loyalty programs of certain industries more fitting to some than others. For instance, the most penetrated industry, hypermarkets and supermarkets, is actually a good loyalty program membership fit for people who are female, 30 to 69 years old with high school education (with "maturita") or university degree and a net monthly income of 4,001 CZK and more. Once all the factors which have affinity index of 100 and above are included, the profile a company with a loyalty program can focus on becomes wider and different across the industries. There is an exception though for the education of loyalty program members. Data suggests that in all the industries, respondents with high school education (with "maturita") or university degree all score affinity index over 100. Although the index ranges from 115.6 to 165.9, both groups are more sensitive to loyalty program membership than others with lower reaching education.

Fig. 3 Loyalty program penetration across industries in the Czech market
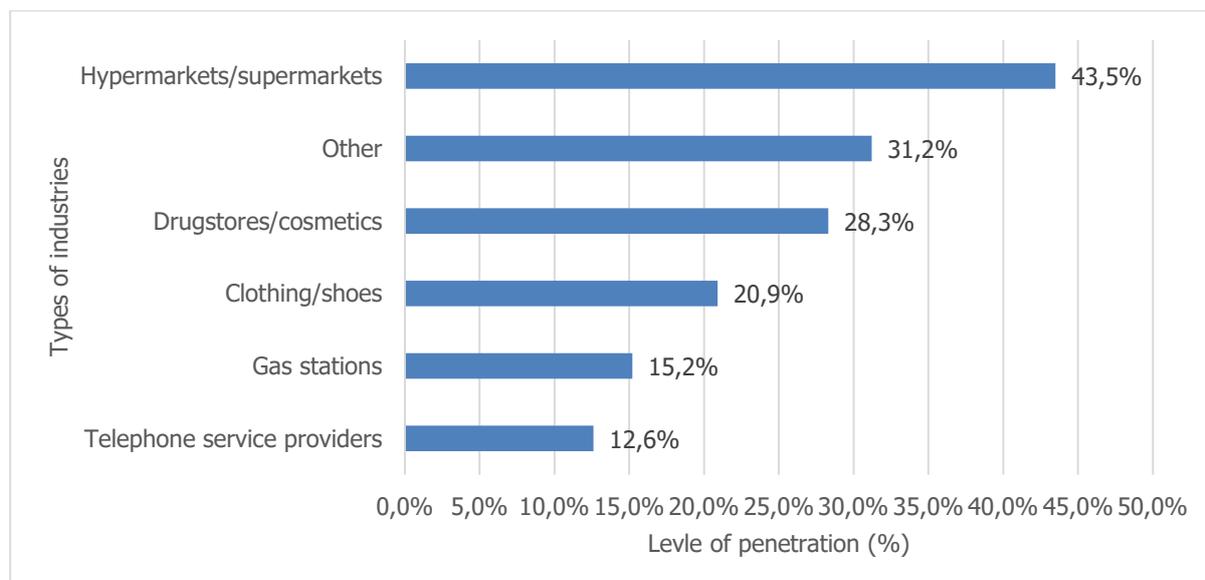
Source: Retrieved from MML-TGI, 2017, N = 15 123, p-value < 0.05

Tab. 4 Loyalty program members with the highest affinity index in the Czech Republic according to gender, age, education and net monthly income sorted by type of industry

Type of industry	Level of penetration %	Gender	Age	Education	Net monthly income
Hypermarkets/ supermarkets	43.5%	female	40-49 years	University education	30,001 CZK and more
Index		117.1	124.9	134.9	120.6
Other	31.2%	female	40-49 years	University education	30,001 CZK and more
Index		123.0	129.2	142.0	146.3
Drugstores/ cosmetics	28.3%	female	40-49 years	University education	4,001 CZK - 10,000 CZK
Index		145.9	125.7	135.2	118.2
Clothing/shoes	20.9%	female	40-49 years	University education	30,001 CZK and more
Index		124.7	150.9	165.9	176.0
Gas stations	15.2%	male	40-49 years	University education	30,001 CZK and more
Index		122.7	158.5	145.5	247.3
Telephone service providers	12.6%	female	40-49 years	University education	30,001 CZK and more
Index		109.4	133.2	136.4	149.0

Source: Retrieved from MML-TGI, 2017, N = 15 123, p-value < 0.05

Regarding the other industries, drugstores and cosmetics stores membership is actually suited for 20 to 59-year olds with net monthly income between 4,001 CZK and 20,000 CZK. Membership regarding clothing and shoes is fitted for 20 to 49-year olds with net monthly income of 20,001 CZK and more. Gas station loyalty programs are suited for 20 to 49-year olds with net monthly income of 20,001 CZK and more. Lastly, telephone service providers' loyalty program membership is fitting for 20 to 29 and 40 to 49 years old with net monthly income of 4,001 CZK and more.

CONCLUSION

Taking into consideration all the affinity indexes, certain sociodemographic factors are more prevalent than others. Compiling this data generates a profile that suggests which people are more sensitive and thus likely to join a loyalty program. The analysis suggests that loyalty program membership seems to be mainly suited for people that are females in the age range of 40 to 49 years old, with university education and net monthly income of 75,001 CZK or more. Also, for people whose lifestyle can be defined as action, education, pro-family and informed. Additionally, people whose psychological traits are comprised of conscientiousness, family adaptability, friendliness and activity. Interestingly, mentioned foreign studies agree upon findings that women and people who are middle aged or older are predominate users of loyalty programs. Which is in accordance with the finding of this research.

However, the selected sociodemographic factors mentioned are only those that displayed the highest affinity index. It is crucial to mention that other factors also showed affinity index of 100 or more, meaning that one should not have a narrow scope when viewing the profile. Those other sociodemographic factors with affinity index value of 100 or more are important as well. Hence, when selecting which segments a loyalty program should target, one should consider a broader view. Acknowledging that people from age of 20 to 69 years old, with high school education (with "maturita") or university degree and earning 10,001 CZK or more are in fact more prone to become loyalty program members than others. They are just not as sensitive to membership as the previously mentioned profile.

The mentioned profile almost implies that loyalty programs should in fact focus on almost all the consumers, since the span within the mentioned sociodemographic factors is so wide. For such reason, loyalty program members were also divided according to various industries, revealing a more fitted profile due to the different products and services that those businesses offer. Most notably, that loyalty programs of hypermarkets and supermarkets are actually a good membership fit for people who are female, 30 to 69 years old, with high school education (with "maturita") or university degree and a net monthly income of 4,001 CZK and more. One can notice that this profile in fact differs from the general profile, as different segments are prone to different behaviours.

These profiles, either the general ones or those fitted to certain industry, represent the most sensitive and responsive consumers to loyalty program membership. Such data can serve as a pillar for new or remodelled targeting. If a company wishes for their marketing campaign to target those who are most likely to become loyalty program members, they can use the data to target more precisely. Or if a company wants to focus more on their loyalty program, they can centre their attention accordingly using the data to tend more to those who will appreciate it. As those are the ones described in the profiles of loyalty program users.

Future research could certainly be focused on an investigation into the role of loyalty programs in ones purchasing process. Especially, in detail, on how and to which degree, do loyalty programs play a role for loyalty program users, in the decision process of choosing a place to shop or a brand. In other words, how does the offer of a loyalty program actually influence a loyalty program user's choice of brand and place to shop? Going beyond Czech market, it

would be productive to repeat such study on an international level in cooperation with other researchers. Such study could provide an insight into varying profiles and factors that reveal what makes loyalty program members different across multiple countries, or the study could be turned into an international project, analyzing factors and profiles on cultural or continental levels.

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Cross-cultural Differences in Electronic Word-of-Mouth:
A Literature Review

Małgorzata Budzanowska-Drzewiecka
m.budzanowska-drzewiecka@uj.edu.pl
Jagiellonian University in Kraków, Faculty of Management and Social Communication
Kraków, Poland

Abstract: The purpose of the study was to systematize and summarize the eWOM literature in the cross-cultural context in the two main streams: theoretical (conceptual framework) and methodological. A total of 42 relevant research articles from peer-reviewed sources published during 2004-2019 were analysed. The results show that researchers most often refer to the Hofstede's cultural dimensions theory when explaining the differences in behaviours and the effects of eWOM. The research mainly concerns the comparisons of two culturally distant countries (e.g. China and the US). Surveys and secondary data analysis dominate among research methods. Future research should include more comprehensive comparisons, not only of consumers/or their statements from culturally similar countries but also of different products or different types of statements (text- vs image-based).

INTRODUCTION

Electronic word-of-mouth (eWOM) communication is a relatively new area of research, although it has been analysed for about two decades. This is one of the currently developing areas of research. There are more and more publications devoted to this issue. Several attempts to organize research threads and contexts as part of literature reviews have been made (e.g. on eWOM pervasiveness (Ismagilova, Slade, & Williams, 2016); or in the hospitality industry context (Serra Cantallops & Salvi, 2014)). Despite the increasingly narrower contexts of analysis, some of them are rather general, which increases the ambiguity of the conclusions made based on them. Regardless of the level of detail, the results show the need for research on eWOM communication in the context of cultural differences (King, Racherla, & Bush, 2014). This need is associated, among others, with globalization and development of the Internet and e-commerce. Culture and its impact in the area of eWOM are becoming an increasingly important subject of research in circumstances in which products are offered without geographical restrictions, and consumers of different nationalities can leave comments about those products. All the more so given the fact that consumers increasingly depend on the Internet and eWOM as the information source when making purchasing decisions.

Despite the growing importance of this research thread, there have not been many attempts to systematize it so far. Therefore, the purpose of this study is to provide a brief review of the existing eWOM literature in the cross-cultural context. Specifically, the study attempts to identify the theoretical (conceptual framework) and methodological issues occurring in the published research results.

1 LITERATURE REVIEW

Electronic word of mouth (eWOM) is generally agreed to be the informal communication on the Internet between private parties in which goods are evaluated (Hennig-Thurau et al., 2004; Ismagilova et al., 2019). It is considered a form of word of mouth (traditional face-to-face WOM) (Bachleda & Berrada-Fathi, 2016), which is one of the oldest and most important channels of information spreading between consumers and is recognized as an important determinant of their purchase behaviour. However, due to the different channel of eWOM communication, both forms have their characteristics and differ significantly (Jeong & Koo, 2015).

eWOM usually takes place in an anonymous online environment, often in social media, although it can also use other ways of communication among people as part of social network sites (SNS). Although eWOM concerns discussions among consumers, the exchange of information can also be initiated by marketing activities. This led to the separation of organic WOM (that occurs naturally when people have a natural desire to share information about products) from amplified eWOM (campaigns designed to encourage or accelerate WOM) (Kulmala et al., 2013).

eWOM plays an important role in the purchasing decision-making process being the source of market information (F. Zhu & Zhang, 2010; Jeong & Koo, 2015). This is associated with greater consumer confidence in the content obtained from other consumers (Sen & Lerman, 2007). Research on the effects of eWOM can be combined with two basic levels of analysis: market and individual. When adopting a market perspective, researchers using data from websites focus on establishing the links between eWOM and, for example, sales results. On the other hand, studies taking into account the perspective of an individual examine eWOM as a process of interpersonal communication, its course and conditioning that may ultimately affect purchasing decisions.

Culture is one of the areas of conditioning underestimated in eWOM literature. It is broadly recognized as an important factor that affects consumers' thoughts and actions (De Mooij & Hofstede, 2014). Despite emphasizing the importance of cultural conditions in international marketing, the methods of searching for and using the eWOM message by consumers from different cultures are not completely known. Knowing and understanding the similarities and differences has its consequences in the possibility of adapting the activities of enterprises to the needs of consumers (e.g. designing systems enabling product recommendations or their evaluation in e-commerce).

However, because the culture is a complex phenomenon, conducting research that allows determining the differences in the behaviour of consumers from different countries is not an easy task. It requires making several decisions, among which one of the most important are [1] determining the method of measuring cultural values, which in the Hofstede concept were originally associated with nationality, not with individual preferences (national vs. individual level); [2] selection of the theoretical framework to capture the essential characteristics of a given culture.

In the literature on the subject one can find various concepts describing cultural values, e.g. Hofstede's cultural dimensions theory (CDT), Hall's high/low-context, House World Value Survey, etc. Among them, Hofstede's dimensions seem to be widely used proxies for measuring cultural traits on a national or individual level. This model originally consisted of four dimensions (4D): individualism, power distance, masculinity and uncertainty avoidance index. Current research also includes long- vs short-term orientation and indulgence vs restraint dichotomy. Another frequently cited concept – developed by Hall – refers to the importance of context in communication and concerns the method of expressing messages (explicit vs implicit).

Specifying the conceptual framework also requires a decision related to the choice of the type of product about which the information is searched for or shared by consumers from various countries on the Internet. Researchers most often use the SEC classification, based on the level of difficulty with which consumers can assess or obtain information. According to it, products can be divided into three categories: search goods, experience goods (Nelson, 1974) and credence goods. Search goods are products that can be assessed based on external information, while experience goods require personal experience or evaluation. The most common configuration found in the literature is the selection of products representing search goods vs experience goods (Wan, Nakayama, & Sutcliffe, 2010; Lepkowska-White, 2013).

2 METHODOLOGY

The identification and systematization of the theoretical and methodological issue on the eWOM literature in the cross-cultural context required a systematic literature review. A critical component of this process is a systematic literature searching. The procedure involves the two main steps: [1] selection of databases and [2] determining the inclusion and exclusion criteria of papers.

To provide a systematic review, relevant articles from two leading academic online databases, EBSCO and Proquest, were gathered and examined. Additionally, to ensure that no significant articles were left out, Google Scholar was searched using the snowball technique. For the selection of articles, an online exploration with the use of the list of keywords was performed. These keywords were combined with "eWOM", "electronic word of mouth", "online word of mouth", "online reviews", "cultural differences", "cross-cultural differences", "cultural issues", "culture". The searching process covered a period from 2004 till 2019. The limitation of searches was connected with the date of the publication of the seminal work by Hennig-Thurau et al. (2004) in which eWOM communication was defined.

After establishing the research objectives and the conceptual boundaries, one researcher was involved in the process of searching, identifying and analysing the articles.

Initial searches included whole texts (without restrictions regarding any sections). It was not until the next step – aimed at selecting relevant articles – when a deeper review of abstracts based on several inclusion and exclusion criteria (Table 1) was conducted.

Tab. 1 The inclusion and exclusion criteria used in the study

Inclusion criteria	Exclusion criteria
• focus on the various aspects of consumer eWOM (as a dependent variable/subject of the research) • focus on the eWOM communication (in terms of consumer statement, e.g. online reviews) • cross-country or cross-nationality comparison • peer-reviewed research articles written in English • published from 2004 to 2019	• focus on eWOM as a moderating variable in examining other constructs • examining different aspects of sharing information (e.g. in work teams) • focus only on one country

Source: own elaboration

Tab. 2 Distribution of articles by years and journals

Year	Authors	Total	Journal name
2006	Fong & Burton, 2006	1	Asia Pacific Journal of Marketing and Logistics
2008	C. Park, 2008; Fong & Burton, 2008	2	Advances in Consumer Research Journal of Business Research
2009	C. Park & Lee, 2009; Lam, Lee, & Mizerski, 2009	2	Journal of Interactive Marketing
2010	Koh, Hu, & Clemons, 2010; Schumann et al., 2010	2	Electronic Commerce Research and Applications Journal of International Marketing
2011	Chu & Choi, 2011	1	Journal of Global Marketing
2012	Jobs & Gilfoil, 2012; Christodoulides, Michaelidou, & Argyriou, 2012; Furner, Racherla, & Zhu, 2012	3	Academy of Marketing Studies Journal European Journal of Marketing International Journal of Networking and Virtual Organisations
2013	Fang, Zhang, Bao, & Zhu, 2013; Lai, He, Chou, & Zhou, 2013; Ma, 2013; Hsu, Township, County, Hong, & Tran, 2013	4	Electronic Commerce Research and Applications Global Journal of Business Research Intercultural Communication Studies International Journal of Business, Humanities and Technology
2014	Goodrich & de Mooij, 2014	1	Journal of Marketing Communications
2016	Chao & Chen, 2016; Hong, Huang, Burtch, & Li, 2016	2	Journal of Global Business Management Journal of the Association for Information Systems
2017	Tao, Jin, Tao, & Jin, 2017; D.H. Zhu, Ye, & Chang, 2017; C.A. Lin & Xu, 2017; Teng, Khong, Chong, & Lin, 2017; Tang, 2017; Men & Muralidharan, 2017	6	Communications of the IIMA Computers in Human Behavior Internet Research Journal of Computer Information Systems Journal of International Marketing Journalism and Mass Communication Quarterly
2018	C. Lee, Choi, & Kim, 2018; Fan, Shen, Wu, Mattila, & Bilgihan, 2018; H.H. Park & Jeon, 2018; Nath, Devlin, & Reid, 2018; J.M. Kim, Jun, & Kim, 2018; H.C. Lin & Kalwani, 2018	6	Asian Journal of Communication International Journal of Contemporary Hospitality Management International Marketing Review Journal of Business Research Journal of Interactive Marketing Journal of International Marketing
2019	K.Y. Lee & Choi, 2019; H. Park & Lee, 2019; R.Y. Kim, 2019; Leon, 2019; Chiu, Chen, Wang, & Hsu, 2019; M. Lee, Lee, & Quilliam, 2019; Wang, Wang, Zhang, & Zhang, 2019; Banerjee & Chai, 2019; Ruiz-Equihua, Romero, & Casaló, 2019; Stamolampros, Korfiatis, Kourouthanassis, & Symitsi, 2019; Broeder & van Hout, 2019; Buzova, Sanz-Blas, & Cervera-Taulet, 2019	12	Computers in Human Behavior Cyberpsychology: Journal of Psychosocial Research on Cyberspace Electronic Commerce Research and Applications International Journal of Contemporary Hospitality Management International Marketing Review Journal of Consumer Marketing Journal of Electronic Commerce Research Journal of Global Marketing Journal of Hospitality Marketing and Management Journal of Travel Research Russian Journal of Communication Service Industries Journal

Source: own elaboration

A significant number of the articles were excluded from the analysis after rejecting duplicates, texts in other languages, other published sources (e.g. conference proceedings or doctoral and master dissertations) and outside the domain. As a result, only 42 articles were considered appropriate within the context of the current study and used for further analysis.

In the studied collection, the numbers of articles increased over time, which indicates a growing interest in the subject. Until now, a lot of journals – from several disciplines (not only strictly marketing) – have published the articles. They include the marketing and consumer behaviour area but also humanities (but still concentrate on consumer-to-consumer online communication regarding the product). Researchers from various disciplines are interested in the topic, which proves that this is a multidisciplinary phenomenon – due to both the culture and the nature of eWOM communication.

3 RESULTS AND DISCUSSION

3.1. Theoretical and contextual issue

The articles examined most often analysed the effects of eWOM and various aspects of eWOM behaviour (Figure 1).

Fig. 1 Main aspects of eWOM communication included in articles examined
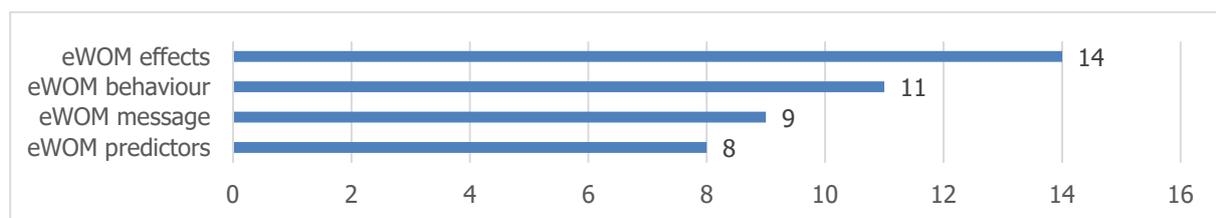
Source: own elaboration

In the case of eWOM behaviour studies, the analysis at an individual level was dominant. For instance, few studies investigated the engagement in information-seeking and – giving among consumers of different cultures (e.g. Fong & Burton, 2008; Leon, 2019; Fang et al., 2013). A market perspective – was used by researchers in the case of analysing the effects of eWOM when determining the influence of eWOM on product market performance (Tang, 2017). However, in this thematic area, the focus was also most often on the impact of eWOM on purchasing decisions (e.g. Chiu et al., 2019; Christodoulides et al., 2012; C. Park & Lee, 2009) and attitudes of individuals (e.g. H.H. Park & Jeon, 2018; Teng et al., 2017). Another popular research topic concerned the identification of differences in eWOM messages from different countries (e.g. Stamolampros et al., 2019; D.H. Zhu et al., 2017).

Regardless of the issue analysed, studies that identify the role of culture in the eWOM context, used diverse models to identify and separate cultures (Figure 2).

Most researchers have adopted Hofstede's cultural dimensions theory (CDT) to examine cultural differences, frequently on a country-level. However, they did not always refer to all the dimensions proposed in the model. There is a body of literature that revolves around the individualism vs collectivism dichotomy (8 studies, e.g. Teng et al., 2017; Christodoulides et al., 2012), which catalogues nationalities according to the extent to which the society values group norms. Other dimensions were also at the root of assumptions explaining cultural diversity. For example, Broeder and van Hout (2019) referred to the level of uncertainty avoidance, and Ruiz-Equihua et al. (2019) used the indulgence vs restraint dichotomy. In most

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cases, cultural values were specified at the national level and then ascribed to individuals based on their country of residence. However, studies (K.Y. Lee & Choi, 2019) have shown that the indicated differences in eWOM behaviour have more to do with individual-level cultural orientation than national culture. It follows that future research should consider individual-level values in addition to collective-level indices of national culture.

Fig. 2 Cultural-based concepts used in examined articles

Concept	Value
Hofstede's cultural dimensions theory (CDT)	33
Hall's high/low-context	3
Country of origin effect (CoO)	2
House World Value Survey	1
Analytical vs holistic thinking style	1
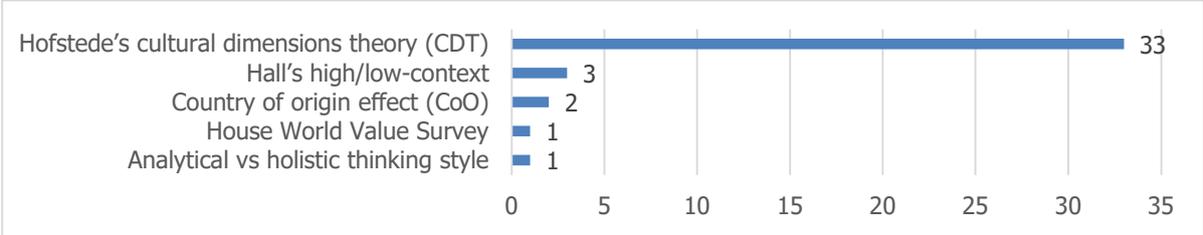
Source: own elaboration

Another analysed aspect concerns the number of countries/nationalities selected for comparison. Only in the case of 9 articles, the analyses concerned more than three countries. The majority of studies (29 articles) relied on two-country designs (mostly comparing American and Chinese consumers).

Fig. 3 The cultures/nationalities compared in examined articles

Comparison	Value
China vs US	13
South Korea vs US	7
Japan vs Us	1
Taiwan vs Vietnam	1
Taiwan vs mainland China	1
Spain vs Mexico	1
North Americans vs Europeans	1
Netherlands vs Russia	1
China vs UK	1
Australia vs Singapore	1
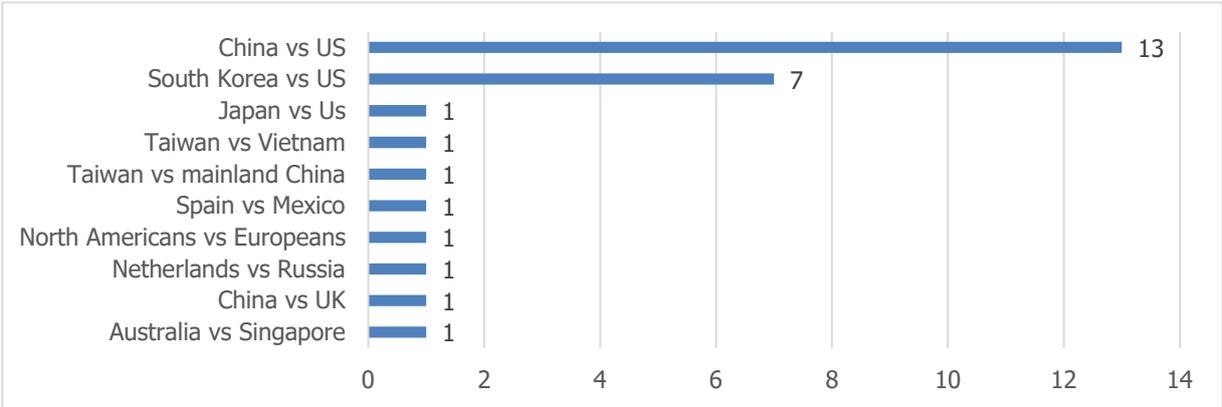
Source: own elaboration

Fig. 4 Types of products considered in the analysed articles

Type	Value
experience good	19
search good	8
search and experience goods	3
no specific brand/product or industry	12
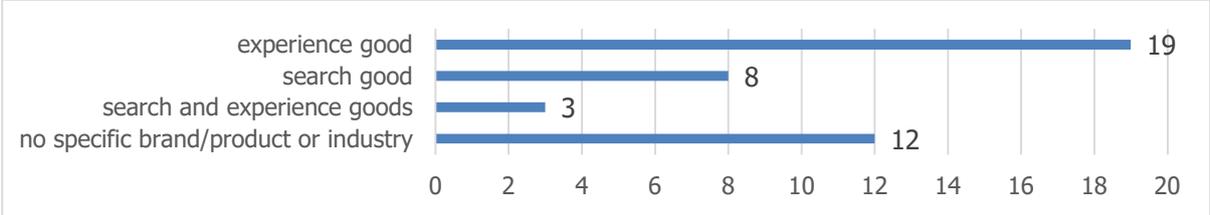
Source: own elaboration

Most of the compared countries represented contrasting cultures. Much less research was conducted comparing countries similar to each other. Besides, the cultures compared mainly represent the Asian region and North America, which limits the generalizability of the findings.

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It was also decided to specify the categories of products that formed the basis of eWOM messages in the analysed studies. In most cases, the research focused on one category of goods (mainly experience goods) (Figure 4). These were primarily various services from the hospitality and tourism industry (10 articles). The research using search goods most often concerned electronic devices (9 cases, including a digital camera and smartphone).

3.2. Methodological issue

For the examination of cultural differences in the eWOM context, both qualitative and quantitative approaches were used by the researchers. However, quantitative methods were more commonly used. Only one article based on discourse analysis was purely qualitative (H. Park & Lee, 2019). Next five used a mixed approach, including qualitative and quantitative methods (e.g. text analysis of 40 case studies (Tao et al., 2017)).

It is interesting to find out that both surveys and secondary data analysis dominated the research methods in the studies on cross-cultural differences in eWOM. Most of the articles were based on primary data (22 articles, 52%). In this case, authors generally used surveys and experiments for gathering data (Figure 5).

Fig. 5   Research methods used in the analysed articles
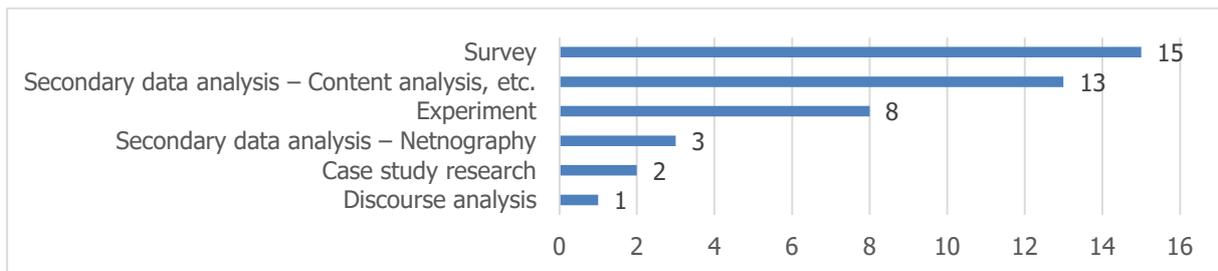
*In case of Secondary data analysis – Content analysis, etc. various strategies of gathering data were used.

Source: own elaboration

Taking into consideration the nature of eWOM, it is not surprising that surveys were typically conducted online. Only the research by Schumann et al. (2010) applied the paper-and-pencil technique. The experiments were factorial, based on the between-subjects design (mostly 2 x 2) (e.g. Ruiz-Equihua et al., 2019; Fan et al., 2018; Nath et al., 2018). Additionally, both the surveys and experiments were frequently conducted among students.

In addition to gathering data from respondents, the research was also based on consumer comments/online reviews (consumer-generated content). It is because eWOM communication is mostly in the form of online consumer reviews, which are easily accessible and durable. These consumer statements came mainly from discussion boards (e.g. Ma, 2013; Tao et al., 2017) or commercial websites on which consumers can comment about products or rank them. Most often, the authors used the data available on Amazon. In some cases, they only compared data from national versions of the Amazon website (e.g. two sites: Amazon China vs Amazon US (D.H. Zhu et al., 2017; Lai et al., 2013); or more than two sites (Tang, 2017)). In other cases, they compiled data from websites of other sellers (e.g. Amazon US vs. Gmarket.co.kr (H.Park & Lee, 2019)). Some of these websites had specialist features related to the specificity of the products to which online reviews referred. For instance, in studies on the hospitality industry, they came from TripAdvisor (Stamolampros et al., 2019; Buzova et

al., 2019; Hong et al., 2016), Booking.com (J.M. Kim et al., 2018) or simply hotel-booking websites (R.Y. Kim, 2019; Leon, 2019).

Most of the studies based on the secondary data were complemented with the econometric methods. In this case, online reviews were compiled with other data (e.g. statistics data of the online reviews (Fang et al., 2013); box office revenue information (Chiu et al., 2019) or data from World Value Survey (Hong et al., 2016)).

Depending on the type of data used, the authors used various methods of analysis. In the case of secondary data, when textual content of the review was analysed, the researchers used, among others, text mining and sentiment analysis tools (e.g. Wang et al., 2019; Buzova et al., 2019; Hong et al., 2016). However, the majority of empirical articles used regression analysis (17 studies). For survey data, Confirmatory Factor Analysis (CFA) was used (e.g. C. Lee et al., 2018)) and/or structural equation modelling (SEM) (e.g. Schumann et al., 2010); (Men & Muralidharan, 2017). However, the analysis of variance (ANOVA or ANCOVA) was used to analyse data from experiments (e.g. Ruiz-Equihua et al., 2019; Fan et al., 2018; Nath et al., 2018).

CONCLUSIONS

The review of research on cultural differences in the eWOM literature confirms a growing interest of researchers in this issue. The number of studies devoted to this topic is rising, as well as the indicated limitations that should be included in subsequent studies.

Due to the durability of consumer statements made available on the Internet, it is possible to analyse significant amounts of data. These data have great potential, but without a proper understanding of the purposes of their sharing by consumers (from different countries), they may be useless. Therefore, it is worth focusing on the participants of this process while carrying out experiments or longitudinal analyses.

Future research should account for more comprehensive comparisons, refer to search vs experience products from various industries and expand the number of platforms or the list of compared cultures (especially countries with perceived similar values). Besides, researchers should pay attention to the groups of respondents other than students (which will allow for reducing sample selection biases).

In all the analysed articles, the research was based on consumers text statements. The current development of social media allows for sharing messages in other forms (e.g. image-based statement) that require separate exploration and embedding in different theoretical and methodological contexts (e.g. visual attention research).

In most cases, the statements concerned large enterprises (Ruiz-Equihua et al., 2019), and more importantly, they were often in English (Stamolampros et al., 2019; Buzova et al., 2019). The extension of the list of countries to be covered by future studies should also include reviews written in other languages, which will require a solution to the problem of their comparability.

One of the more important dilemmas faced by researchers is determining how to identify the culture/nationality of consumers (or creators of online statements). Currently, researchers use different solutions when trying to determine the authorship of a statement (e.g. classifying the consumers' nationality based on IP locations (R.Y. Kim, 2019); or based on customer's self-report (Hong et al., 2016)) or when determining the cultural values of consumers (national vs individual level), limiting the possibility of comparing results.

Despite these results, the review conducted still has some limitations. It would be valuable to indicate the detailed directions for further research and research gaps, but it requires greater

concentration on the research subject in the eWOM literature. Besides, the review was carried out by one researcher, which increases the likelihood of making mistakes related to content coding and classification. It also does not include studies in a language other than English, which may have led to the omission of some studies.

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The Cognitive, Affective and Conative Components of Consumer Behaviour in the Context of Country of Origin: A Case of Slovakia

Marián Čvirik

marian.cvirik@euba.sk

University of Economics in Bratislava, Faculty of Commerce, Department of Marketing
Bratislava, Slovakia

Abstract: The country of origin concept is a relatively well-known, but it has a weaker theoretical basis. The main aim of our article was to examine the meaning of the country of origin in components of consumer behaviour. The work is supported by a primary survey conducted in Slovakia, with Hungary being the country of origin. A sample of 306 respondents was collected by a quantitative survey through paper and online questionnaire. To explore and to prove the hypothesis was employed one-way ANOVA. Author of the article used regression and correlation analysis to explore the relationship between components of consumer behaviour in the country of origin context. The results indicate a clear link between the components of consumer behaviour in the context of country of origin and completing a country of origin theory. The results can be used in many fields (sociology, psychology, marketing) both in the theoretical and practical level.

Keywords: country of origin; consumer behaviour; cognitive, affective and conative components.

INTRODUCTION

Today, international trade cannot function solely on the basis of economic variables. Consumer attitudes towards foreign products are becoming increasingly important. This attitude is influenced by many factors such as price and quality. However, in the context of the globalisation and international trade, the significance of the concept of the country of origin also comes to the fore.

The main aim of our article was to examine the meaning of the country of origin in components of consumer behaviour.

The concept of the country of origin is related to consumer behaviour. In this article, we focus on this connection and examine the components of the country of origin more closely in the context of consumer behaviour. First and foremost, we analyze the individual components of the country of origin and then examine their relationship. In defining them, we also focus on the elements of these components.

1 LITERATURE REVIEW

1.1 Consumer behaviour

The American Marketing Association (AMA, 1995) defines consumer behaviour as "the dynamic interaction of affect and cognition, behaviour, and environmental events by which human

beings conduct the exchange aspects of their lives". Dynamics shows us that consumer behaviour is constantly changing. It is therefore necessary to continually address this interaction. The AMA takes into account interaction as interaction between behaviour and environment. The environment in which consumer behaviour takes place affects our knowledge (cognitive component), emotions (affective component), and ultimately action (the conative component). Consumer behaviour also includes an exchange that takes place between the buyer and the seller.

"Consumer behaviour means the behaviour of people - the ultimate consumer, that relates to the acquisition, use and storage of consumer products - products". (Koudelka, 1997) The definitions do not mention the consumer's relationship with the activity before or after the use of the product. postponement, which means behaviour after consumption of the product. The author focuses on consumers as end consumers.

Boučková (2003) defines consumer behaviour from the perspective of the consumer. She understands it as "part of human behaviour, allowing the creation of models of behaviour and thus better understanding of the consumer. Approaches to behaviour can be understood from a rational (psychological), psychological (mental) and sociological (social) perspective."

According to Schiffman - Kanuk (2004), consumer behaviour can be understood as "the behaviour that consumers manifest in finding, buying, using, evaluating, disposing of products and services they expect to satisfy their needs." In the definitions we find expectations of satisfaction of the need, and thus the authors also point to the possibility of dissatisfaction, respectively.

Known experts Engel, Blackwell and Miniard (as quoted by Richterová et al., 2007) have agreed to define consumer behaviour as "the act of acquiring, consuming or disposing of products and services, including decision-making processes that precede or follow this act."

Solomon (2006) defines "consumer behaviour as studying the processes in which individuals or groups collect, purchase and dispose of products, services, ideas or experiences to meet their needs and desires". Solomon's approach is considerably more extensive than the AMA definition. Solomon understands consumer behaviour as a process, that is, a course of events that it defines as choice, purchase, and disposition. Thus, it can be stated that it focuses directly on action - the purchase phase. The definition reveals the reason for this process, and that is the satisfaction of needs and desires, which represents a significant shift from the AMA definition.

Richterová et al. (2007) quote the following: "Consumer behaviour is primarily obvious and observable acts such as buying and consumption. These are important aspects of consumer decision-making. However, the notion of consumer behaviour is understood to be considerably wider and refers to the mental and social processes that are taking place: 1.) before the actual purchase (for example, awareness of the need, shaping the attitude, searching for information, evaluating alternatives, selecting a product, brand or store) 2.) during the purchase (for example, situational factors affecting purchase - that is, shopping behaviour) 3.) after purchase (buyout evaluation of usefulness, dissonance, consumption process)."

Unlike the previous ones, it does not only focus on the purchase process, but also on pre-sale and post-purchase trial. He points out that a number of processes are taking place before purchasing and consumption (as he understands the process of consumer behaviour of Solomon). Also, buyback behaviour is a very important part of the buying behaviour process that other definitions do not point out.

Based on a systematic knowledge of consumer behaviour, Horská (2009) summarizes that "consumer behaviour is a broad term defined by many leading marketing authors as acts of obtaining, consuming or disposing of products and services, including decision-making processes that precede or follow this act Consumer buying behaviour is a process that is

constantly influenced by various factors. At the same time, it is dynamic because it changes over time. These factors create a kind of mechanism causing changes in the purchasing behaviour of individuals or groups."

Two prominent authors, Peter and Olson (2008), define consumer behaviour as "a dynamic interaction of the affects, knowledge, behaviour and influences of the environment through which people manage exchange relationships in their lives." As stated, the authors are largely inspired by the definition of the American Marketing Association.

According to Wright (2006), "the role of marketing is to understand the customer and consumer behaviour at every stage of the decision-making process." The central part of marketing is to understand why a customer or buyer is buying.

As we can see, different experts understand consumer behaviour differently. In general, individual consumer behaviour definitions differ, but they maintain the same substance. However, the key factor of definitions can be understood as the process of consumer behaviour in the context of understanding the term consumer.

Consumer behaviour involves three components (see Fig. 1) that need to be analyzed for its consistent understanding. The cognitive component focuses on knowledge. An affective component can be understood as an emotional, emotional component and a conative component that is a direct consequence of action. These components cannot be examined separately, or even cooperate with each other (Rosenberg - Hovland, 1960; Ajzen - Fishbein, 1975).

Fig. 1 Components of consumer behaviour
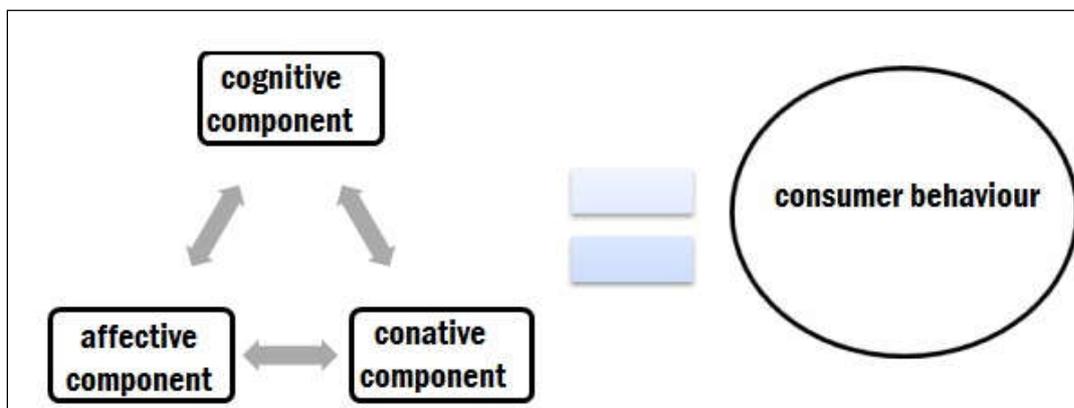
Source: Own processing based on Rosenberg - Hovland (1960) and Ajzen - Fishbein, 1975.

1.2 The country of origin in consumer's behaviour

If we work on the assumption that the consumers behaviour contains three basic components (cognitive, affective and conative), is possible to apply them also to the COO as a part of a consumer's behaviour. This three-component structure as a basic for exploration phenomenon COO is used in study Papadopoulos – Heslop (1993). The cognitive component represents the impact of product attributes and COO. Affective component examines the evaluation of the variables. And in the end conative component deals with the interaction of the participants with specific product in context of COO.

The cognitive component. The cognitive component is most often associated with the knowledge. From the point of view of the consumer and COO this is a comprehensive set of all information (including false) that focuses on the two-basic component of the COO – the country and the product. We agree with Heslop and Papadopoulos when they state that

"general learning theories would suggest that the sources are likely to be many and complex, including general knowledge about countries picked up everywhere from geography class in elementary school to daily newspapers and TV documentaries, friends and co-workers, and direct experiences from visits to the country. This knowledge, coupled with any prior experiences from using a country's products, can be applied to evaluating future purchases." (Heslop - Papadopoulos 1993) Based on the literature that has been studied, it can be stated that the basic categories of impact of the COO are (in view of country): (1) Globalization, (2) Religion, (3) Economic and political factors, (4) Domestic and foreign country, (5) History of domestic and foreign culture, (6) Geography of the country.

1. Globalization. The specific impact on the COO effect had (and has) a globalization. The globalization is causing a decline in trade barriers which has impact in the availability of foreign products. This situation is being used by foreign companies, which often gain competitive advantage on the basis of the country of origin effect. The globalization also has a negative effect in the form of unclear COO determination from the point of customers view.

2. Economic and political factors. Roll (2008) focuses on the study of factors influencing the COO on economic-political factors. It is important to examine the economic situation of the country and its maturity. Products that originated in developed countries have tendency to create a positive effect. Products from less developed countries are often linked to consumers´ minds with lower quality. Technologies are directly linked to the economic development of the country. Country that has an impact on consumers as innovative and technologically advanced, often has a positive attitude in the COO. The welfare index shows how much a citizen of given country can afford for their monthly income compared to another country. In simple terms, it can be said that the higher the country index achieves, the more positive the COO effect. Regulatory mechanisms are an essential component of international trade, both economically and politically. Significant factors include the law on intellectual property rights, security in the country (from the point of view of businessman and consumers). But also the overall political situation in the country. The more stable the political situation, the more positive effect is. It is also necessary to examine the political system of the country. Countries that do not follow capitalism act in consumer consciousness often lagged behind, and thus produce a negative effect. Hisrich et al. (1981) agree that a ruling political ideology is an important factor influencing the perception of the COO. In their study, they research US consumers and their attitude to products coming from communist countries. The results showed that more than three-quarters of respondents agreed with the Communist countries trade. Nevertheless, only 64% of respondents were willing to buy a product from these countries.

3. Domestic and foreign culture. Venkatesh (1995) claim that "individuals are products of their culture and their social groupings; therefore, they are conditioned by their socio-cultural environment to act in certain manners." This definition understands the culture of the domestic country as one of the main factors of consumer's behaviour. From the COO perspective, not only the culture of the domestic country, but also the culture of the product COO is important. When confronting these two cultures, negative or positive relationships may occur. Wall and Heslop (1986) have shown that cultural similarity has a positive impact on product evaluation. Samiee and Mayo (1990) claim that cultural differences are very important component trade, often acting as a barrier to trade (negative relationships).

4. History of domestic and foreign country. From the COO perspective, it is necessary to evaluate not only the country of origin but also the consumer´s country and therefore the history of the product COO, since its history can bring both positive and negative impacts. Klein et al. (1998) found that past (political, military, economic and other) conflicts could act as barriers to current international trade. Authors emphasize the need to recognize these historical connections (ties) in consumer behaviour as well. Klein et al. (1998, 2002) claim that

it is likely that hostility (enmity) to the current or former enemy will also affect willingness to buy products from the country.

5. Geography of the COO. Verlegh (2001) claims that the geographical component is important for consumers to evaluate foreign products. Askegaard and Ger (1998), when examining the image of the COO in the minds of Turkish and German, discover that the Denmark perceives the green country (nature) that is associated with rural way of life. Consumers of both countries joined Denmark with agricultural production. Dairy products, cakes, fish products and wood products are the most common. According to Hopkins (1998), geographic formations bring a large number of symbols that can be used in business tools.

6. The religion. According to Usunier-Lee (2009), the religion serves as a filter of advertising messages that transform factual information into a culture-interpreted meaning. Tongberg (1972) identified faith in the country as a significant factor in the COO. Han (1990) states that religion can also influence product ratings.

Affective component. Peterson et al. (1986) states that the affective component can perform various task, such as influencing the way information is being processed and storied in memory. This claim has resulted in an increase in emotionally oriented research (most of the research places particular emphasis on cognitive components). However, it is necessary to understand what affective reactions can be expected in the context of the COO. Verlegh (2001) defined a two-dimensional structure of feelings that build on groups of positive and negative feelings. The affective component is measured by using the PANAS (The Positive Affect a Negative Affect Schedule) which was created by the Watson-Clark-Tellegen (1988). The scale is based on a two-factor model (positive and negative emotions) that contains 20 emotions to which the respondents expresses the sensational intensity. (Watson-Clark-Tellegen, 1988).

Conative component. In the conative component is significant the research of consumer´s behavioural intentions. In general, it can be said that product behaviour can be varied. Brengman (2002), however, believes that the conative component of consumer behaviour is one-dimensional and brings bipolar outcomes. In the continuity of these conclusions, the two most common reactions are presenting, such as the adoption and avoidance, which in the context of the COO, means accepting the COO and its products or refusing them.

2 METHODOLOGY

The main aim of our article was to examine the meaning of the country of origin in components of consumer behaviour. Consumer behaviour consists of three components (cognitive, affective and conative) that we use in our article. We presented the individual components and their division in the theoretical part of the article. The theory suggests that the components are interrelated and thus create certain relationships.

Set of hypotheses is related to the structure underlying the country of origin (COO) in consumer behaviour (Fig. 2):

H1 There is relationship between cognitive component and affective component of the COO.

H2 There is relationship between cognitive component and conative component of the COO.

H3 There is relationship between affective component and conative component of the COO.

The study is based on primary research. We used a quantitative method to collect data. We conducted a standardized query using a research tool - a questionnaire. The questionnaire was created in both print and electronic form using the Google form to get as many respondents as possible. The basis for our research was 306 respondents. The questionnaire

consisted of 4 parts (36 questions). In the first part we focused on measuring the value of the cognitive component (COG), in the second we focused on measuring the value of the affective component (AFF) and in the third one we focused on measuring the value of the conative component (CON). The questions in the first three parts were of the scale type. Respondents expressed their opinion on individual statements using a 5-degree scale. The statements were based on the theoretical part of the article. The last part consisted of questions specifying the demographic characteristics of the respondents. All respondents came from Slovakia. Hungary was chosen as a model of the country of origin.

Mean scores, standard deviations and Cronbach alphas for items of the COO model are presented in Tab. 1.

Fig. 2 Structure of country of origin in consumer behaviour (modified COO model)
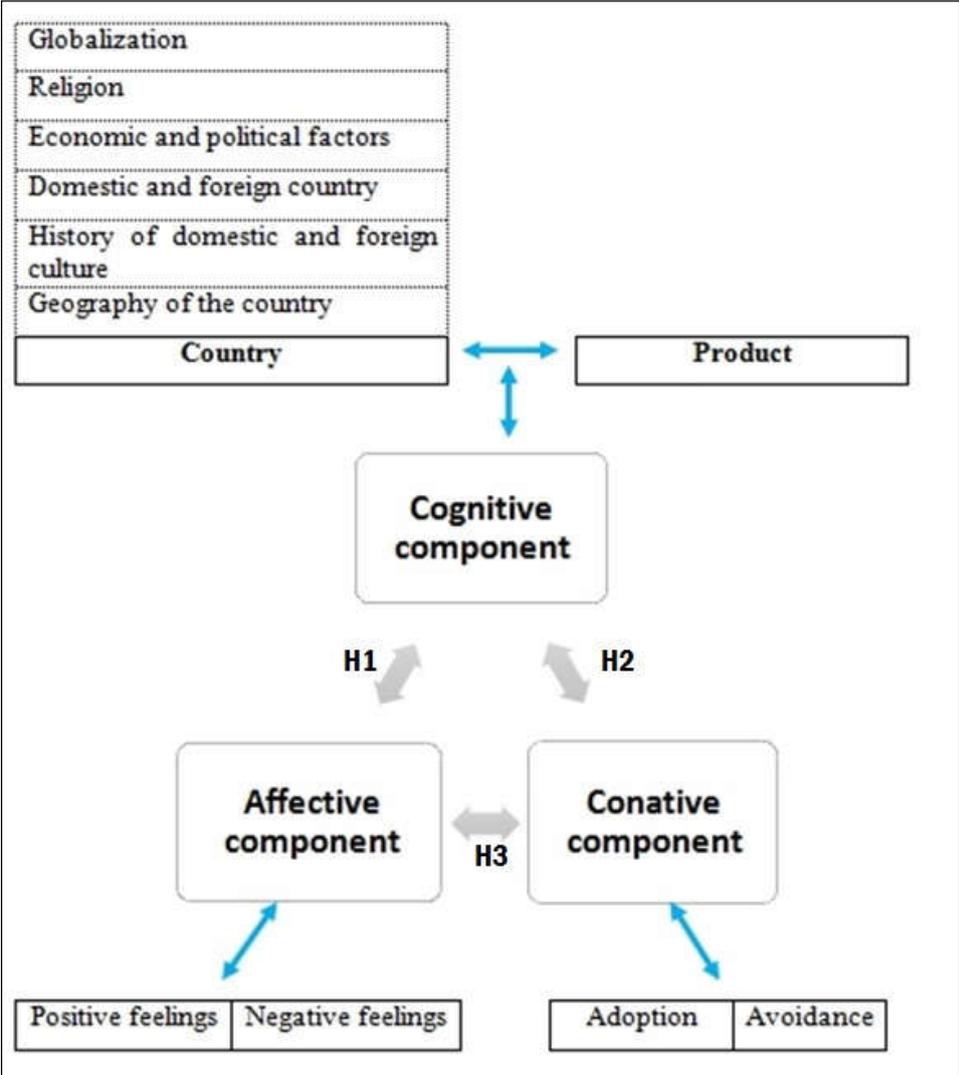
Source: Own processing

Cronbach alpha is used to investigate the reliability (accuracy and reliability of a research tool) within the internal consistency of the selected scale tools (model of COO). As we can see, the total value of Cronbach alpha value is 0.809 which can be interpreted (based on Tavakol - Dennick, 2011) as a high value. From a practical point of view, it should also be stated that if the Cronbach alpha value for the individual statements is higher than a total value, it is advisable to exclude this statement in future researches, as this will increase the overall

accuracy and reliability of the research tool – in our case model of COO. (Tavakol -Dennick, 2011) As we can see, it is not appropriate to rule out any of the component.

Tab. 1 Statistical variables

CODE	Rating (scale)	Mean scores	Standard deviations	Cronbach alpha*
COG	<12-60>	39.11	5.89	0.797
AFF	<10-50>	27.84	6.09	0.801
CON	<10-50>	29.77	7.19	0.805

Source: Own calculation.
Notes: *Overall Alpha =0.809

The standard deviation of the mean represents the dispersion of the calculated arithmetic mean across the different samples selected from one main population. The standard deviation shows to what extent the individual measured values are around the mean value. The smaller the standard deviation, the closer the measured values are around the mean value. If the variance is smaller, it can be understood that the statement was rated similarly by all respondents. In our case we can see bigger deviations in the conative component, which means that there is the biggest difference in consistency of responses in a given component.

We use a one-way ANOVA test to prove / disprove hypotheses and we use regression analysis to determine the direction and intensity of the relationship.

3 RESULTS AND DISCUSSION

In the primary research we used a quantitative method to collect data. We conducted a standardized query using a research tool - a questionnaire. The research was attended by 306 respondents. The sample was selected by a convenient method. The average age of respondents was 34 years. 47.71 % (n = 146) of men and 52.29 % (n = 160) of women participated in the survey, which roughly corresponds to that of the baseline. All respondents came from Slovakia.

In the article, we focus on three components; cognitive, affective, conative:

1 Cognitive component

In examining the component, we used 12 scaling questions with responses spread over a five-degree scale (possible score interval 12-60 points). Each factor was represented by two questions. The cognitive component averaged 44 points (range 12-60 points), which is a high score. Thus, it can be stated that all the selected factors of the theoretical basis represent significant factors in the cognitive component. The lowest score reached "Hungarian politics looks positive to me" (average score 1.84). The highest score reached "I consider Hungary to have a significant history in the world" (average score 4.22).

2 Affective component

In the exploration of the affective component we used the PANAS tool. However, from the original 20 emotions we used only 10 emotions (5 positive and 5 negative) for the shortness of the questionnaire. The results suggest that Slovaks perceive Hungary as an interesting country that is strong and inspired. For the strongest negative emotion that Slovaks feel against Hungary is the hostility of Hungarian citizens. Overall, Hungary is more positive for Slovaks.

3 Conative component

In examining the conative component, we focused on an adoption and avoidance of Hungarian products. Using 10 questions we found that the Slovaks are willing to buy Hungarian products. Slovaks are particularly interested in food products from Hungary.

3.1 Hypothesis evaluation

In the work we focus on three hypotheses, which represent the interconnection of individual components. In Tab. 2, only the key ANOVA test values are recorded. The selected values are F-value, F-critical value, alpha, and p-value, as well as F-value and F-critical differences, and alpha and p-value values. We use regression analysis to determine the direction and intensity of the relationship.

Tab. 2 Hypothesis Evaluation Results (ANOVA) and Regression analysis

Results		H1	H2	H3
		COG - AFF	COG - CON	AFF - CON
ANOVA	alpha	0.05	0.05	0.05
	P-value	0.000	0.000	0.000
	F- value	24.542	25.937	25.554
	F- crit.	5.633	7.150	6.854
Regression Statistics	Multiple R	0.786	0.844	0.766
	R Square	0.554	0.675	0.621
	Standard Error	5.144	6.224	7.359
Character of regression function		positive	positive	positive

Source: Own calculation.

H1 There is relationship between cognitive component and affective component of the COO.

Based on these results (F > F- crit.), Hypothesis 1 can be confirmed. Confirmation of the hypothesis is also supported by the fact that Alpha > P-value. In this way, it can be rejected that it is only noise or a random factor and we confirm that there is a relationship between the cognitive component and the affective component.

Multiple R value (correlation coefficient) is 0.786. This value is close to 1, so the dependence is strong. The R Square value is the value of the coefficient of determination; the value is 0.554. This value after interpolation 100 indicates that the selected regression line explains revenue variability to approximately 55.4 %; the other part represents an unexplained variability; the impact of random factors and other unspecified impacts. The standard deviation should be as small as possible. The standard deviation is acceptable due to the depth of the tool used. Regression analysis has a positive character.

H2 There is relationship between cognitive component and conative component of the COO.

Based on the above results in Table 2 (F > F crit.), Hypothesis 2 can be confirmed. Confirmation of the hypothesis is also supported by the fact that Alpha> P-value. In this way, it can be rejected that it was just a noise. We confirm that there is a relationship between the cognitive component and the conative component.

Based on regression and correlation analysis, it can be concluded that there is a very strong relationship between COG and CON components (Multiple R is 0.844). The regression line explains the variability of COG and CON components to approximately 67.5 %. The standard deviation is acceptable. Regression analysis has a positive character.

H3 There is relationship between affective component and conative component of the COO.

Based on these results (F > F- crit.), Hypothesis 3 can be confirmed. Confirmation of the hypothesis is also supported by the fact that Alpha > P-value. In this way, it can be rejected that it is only noise or a random factor; we confirm that there is a relationship between the affective component and the conative component.

Based on regression and correlation analysis, it can be concluded that there is a strong relationship between AFF and CON components (Multiple R is 0.766). The regression line explains the variability of AFF and CON components to approximately 62.1 %. The standard deviation is acceptable. Regression analysis has a positive character.

Examining the impact of the country of origin on consumer behaviour is a difficult task, as there is no universal instrument for measuring it. In our case, we have defined the country of origin Hungary in a quantitative survey. Based on theoretical knowledge, we proposed a three-components model of the country of origin, which includes a cognitive, affective and conative component. The cognitive component is associated with consumer knowledge. Respondents in the quantitative survey reported above-average knowledge of Hungary, which may be due to the fact that Hungary has a common border with Slovakia and at the same time part of the population has Hungarian nationality and speaks Hungarian. The affective and conative components were below average, indicating a below-average interest in Hungarian products.

CONCLUSION

The present article examines the concept of the country of origin in the context of consumer behaviour. The theoretical contribution of the work can be seen in the critical analysis of the concept of consumer behaviour and in the creation of a coherent model of the country of origin based on the use of components of consumer behaviour. We specify all the components and characterize their basic components. The practical part of the article is supported by a primary survey based on which we have linked the country of origin components. Thus, it can be stated that all components of the country of origin need to be examined and their interconnection should be paid attention for. The limits of work can be considered by examining the attitudes of one nation to one country of origin. In the future, it would be appropriate to examine this connection with other nations and other countries of origin. Research into selected products and product lines would also be appropriate in the future.

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Evolution of Sustainability in Marketing

Katarína Chomová

katarina.chomova@euba.sk
University of Economics, The Faculty of Commerce, Department of Marketing
Bratislava, Slovakia

Abstract: Evolution of marketing has been discussed through five concepts, which are: production concept, product concept, selling concept, marketing concept and societal marketing concept. All the marketing activities revolved around these concepts. Concept of societal marketing developed into sustainable marketing. Sustainability in marketing has gained some traction over the years, yet we still remain uncertain about exactly what 'sustainability marketing' means. The article introduces discussion on sustainable marketing and its fundamental importance in the development of marketing theory.

Keywords: sustainable marketing; societal marketing; environmental marketing; ecological marketing; green marketing; greener marketing

JEL Classification codes: M31

INTRODUCTION

The world faces extraordinary and unprecedented challenges relating to both to the environment and to society. Rapidly increasing demand is colliding with declining resources. Vital ecosystems are under stress. Millions of people lack the most basic needs to sustain life. The problems lie in social and economic systems that are unsustainable. Awareness of the need for environmental and social sustainability has grown among citizens, governments and, finally, mainstream businesses. Recently that awareness appears to have reached a tipping point, triggering impulses for widespread change in business priorities and practices. Marketing has a vital role in making businesses and society more sustainable. The concept of sustainable marketing is explained and defined (Radu, 2012).

1 LITERATURE REVIEW

Field of marketing has also evolved over time. Evolution of marketing has been discussed through five concepts, which are: production concept, product concept, selling concept, marketing concept and societal marketing concept. All the marketing activities revolved around these concepts. Production concept was based on meeting unsatisfied demands by producing more at lesser cost. Whereas the product concept holds that consumers prefer quality products with sound performance and innovative features. Selling concept relies on aggressive selling and promotion. But in the mid of twentieth century, marketing concept came with a focus on consumer centric approach. It holds that the marketing activities should be based on creating communicating, and delivering superior value to targeted customers (Kumar, et al. 2012).

Finally, the societal marketing concept came, which is based on bringing social and ethical considerations into marketing activities (Kotler, 2008). But now, it is time to include sustainability criteria into marketing, which is the need of the hour. The companies should keep in mind that sustainability has become a requirement; it does not remain as an option (Charter et al., 2006). The time has gone when it was an option, now it is becoming an

obligation for the companies so as to achieve competitive advantage. It is essentially a requirement in the business because, the concept of marketing is not remained limited to intrapersonal and interpersonal needs; it is getting extended towards needs of future generations (Dam and Apeldoorn, 1996).

The concept of marketing is extending towards fulfilling the needs of future generations, which further means that creating, communicating and delivering sustainability-based value to customer. It can be said that company has to balance its marketing strategy in such a way that customer needs can be fulfilled after maintaining profitability, public interests and ecology.

Several marketing concepts have emerged that consider marketing within its social and environmental context and to deal with the ecological and social issues relevant to marketing. Societal marketing, ecological marketing, green marketing, greener marketing, environmental marketing and sustainable marketing are explored in more detail in the next chapters.

2 METHODOLOGY

This article reviews the literature regarding sustainability aiming to clarify the related concepts and integrate them with the theoretical perspectives of marketing. Data was gained from published sources, such as books and articles, as well as the internet.

The purpose of this article was critical analysis and literature review of marketing covering recent studies on marketing issues in relation to the concept of sustainability.

The next chapter is divided into evolution of sustainability in marketing, relationship between societal marketing concept and sustainable marketing and last part about framework and definition of marketing.

3 RESULTS AND DISCUSSION

3.1 Evolution of sustainability in marketing

Integrating concern about the environment into the practice and principles of marketing is an idea that has been with us since the 1970s. Over time our understanding of the interaction between the economy and the environment has developed, and therefore our ideas about what might constitute "green marketing" have continued to evolve (Peattie, 2004). It exists three stages with different implications for marketing: (1) Ecological marketing, a narrowly focussed initiative which concentrated on reducing our dependence on particularly damaging products; (2) Environmental marketing, a more broadly based initiative which aimed to reduce environmental damage by tapping into green consumer demand and opportunities for competitive advantage; and (3) Sustainable marketing, a more radical approach to markets and marketing which seeks to meet the full environmental costs of production and consumption to create a sustainable economy.

Fig. 1 Three stages with different implications for marketing

Source: Peattie, 2004

Ecological marketing

According to Peattie (2004) the relationship between marketing and socio-environmental sustainability can be categorized into three "ages". It began with ecological marketing in the 1970s that focused on pressing environmental problems, such as air pollution, depleting oil reserves, and the environmental impact of pesticides (e.g. Henion and Kinnear 1976). It impacted a narrow range of industries and largely focused on technical solutions to resource use, pollution or waste concerns (e.g. the addition of catalytic converters to cars).

However, it soon proved to be too insufficient in order to fully cope with the environmental and social aspects of sustainability as elaborated by Henion and Kinnear (1976). Therefore, ecological marketing did not fulfill the requirements for taking into account the sustainability agenda.

Environmental/ Green and Greener marketing

The 1980s era of **environmental marketing** focused on developing products with superior socio-environmental performance with the aim of marketing them to the 'green consumer' in search of competitive advantage. Some companies have started to label their products and services as "environmentally friendly or friendly" (Orgonáš and Lipianska, 2009). This was more opportunity focused and involved a far wider range of industries. It reflected growing consumer interest in sustainability issues, and higher levels of information available through the development of sustainability-oriented guides and labels.

Some authors for example Kumar use term green and greener marketing instead of environmental marketing.

Figure 2 shows the progression of the marketing term (Kumar, 2013) which will be described in this part of the chapter.

Fig. 2 Progression of marketing

Source: Kumar, 2013

Green marketing according to Lee (2008) was established through three stages. Starting in the 1980's marketers started to initiate their focus on selling greener products which had a lower impact on the environment in terms of energy efficiency for instance (Peattie and Crane, 2005). Subsequently within the second stage during the 1990's green marketing took a backlash as consumers felt more and more brainwashed by various offerings and confusing promises which led consumers to decrease their spending on those particular products and final purchasing decisions have been unsuccessful. In green marketing research this phenomenon is called greenwashing where companies purposely decepted consumers with false environmental commitments (Vermillion and Peart, 2010). Marketing decisions have been made that exchanged long-term customer loyalty with short-term profits diminishing the trust consumers had in environmental efforts performed by companies (Zinkhan and Carlson, 1995).

The third and final stage with the turn of the century however gave the green marketing a new impulse as new technology was implemented and stricter government regulations where put in place (Wong et al., 1996) in connection with millenials as the most recent consumer generation that cares more about green products and has increased customer loyalty towards green brands which unfortunately does not signify higher conversation rates when it comes to the consumption process (Smith and Brower, 2012).

Several sources point out that a more complete definition of green marketing is based on the process of planning, implementing and managing the development, pricing, promotion and distribution of products in a way that meets the criteria of meeting customer needs, achieving organizational goals of the business, and linking these processes to the ecosystem (Dangelico, 2017).

The main goal of green marketing is to present consumers with the importance of protecting the environment in the context of product consumption, placing an emphasis on building long-term relationships based on both sides of communication, not only with customers but also with other stakeholders and creating the natural need to be environmentally responsible (Moravčíková, 2017).

Unfortunately, green marketing may have achieved to increase the performance of selected green companies however it cannot be applied to every company in every sector, namely the apparel industry. In addition, when applying Kotler's marketing-mix model it becomes apparent that greener products might challenge the price and promotion aspect. Research has shown that green consumers refuse to pay premium prices and are to some extent still affected by the green washing backlash of the 90's thus declining to be persuaded or attracted by environmental campaigns (Kilbourne, 1995; Davis, 1993). Subsequently, leading to the conclusion that green marketing failed just as ecological marketing to incorporate the sustainability agenda and another marketing approach is necessary to tackle the challenges of sustainability (Belz and Peattie, 2012).

Greener marketing and sustainable marketing both developed towards a holistic and responsible management approach in terms of taking into consideration stakeholder requirements and sustainable economic development, however the maintenance of those relationships was still not in focus (Kumar et al., 2013).

Sustainable marketing/ Sustainability marketing

The third age, of sustainable marketing, involves the transformation of markets and marketing to achieve substantive progress towards the internalization of socio-environmental costs previously treated as externalities. Since sustainable marketing implies it having reached a sustainable end state (which ultimately is both impossible to judge and dependent on the sustainability of the society within which it takes place), it is more helpful to talk about sustainability marketing. This is marketing that seeks to integrate the ecological and ethical concerns of the green marketing era, along with a relationship marketing focus, to create a form of marketing that develops long-term, sustainability-oriented value relationships with customers (Belz and Peattie 2012).

The distinction between sustainable marketing and **sustainability marketing** is important. The adjective "sustainable" can be used to mean durable or long-lasting. Therefore, sustainable marketing can be interpreted as a kind of marketing that builds long-lasting customer relationships effectively- without any particular reference to sustainable development or consideration of sustainability issues. Sustainability marketing more explicitly relates to the sustainable development agenda (Belz and Peattie 2012).

According to Rakic and Rakic (2015), sustainability marketing is oriented towards the whole community, its social goals and the protection of the environment. It requires the engagement of national and local governments, organisations and population as well as the necessary capital (human, financial, infrastructural, etc.). A set of characteristics is related to sustainability marketing including economic, environmental, social, ethical and technological dimensions (Lim, 2016).

According to Kemper (2019) three conceptualisations of sustainability marketing: Auxiliary Sustainability Marketing (which focuses on the production of sustainable products), Reformative Sustainability Marketing (which extends the auxiliary approach through the promotion of sustainable lifestyles and behavioural changes) and Transformative Sustainability Marketing (which further extends the auxiliary and reformative approaches through the need for transformation of current institutions and norms, and critical reflection).

3.2 Societal marketing concept and sustainable marketing

Societal marketing concept is the newest marketing concept developed by Kotler (Fig.3), which adopts the position that marketers have a greater social responsibility than simply satisfying

customers and providing them with superior value. Instead, marketing activities should strive to benefit society's overall well-being.

Fig. 3   Marketing concepts
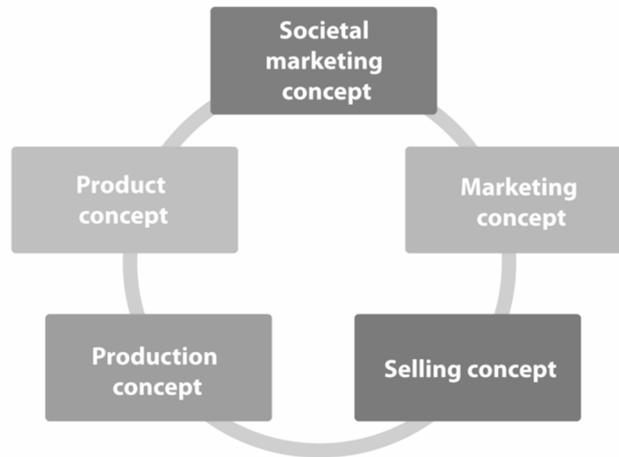
Source: Ph. Kotler, 2012, p. 65

Marketing organisations that have embraced the societal marketing concept typically identify key stakeholder groups including: employees, customers, local communities, the wider public and government and consider the impact of their activities on all stakeholders. They ensure that marketing activities do not damage the environment and are not hazardous to broader society. Societal marketing developed into sustainable marketing.

Fig. 4   Four main types of marketing concepts

Source: Ph. Kotler, 2012, p. 583

According to Kotler (2012) nowadays companies can use four main types of marketing concepts (Fig.4); marketing, societal marketing, strategic planning and sustainable marketing. Each concept takes a different approach and priority on the needs of both their consumers and the needs of the business. Sustainable marketing concept is unique, it makes actions that meet the needs of their consumers and their business but focuses on being both socially and environmentally responsible while constantly striving to meet their future generation needs.

3.3 Framework and definition of sustainable marketing

The previous subchapters have shown that sustainability in marketing has gained some traction over the years, yet we still remain uncertain about exactly what sustainable marketing means.

It is important to define what is meant by Sustainability Marketing and what aspects of sustainability it is addressing. According to Martin & Schouten (2014) define sustainable marketing as:

"…the process of creating, communicating, and delivering value to customers in such a way that both natural and human capital are preserved or enhanced throughout."

Belz and Peattie (2012) provide enhanced explanations which state that sustainable marketing consists of:

"Planning, organizing, implementing and controlling marketing resources and programmes to satisfy consumers' wants and needs, while considering social and environmental criteria and meeting corporate objectives."(Belz and Peattie, 2012)

In addition, with the focus on the long-term relationship in terms of:

"… building and maintaining sustainable relationships with customers, the social environment and the natural environment".

The two definitions may vary in content however concern the same issue of generating sustainable value that serve the consumer's wants and needs while ensuring that all activities of the consumption process do not distress or cross the boundaries of the sustainability pillars.

Other definitions are presented in Tab.1.

Tab. 1 Definitions of Sustainable marketing

Autors	Sustainable marketing definitions
Donald A. Fuller (1999)	the process of planning, implementing, and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met, (2) organizational goals are attained, and (3) the process is compatible with ecosystems.
Sheth and Parvatiyar (1995)	the "ways and means" for reconciling economic and ecological factors through reinvented products and product systems
Dam and Apeldoorn (1996)	the marketing within and supportive of sustainable economic development
Belz and Peattie (2012)	a kind of marketing, which builds long lasting customer relationships effectively- without any particular reference to sustainable development or consideration of sustainability issues

Source: A. Fuller, 2004, Sheth and Parvatiyar, 1995, Dam and Apeldoorn, 1996, Belz and Peattie, 2012

CONCLUSION

Since the 1970s, several marketing concepts have emerged that consider marketing within its social and environmental context. Belz and Peattie (2012) list some of the previous marketing concepts that have been developed over the years: ecological marketing, green and greener marketing, environmental marketing, sustainable marketing and sustainability marketing. From these earlier approaches, sustainability marketing represents a logical evolution, and further extends and integrates them into one broad marketing approach. The programs within social marketing are designed to influence the behavior of individuals or communities to improve their well-being or of the society. Ecological marketing however, emerged as a reaction to the worst examples of environmental damage, some pioneering companies at that time proactively embraced environmental and social values as central to their business (Belz and Peattie, 2012). Green marketing differs from ecological marketing since it is more characterized by a focus on environmental issues, and by an emphasis on reducing environmental damage. Sustainable marketing is the next natural step forward and is considered as a broader concept. It focuses on achieving the 'triple bottom line' through creating, producing and delivering sustainable solutions with higher net sustainable value and at the same time continuously satisfying customers and other stakeholders (Charter et al. 2002).

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Impact of Chinese Positions and BRI Projects in the Western Balkans on the EU Agenda in the Region

Kristína Drieniková – Ľubica Zubaľová – Barbora Družbacká
kristina.drienikova@euba.sk, lubica.zubalova@euba.sk, barbora.druzbacka@euba.sk
University of Economic in Bratislava, Faculty of Commerce, Department of
International Trade
Bratislava, Slovakia

Abstract: Recently China has emerged as an important infrastructure developer in the Western Balkan region improving transport and energy infrastructure to support the flow of Chinese goods to the EU markets. Even if China fully supports EU integration process in the region, the Belt and Road Initiative (BRI) and the 17+1 cooperation format, connecting China, Central and Eastern European countries, raised the EU concerns on the risk of Chinese influence in the region. Although the trade positions of China are not that strong as those of the EU, the realized and announced investment projects of China in Serbia, North Macedonia, Montenegro and Bosnia are of the concerns. The paper focuses on the trade and investment activities of China in the Western Balkans and explores their risks on the EU strategic interests and its agenda in the region.

INTRODUCTION

The Western Balkans became a region important for Chinese strategic initiative – the Belt and Road Initiative (BRI) focused on improving connectivity and economic interconnectedness between China and different parts of the world (especially through upgrading roads, rail lines, ports, pipelines, and other infrastructure) (Pacheco Pardo, 2018). Western Balkan countries participate in the 17+1 platform, an ambitious regional arrangement between China and 17 Central and Eastern European (CEE) countries established in 2012 (including Greece from 2019) opening trade links for Chinese companies. Western Balkans are also part of China–Central Asia–West Economic Corridor, maritime corridor and digital corridor and for China, the region and especially Serbia is the gateway to the EU markets. Projects within BRI should improve and modernize region's infrastructure and energy security and it is estimated, that China will invest USD 11 billion within the next decade in the region (Bjelotomic, 2018).

For the EU, the Western Balkans is a priority in a term of further enlargement. The stabilization and association process launched in 1999 is considered to be the most effective EU foreign trade policy instrument in the process of conflict prevention, peacekeeping and preserving stability and increasing economic growth. Although it is a very powerful policy, within twenty years only Croatia was granted full EU membership. Therefore, candidate and potential candidate countries are worried if the EU promise that all countries of the region reaching EU entry conditions would be accepted, is still valid. To assure that the EU is counting on them, the Commission adopted new strategy toward Western Balkans in 2018, confirming that the enlargement process continued and the EU doors are open for new members when they meet the criteria (Kašťáková, Drieniková & Zubaľová, 2019).

The biggest European players like Germany or France perceive China's trade and industrial policies (intellectual property theft, technology substitution, lack of investment transparency, and insufficient market reciprocity) as economic threats, and are concerned about the influx of Chinese investments and their consequences in terms of political influence, control of key transport hubs, and access to sensitive technologies. Even though these countries publicly criticized Italy as the first G7 country that officially joined the BRI, Italian Minister for Economic Development Luigi Di Maio declared the cooperation will correct the trade imbalances between the two countries (Andani, 2019).

Despite the attitudes of France and Germany, Bulgaria, Croatia, the Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia, joined the BRI. In deepening cooperation with China, CEE countries are primarily motivated by economic factors. Many of them have turned to China as to a source of investment, not as a first choice, but as a last resort. For example, while Germany and other European creditors have imposed austerity measures on Athens beginning in 2010, China bankrolled the Port of Piraeus, now the Mediterranean's busiest port. Improving ties with China gives these small and medium states, which have historically been "sandwiched" between Russia and Germany, greater strategic and economic flexibility (Van Oudenaren, 2018).

According to Kavalski (2019) growing involvement of China in the CEE (and thus also in the Western Balkans) offers a qualitatively new context for the relations between the EU and China and it seems to challenge the very identity of the EU. The EU and China have divergent norms as for finance, financial integration as well as for investment area – both vary in labour standards, requirements on transparency, procurement or competition policy. Until 2009, the EU lacked a common investment framework, moreover, there is no common approach among EU Member States as for investments towards China (negotiations of bilateral investment agreement are still ongoing) the new EU framework for investment screening process will be applied from October 2020 – meantime the EU cannot consistently enforce its normative approach towards China (Pacheco Pardo, 2018). The new EU framework for foreign direct investments (FDI) screening is to ensure the security and public order in relation to investments into the EU and to improve coordination between EU member states and the Commission (Brattberg & Le Corre, 2019).

1 LITERATURE REVIEW

Expansion of Chinese investment in the EU has raised concerns regarding national security issues, as well as political and economic impact in European countries (Jacimovic et al., 2018). Pacheco Pardo (2018) analysed the effects of Chinese economic statecraft (defined as achieving foreign policy goals by economic means) in the case of BRI as its tool on financial security of Europe. He argues that economic spacecraft is working when influencing the policies of targeted countries (however with limits and not without frictions), as many European countries have already tried to use BRI's investments as a means of strengthening their financial position.

Examining Chinese investments in Europe, a growing attention is paid to the CEE region and its strategic position in the Belt and Road Initiative in the form of 17+1 mechanism. Kavalski (2019) explores the motivation and willingness that drives the CEE countries to partner with China. He concludes that beyond economic reasons (that are neither the main nor only, but not negligible) for their participation in the BRI there are three strategic motives to participate related to identity issues.

The 16+1 forum with CEE countries established in 2012 entered a "new era of cooperation" (Jacimovic et al., 2018) and with the BRI project launched a year later these countries have become interesting market for Chinese investment and "a window of opportunity" for Chinese

gateway to the EU markets (Zuokui, 2014). The countries in the forum are becoming more interesting for China (the relationship strengthened especially with the global financial crisis) and especially with the Western Balkan countries there is a growing trend in mutual cooperation with China in terms of both trade and investment (Jacimovic et al., 2018). There is some belief that China seeks to gain more influence and thus affects EU decision-makers towards China, and at the same time, the unity of the EU. Additionally, as for the Western Balkan countries, the impact of China could even abandon the idea of joining the EU (Long 2014).

China's engagement in the Western Balkans region has intensified in recent years, and China maintains good investment dynamics, particularly in the infrastructure and energy sectors. Its increasing activities in the region have stimulated academics interests and have raised new questions and challenges regarding concerns about the growing impact of China on economic and political (as well as integration) directions of the Balkan countries. The first analysis of the region's infrastructure investment development is provided by the European Investment Bank study from 2018 concluding that despite these infrastructure investments make only a small (but important) fraction of overall investment, they could help the Western Balkans' economies to overcome the developmental backwardness, promote a gradual recovery from the effects of the global financial and economic crisis as well as catching-up with the EU average (Holzner & Schwarzhappel, 2018).

In his article, Makocki (2017) deals with the impact of China's presence in the Western Balkans, noting that its initiative is competing with the existing economic centres of power in the region. Several authors have examined the extent of China's power and influence in the Western Balkans region, often in the context of China's relations with all Central and Eastern European countries. Pepermans (2018) argues that China is using a strategy that combines positive economic state art with a soft power culture to increase its economic and political influence in the region. However, according to Pavlićević (2019a), China lacks both the intention and the capacity to change the strategic and political decisions of the Balkan states, in particular to the detriment of the EU. In his next paper, Pavlićević (2019b) focuses on the trilateral relations of the EU, China and the Western Balkans within the three areas where China has the most significant impact on the countries of the Western Balkan region, foreign policy, physical infrastructure and connectivity and investments. The author recalls that concerns about China's growing involvement in the region's activities have been reflected not only in louder criticism, but have led, or have made a significant contribution to relaunching the EU's Western Balkans strategy and strengthening its structural strength.

2 METHODOLOGY

There is an increasing interest among academics and politicians as for the potential economic impacts regarding the growing engagement of China in the Western Balkan region. The EU faces new challenges in the economic, political and integration ambitions to the Western Balkans. The aim of the paper is to review the risks posed by China's presence in the region in terms of investment and trade in the context of EU interests.

In the introduction, we briefly summarize the positions of China - its aims regarding the BRI initiative, and of the EU in the Western Balkan countries. Further the article deals with the characteristics of the Western Balkans in terms of the main macroeconomic indicators and analyses the investment activities of China in the region. In the following sections we address the challenges for the EU resulting from China's increasing engagement in the region, and highlighting three areas that we consider to be the most important in this regard – debt-trap diplomacy, (non)-compliance with the EU environmental standards and persistence of corruption in the region.

The article draws on qualitative methods, including secondary data and information analysis. It uses data provided by relevant organizations such as the International Monetary Fund, the European Commission, ITC Trademap and official Chinese authorities. In view of the difficulty of transparency in Chinese investment, the article by China Global Investment Tracker (CGIT), compiled by The American Enterprise Institute and The Heritage Foundation, is used to analyse individual investments in Western Balkan countries. CGIT provides a comprehensive set of data on foreign direct investment (FDI) and China's construction contracts. In particular, current press releases on individual investments were used to analyse the data obtained and to bring investment projects closer to them, as China does not disclose all the details of the implemented and planned projects. The synthesis of this information provides an overview of the most important projects in each country. Other methods, such as deduction, induction and especially comparison were also used.

Table and graphical representation were used to make the obtained data more transparent. The complex picture of the researched issue was supplemented with comments and verbal descriptions of graphs, tables, and figures.

3 RESULTS AND DISCUSSION

China is an important investment partner of the Western Balkan, the region with the poor investment climate: poor governance, corruption, unemployment and fading ambition for the EU membership; at the same time, it is a region with weak possibilities to attract foreign direct investments and loans from other partners.

The following Tab. 1 provides an overview of the basic macroeconomic data of the Western Balkan countries. Within the Western Balkans, Montenegro and Serbia have the highest GDP per capita; unemployment rates in Albania and Serbia are between 12% – 13%, while Bosnia and Herzegovina and North Macedonia face more serious problems with rates reaching 18.4% and 20.7% respectively. The IMF does not publish data on unemployment and governmental net debt for Kosovo and Montenegro. Net governmental debt in Albania is as high as 60% of GDP, 52.7% in Serbia, 39.2% in North Macedonia and 24% in Bosnia and Herzegovina.

Tab. 1 Basic macroeconomic data for Western Balkans in 2018

	GDP/capita /USD PPP	Unemploy-ment	Governmental net debt	Trade balance million USD	Trade with China	Trade with EU
Albania	13 327	12.2%	60.0%	-3,065	6.3%	66.0%
Bosnia	13 583	18.4%	24.0%	-4,445	4.4%	65.3%
Kosovo	11 664	n.a.	n.a.	-2,536	8.4%	42.2%
Montenegro	19 172	n.a.	n.a.	n.a.	9.2%	47.8%
North Macedonia	15 715	20.7%	39.2%	-2,145	3.7%	70.9%
Serbia	17 552	13.2%	52.7%	-6,643	5.1%	64.6%

Source: processed by the authors according the data from IMF, 2019, European Commission, 2019a,b,c,d,e,f ITC Trade map

All Western Balkans face problems with negative trade balance and for all the EU is the most important trade partner; China is the second most important partner for Albania (6.3%, 503 million EUR), the third most important partner for Bosnia and Herzegovina (4.4%, EUR 703

million), Kosovo (8.4%, EUR 312 mil.), Montenegro (9.2%, EUR 272 million), North Macedonia (3.7%, EUR 499 million) and Serbia (5.1%, EUR 1913 million). The trade balance is negative in trade with China as well as the EU (European Commission, 2019a, b, c, d, e, and f).

According to Munich Security Report (2019), China supports the EU accession process of the region; however, its activities have raised suspicion within the European Union that China may exploit its economic heft for political gains. Chinese partnership is without conditionality, investment projects do not require strict environmental standards, transparency or any internationally accepted rules required by the western investors. The Chinese presence in Western Balkans may have a strategic future aspiration of being strongly present in part of Europe that may be a part of the EU and have access to the EU market.

3.1 Chinese investment activities in the Western Balkans

Within the BRI, the Government of China (GOC) published the first most comprehensive official document containing the general integration objectives of the initiative in March 2015. This document defines the five key areas of initiative cooperation shown in Fig. 1. According to the NDRC (2015), investment and trade cooperation plays a major role in the reviving of Silk Road. The investments are mainly connected with the construction of infrastructure projects, which also represent one of the main pillars of the BRI.

Fig. 1 Five key areas of BRI co-operation
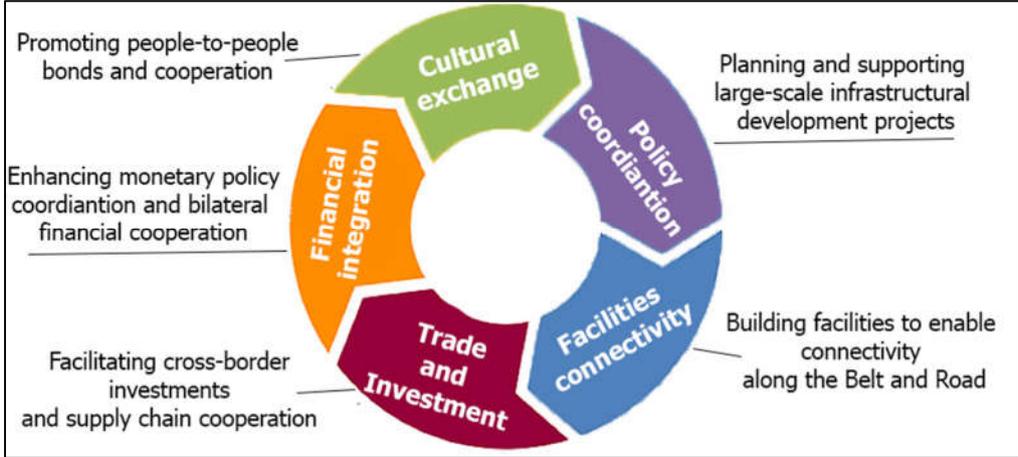
Source: processed by the authors

The EU is the main investor in the region contributing around 60% of all FDI; China only 3% with the majority of FDI in Serbia (Day, 2019).

According to the AEI (2019), the amount of Chinese investments and construction contracts in Western Balkans between 2010 and 2019 approached USD 14.67 billion. Over 80% of these investments and projects have been added after the launch of the BRI and are considered to be implemented as a part of this initiative. These projects are FDI, but mostly public investment contracts financed by Chinese banks.

The breakdown of Chinese construction project costs and investments in each country is displayed in Fig.2. Geographically, the prime target of Chinese construction contracts is Serbia, where up to 70% of Chinese investment worth a total of USD 10.3 billion has been realized. The second-largest market for investments is Bosnia (17%) with USD 2.5 billion including 5 contracts and one greenfield project. The third is Montenegro with 8.3% and Macedonia with 4.4% of Chinese investments in the region.

Fig. 2 Breakdown of Chinese construction contracts costs and investments by countries between 2010 and 2019 (in %)
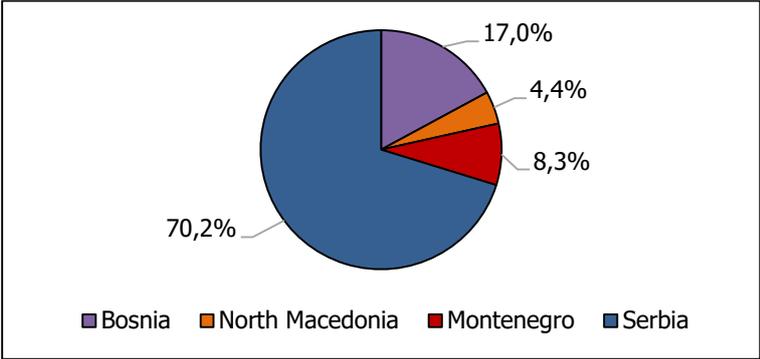
Source: processed by the authors according the data from American Enterprise Institute (2019)

Out of the total projected construction costs almost half are budgeted for transport (49%) and slightly less for energy projects (32%). The most important transport sector contractor is the predominantly state-owned China Communications Construction Company. In the energy sector, the state-owned China National Machinery Industry Corporation – known as Sinomach – is the leading investor (Holzner & Schwarzappel, 2018). A complete overview of contracts and investments by sectors is shown in Fig. 3.

Fig. 3 Breakdown of Chinese construction contracts costs and investments by sectors in between 2010 and 2019 (in %)
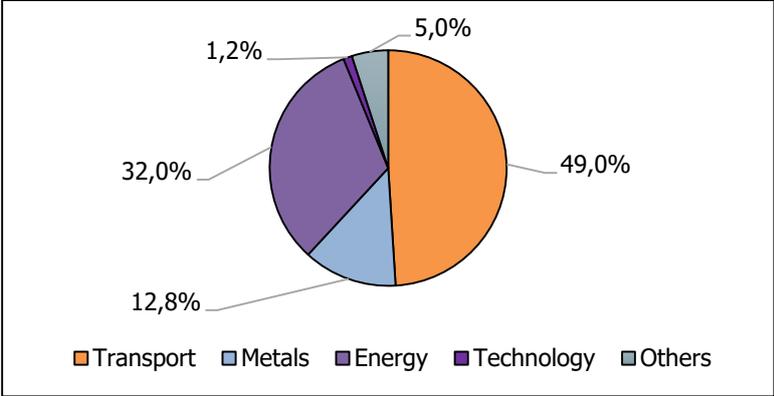
Source: processed by the authors according the data from American Enterprise Institute (2019)

China is thus not the biggest source of FDI but is an important provider of loans for project financing under the BRI. Taken in the account the construction contracts documented in Fig 4, it is apparent that Serbia is the most attractive country with infrastructure contracts worth more than USD 3.8 billion and energy projects worth USD 1.7 billion. Projects in the energy sector dominate in Bosnia, with total contracting amount of more than USD 1.4 billion. Other projects in Bosnia are in the transport sector worth USD 740 million. Montenegro mainly implements infrastructure projects (USD 1.2 billion), the same as the Northern Macedonia (USD 490 million).

Fig. 4 Chinese construction contracts in individual countries between 2010 and 2019 (millions USD)
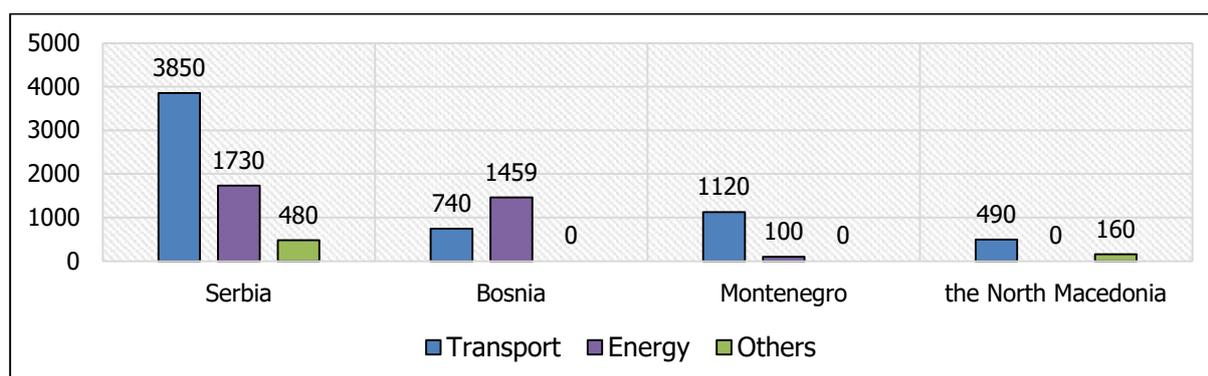
Source: processed by the authors according the data from American Enterprise Institute (2019)

Tab. 2 The most important BRI projects in the Western Balkans

Project	Country	Contractors	Realization	Costs
Reconstruction of Budapest - Belgrade railway	Serbia	CCCC	2014 - 2023	USD 1.12 billion
Belgrade-Bar motorway	Montenegro	China Road and Bridge Corporation (CRBC)	2014 – n.a.	USD 1.12 billion
Kostolac power plant (B3 block construction, revitalisation)	Serbia	Sinomach	2017 - 2020	USD 716 million
Preljina – Pozega highway	Serbia	CCCC	2017 – n.a.	USD 520 million
Stanari Thermal Power Plant	Bosnia	Dongfang Electric	2016	USD 460 million
Modernization of Telekom Serbia network	Serbia	Huawei	2016 - 2019	USD 170 million
Commercial complex in Skopje	North Macedonia	Sinomach	2019 – n.a.	USD 160 million

Source: processed by the authors

From China's perspective, the Western Balkans is a strategic place for investment. An overview of the most important Chinese projects is provided in Table 2. Reconstruction and modernization of the Budapest–Belgrade railway line is not only one of the most important BRI projects in Serbia, but also in the whole of Europe creating a Greece–Central Europe corridor. In 2016, the Chinese state-owned company COSCO has bought a 67% stake in Greece port Piraeus for USD 419.7 million (Stamouli, 2016). Since this purchase, China has transformed Piraeus into the second largest port in the Mediterranean (TNH, 2019). The geographical proximity of the Western Balkans, the port of Piraeus and Central Europe makes enabled to create a modern Budapest–Belgrade–Skopje–Athens–Piraeus transit corridor even if this project has already highlighted the problematic aspects of the initiative in Europe in the past – avoiding tender procedures (Spike, 2016). The completion of the project, worth approximately USD 1.2 billion and funded by the Chinese Export-Import Bank, was delayed to 2023 (Zasiadko, 2019).

In 2016, Chinese technology giant Huawei and Serbian national operator Telekom Serbia launched a project, worth USD 170 million, to transform and modernize the fixed telephone network. The project initiated extensive cooperation in information and communication technologies between China and Serbia (Bjelotomic, 2016).

Other projects worth hundreds of millions of dollars are the construction of a highway from the Montenegrin town of Bar to Belgrade, or the construction of the coal-fired power stations Stanari (Bosnia), Kostolac (Serbia). Albania and Kosovo have not registered any BRI projects yet, but given China's ongoing expansion and interest in the Western Balkans, we can expect Chinese investors to be interested in these territories as well.

3.2 Debt-trap diplomacy in the Western Balkans

The term "Debt-trap diplomacy" was first used in 2017 as a criticism of China's foreign policy in relation to BRI implementation, questioning funding of fiscally unsound infrastructure projects and offering loans to countries confined in a debt trap that leaves them vulnerable to Chinese influence (Chellaney, 2017). Countries like Pakistan and Sri Lanka are associated with this new phenomenon, but the Western Balkans region is also at risk.

Chinese government within credit agencies refuse to apply the OECD rules for Export Credit Agencies. In practice, this means that China provides more advantageous credit conditions than the countries which applied the so-called OECD Consensus (Arrangement on Officially Supported Export Credits) (Zubaľová, 2019).

Among the Western Balkan countries, Montenegro is, particularly at risk. Montenegro and the China Export-Import Bank signed a loan agreement of USD 1.12 billion in 2014 to finance the highway linking the port of Bar to Belgrade, Serbia. China has provided a loan at 85% of the total with a 20-year repayment (Reuters, 2014). According to Hopkins (2019), loan from China rocketed government debt from 63% in 2012 to almost 80%. If Montenegro were to default, the terms of its contract for the loans give China the right to access Montenegrin land as collateral. A Chinese loan also forced the government to raise taxes, partially freeze public sector wages and other social (Barkin & Vasovic, 2018).

The EU is undoubtedly fully aware of the impact that the current status of Montenegro's exorbitant debt creates for China, enabling China to increase political leverage in a variety of contexts for strategically ambiguous reasons.

In the context of EU enlargement, if Montenegro is to eventually accede to the EU, the EU will be disinclined to take on a member state that has both strong incentives to attempt to shape EU foreign policy in a pro-China direction and an ever-worsening debt situation (Doehler, 2019). With the growing number of Chinese investment projects, this problem may also occur in other Western Balkan countries.

3.3 Compliance with EU environmental standards

As part of the EU integration process, Western Balkans were obliged to join an environmental compact with every EU member state called the Energy Community, governed by legally binding directives under the Energy Community Treaty (ECT) (Doehler, 2019). An important part of this agreement is the alignment of EU energy policies and pollution standards of the Western Balkans with EU countries, which is inconsistent with Chinese activities in the region. Examples are the construction of coal-fired power stations in the Western Balkans:

- In Bosnia Stanari TPP coal power plant for USD 460 million built by the Chinese company Dongfang Electric (Ciuta, 2019).

- In Serbia the B3 unit in the Kostolac coal power plant worth USD 716 million covered by Sinomach. To finance this project, EPS has received a preferential loan from the Chinese Export-Import Bank. The maturity of the loan is 20 years, with a period of 7 years and a fixed interest rate of 2.5%. Deadline for the completion of the new block is the end of 2020 (SerbiaEnergy, 2019).
- In March 2017, the House of Representatives in the Federation of Bosnia and Herzegovina has approved a resolution allowing the construction on a Chinese-funded thermal power plant in Tulza (Lakic, 2019a). This project has triggered EU responses. On March 27, the EU Energy Community Secretariat announced that it was opening a dispute settlement procedure on Bosnia's planned guarantee for a EUR 614 million loan from the China Exim bank to build the Tuzla 7 coal power plant (Lakic, 2019b). Former European Commissioner for Neighbourhood and Enlargement Johannes Hahn stated that issues such as environmental impact assessments, state aid and public procurement procedures would "certainly be closely looked at during the opinion process", a reference to one of the steps toward joining the EU (Reuters, 2019).

It is unambiguously clear that by investing in coal power plants, China's BRI is having a negative impact on Bosnia's prospects for EU membership. However, this is not to say that China is responsible for the decisions of the Bosnian government. After all, it was Bosnia's choice to pursue an energy policy that it knew full well was incongruent with the one that it is supposed to be adopting to keep pace with its EU aspirations (Doehler, 2019). Although, China is not responsible for the decisions of the countries, the implementation of projects that are not in line with EU strategies excludes China's full support for the EU integration.

3.4 Persistence of corruption in region

The EU's enlargement policy has evolved through the years and as a result, certain fundamental issues have been given priority in the accession process, including the fight against corruption. Lessons learnt from previous enlargement rounds have drawn attention to the importance of the EU's pre-accession leverage and have helped refine the EU's approach to anti-corruption policies. The EU supports the aspirant countries' anti-corruption efforts with technical expertise under various projects, and financing through its Instrument for Pre-accession Assistance. It also cooperates with international bodies like the Council of Europe's Group of States against Corruption (GRECO), and regularly assesses progress (European Parliament, 2017).

Nevertheless, fighting corruption in Western Balkans is still failing. Transparency International Corruption Perception index confirms persistence of corruption in region. According to Transparency International (2019) in 2018 Western Balkans were ranked between 99 (Albania) to 67 (Montenegro) out of 180. Albania, even if its position was improved by 5 points since last year, is the worst performer (Albania blocked the anticorruption reforms and has underperforming institutions that enables spread of corruption). In Bosnia (89) large legislative reforms were launched but without proper anticorruption regulations enforcement; the same in Macedonia (93). Montenegro (67) has also weak law implementation and sanction system for law violators; Serbia (87) launched several successful anticorruption campaigns, but corruption and its sanctioning still remains a problem; in Kosovo (93) implementation and enforcement of reforms remain a big problem.

An example of a corruption problem in relation to Chinese investments and initiatives is the case from Macedonia. In late 2013, the government in Macedonia signed an agreement for the construction of the 57–kilometre Kicevo–Ohrid highway with the Chinese Sinohydro Corporation LTD: the contract amounted to EUR 373 million, and was signed together with another one covering the 53–kilometre stretch from Skopje to Stip (EUR 206 million). The

project was to be financed by a loan from the state-owned China Exim Bank for 85% of its value – and executed by Sinohydro (Makocki, 2017). Nevertheless, Sinohydro had dubious reputation for alleged fraudulent activities and was on two occasions debarred – by the World Bank and the African Development Bank. The government selected a Chinese contractor from the list of Chinese state-owned enterprises and decided for that purpose to set aside the national legislation on public procurements, largely harmonized with the EU acquis (Krstinovska, 2019). In addition, the entire highway construction project has highlighted several shortcomings that can be attributed to poor quality planning and project documentation, leading not only to an overpriced but also dangerous route in terms of technical standards.

China is not responsible for the decisions of the country's government, but it supports persistent problems in the region. Corruption and governance issues are major roadblocks to Western Balkan-EU integration and Chinese manipulation of these vulnerabilities will only continue to adversely impact the prospects for Western Balkan–EU integration until serious reforms are made (Doehler, 2019).

CONCLUSION

China's investments and projects in the Western Balkan region have started to grow with the launch of the BRI. Thanks to the strategic location of the countries as well as the easy access of Chinese investors, this region is becoming an important crossroads of China's vision of the New Silk Road project. Despite the unstable macroeconomic environment, the start of BRI implementation brought 28 investments (FDI and investment projects) worth more than USD 14.67 billion. More than half of these projects are being implemented in Serbia, but also in Bosnia and Herzegovina, Montenegro and North Macedonia.

Reconstruction and modernization of the Budapest—Belgrade railway line or the construction of the Bar—Belgrade motorway are projects with costs exceeding USD 1 billion, which the Western Balkan countries had to borrow from China. Similar projects and loans are on the increase. China's investment in the region carries many risks that may threaten the countries of the Western Balkans. Major China-funded projects are in the form of loans that must be repaid and thus, that can lead the countries to heavy debt and consequently increase their economic dependence on China and therefore their vulnerability to increased political influence from China. Similarly, China is using so-called debt-trap diplomacy in several developing countries to merge its strategic interests.

Chinese companies are implementing projects that use workers from China and import their own materials that do not help to create employment opportunities for local workers and manufacturers. At the same time, energy projects that include coal-fired power plants, for example in Bosnia and Herzegovina or Serbia, are not in line with the EU's energy and environmental strategy and can lead to environmental degradation in the region. Thus, they do not comply with the EU environmental and social standards. Moreover, cooperation with Chinese telecoms giants such as Huawei could threaten cybersecurity, as cooperation in such high technology can open up access to sensitive data for China. An important fact is that, since the Western Balkan countries are not the EU Member States and therefore are not regulated by strict public procurement rules, there is no pressure on the transparency of trade transactions and investments, what creates a great advantage for China. On the other hand, it will not help to fight widespread corruption in the region. Another problem is the negative and even worsening trade balance in Balkan countries in trade with China and the EU as well.

On the other hand, the main benefit of the BRI for the Western Balkans is that BRI is an important source of foreign direct investment and loans for large investment projects that could improve their development and catch up to the EU member states. New production

companies or power plants provide new jobs, which can improve the relatively high unemployment in the region. Modernizing infrastructure and improving connectivity across Europe can help Balkan companies find new markets for their production. Stronger partnerships between China and the Balkan countries, as well as the rising standard of living of the Chinese population, may also lead to an increase in the number of Chinese tourists in the region which would entail new income for tourism countries. Moreover, despite China in terms of trade exchange and investments is not as important as the EU, its presence in the region and clear long-term strategy should start-up EU investment activities as well as political support in border disputes, democracy reforms, etc. Western Balkans should continue their EU accession process and reinforce mutual cooperation with the EU and at the same time building their contacts with China coping with above mentioned benefits and risks.

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Female Consumer Behavior: A Comparative Study

Kutlu Ergün

kutlu.ergun@balikesir.edu.tr

Balikesir University, International Relations Research and Application Center

Balikesir, Turkey

Abstract: Although there are many types of research on consumers' economic behaviors, there are not many studies focusing especially on female consumers. Therefore, this study tried to close this gap and aimed to reach possible determinants of financial behaviors of female consumers. This study was based on an online survey created on google online survey hosting platform, and was shared on social media in Romania and Turkey. 180 female participants were included in the research because this study was only focused on the behavior of female consumers. One-Way ANOVA was used to analyze the data. The study concluded that being older, having high income and paying off credit card on time were the determinants of favorable financial behaviors for Romanian and Turkish female consumers. I suggest that young and low-income female consumers should be provided financial education on responsible consumer behaviors and good decision-making.

Keywords: female; consumer behavior; financial behavior

JEL Classification codes: D12, D14, G51

INTRODUCTION

The majority of studies have conclusions that the responsible and favorable of male individuals is higher than female individuals. It means that male individuals have more positive and responsible consumer behavior than female individuals. Although there are many types of research on consumers' economic behaviors, there are not many studies focusing exclusively on female consumers. The number of employed women has been increased especially last decade. Therefore, this study aimed to reach possible determinants affecting favorable and responsible behaviors of female consumers. We can evaluate consumer behavior in a wide spectrum from saving to shopping. Therefore, it is important to use specific characteristics to reach specific determinants of consumer behaviors. According to Kinley, Josiam and Lockett (2010), consumers shop in different kinds of stores with differing frequencies and spend variable amounts of money for a wide spectrum of products. Therefore, narrowing the focus to a particular demographic and psychographic characteristic to determine shopping tendencies can be particularly useful. Consumer decision-making styles can be useful because they can offer insights to determine the preferences of purchasing products and services (Mitchell and Walsh, 2004). Also consumers with powerful word-of-mouth abilities in relation to fashion have higher hedonic motivations for shopping (Kim & Hong, 2011).

On the other hand, gender identity has an important role for designing marketing process. target consumers in emerging gender-market segmentations (Ye and Robertson, 2012). Gender is the major factor out of all the other factors that affects consumer purchasing behaviour. When gender differs, the perception of consuming the product is different as well. Men and women tend to have different choices while shopping because of the difference in their upbringing and socialization. Women are more internally focused whereas men ought to be externally focused. (Lakshm, Niharika, & Lahari, 2017).

The aim of this study was be to examine the relationship between consumer behavior and some of demographic characteristics including gender, monthly net income, and educational level, pre-knowledge on personal finance and paying off credit card in full. I tried to find an answer to following research question with five hypotheses:

Does a statistically significant difference between consumer behavior and selected demographic characteristics?

H1: There is no statistically significant difference between consumer behavior and age.

H2: There is no statistically significant difference between consumer behavior and monthly net income.

H3: There is no statistically significant difference between consumer behavior and educational level.

H4: There is no statistically significant difference between consumer behavior and pre-knowledge on personal finance.

H5: There is no statistically significant difference between consumer behavior and paying off full balance of credit card.

The second section of this study consists of literature review. Methodology is the third section to explain the method of the research. Fourth section is the result and discussion that summarize the result of analysis. Conclusion is the last section that includes main findings and suggestions.

1 LITERATURE REVIEW

It is important to have a pre-knowledge in financial issues and marketing process. Ishak and Zabil (2017) demonstrated that awareness is prior to effective consumers' behaviors; while unawareness leads to ignorant and reduction of individual capacity in protecting and upholding their rights against sellers' frauds.

In their study examining the influence of internet experience and web atmospherics on consumer online behavior, Richard, Chebat, Yang, and Putrevu, S. (2010) found that males relied on their skills to navigate websites quickly and efficiently to obtain select pieces of information, whereas females enjoyed facing the various challenges as they conduct thorough search to gather all relevant information before making a decision.

Consumers' behavior is mostly based on the need that makes some changes on consumer attitudes towards purchasing products and services. Velaudham and Baskar (2015) examined the influence of gender over the consumer buying behavior towards air conditioner, and found that female influence the purchase decision through consumer need, information search product awareness, and evaluation of alternatives. On the other hand, male influence the consumer buying behavior only through evaluation of alternatives than female. İn another study conducted by Kim and Hong (2011), it was found that women's fashion leadership tendencies to directly influence their motivation for value, gratification, social, and idea shopping.

It has been carried out some research has also been conducted on women's financial behavior as well. Mottola (2013) concluded that women engaged in more costly credit card behaviors than men. But he suggested that the difference could be accounted for by demographic characteristics, economic circumstances, and financial literacy levels. Kuo, Hu and Yang explored the effects of consumer inertia and satisfaction on repeat-purchase intention among female online shoppers, and indicated that consumer inertia positively affects repeat-purchase intention in online shopping. They also suggested that positive word-of-mouth negatively

moderates the relationship between consumer inertia and repeat-purchase intention. Hernandez, Jimenez and Martin (2009) analyzed the influence of socioeconomic characteristics including age, gender and income on online shopping behavior, and they found that once individuals attained the status of experienced e-shoppers, their behavior was similar, independently of their age, gender or income level. They suggested that this was probably due to the experience acquired during purchases modifying the effect exercised by these variables.

In the study exploring the relationships among demographic factors (gender, age, education, and income), consumer traits (technology anxiety, need for interaction, and technology innovativeness), and intention to use retail self-checkouts, and conducted by Lee, Cho, Xu and Fairhurst (2010), it was found that gender significantly influences intention to use retail self-checkouts through technology anxiety and technology innovativeness. As expected, women tend to exhibit a greater level of technology anxiety while men are more likely to be innovative toward technology. They also showed that age has a significant influence on intention to use retail self-checkouts in combination with technology anxiety, need for interaction, and technology innovativeness.

2 METHODOLOGY

For the purpose of this study, I used data on online consumer behavior survey which was open to all voluntary participants on social media. The survey consisted of socio-demographic variables including age, income educational level, pre-knowledge on financial issues, and paying off credit card debt. To measure the favorable financial behavior and to reach total behavioral score, 13 survey questions related to the saving-spending pattern, investing, paying bills on time, saving for short and long-term financial goals, budgeting and saving for retirement were included in the survey. To collect data, the link of the survey was shared on social media in Turkey and Romania. It was reached totally 241 male and female respondents voluntarily completed the survey questionnaire. 180 female participants were included in the research because this study was only focused on the behavior of female consumers. The one-way analysis of variance (ANOVA) was used to determine whether there were any statistically significant differences between independent categories in each group.

3 RESULTS AND DISCUSSION

Descriptive statistics was conducted to observe the distribution of the selected data. Table 1 displays descriptive statics of the sample including 180 female participants from Romania (47.8%) and Turkey (52.2%). Percentage of participants from two countries is almost equal. Age groups are also equal for Romanian participants. But individuals above 26 years old have higher percentage for Turkish participants. Most of the participants have the income level below €500. 82.6% of individuals from Romania' monthly net income is lower than €500. While 62.8% of Romanian participants have at least master level of education, 25.5% of Turkish participants have the master or higher level of education. Participants from Romania are more knowledgeable on personal financial issues than Turkish participants (48.8% and 30.9% respectively). Almost half of the all participants pay off entire balance of their credit card debt (46.0% for Romanians and 48.9% for Turkish respondents).

The independent variable, consumer behavior scores ranged from 3 to 13 with a mean of 7.52 and a standard deviation of 2.61 for Romanian participants. The consumer behavior score for Turkish participants ranged from 1 to 13 with a mean of 7.59 and a standard deviation of 2.85.

Tab. 1 Descriptive statics

Characteristics	Romania		Turkey	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)
Age				
17-25	43	50	60	63.8
26 and above	43	50	34	36.2
Monthly net income				
Lower than €500	71	82.6	67	71.3
Higher than €500	15	17.4	27	28.7
Education level				
Bachelor	32	37.2	70	74.5
Master or higher	54	62.8	24	25.5
Pre-knowledge (finance)				
Yes	42	48.8	29	30.9
No	44	51.2	65	69.1
Paying off credit card				
Yes	36	41.9	46	48.9
No	28	32.6	34	36.2

Source: K. Ergün, 2020, p. 4

To compare differences of means among female group based on overall demographic conditions and consumer behaviors, one-way ANOVA was performed. One-way ANOVA indicated significant difference among Romanian and Turkish participants in terms of age (Romania: F = 6.72, p < .05; Turkey: F = 4.50, p < .05), monthly net income (Romania: F = 8.03, p <.01; Turkey: F = 5.85, p <.05), and paying off entire balance of credit card (Romania: F = 8.35, p < .01; Turkey: F = 5.65, p < .05) (Table 2). The results of the ANOVA allowed to rejecting the null hypothesis H_1, H_2, H_5, and supporting the conclusion that there is a statistically significant and strong relationship between consumer behavior and the dependent variables including age, monthly net income, and paying off credit card in full for Romanian and Turkish participants. On the other hand, the result of One-way ANOVA also indicated no significance difference among Romanian participants in terms of educational level (F = 0.16, p > .05), and pre-knowledge on personal finance (F = 0.67, p > 0.05). The results of the ANOVA allowed to accepting the null hypothesis H_3 and H_4, and indicating the conclusion that there is no statistically significant and strong difference between consumer behavior and educational level and pre-knowledge on personal finance for Romanian participants. But educational level and pre-knowledge on personal finance was found to be statistically significant among Turkish participants (F = 2.99, p < .10 and F = 5.65, p < .05 respectively). The results of the ANOVA allowed to rejecting the null hypothesis H_3 and H_4, and supporting the conclusion that there a no statistically significant difference between consumer behavior and educational level and pre-knowledge on personal finance for Turkish participants.

The study found that there was a statistically significant difference between two categories in each group with respect to age, income and paying off credit card debt for Turkish and Romanian participants. Turkish and Romanian individuals who were older than 26 years old, those who had net monthly income of more than €500, and, those who paid off credit card debt on time was found to have more favorable financial behaviors. While the educational level and pre-knowledge on financial issues did not have a relationship with financial behavior for Romanian participants, a significant relationship was found with respect to that independent variables for Turkish respondents.

Tab. 2 Means, standard deviations, and One-Way Analyses of Variance in baseline characteristics

Measures	Romania				Turkey			
	M	SD	F	P	M	SD	F	P
Age								
17-25	6.81	2.09	6.72**	0.011	7.13	2.72	4.50**	0.037
26 and above	8.23	2.91			8.41	2.94		
Monthly net income								
Lower than €500	6.94	2.47	8.03***	0.006	7.03	2.71	5.85**	0.017
Higher than €500	8.54	2.59			8.45	2.89		
Education level								
Bachelor	7.37	2.05	0.16	0.689	7.30	2.69	2.99*	0.087
Master or higher	7.61	2.91			8.45	3.20		
Pre-knowledge								
Yes	7.28	2.44	0.67	0.415	8.62	2.55	5.65**	0.019
No	7.75	2.78			7.13	2.88		
Paying off credit card								
Yes	7.80	2.16	8.35***	0.005	8.10	2.77	4.64**	0.034
No	6.07	2.63			6.73	2.87		

Source: K. Ergün, 2020, p. 5

Figure 1 represents the determinants of responsible consumer behavior for Romanian and Turkish female individuals. For Romanian individuals, income and age is more specific variables that affect the consumer responsible behaviors. Romanian individuals who are older and those who have higher income have more responsible consumer behavior than others. For Turkish individuals, almost all variables have equal effect on having responsible consumer behaviors.

The mean score of the survey for Romanian individuals was found to be higher than the score of individuals who paid the entire balance of credit card debt. The variable of credit card was the smallest impact on Romanian female responsible consumer behavior. The means score of the Turkish individuals was found to the lower than all scores. That is, scores of individuals who were older, those who have high level of income and education, and pre-knowledge on

personal finance, and those who paid the full balance of credit card debt has an impact over the mean score.

Fig. 1 Determinants of Responsible Consumer Behaviors

Romania   **Turkey**
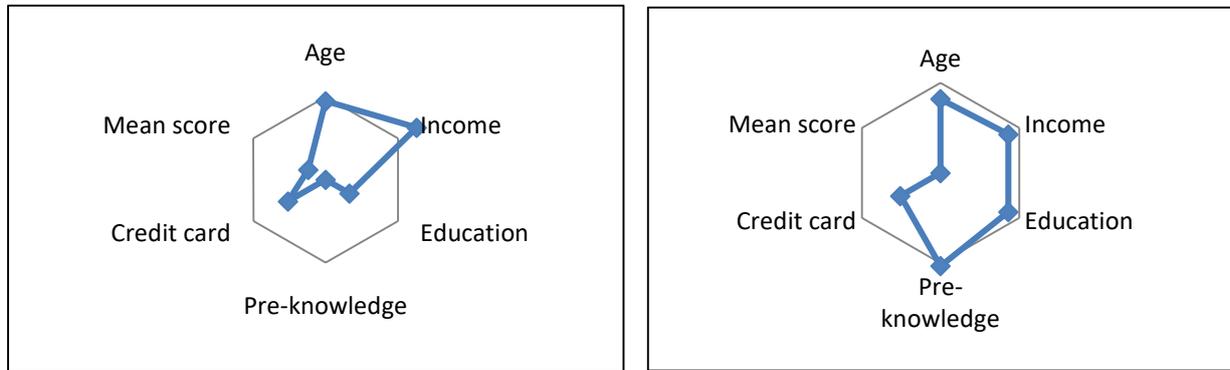
Source: K. Ergün, 2020, p. 6

CONCLUSION

The purpose of this study was to examine the relationship between consumer financial behavior and some of demographic characteristics affecting the consumer spending and saving behaviors. The study concluded that for Romanian and Turkish consumers, being older, having higher income and paying of monthly credit card in full had significantly higher responsible consumer behavior than being young, having lower income level and over-borrowing on credit card, indicating responsible consumer behavior improves with age, higher income and responsible credit card usage. This result is consistent with almost all previous the results covering all genders in financial behavior and financial literacy, which concludes that especially age and income is the most important determinants for financial behavior and financial literacy. This study can provide information to policymakers in terms of improving positive consumer behavior of female individuals. Based on this study, it can be developed financial education programmes peculiar to female consumers. These efforts might result in enhancing positive consumer behaviors. Given these results for female consumers, I suggest that young and low-income female consumers should be provided financial education on favorable and responsible financial behaviors and decision-making. This effort might close the gap of financial behavior and financial literacy level between female and male individuals.

Since the number of the sample is small, the findings are not generalizable to all consumers in the Europe. Future research in this area should consist of larger sample to get more reliable findings. And also, if the more of socio-demographic characteristics are involved in future research, it would be reach some of fruitful findings.

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Foreign Direct Investment and Corruption: Proving the Contra-Intuitive

Tomáš Evan – Ilya Bolotov
evantoma@fit.cvut.cz, ilya.bolotov@vse.cz
Czech Technical University in Prague, Faculty of Information Technology,
Department of Software Engineering
Prague University of Economics and Business, Faculty of International Relations,
Department of International Business
Prague, Czech Republic

Abstract: This paper builds on the assumption of a contra-intuitively weak relation between foreign direct investment (FDI) and corruption in time. Provided multinational corporations depend, among other, on arbitrary political decisions of home as well as of host governments to offset the extra costs from the diverse international socio-economic business environment, FDI inflows may not immediately lead to a more transparent environment in the host country. By formalizing Dunning's eclectic and Vernon's obsolescing bargain models, the works we consider seminal on the topic, we fail to find any statistically significant non-spurious dynamic relationship between corruption and FDI on a global scale. Our test includes two panel Granger causality tests within a dynamic panel model framework on the dataset of 154 countries for the years 1980–2015.

INTRODUCTION

Part of economic literature during the circa last sixty years discussed the possible (theoretical) incompatibility of MNCs with the liberal market: Hymer (1976), Kindleberger (1974), Vernon (1972), Caves (1982) and Dunning (1988). The latter specified reasons for continuous expansion of MNCs by developing the OLI paradigm under his eclectic model of international investment. While the eclectic model is a standard mainstream tool of economic analysis of today, its implications, most notably the need to drop the precondition of a liberal environment in international investment, are often disregarded. In its absence, the three advantages of the OLI paradigm, i.e. ownership (O), location (L) and internationalization (I), are to be benefited from by MNCs not because of their success on the free market but rather as a result of a negotiation with the governments of not only the host but also of the home country. Therefore, to explore the relationship between FDI and corruption, we first need to realize that this relationship between MNCs and the political class (at least in the host country) is of primal importance, and that international investment may very likely be occurring in a strongly non-liberal environment. What effect can such an environment have on corruption?

In general, mainstream economic theory states that it is beneficial for a country to have clear and transparent rules, among other, for the purposes of attracting investment. Differences in macroenvironment (language, legal system, transportation, cultural patterns, customs, and many others) can be already significant and additional expenditure on cronyism, clientelism, bribery etc. will only mean increase costs for MNCs. Furthermore, according to Habib and Zurawicki (2002), foreign investors are corruption-averse, considering corruption to be both

inefficient and immoral and wanting to avoid it virtually any cost, and not only because it creates risk of losing reputation (Zhao, Kim, & Du, 2003). Even some positives of corruption mentioned in the literature under the description of `greasing hand' or `helping hand' (Houston, 2007; Swaleheen & Stansel, 2007) may be disproportionate or exaggerated in this regard. Nonetheless, MNCs require a certain minimal level of political negotiation with the governments of host countries such as different forms of lobbying. This specific kind of negotiation, which from the point of view of the government (or its specialized agency) serves to convince a MNC to redirect its investment away from the locations optimal under normal market conditions to the country in question, provides the MNC with an additional non-market advantage (such as investment incentives, for example, subsidies, tax holidays etc.) allowing to maximize its OLI advantages. This paper will argue that the nature of such rent-seeking behaviour may instigate or to the very least pertain to corruption and to slow down the changes suggested by the above-described mainstream thinking.

1 LITERATURE REVIEW

The rather extensive body of economic literature on corruption is inconclusive on the matter whether corruption affects FDI influx or not. The mainstream view applying liberal tradition in the field of international investment claims corruption has a strong statistically significant negative relationship with FDI inflows while the dissenting opinion, including the one in this paper, is predicting the opposite. Little consensus is, however, observed inside both 'camps' on the strength of such a relationship, on its determinants as well as on its development in time (whether it stays unchanged or varies in the short / middle / long run).

The older literature tends to be dominated by the theory assuming liberal environment in international investment and reporting great reduction in FDI inflows for corrupt host countries while considering the lack of such relationship as the 'failure to find significant correlation' (Wei, 2000, p. 1), i.e. it is 'aprioristic' in nature. For example, Smarzynska and Wei (2000) found out that corruption reduces inward FDI and shifts ownership structure towards joint ventures and thus reduces investment into more technologically advanced firms. Wei (2000) goes one step further to measure how much more FDI host country would receive provided it would decrease corruption by a certain percentage. Cuervo-Cazurra (2006) examined the impact of corruption on FDI and argues that corruption reduces FDI as well as it changes the composition of origins of FDI. On the contrary, recent literature introduces a more balanced approach and thus a more complex relationship between FDI and corruption. For example, Kolnes (2016) summarizes both negative effects of corruption, the *grabbing hand* ('increase costs in terms of risk and outright uncertainty', Kolnes, 2016, p. 26), and positive ones, the *greasing hand* ('grease in the machinery, increasing FDI because it allows for short-cuts, lower taxes, beneficial regulations and rules, and in fact, less uncertainty and risk', Kolnes, 2016, p. 26). This classification albeit in slightly different terms is shared by quite a few other authors (Egger & Winner, 2006; Ohlsson, 2007; Quazi, 2014 i.a.). In these studies, corruption is assumed to be perceived by MNCs as one of many phenomena in the host countries and should be dealt with by cost-benefit analysis (Cuervo-Cazurra, 2006).

Alternatively, it is possible to distinguish between the administrative (bureaucratic, small) corruption and political (big) corruption. This classification of corruption allows certain authors to claim that administrative corruption might be large-scale but it is predictable and can be budgeted. Tanzi and Davoodi (1997) report that until the 1990s, some home countries considered the involvement of their MNCs in such corruption as legal. On the other hand, political corruption is believed to be volatile and several authors (Cuervo-Cazurra, 2006; Ravi, 2015; Kolnes, 2016 i.a.) conclude that it not only decreases the profitability but also increases the risk of investment. It can, however, be argued that a deal concluded with long-serving top politicians can give an MNC an 'untouchable status' in terms of encroachments on the part of

local politicians and the country bureaucracy. Thus, the opposite may be held true as well political corruption may be very costly but give a sense of stability to MNCs while administrative corruption is nothing more than a drain of their resources.

Yet another classification of corruption is offered by Hakkala, Norbäck and Svaleryd (2008) by distinguishing between the horizontal (market-seeking) and vertical (resource-seeking) FDI. The horizontal FDI is used by MNCs to establish themselves on a new market, possibly getting their production costs lowered with the help of economies of scale. As such, they usually do not enter into a close relationship with the host government as the vertical FDI pursuing MNCs. This, together with the fact that they are possibly more exposed to administrative corruption, led some authors (Ravi, 2015) to conclude that they have the need for more transparent environment. However, other authors insist that to the 'vertical' MNCs looking solely for security of their operations and to decrease costs of production, the agreement with the government is essential and they are more exposed to corruption. The agreement usually involves granting some form of monopoly over natural resources, purchasing shares in large and/or privatized domestic companies or regulatory incentives including environmental and/or competition laws. Thus, the increased corruption can be more damaging and MNCs might find it necessary to decrease their investment (Brouthers, Gao, & McNicol, 2008).

Several authors go as far as to measure market attractiveness as a positive factor for FDI inflows while corruption as virtually the sole negative factor. This compensatory model can be found in Wei (2000), Voyer and Beamish (2004) and Grosse and Trevino (2005). In our opinion, this is a clear misunderstanding or disregarding of what MNCs are and how much they are embedded in the 'neo-mercantilist' (protectionist) and non-liberal environment. Given the extensive need of MNCs for political favors of governments of both home and host countries, there might be a case where the trade-off has opposite signs: attractive markets open to anyone are rather a liability than an asset to MNCs. Or at least, as was proven by Brouthers, Gao and McNicol (2008): 'compensatory trade-offs do not appear to exist between corruption and market attractiveness for all types of FDI' (Brouthers and McNicol, 2008, p. 678).

Robertson and Watson (2004) suggest that there is a bidirectional relationship between FDI influx and corruption, and they explore the ways in which a change in FDI inflows influences the perceived level of corruption. They found out that both the rate of change of FDI inflows and its absolute value have a positive impact on the level of corruption in host countries. Using culture as an explanatory variable they also discovered that both the uncertainty avoidance and masculinity cultural Hofstede dimensions (Hofstede, 1983) cause a higher perceived level of corruption. The authors in question suggest practical applications of their empirical findings. For example, 'if a manager of a multinational firm that is considering a potential market is aware that market has a pattern of high corruption followed by a massive influx of FDI, certain procedures and protocols for dealing with local contacts may need to be adjusted' (Robertson & Watson, 2004, p. 394). Top management of MNCs must be aware of the fact that their need to negotiate the best conditions for their company with politicians and officials of the host country is per-se problematic in the long-run. 'Eagerness to get in on the action, and fear of being left out while their counterparts in other firms are seizing what appears to be a golden opportunity, are understandable. But this eagerness should be tempered with awareness that the large increase in FDI may change the target country in ways that make it more difficult for MNCs to conduct business there' (Robertson & Watson, 2004, p. 394). Robertson's and Watson's results contradict the claims of Kwok and Tadesse (2006) that MNCs are the agents of change for transparency in countries.

A relatively novel approach and a complex model of determinants of corruption is established by Larraín and Tavares (2004). They try to separate the influence of openness (represented by FDI) on corruption by controlling six factors inducing corruption which are known to

literature. Contrary to Robertson and Watson, they conclude that FDI is significantly associated with lower corruption levels.

Another noteworthy relationship between FDI and host government policies can be found in Cole, Elliott and Fredriksson (2006). The authors explore how FDI inflows affect environmental policy of the host country. They discovered that the relationship is conditioned by the degree of government corruptibility. If the degree is sufficiently high, the investment leads to a more relaxed environmental policy and vice versa.

Given the assumed nature of MNCs (the non-liberal environment), it is hardly surprising that a statistically significant relationship cannot be found between the Index of Economic Freedom and FDI inflows (Kapuria-Foreman, 2008). However, when disaggregated results are taken into consideration, the parts of the Index of Economic Freedom which are beneficial to the maximization of the OLI advantages (especially the protection of property rights and lowering barriers to capital flows) become correlated to FDI inflows.

Still, several authors demonstrate their affinity to the free market and liberal environment by choosing them as prerequisites for their analyses (the above-mentioned 'apriorism'). Kwok and Tadesse (2006) seem to omit the essence of MNCs and consider them the 'agents of change' which through the regulatory pressure effect, the demonstration effect and the professionalization effect, all three stemming from MNCs, decrease corruption levels in host countries. The regulatory pressure effect is the most arguable assumption of the authors as many developing countries appear to be maintaining regulatory (or non-financial) incentive schemes and indeed MNCs have been on more than one well-media-covered occasion 'caught' pushing for lower environmental, labor and other regulatory standards. Serious arguments could be brought against the demonstration effect as well where the authors mix technological change (spill-over effects of FDI) with changes in management styles which include, among other, dealing with governments. Finally, the third effect seems to be defined in such a way that it only requires a proper education system but no strong MNCs influence. Given the fact that a large share of MNCs is getting investment incentives from the host governments in various forms (which might include but are not limited to tax holidays, tariff exemptions and grants of free land) which are de facto paid for by host country economic agents with their taxes, the higher moral ground that the MNCs need to act as agent of change for corruption reduction might be lost before MNCs even enter the market. Kwok and Tadesse, nonetheless, conclude that their empirical results are consistent with their hypotheses employing all three effects.

Few studies, however, have applied Dunning's OLI theory to the relationship between FDI and corruption. Accepting that MNCs cannot survive or would see their activities dramatically reduced in an environment of free trade, free from monopolies stemming from intellectual property rights, excessive government regulations and, most of all, free from government (investment) subsidies, leads to what we consider more realistic models.

For example, in 2006, Egger and Winner studied the two-way effects of corruption on the size of inward FDI. They found out that on one hand, corruption is costly for firms; while on the other hand, it 'greases' the wheels with which MNCs do business with host governments. Or corruption is important for the intra-OECD FDI, 'whereas it seems much less relevant, if not irrelevant, for the FDI from the OECD economies in non-OECD member countries' (Egger & Winner, 2006, p. 479). This paper produces a much more realistic overall picture as the OLI paradigm is, albeit implicitly, present. It suggests that FDI inflows to the otherwise attractive developing countries (China, Thailand) do not depend as much on their corruption levels but rather on their locational advantages amplified by government agreements and subsidies.

Evan and Bolotov (2014), one of the largest (in terms of dataset) studies on the topic which also examines Dunning's ideas, discovered that there is no statistically significant relationship between corruption and FDI influx. While it might deem counter-intuitive, the econometric study is based on the combination of several long-standing theories of MNCs and international

investment in general. The authors explain the relationship with government-created market failure as the primal reason for MNCs success (Evan & Bolotov, 2014, pp. 475–477).

2 METHODOLOGY

In this paper, assuming Dunning's OLI paradigm to be valid and in view of the above presented theories and empirical findings, especially Robertson and Watson (2004), Egger and Winner (2006) and Evan and Bolotov (2014), we derive our own formal 'dynamic' relationship between corruption and FDI inflows, the relationship allowed to vary in time, based on a model of interaction between a MNC and a host country government developed by Vernon (1971), for an econometric Popper (falsification) test. Vernon's model predicts that the MNC and the government initially reach a bargain that favours the MNC, but over time, as the MNC's fixed assets in the country increase, the bargaining power shifts to the government. This allows us to formulate three hypotheses (possible scenarios):

- *H1:* MNCs want lower corruption in a host country and are the agents of change, i.e. they have the decision power at the beginning of negotiations with the government before the FDI is placed, and the will to achieve what they want. During this initial phase (one or several years), corruption is diminishing in the host country as MNCs change the regulatory environment in their respective fields but it may increase later to previous levels for a number of reasons.
- *H2:* The corruption levels are not decreasing during the initial phase of negotiations (one or several years) with host governments and later on. This might be due to the fact that MNCs are not the agents of change and use their power in negotiation not to decrease corruption but to gain other financial or non-financial benefits in the form of increased investment incentives.
- *H2^A:* The corruption levels are counter-intuitively increasing during the initial phase of negotiations (one or several years) with host governments and may increase later on for a number of reasons. The MNCs may for example be abusing their power or agreeing to the government's corruption schemes, which become more profound in time.

2.1 The parametric test and model

To test the above stated hypotheses on available panel data, we define a parametric test of a dynamic non-linear relationship between corruption perception indicator in a country (CI_i) and inflows of foreign direct investment of a representative 'Gorman-style' MNC into the country ($FDI_{j,i}$), based on Gorman (1961) and partly on the approach of Evan and Bolotov (2014). Assuming $CI_{i,t} \propto FDI_{j,i,t}^2$ and $CI_{i,t} \propto FDI_{j,i,t}$ where $i \le N$ is the country, j is the MNC and t is the time unit, the relationship between $CI_{i,t}$ in the country i and $FDI_{j,i}, t$ of the MNC j will have the form of an autoregressive distributed lag $ARDL(q,r)^*$, for $FDI_{j,i,t}$ to Granger cause $CI_{i,t}$:

$$CI_{i,t} = \eta + \upsilon_i + \sum_{k=1}^{q} \alpha_k CI_{i,t-k} + \sum_{k=1}^{r} \beta_k FDI_{j,i,t-k}^2 + \sum_{k=1}^{r} \gamma_k FDI_{j,i,t-k} + \varepsilon_{j,i,t}, \quad q,r \ge 1 \quad (1)$$

For all MNCs present in the country i, the transformation (i.e. aggregation across MNCs j) $FDI_{i,t-k}^2 = \sum FDI_{j,i,t-k}^2$ and $FDI_{i,t-k} = \sum FDI_{j,i,t-k}$ is to be applied to the model, so that:

$$CI_{i,t} = \eta' + \upsilon_i' + \sum_{k=1}^{q} \alpha_k' CI_{i,t-k} + \sum_{k=1}^{r} \beta_k' FDI_{i,t-k}^2 + \sum_{k=1}^{r} \gamma_k' FDI_{i,t-k} + \varepsilon_{i,t}', \quad q,r \ge 1 \quad (2)$$

where η and η' are constants, υ_i and υ_i' are individual country effects, $\alpha_k, k \le q$, $\beta_k, k \le r$ and $\gamma_k, k \le r$ and $\alpha_k', k \le q$, $\beta_k', k \le r$ and $\gamma_k', k \le r$ are coefficients of the model, $\varepsilon_{j,i,t}$ and $\varepsilon_{i,t}'$

are random components (errors), $\{CI_{i,t-k}\}$, $k \leq q$ is the dynamic (autoregressive) $AR(q)$ term, and $\{FDI_{i,t-k}\}$, $k \leq r$ is the overall inflow of FDI into the country i. The maximum number of lags q and r will be considered equal to balance the ARDL ($q = r = K$), $ARDL(K,K)^*$.

(2) under the *ceteris paribus* condition: *H1* is a degree 2 polynomial relationship between $CI_{i,t}$ and $\{FDI_{i,t-k}\}$, $k \leq K$, i.e. $\exists \, \beta'_k > 0 \, \wedge \, \exists \, \gamma'_k < 0$, $k \leq K$, *H2* is a $CI_{i,t}$ equal to η' and non-dependent on $\{FDI_{i,t-k}\}$, $k \leq K$, i.e. $\forall \, \beta'_k = 0 \, \wedge \, \forall \, \gamma'_k = 0$, $k \leq K$, and *H2ᴬ* is a degree 2 polynomial inverse to *H1* or a positively sloped beam, $\exists \, \beta'_k < 0 \, \vee \, \gamma'_k < 0$, $k \leq K$. Thus, the parametric test combines two Granger causality F-tests, (Granger, 1969), for $\{FDI^2_{i,t-k}\}$, $k \leq K$ and $\{FDI_{i,t-k}\}$, $k \leq K$:

H1: $\exists \, \beta'_k > 0 \, \wedge \, \exists \, \gamma'_k < 0, \; k \leq K$

H2: $\forall \, \beta'_k = 0 \, \wedge \, \forall \, \gamma'_k = 0 \; \; k \leq K$

H2ᴬ: $\exists \, \beta'_k < 0 \, \vee \, \gamma'_k < 0, \; k \leq K$ (3)

To test the hypotheses in equation (3) on multiple countries, i.e. with the help of one dynamic panel model (DPM) instead of individual $ARDL(K,K)^*$, we employ two panel Granger causality F-tests for relationships between $CI_{i,t}$ and $\{FDI^2_{i,t-k}\}$, $k \leq K$ and $CI_{i,t}$ and $\{FDI_{i,t-k}\}$, $k \leq K$ under the condition of stationarity of the variables in question or of their first differences ($\Delta CI_{i,t}$, $\{\Delta FDI^2_{i,t-k}\}$, $k \leq K$ and $\{\Delta FDI_{i,t-k}\}$, $k \leq K$). The panel version of the Granger causality F-test was developed by Hurlin, Venet et al. (2001), Hurlin (2004a, 2004b) and Hurlin and Dumitrescu (2012), later by Hood, Kidd and Morris (2006) and others. The parametric test is conducted in *three consecutive steps*:

(1) For unit root checks of variables, we recur to the augmented Dickey and Fuller (1979) (ADF) test (H0: presence of unit root in a time series) with a simultaneous verification by Kwiatkowski, Phillips, Schmidt and Shin (1992) (KPSS) test with an inverse *H0* hypothesis (*H0*: no unit root in a time series) in the form of Levin, Lin and Chu (2002) and Harris and Tzavalis (1999) *t*-statistic poolization for the ADF tests and Choi (2001) p-value aggregation for the ADF and KPSS tests. The maximum number of lags for the ADF and KPSS tests is calculated using the Schwert (1988) second criterion (l_{12}):

$$\max K = l_{12} = Int\left\{12\left(\tfrac{T}{100}\right)^{\frac{1}{4}}\right\} \qquad\qquad\qquad\qquad\qquad\qquad (4)$$

where T is the length of time series (number of t). Panel unit root tests will help determine whether the variables are homogeneously stationary or homo-/heterogeneously non-stationary (require stationarization).

(2) The estimation of the dynamic panel model (aggregate of $ARDL(K,K)^*$) is performed with the help of one- or two-step Arellano and Bond (1991) estimator modified by Blundell and Bond (1998), based on the generalized method of moments (GMM) (System GMM), Hansen, Heaton and Yaron (1996), Ahn, Lee and Schmidt (2001), Baum, Schaffer, Stillman et al. (2003) and Lin and Lee (2010), which will remove the eventual homo-/heterogeneous non-stationarity, constant term and individual country (fixed) effects from the model by taking first differences of the variables:

$$E\left(\Delta CI_{i,t} - \sum_{k=1}^{K} \alpha_k{}' \Delta CI_{i,t-k} - \sum_{k=1}^{K} \beta_k{}' \Delta FDI^2_{i,t-k} - \sum_{k=1}^{K} \gamma_k{}' \Delta FDI_{i,t-k} \,\middle|\, Z\right) = 0$$

$$Z = \{\Delta CI_{i,t-k}\}, \{\Delta FDI^2_{i,t-k}\}, \{\Delta FDI_{i,t-k}\}, \dots, \; k \leq K \leq l_{12}; \; \Omega \dots arbitrary\,weights \qquad (5)$$

where Z are instruments and Ω are weights in the GMM one- or two-step estimation.

The number of lags K is derived from the information criteria, AIC, HQC and BIC, within the (pooled) ordinary least squares (OLS) estimation of the stationarized model in equation (2):

$$\Delta CI_{i,t} = \sum_{k=1}^{K} \alpha_k{'}\Delta CI_{i,t-k} + \sum_{k=1}^{K} \beta_k{'}\Delta FDI_{i,t-k}^2 + \sum_{k=1}^{K} \gamma_k{'}\Delta FDI_{i,t-k} + \varepsilon_{i,t}{'}, \ \ K \leq l_{12} \tag{6}$$

(3) The two panel Granger causality tests between $CI_{i,t}$ and $\{FDI_{i,t-k}^2\}$, $k \leq K$ and $CI_{i,t}$ and $\{FDI_{i,t-k}\}$, $k \leq K$ are performed with the help of linear restrictions tests, $\{\beta_k\} = 0, k \leq K$ and $\{\gamma_k\} = 0, k \leq K$, i.e. pooled Wald χ^2-tests (Wald, 1943), in the dynamic panel model.

Finally, for incorporating differences between developed, transitional and developing countries which may be affecting both $CI_{i,t}$ and $\{FDI_{i,t-k}\}$, $k \leq K$, we add one additional variable reflecting the economic level $\{Y_{i,t-k}\}, k \leq K$ into the equations (5) and (6):

$$E\big(\Delta CI_{i,t} - \sum_{k=1}^{K} \alpha_k{''}\Delta CI_{i,t-k} - \sum_{k=1}^{K} \beta_k{''}\Delta FDI_{i,t-k}^2 - \sum_{k=1}^{K} \gamma_k{''}\Delta FDI_{i,t-k} - \sum_{k=1}^{K} \varphi_k{'}\Delta Y_{i,t-k} \big| Z\big)$$
$$= 0$$

$$Z = \{\Delta CI_{i,t-k}\}, \{\Delta FDI_{i,t-k}^2\}, \{\Delta FDI_{i,t-k}\}, \{\Delta Y_{i,t-k}\} \dots, \ \ k \leq K \leq l_{12}; \ \Omega \dots arbitrary \ weights \tag{8}$$

$$\Delta CI_{i,t} = \sum_{k=1}^{K} \alpha_k{''}\Delta CI_{i,t-k} + \sum_{k=1}^{K} \beta_k{''}\Delta FDI_{i,t-k}^2 + \sum_{k=1}^{K} \gamma_k{''}\Delta FDI_{i,t-k} + \sum_{k=1}^{K} \varphi_k{'}\Delta Y_{i,t-k} + \varepsilon_{i,t}{'} \tag{9}$$

where $\alpha_k{''}, k \leq K$, $\beta_k{''}, k \leq K$ and $\gamma_k{''}, k \leq K$ and $\varphi_k{'}, k \leq K$ is a new matrix of coefficients, Z are instruments and Ω are weights in the GMM two-step estimation, presented in equation (5).

2.2 Data

Based on the empirical findings of Bolotov and Evan (2014, pp. 482–485) for 1998–2007, data on corruption for the three main tables / databases (Transparency International, World Bank's Worldwide Governance Indicators, and the Heritage Foundation's Index of Economic Freedom) is mutually correlated with the rate of 96.0–97.9% which makes them interchangeable in research (at least for the mentioned period) and to a certain degree reduces potential `perception' bias for the Transparency International's CI. Therefore, data for this paper were retrieved from a) the Transparency International's (TI) historical Corruption perception index (CPI) reports (since 1995) and from the Internet Centre for Corruption Research's pre-TI tables (ICGG, 2018) (1980–1995, multiple sources), b) the World Bank's (WB) World Development Indicators database (February 2017) for the gross national income per capita (GNI), and c) the International Monetary Fund's (IMF) International Financial Statistics (2017–2018) for FDI inflows. All variables are expressed as indices or shares in GDP / world average to preserve the degree 2 polynomial (parabolic) relationship in the model, to incorporate trends (economic development) in each country and in the world (to adjust FDI inflows to the changes in output), as well as to achieve comparability of coefficients in the model (logaritmization would entail a translog relationship with different formalization of H1 and H1A, as well as a less intuitive interpretation of results in terms of Vernon's theory). We refer the reader to the ICGG for methodology and compatibility issues between the TI and pre-TI agency sources (available at http://www.icgg.org/corruption.cpi_olderindices_historical.html, last access 2020-08-05, and http://www.icgg.org/corruption.cpi_olderindices_hist_sources.html, last access 2020-08-05) which we cannot solve in this paper because of its size. To achieve the longest possible time series, missing values in the panel were interpolated with the help of simple moving averages with varying periods (for CI and Y) and zeros (for FDI) and extrapolated using repeated beginning and end values. The outcome is a partly artificial CI dataset, $\widehat{CI}$, which is used as a proxy for CI. A detailed overview of the panel data file, which comprises data for 154 countries

for 36 years, 1980–2015 (5544 rows, 22,176 observations) is provided in the Annex. This may as well be the biggest strongly (though artificially) balanced panel dataset on the topic of corruption and FDI so far. At the same time, the authors acknowledge that the length of time series is quite short for a polynomial model (a typical problem in most panel data research).

Furthermore, extrapolating missing values in the dataset requires a preliminary assessment of credibility of our results. The probability of bias (error) created by artefacts in either *CI* or *FDI*, under the condition of their mutual non-exclusivity, is at its maximum $P(artefacts_{CI} \cup artefacts_{FDI}) = P(artefacts_{CI}) + P(artefacts_{FDI}) - P(artefacts_{CI} \cap artefacts_{FDI}) =$ 61.53% with joint probability $P(artefacts_{CI} \cap artefacts_{FDI}) = 6.84\%$ (assuming that the probability of each value in a variable being an artefact is equal to the share of interpolated / extrapolated observations in the variable). Since there is no empirical way of assessing the quality of $\widehat{CI}$ against *CI*, the authors are forced to strongly assume $\widehat{CI}_{i,t} \propto CI_{i,t}$, which reduces the $P(artefacts_{CI} \cup artefacts_{FDI})$ to 12.18% and the overall probability of artefacts $(artefacts_{CI} \cup artefacts_{FDI} \cup artefacts_Y)$ to 12.18%–25,07% depending on the number of variables proven to be statistically significant (*FDI*, *Y* or both *FDI* and *Y*). Ergo, the credibility of our computations, under all the assumptions, must be at least 75%. We consider this risk to be acceptable given the task at hand and the limitations of available data.

3 RESULTS AND DISCUSSION

The maximum number of lags for the panel unit root tests and for the dynamic panel model was $max\ K = l_{12} = 9$ for $T = 36$. The same number proved to be optimal for the dynamic panel model, according to the AIC, HQC and BIC in a preliminary OLS estimation on first differences of $\widehat{CI}$, FDI^2, FDI and Y.

Step 1. The four different panel unit root tests for $\widehat{CI}$, FDI and Y acknowledge the presence of heterogeneous non-stationarity, i.e. statistically significant number of non-stationary time series in a panel, for each variable with 99%, 95% and 90% probability (p-value ≤ 0.01, 0.05 and 0.1). For example, $\widehat{CI}$ had 59 and 91 non-stationary time series according to individual ADF and KPSS tests, FDI – 95 and 75, and Y – 124 and 97 at the 10% significance level. This stresses the necessity of stationarization of variables (the use of Blundell-Bond estimator instead of the classical Arellano-Bond) and an Engle-Granger co-integration check after coefficients estimation: a panel unit root test of residuals in step 2 (Engle and Granger, 1987).

Step 2. Based on the one-step Blundell-Bond (system GMM) estimator with 913 instruments, matrices of coefficients $\alpha_k'', k \leq K, \beta_k'', k \leq K$ and $\gamma_k'', k \leq K$ proved to be partly significant, lags 1–4 for $\widehat{CI}$, lags 4, 5, 7 and 8 for FDI^2, lags 5, 6 and 9 for FDI, and $\varphi_k', k \leq K$ completely statistically insignificant. The overall Wald χ²(36) statistic was 34762.26 (p-value << 0.01), which acknowledged overall statistical significance of the model. This cannot be said about the residuals, since they also showed presence of heterogeneous non-stationarity, according to the four unit root tests: the individual ADF and KPSS tests acknowledge 41 and 104 time series to be stationary at the 10% significance level. Despite the fact that the relationship proved to be spurious (there is no Engle-Granger panel co-integration vector between $\widehat{CI}$ and FDI), we still perform Step 3 and interpret the examined relationship between $\widehat{CI}$, FDI^2 and FDI.

Step 3. The results of the pooled Wald χ²-tests presented show statistical significance of the model coefficients $\{\beta_k''\} = 0, k \leq K$ and $\{\gamma_k''\} = 0, k \leq K$ for FDI^2 and FDI, which acknowledges the presence of Granger causality at the 5% and 10% significance level (p-value ≤ 0.05 and 0.1), but not on 1% level for FDI^2.

In general, the conclusions of Evan and Bolotov (2014) seem to be backed by our results as well, in spite of the use of $\widehat{CI}$ as a proxy of *CI* (which may speak in favour of the credibility of computations as assessed in the section on data): the parametric test confirmed the 'dynamic'

(non-linear) relationship between $\widehat{CI}$ and FDI *if and only if* it is interpreted as non-spurious, which is doubtful given the heterogeneous non-stationarity of the residuals of the DPM model in Step 2. However, assuming (for a moment) the relationship to be indeed non-spurious, with the 75% credibility, it is possible to observe a *ceteris-paribus* parabolic relationship between the level of corruption $\widehat{CI}$ and foreign direct investment inflows FDI for a 9-year period (i.e. almost a decade) for 154 countries since 1980s (and technically ca. 1990s because of the 9 lags). It can be seen that FDI Granger causes no change in corruption for the first three years, after which the effects of MNCs begin to diverge, regardless whether the country is developing, developed or transitional, since the additional variable Y proved to be statistically insignificant. Overall, FDI seem to increase corruption to a small degree (less than 5 points) before $FDI = 75.43\% \, of \, GDP$ (the local maximum), after which the process is reverted, but this reversion affects less than 10% of cases (without doubt, offshore financial centres), consult the 5% and 95% of percentiles in the Annex (95% percentile is 12.3% of GDP) and Figure 1.

Figure 1: Schematic graphical representation of the CI‑FDI relationship based on results from the dynamic panel model under the ceteris paribus assumption
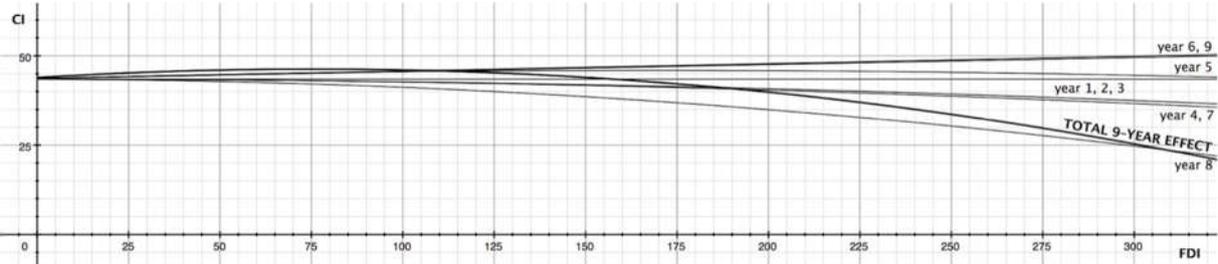
Source: authors

This seems to support *H2* hypothesis for the first three years and *H2^A* hypothesis afterwards. Of course, if the relationship is correctly interpreted as spurious, the *H2* hypothesis can be claimed as the only one confirmed. Either way, *H1* is rejected by our results, which means that MNCs cannot be seen as the agents of change for nearly a decade for at least 90% of economies on data for 154 countries for the years 1980–2015 with 75% credibility under the assumption $\widehat{CI}_{i,t} \propto CI_{i,t}$. The test, also in view of several previous studies, points to the *non-validity of this postulate*. The exactness of our findings, however, depends on the limited size and quality of the collected data, which also includes the "subjective" nature of the CI (the Corruption Perception Index, CPI). Still, historically, all major official corruption indicators tend to be strongly mutually correlated as was demonstrated by previous research on the topic.

CONCLUSION

In this paper, we attempted to tackle the wide-spread mainstream assumption that MNCs are the agents of change for reducing corruption in host countries for their FDI. To do so, we tested the 'dynamic' pattern of relationship between FDI inflows and the host country corruption on the panel data for 154 countries over 36 years (1980–2015, missing values intra- and extrapolated) by employing Vernon's obsolescing bargaining model under the Dunning's OLI framework. The model postulates initial advantage of MNCs in negotiation, yet, over time, as the MNC's fixed assets in the country increase, the bargaining power shifts to the government. The model was estimated with the help of a custom-tailored parametric test based on a dynamic panel model and two Granger causality tests. The test results demonstrated that the relationship is, most likely, spurious at all and if counter-intuitively considered statistically significant, MNCs econometrically exhibit no properties of the described agents of change for at least a decade with at least 75% credibility.

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ANNEX: DESCRIPTION, SOURCES, AND SUMMARY STATISTICS FOR THE DATA

	Description	Unit / Formula	Sources of data	Interpolated / Extrapolated observations
CI	Corruption Perception Index	Quality of institutions, index, 0–100	TI, ICGG	3115 (56.19%)
FDI	Inflows of foreign direct investment	Percentage of GDP	IMF, WB	675 (12.18%)
Y	Country GNI per capita in purchasing power parity	Percentage of world in the corresponding year	IMF, WB	814 (14.68%)

Summary statistics for the variable 'CI' (5544 valid observations):		Summary statistics for the variable 'FDI' (5544 valid observations):	
Mean	43.383	Mean	3.4978
Median	37.000	Median	1.3508
Minimum	0.0000	Minimum	-82.892
Maximum	100.00	Maximum	451.72
Standard deviation	21.323	Standard deviation	12.377
C.V.	0.49149	C.V.	3.5384
Skewness	0.74850	Skewness	20.444
Ex. kurtosis	-0.37572	Ex. kurtosis	600.56
5% percentile	17.000	5% percentile	-0.039959
95% percentile	86.900	95% percentile	12.297
Interquartile range	30.000	Interquartile range	3.6734
Missing obs.	0	Missing obs.	0
Within s.d.	6.7985	Within s.d.	11.484
Between s.d.	20.306	Between s.d.	5.0109

Summary statistics for the variable 'Y' (5544 valid observations):			
Mean	98.946		
Median	53.631		
Minimum	0.82775		
Maximum	1131.3		
Standard deviation	128.05		
C.V.	1.2941		
Skewness	3.1352		
Ex. kurtosis	13.864		
5% percentile	5.6268		
95% percentile	323.82		
Interquartile range	113.89		
Missing obs.	0		
Within s.d.	49.927		
Between s.d.	118.58		

Note: Cross-sectional units include (specifed in ISO 3166 country codes) AGO, ALB, ARE, ARG, ARM, AUS, AUT, AZE, BDI, BEL, BEN, BFA, BGD, BGR, BHR, BHS, BIH, BLR, BLZ, BOL, BRA, BRB, BRN, BTN, BWA, CAN, CHE, CHL, CHN, CIV, COG, COL, CRI, CYP, CZE, DEU, DJI, DMA, DNK, DOM, DZA, ECU, EGY, ESP, EST, ETH, FIN, FJI, FRA, GAB, GBR, GEO, GHA, GMB, GRC, GTM, HKG, HND, HRV, HTI, HUN, IDN, IND, IRL, IRN, IRQ, ISL, ISR, ITA, JAM, JOR, JPN, KAZ, KEN, KGZ, KHM, KOR, KWT, LBN, LBR, LCA, LKA, LSO, LTU, LUX, LVA, MAC, MAR, MDA, MDG, MEX, MKD, MLI, MLT, MNE, MNG, MOZ, MUS, MWI, MYS, NAM, NER, NGA, NIC, NLD, NOR, NPL, NZL, OMN, PAK, PAN, PER, PHL, POL, PRT, PRY, QAT, ROM, RUS, RWA, SAU, SDN, SEN, SGP, SLE, SLV, SRB, STP, SUR, SVK, SVN, SWE, SWZ, SYC, SYR, THA, TJK, TKM, TTO, TUN, TUR, TZA, UGA, UKR, URY, USA, UZB, VCT, , VEN, VNM, YEM, ZAF, ZMB, and ZWE.

Source: authors, self-prepared based on calculations in STATA and gretl

Consumer Involvement in Design Process through Social Networks

Petra Garasová – Ľubica Knošková

petra.garasova@euba.sk, lubica.knoskova@euba.sk
University of Economics in Bratislava, Faculty of Commerce, Department of
Commodity Science and Product Quality
Bratislava, Slovakia

Abstract: The number of users of social media still rises. Social networks have brought a new style of consumerism. Consumers are no longer passive, but instead take active and participatory roles in product design and production. This make customers feel more important. The aim of the paper is to identify consumers' perception of participatory design through social networks. Authors discuss participatory design using results of own consumer survey, case studies, research studies and other secondary data applying analysis, abstraction, and mathematical-statistical methods including cross tables. In our survey we found out, that 24.2% of respondents decide on products, and 38.4% of respondents had the opportunity to customize the product through social media. Consumers would like to have more opportunities to decide about products on the market, and also customize products, mainly clothing, shoes, accessories, handbags, furniture, notebooks and computers.

INTRODUCTION

Social networks have enabled a new style of consumerism. Consumers are no longer passive, instead, they take active and participative roles in product design and production. The boundaries between the specific roles of designers, manufacturers and consumers are smaller and business opportunities are created where consumers have the opportunity to influence product strategies (De Vere, 2014).

Social network users continue to grow. In 2019, the number of active social network users reached 3.534 billion people, representing 46% of the total population. There are 3,463 billion active mobile equipment users in 2019, 45% of the total population (Kemp, 2019).

Brands consider social networks as a selling platform more than ever. Almost 25% of businesses sell via Facebook and 40% use social media to generate sales. Social media affects not only what people buy through recommendations (23%), but a total of 30% of consumers purchases via Pinterest, Instagram, Twitter or Snapchat (Arnold, 2018).

Holmes et al. (2013) pointed out that, in addition to shopping, the use of mobile phones in the information-seeking phase and the phase of considering alternatives is increasingly recorded. Mobile devices are used more in the decision-making phase when it comes to purchasing products that require a higher degree of engagement.

The increasing number of user devices, as well as the link of the online and offline space, create a new type of user - the user omnia. The customer omnichannel behavior model assumes that the customer will interact with the company by using multiple channels and devices before a purchase (Dorman 2013). Juaneda-Ayens et al. (2016) refer to these users

as 3.0 users. According to them, in the omnichannel space, marketing channels and devices are used without problems and freely exchange, which makes it difficult for businesses to control the purchase process of their customers. Edelman and Singer (2016) say that analyzing and customizing a customer journey to these users is important in providing relevant experience during each step of the buying process for brand interaction.

The increase in social network users allows sellers to use them to reach their customers. But it is not just about building a customer relationship, but also about getting necessary information in a faster and easier way, and also involving customers in the product design process. This gives the customer the opportunity to participate in the decision-making process, to customize the products, and become more important.

1 LITERATURE REVIEW

Participatory design has its roots in the movements toward democratization of work places in the Scandinavian countries. In the 1970s participation and joint decision-making became important factors in relation to workplaces and the introduction of new technology. Early Participatory Design projects addressed new production tools, changes in production planning, management control, work organization, and division of labor from users' shop floor perspective (Ehn, 1998).

Participatory Design is a design methodology in which the future users of a design participate as co-designers in the design process. Participatory design is considered – to be both a process and a strategy – which brings end-users and customers to design process (Cipan, 2019). Participatory design is an approach to design that invites all stakeholders (e.g. customers, employees, partners, citizens, consumers) into the design process as a means of better understanding, meeting, and sometimes preempting their needs (Elizarova et al., 2017). Involving the user in the creation process implies developing solutions that are more durable and meaningful for the consumer (Knošková, 2014). It is a value-centered design approach because of its commitment to the democratic and collective shaping of a better future. For some, it is seen as taking away responsibility for design and innovation from designers.

Social media are "characterized by participation, openness, conversation, connectedness and sense of communality'. This enable by Web 2.0 which is results from innovation in functionality that allows simultaneous publishing, retrieval and modification by all users in a participatory and a collaborative fashion, also leading to user-generated content (Nakki & Virtanen, 2007; Kaplan, 2010). Technology has provided consumers with unlimited communication interaction both with other consumers and companies. Consumers are increasingly empowered, and now desire a greater role in the process of value creation (Hoyer et al., 2010). This co-creation process is now considered as an important manifestation of consumer engagement behavior (van Door et al., 2010). This is particularly important in new product development where consumers contribute new ideas, or suggest product or service improvements, in a model of collaborative co-creation where the consumer is an active participant (De Vere, 2014).

Current state of the Web 2.0 makes it easy to take end users as co-designers by using online tools. Everyone can participate in the design process from the place they want and at the time that is best for them. Online tools lower the threshold to invite users into the different phases of innovation process as a daily practice. Online community also serves as a permanent connection to the users during the more silent phases of the process and enable constant forum for discussion and feedback (Näkki et al., 2008).

Whilst many companies simply connect with consumers as part of a marketing strategy, social media engagement is increasingly impacting all business areas, in particular new product development. At the analysis stage, designers can use crowdsourcing to engage consumers in

product strategy development, market research. In the creation phase, it can range from initial ideas to choosing a solution concept. In the definition phase, it can involve more qualified participants through open innovation platforms, while the implementation phase is enabled by digital production technologies that facilitate home production, customization (De Vere, 2014).

Recent research studies (Mitchell, V. et al., 2015, Trischler, J. et al. 2018) suggests that designers create more innovative concepts and ideas when working within a co-design environment with others than they do when creating ideas on their own.

2 METHODOLOGY

The aim of the paper is to find out consumer perception of participatory design through social networks. Primary and secondary data were used to achieve this goal. The primary survey was conducted using the standardized query method. The survey sample was 100 students from the University of Economics in Bratislava. The questionnaire was distributed via the Internet. The questionnaire consisted of 22 questions, including 5 selective questions, 8 dichotomous questions, 5 open questions, 1 semi-open questions and 3 simple questions. We wanted to find out the characteristics of student shoppers on social networks and their experience with participative design.

Mathematical-statistical methods were used to process the results from the questionnaire. Tables and graphs are used to illustrate the results.

A crosstabulation is a joint frequency distribution of cases based on two or more categorical variables. Displaying a distribution of cases by their values on two or more variables is known as contingency table analysis. The joint frequency distribution can be analyzed with the chi-square statistic to determine whether the variables are statistically independent or if they are associated. (Michael, 2001). Cross-tabulations were used to determine the different perceptions of participatory design between different consumer segments according to their behavior.

We developed a profile of a student shopper on social networks. The profile of student shopper on social media describe her/his behavior, perception of participatory design and involved to design process.

3 RESULTS AND DISCUSSION

A total of 100 respondents participated in the survey (Tab. 1). Of the total number of respondents 65% were women and 35% men. Most respondents (24%) were 23 years old, followed by 20 years old (18%), 21 years old (13%) and 22 years old (13%). The survey examined whether students work during their studies. This question was answered by 96 respondents, 69.8% of respondents work during the study and 30.2% do not work.

In the survey we wanted to find out how respondents spend their leisure time (Fig. 1). Most respondents (83) spend their time with family, friends. For 59 respondents is sport a favorite activity. 45 respondents spend their free time listening to music, attending concerts and festivals and 42 respondents walking to nature.

Tab. 1 Demographic criteria of respondents

Gender		Age		Work during study	
Women	65%	19	15%	Yes	69.8%
Men	35%	20	18%	No	30.2%
		21	13%		
		22	13%		
		23	24%		
		24	8%		
		25	6%		
		26	3%		

Source: Own research

Fig. 1 Leisure time activities of respondents
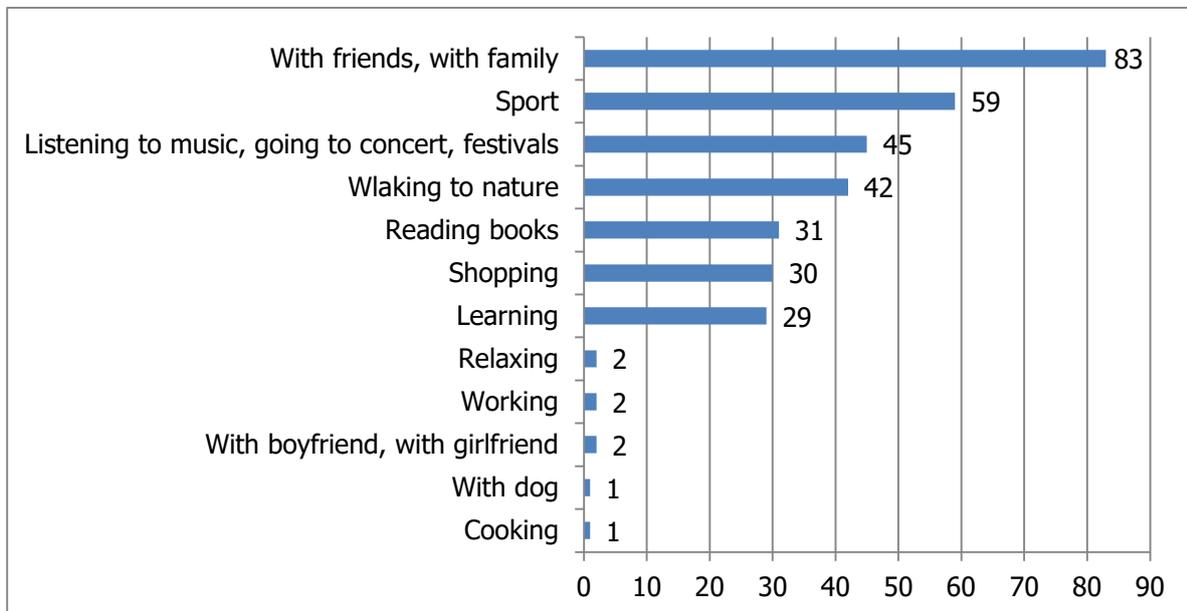
Source: Own research

99% of respondents are users of social networks, only 1% of respondents are not (Fig. 2). This fact agrees with the increasing number of users of social networks. It is also important to note that the survey was focused only on students - young people, who are more likely to use benefits from the up-to-date technologies.

For the respondents who use social networks, the most used one is Facebook, used by 98 (99%) of respondents. The second most used social network is Instagram, used by 90 (90.9%) of respondents, the third most used network is LinkedIn, used by 18 (18.2%) of respondents. Respondents also use less known social networks such as Twitch, V: Live, Wicker, Telegram, Weverse Tumblr Vlive (Fig. 3).

Fig. 2 Users of social networks
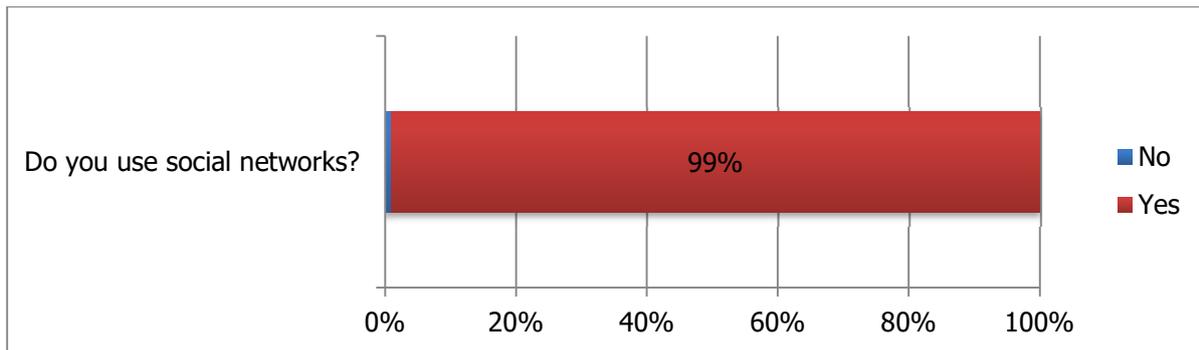
Source: Own research

Fig. 3 Social Networks in use
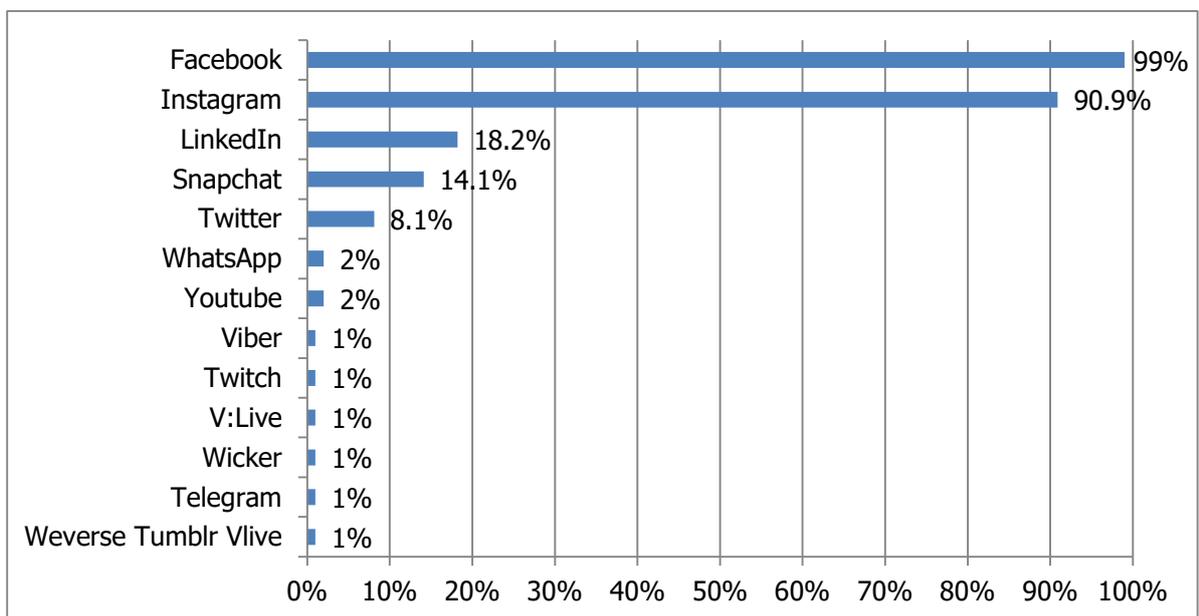
Source: Own research

Most respondents spend 2-3 hours on social networks daily, 34 (34.3%) of respondents (Fig. 4). 26 (26.3%) respondents spend 1-2 hours on social networks a day and 24 (24.2%) respondents 3-4 hours a day. However, the time spend on social networks may differ from respondents' responses, because some respondents may not realize how much time they spend on social networks or they are reluctant to admit that the time spend on social networks is much higher than they stated.

32 (31.3%) of respondents purchase through social networks and 68 (68.7%) of respondents do not (Fig. 5). During their studies, 66 (69.5%) students work and 29 (30.5%) do not work. Our survey shows that almost all students who shop through social networks, work during their studies (24 students which represents 82.7%), while those who do not shop through social networks work much less, only 42 (63.6%) work and 24 (36.4%) do not work (p <0.06).

Only 10 (10.1%) of respondents is aware of the concept of the concept of participatory design, 90 (89.9%) respondents do not know this concept. We can conclude that the knowledge of this concept is at a very low level. We asked respondents if they knew that sellers use consumers to make decisions about products, for example by choosing between 2 product variants. 54 (54.5%) of respondents were aware of this, 46 (45.5%) of respondents were not.

On social networks, 62 (62.6%) of respondents saw such posts and 24 (24.2%) of respondents participated in the decision-making process. Respondents who were involved in making decisions about products by means of social networks most often decided about clothing, shoes, cosmetics - hair shampoos, creams.

Fig. 4 The time spend on social networks
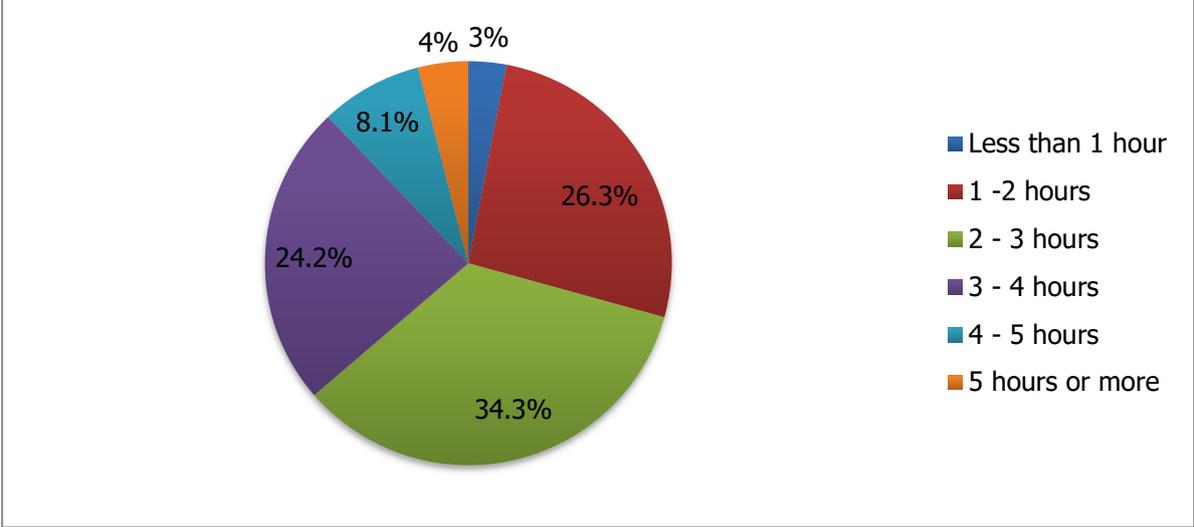
Source: Own research

Fig. 5 Knowledge of consumer involvement in the design process
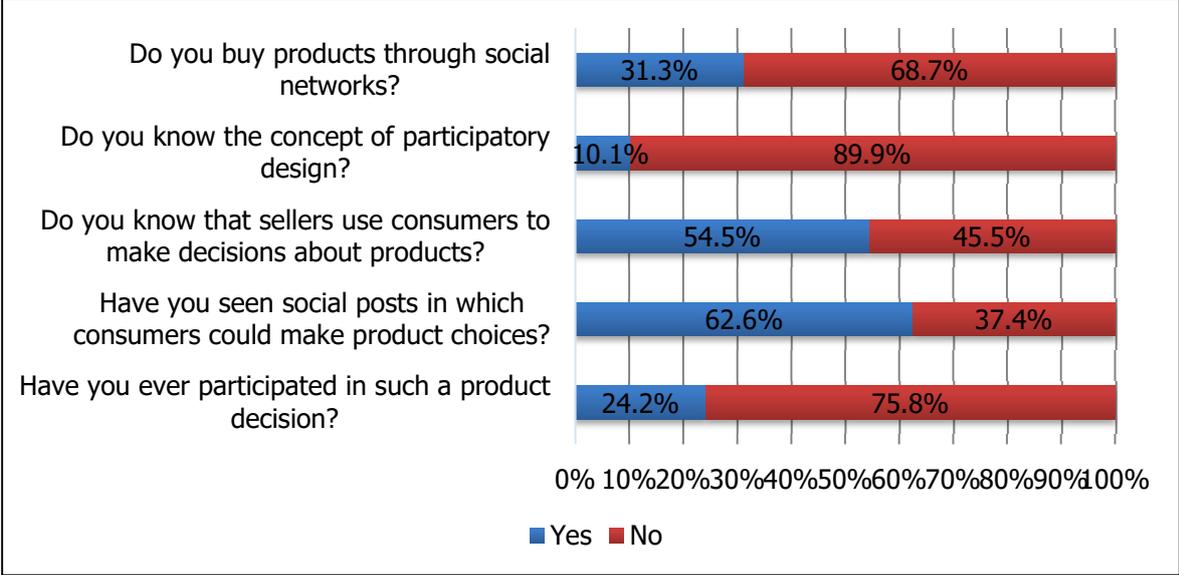
Source: Own research

Buying products through social networks depends from gender (Tab. 2). 31.3% of all respondents shop through social networks. We found out with statistical relevancy that much more women (39.1%) than men (17.1%) purchase products through social networks, with p-value < 0.5. Women represent 80.6% of shoppers through social networks. Another personal characteristics or leisure time activities of respondents do not have impact on purchases through social networks.

Tab. 2 Crosstabulation Purchase through social networks against Gender

	[Women]	[Men]	TOT.
Cross-tabulation of Purchase through social networks (rows) against Gender (columns)			
[Yes]	25	6	31
[No]	39	29	68
TOTAL	64	35	99
Pearson chi-square test = 5,05452 (1 df, p-value = 0,0245618)			

Source: Own calculation

Participation in product decision making depends from purchase through social networks (Tab. 3). If respondents make purchases through social networks, they also participate in product decisions in much higher extend (48.4%) than respondents, who do not shop through social networks (13.2%), with p-value < 0.0002. 62.5% of those who participate in product decision making also buy through social networks. We can say that respondents who buy products through social networks use more opportunities to influence the offer that they buy.

Tab. 3 Crosstabulation Purchase through social networks against Participation in product decision making

	[Yes]	[No]	TOT.
Cross-tabulation of Purchase through social networks (rows) against Participation in product decision making (columns)			
[Yes]	15	16	31
[No]	9	59	68
TOTAL	24	75	99
Pearson chi-square test = 14,3261 (1 df, p-value = 0,000153717)			

Source: Own calculation

53 (53.5%) of the respondents would like to have more opportunities to participate in the decision-making about products, only 12 (12.1%) of the respondents do not want it (Fig. 6). 34 (34.3%) of respondents did not know if they would like to be more involved in the design process.

79 (79.8%) of respondents like that they can be a co-creator of the products, and 20 (20.2%) of respondents do not like it (Fig. 6). Based on the answers from the respondents to the question of why they like to be co-creators of the products, we found out several facts. It is important for consumers to be able to express their opinion and to guide the sellers in their product offer and to personalize the offer for consumers. Respondents become more important and significant through personalized products. Thanks to the possibility to customize the product, the offer would become more interesting. Insufficient offer of some products can be filled through customization. Respondents who do not like being co-creators of the products say that they are not interested in such a possibility, do not have time to do it, or that the retailer is here to supply consumers the product they want without having the need to adjust it.

38 (38.4%) of respondents had the opportunity to customize the product, and 61 (61.6%) of respondents did not have this opportunity (Fig. 6). Respondents who had the opportunity to

customize and then buy this product, most frequently customized sneakers, clothes - dresses, wedding dresses, sweatshirts, t-shirts, socks, sportswear. Respondents also customized laptops, computers, and cosmetics.

Fig. 6 Consumers' involvement in the design process
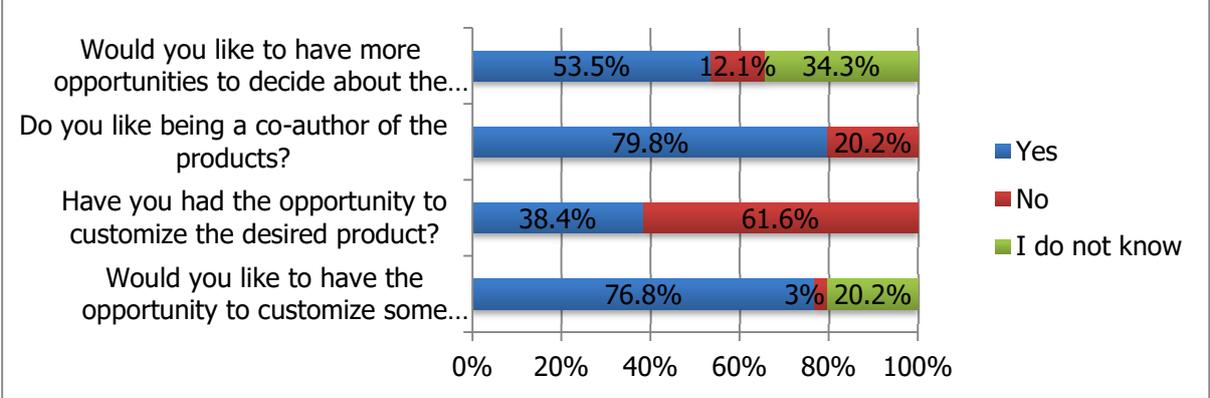
Source: Own research

76 (76.8%) of respondents would like to have the opportunity to customize products according to their ideas, 20 (20.2%) of respondents do not know if they would like to (Fig. 6). Of those who shop through social networks it was 28 (90.3%). Of those who do not shop through social networks, 48 (70.5%) would welcome this option, which is significantly lower percentage as the one obtained for shoppers at a $p < 0.07$ significance level. At the same time 18 (26.4%) of non-shoppers would probably take the opportunity to customize products. Products that the respondents would like to customize are clothing, shoes, accessories, jewelry, handbags, furniture, electronics - mobiles, laptops, computers and others.

3.1 Consumer profile – Student shopper on social networks

Based on our research we found out that typical student who buys products through social networks is 21.66 years old and is involved in student work during his/her studies. Most often it is a woman.

The most popular leisure activities are sports, going to nature, spending time with family and friends, listening music, going to concerts/festivals.

The typical student spends approx. 2 – 3 hours daily on social media, mainly on Facebook and Instagram.

She/he does not know the concept of participatory design but knows that sellers use consumers to make decisions about products. Light majority of student shoppers on social networks saw a post in social media in which consumers could make product choices but few got involved in decision making. The student shopper on social networks likes the opportunity to be a co-author of products and would like to have more opportunities to do it. He/she likes it because this way he/she expresses an opinion, because it is interesting, more tempting and customized offer.

The student shopper on social networks rarely has the opportunity to customize the product but definitely want it. The students would like to customize mainly clothes, shoes, sneakers, accessories and electronics.

CONCLUSION

The aim of the paper was to find out consumer perception of participatory design through social networks with use the primary research with standardized query method. Knowledge of the concept of participatory design itself is very low, as up to 90 (89.9%) respondents do not know this concept. Involvement of respondents in the design process is already at a higher level. On social networks, 62 (62.6%) of respondents saw the social networks posts in which they could decide about products and 24 (24.2%) of respondents participated in this decision. Respondents who were involved in making decisions on social network most often decided about clothing, shoes, cosmetics - hair shampoos, creams.

Purchases on social networks are typical for women. Most of respondents who work during their studies also shop through social networks. Respondents who buy through social networks are more often involved in product decisions. They want to have more control over products which they buy.

It is important for consumers to be able to express their opinion and to guide the seller in what they should sell and customize the offer to individual. As a result, respondents become more important and significant. The ability to customize products would make the offer more interesting or fill the under-supply of some products.

Based on the results we can conclude that consumers would like to be more involved in the design process, and they would also like to be able to customize products. Such a finding may constitute an opportunity for retailers and manufacturers to approach consumers to be involved in participatory design or fill a niche.

Most respondents would accept the possibility to adjust their clothes, sneakers or various fashion accessories. This may be because consumers would like to be distinguished from others, as the largest clothing retailers are fast fashion stores that produce a large number of products in a short time. However, such clothing production has a negative impact on the environment as natural resources such as water, soil, forests, CO_2 emissions, various chemicals and others are used for production. The clothes, however, do not end in shops, but at the landfills. Participatory Design increases the chance that the final result of a design process represents the values of the future users. If the understanding of end-user's needs and interests is based on real findings rather than assumptions, there is a higher chance of ensuring a successful design outcome for them. When people are able to give creative, critical input and translate them into real solutions, they also can better cultivate responsibility and ownership towards the eventual outcomes.

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The Evaluation of Foreign Trade between Slovakia and the Western Balkans Based on the Analysis of the Trade Intensity Index

Elena Kašťáková – Andrea Chlebcová
elena.kastakova@euba.sk, andrea.chlebcova@gmail.com
University of Economics in Bratislava, Faculty of Commerce,
Department of International Trade
Bratislava, Slovakia

Abstract: The Western Balkans is an important priority for the development of external economic relations and the direction of the pro-export Slovak Republic. The countries of the Western Balkans have made significant progress in the process of economic transformation, democratization and reforms in recent years, with the region becoming a promising, rapidly growing market. The aim of the paper is to evaluate the trade relations of Slovakia with the Western Balkan countries based on an analysis of the trade intensity index and to determine possible prospects for further development. Foreign trade relations of the Slovak Republic with Western Balkan countries are highly dependent on the development of strategic foreign trade interests and integration trends of the European Union. This work focuses on the development of foreign trade relations between Slovakia and the Western Balkans. It analyses in detail foreign trade through the trade intensity index, based on which the Western Balkans is a potentially important partner in terms of raw material suppliers for further processing in Slovakia. The dominant export and import partner of Slovakia is the Republic of Serbia. Slovakia and Montenegro have the lowest volume of foreign trade.

INTRODUCTION

An important factor of the current global economy is more active interference of globalization processes that are directly or indirectly present in almost all kinds of economic activities. The development of the world economy over the past three decades has led to significant qualitative changes, whose intensity increasingly manifests itself nowadays. These changes are also reflected in the foreign trade relations of the Slovak Republic with third countries. The strategy of external economic relations of the Slovak Republic and its pro-export policy plays an important role in the development of trade and economic relations, defining the strategy for the development of trade relations with foreign countries by defining specific tools and measures having direct and exclusive relationship with the export performance of the business sector. European Union countries represent the most significant portion of foreign trade of the Slovak Republic, which adversely affects the territorial diversification of foreign trade. In support of the territorial diversification, the region of the Western Balkans represents promising, rapidly expanding market with more than 25 million consumers, which grow continuously. Due to unfavorable historical development and ongoing geopolitical changes, the economies of the region are struggling with several problems such as high unemployment, corruption in government institutions, organized crime and shadow economy. The market potential of the region is significant especially regarding the geographical location, thanks to

which it is considered a "gateway to Europe" and a fundamental transit route from northern to southern Europe.

1 LITERATURE REVIEW

The current geopolitical changes affecting globalization processes taking place in the global economic environment and the level of their impact on individual economies affect their openness as well as their involvement in the ongoing division of labor. Positive development of foreign trade is an important indicator of economic growth, largely affecting effective functioning of the entire economy (Baláž, Zábojník & Harvánek, 2019). The Slovak Republic is highly open economy due to the strong dependence on foreign trade and significant sensitivity to changes in the world economic environment. Developed industrial production depends, on one hand, on import of raw materials (it has minimal own resources), and on the other hand, it must sell own production on foreign markets because of the relatively small internal market (Kittová & Steinhauser, 2017). The importance of the Western Balkans for the Slovak economy is also underlined by its position in the current Strategy of External Economic Relations of the Slovak Republic for the period of 2014 – 2020 (Ministry of Economy of the Slovak Republic, 2014). In the Strategy, the Western Balkans is specified as a region of preferential interest for support of export to non-European markets. Serbia, Bosnia and Herzegovina and North Macedonia are classified in the first group as countries of priority interest (Zubaľová, 2017).

As a part of the analysis of the business environment quality, the World Bank annually publishes the Doing Business report, which monitors and assesses quantitative indicators of the business environment and the protection of property rights that can be compared across 190 economies. The Heritage Foundation in cooperation with the editorial staff of daily newspaper The Wall Street Journal compiles the Index of Economic Freedom. The index, always published at the start of the calendar year, examines variables reflecting the status of the previous year. Economic freedom is therein understood as fundamental right of every person to control own work and property. Individuals in an economically free society can freely work, produce, consume and invest (Miller, Kim & Roberts, 2019). The most used indicator of corruption is the Corruption Perceptions Index, compiled annually by Transparency International. The index, in which experts and entrepreneurs rank 180 countries and territories according to the perceived level of corruption in the public sector, uses a scale from 0 to 100, where 0 is highly corrupt environment, and 100 is very "pure" public sector (Kittová, Steinhauser & Ružeková, 2017). Wach, Głodowska & Maciejewski (2018, 2019) analyse the impact of entrepreneurial orientation on the internationalisation of companies. They confirm that entrepreneurial orientation can stimulate internationalisation much earlier than it is assumed in previous theoretical concepts, by combining entrepreneurial orientation, knowledge, and internationalisation (Wach, Głodowska & Maciejewski, 2018). Pehrsson (2016) addresses the importance of international firms' in foreign markets. Dimitrators, Lioukas & Carter (2004) discuss the uncertainty of domestic environment, while the corruption is analysed by Shleifer and Vishney (1993). According to Marcouiller & Young, bribery and corruption may result from inadequate institutional environment (Marcouiller & Young, 1995).

When analyzing foreign trade relations, it is important to monitor trade flows according to the trade intensity defined by Brown (1949). He defined the trade intensity as mutual trade between two countries in relation to the total value of the world trade and the share in the world trade. Applied and developed by several academics like Kojima (1964) and Kunimoto (1977), the Trade Intensity Index has been used as a convenient approach for describing the geographic distribution of country trade and an effective quantitative indicator to measure the level of trade ties between two countries (Xiaofei, Yonghui, Wenyi & Qi). The trade intensity model was first applied and analyzed by Yamazawa (1971). Also, Kašťáková and Bebiaková, in the context of analysis of foreign trade between two countries, have pointed out the

possibility to examine the potential of further development of mutual foreign trade relations using the trade intensity (Kašťáková & Bebiaková, 2017).

2 METHODOLOGY

The aim of this paper is to assess trade relations between Slovakia and Western Balkan countries using the analysis of the Trade Intensity Index and determine possible prospects for further development. We used several general theoretical methods, especially methods of analysis, synthesis, induction, deduction and comparison. The analysis of the business environment of the Western Balkans has been carried out by comparing multi-criteria evaluation indicators of competitiveness in terms of export performance of foreign trade - Doing Business 2020 and the Index of Economic Freedom 2019. The business environment of the Western Balkans is characterized by high levels of corruption and clientelism. For this reason, we examined the Corruption Perception Index in individual economies. The most comprehensive source of information on the Western Balkans is reports and publications of various European Union bodies. Ministry of Foreign and European Affairs of the Slovak Republic annually publishes economic information about individual territories. A major source of data used for the research of foreign trade relations are statistical databases of the European Union, the Slovak Republic, the statistical offices of the Western Balkans, as well as databases of UNCTAD, WTO, OECD and the World Bank.

Trade Intensity Index has been used to assess the mutual foreign trade between the Slovak Republic and the Western Balkans, which is used to determine whether the value of trade between two countries is bigger or smaller than expected based on their position in world trade. A formula has been used to calculate the Trade Intensity Index (TII):

$$T_{ij} = \frac{x_{ij}/X_{it}}{x_{wj}/X_{wt}}$$

(1)

Where:

x_{ij} is the export value of the first country to the second country
X_{it} is the value of total worldwide exports of the first country
x_{wj} is the value of world exports to the second country
X_{wt} is the total value of world exports

Index values range from 0 to $+ \infty$. Index value equal to 1 means that the i export country exports to the j country the exact ratio of exports pertaining to the j country in view of its share of global imports. Values greater than 1 indicate intensive business relationship, i.e. trade flows between the examined countries are at a higher level than expected in view of the world economy. The i country exports proportionally more goods to the j country than to the rest of the world. If the value is lower than 1, then the intensity of trade is at a lower level than expected (World Bank, 2013).

3 RESULTS AND DISCUSSION

3.1 Assessment of Economic Environment in Western Balkan Countries

Albania achieves economic progress in the last three decades thanks to the economy restructuring. The country implements important reforms to increase the competitiveness of

the economy, to improve governance, promote job creation and also to promote integration into European structures. The agricultural sector of the country is inefficient. It employs almost half of the population but contributed only 20% to the country's total GDP in 2018. Promising sector of the Albanian economy is tourism, which gradually grows; its share in economy is about 14% of GDP. Albania is a country rich in oil, gas and minerals (World Bank, 2019a).

Bosnia and Herzegovina is currently a medium-developed country. The economy is heavily dependent on export of metals, energy, textiles and furniture, as well as foreign financial assistance and Chinese investments into infrastructure, particularly in the energy sector. In terms of GDP creation, service sector is the most important, followed by industry and construction. Economically significant deposits of iron, manganese, nickel, cobalt, chromium, lead, zinc, antimony and bauxite are located in the territory of Bosnia and Herzegovina (Ministry of Foreign and European Affairs of the Slovak Republic, 2019a).

Economy of Montenegro is characterized by a high degree of openness. The country economy is sensitive to external influences; growth stimulation is based on significant foreign investment activity, especially in the energy sector and tourism (World Bank, 2019b). Tourism represents more than 20% of Montenegro GDP.

Kosovo is one of the poorest parts of Europe. It is characterized by limited regional or global economic integration, political instability, corruption, unreliable energy supplies and weak rule of law. The economy of the country has shown some progress in the transition to the market system and maintaining macroeconomic stability but is still very dependent on the financial and technical support of western donors (Ministry of Foreign and European Affairs of the Slovak Republic, 2019b). In terms of GDP creation, the service sector is the most important with the share of more than 50% in the GDP creation, followed by industry and agriculture.

The Republic of North Macedonia is a country, whose economic growth has been the most stable in the Western Balkans in the last two decades. The major share in the North Macedonia economy is represented by agriculture, textile industry, energy and construction, not producing products requiring usage of advanced technologies and education of employees. Agriculture employing more than 20% of the active population remains an important sector of the economy, contributing 7.9% to the GDP (World Bank, 2019c).

The Republic of Serbia is the largest market in the Western Balkan region. The current reform program aims to ensure economic and financial stability, debt reduction, employment promotion and increase of the standard of living. In terms of GDP creation, the most important is the service sector representing 49.9% of GDP. The industrial sector contributing 26.4% to the total GDP of the country requires modernization and foreign investments. The condition of energy and transport infrastructure is an obstacle to economic development and integration of regional trade (Ministry of Foreign and European Affairs of the Slovak Republic, 2019c).

Based on Doing Business 2020, the World Bank report, the country with the most favorable conditions for business development in the Western Balkan region is the Republic of North Macedonia, at the 17th place out of 190 assessed economies. The World Bank positively assesses the simplification of labor legislation and enforcement of obligations arising from business relationships. The second Western Balkan state with the best investment environment according to the Doing Business 2020 is the Republic of Serbia, located at the 44th place. The World Bank considers the improvement of the reliability of electricity supply, computerization of the building procedure, strengthening the protection of minority investors and promoting settlement of contractual business relations through mediation to be positive changes. A negative aspect according to the World Bank is the process of company establishment made more complicated by introduction of an electronic certificate subject to special registration. Bosnia and Herzegovina ranked the 90th, which is the worst place in the Western Balkan region. Based on a comparison of the Western Balkans and the Slovak Republic according to Doing Business 2020, we can conclude that the Slovak Republic ranked the 45th, just behind the

Republic of Serbia. For the Slovak Republic, the World Bank considers facilitating the start of business by cancelling the requirement to submit information on tax arrears to be a positive change (World Bank, 2020).

According to the Index of Economic Freedom in the monitored period, Republic of North Macedonia received the best rating, followed by the Republic of Albania. Bosnia and Herzegovina received the worst rating.

Republic of North Macedonia has received the score of 71.1 in the Index of Economic Freedom 2019, ranking the 17th among 44 countries in the European region, and its overall score is above the world and regional average.

Albanian score according to the Index of Economic Freedom 2019 is 66.5, ranking the 27th among 44 countries in the European region, and its overall score is below the regional average, but above the world average.

Bosnia and Herzegovina ranked the 37th among 44 countries in the European region, and its overall score is below the regional average and slightly above the world average.

Tab. 1 Economic Freedom Index of the Western Balkans 2015 – 2019

Country	2015 score	2016 score	2017 score	2018 score	2019 score
the Republic of Albania	65.7	65.9	64.4	64.5	66.5
Bosnia and Herzegovina	59.0	58.6	60.2	61.4	61.9
Montenegro	64.7	64.9	62.0	64.3	60.5
the Republic of North Macedonia	67.1	67.5	70.7	71.3	71.1
the Republic of Serbia	60.0	62.1	58.9	62.5	63.9
Kosovo	n/a	61.4	67.9	66.6	67.0
WB average	63.3	63.4	64.0	65.1	65.2

Source: own processing according to World Economic Forum

According to the Index of Economic Freedom 2019, it is clear that the Republic of Albania and Montenegro achieved the best score in the areas of taxation and freedom of trade. Bosnia and Herzegovina and Republic of Serbia received the best ratings in the areas of fiscal health and monetary freedom. Kosovo and the Republic of North Macedonia have the best rating in the areas of tax burden and fiscal health.

The quality of the business environment is also significantly affected by the level of corruption. According to the Corruption Perception Index, all countries and territories of the Western Balkans received a score below 50 for 2019. The highest-ranking country was Montenegro on the 66th place and the worst ranking country Albania and the Republic of North Macedonia on the 106th place out of 180 assessed economies. When compared with the member countries of the European Union, we can state that the Slovak Republic ranked 59th, followed by Greece at the 60th place. Croatia achieved the score of 47, ranking the 63rd. Hungary with the score of 44 ranked the 70th.

3.2 Foreign Trade of the Slovak Republic with the Western Balkans

Foreign trade holds important position in the Slovak economy, largely contributing to the economic growth of the country and production of gross domestic product, and also forms a

substantial part of foreign exchange revenue. The positive development of foreign trade therefore significantly affects the functioning of the entire economy (Kašťáková & Ružeková, 2019). The foreign trade of the Slovak Republic reached the level of EUR 157.11 billion in 2018 (Statistical Office of the Slovak Republic, 2019). Import of the Slovak Republic amounted to EUR 77.33 billion. The total import increased by 7.12% in comparison with 2017. Export amounted to EUR 79.785 billion, increasing year-on-year by 6.23%. The most significant share in foreign trade of the Slovak Republic have European Union countries.

The share of import from EU countries was 67.60% of the total Slovak import in 2018. At the same time, the share of third countries on the Slovak import accounted for 32.4%, out of which the share of import from the Western Balkan territories was 2.12%.

Tab. 2 Development of foreign trade between the Slovak Republic and the Western Balkans 2014 – 2018 (thousand EUR FOB)

		2014	2015	2016	2017	2018
the Republic of Albania	export	40 053	38 780	30 194	33 891	22 901
	import	6 631	3 107	4 311	5 445	5 444
	turnover	46 684	41 887	34 505	39 336	28 345
	trade balance	33 422	35 673	25 883	28 446	17 457
Bosnia and Herzegovina	export	76 508	87 548	86 000	100 677	101 735
	import	57 601	64 019	69 138	71 049	75 251
	turnover	134 109	151 567	155 138	171 726	176 986
	trade balance	18 907	23 529	16 862	29 628	26 484
Montenegro	export	36 432	29 386	20 612	15 808	18 409
	import	1 249	302	285	143	55
	turnover	37 681	29 688	20 897	15 951	18 464
	trade balance	35 183	29 084	20 327	15 665	18 354
the Republic of North Macedonia	export	42 454	50 705	52 782	59 977	66 138
	import	54 142	62 069	41 050	29 392	59 682
	turnover	96 596	112 774	93 832	89 369	125 820
	trade balance	-11 688	-11 364	11 732	30 585	6 456
the Republic of Serbia	export	288 330	290 675	317 558	349 940	374 115
	import	216 968	247 308	313 921	351 579	392 078
	turnover	505 298	537 983	631 479	701 519	766 193
	trade balance	71 362	43 367	3 637	-1 639	-17 963
Kosovo	export	10 332	18 114	14 962	13 356	13 404
	import	1 852	993	873	167	262
	turnover	12 184	19 107	15 835	13 523	13 666
	trade balance	8 480	17 121	14 089	13 189	13 142

Source: own processing according to the Statistical Office of the Slovak Republic

The share of export to EU countries was 85.16% of the total Slovak export in 2018. At the same time, the share of third countries on the Slovak export accounted for 14.84%, out of which the share of export to Western Balkan territories was 4.96%.

Mutual foreign trade exchange between the Slovak Republic and the Republic of Albania in the monitored period had negative trends for the Slovak export as well as the total turnover. Turnover decreased by 27.75% in 2018 compared to 2017 and amounted to EUR 28,345 thousand. In 2018, Slovak export decreased by EUR 10,990 thousand, Albanian import decreased slightly by 0.02%. The biggest commodity of the Slovak export to Albania in 2018 was telephone devices followed by TVs. Import was dominated by ethyl alcohol and footwear.

In 2018, the foreign trade turnover between the Slovak Republic and Bosnia and Herzegovina was EUR 176,986 thousand, increasing year-on-year by 3.06% compared to 2017. Export of the Slovak Republic to Bosnia and Herzegovina amounted to EUR 101,735 thousand in 2018, increasing slightly by 1.05% in comparison with 2017. In 2018, import of Bosnia and Herzegovina increased by 5.91% in comparison with 2017. In 2018, the most important commodity item of the Slovak export to Bosnia and Herzegovina was electrical equipment, including telephone equipment. The import into the Slovak Republic was dominated by footwear parts (insoles, leather).

In 2018, the total turnover of bilateral trade between the Slovak Republic and Montenegro amounted to EUR 18,464 thousand. Compared to 2017, there was a slight increase in foreign trade turnover by EUR 2,513 thousand. During the monitored period, the Slovak export was substantially higher than import. In 2018, export amounted to EUR 18,409 thousand. In 2018, the most important commodity item of the Slovak export to Montenegro was electrical equipment, including telephone equipment. Import into the Slovak Republic was also dominated by electronic machines and equipment, followed by wood and wood products.

Development of foreign trade between the Slovak Republic and the Republic of North Macedonia in 2018 was marked by an increase in imports of parts and sub-deliveries for the Slovak automotive industry (Ministry of Foreign and European Affairs of the Slovak Republic, 2019d). Mutual trade turnover increased by 40.79% compared to 2017. Slovak export had increasing rate in the monitored period.

The mutual turnover of trade between the Slovak Republic and the Republic of Serbia in the monitored period developed by increasing pace. In 2018, Slovak export grew by 6.91% in year-on-year comparison with 2017. Serbian import grew by 11.52% in 2018; the main reason for the growth are supplies of Serbian subcontracting companies for Slovak automotive industry. In 2017, Slovak Republic has reached a negative trade balance with the Republic of Serbia in the amount of EUR 1,639 thousand, which increased to EUR 17,963 thousand in 2018. In the future, even greater interconnection of Serbian subcontractors with the Slovak automotive industry can be assumed, which may affect the further increase of the negative trade balance (Ministry of Foreign and European Affairs of the Slovak Republic, 2019c).

Foreign trade turnover between the Slovak Republic and Kosovo amounted to EUR 13,666 thousand in 2018, while the Slovak Republic has long-term positive trade balance with Kosovo. In 2018, Slovak export amounted to EUR 13,404 thousand. Import from Kosovo significantly declined in 2017, year-on-year decrease of 80.87% in comparison with 2016. Although there was a minimal growth of Kosovo's import in 2018, it still remains at a negligible level. The most important export commodities of the Slovak Republic placed on the Kosovo market in 2018 were electronic devices and equipment. Import was dominated by other plastic products.

In connection with the statistics on export from the Slovak Republic to the Western Balkans, it should be noted that even though cell phones are the biggest item, the phones are not produced in the Slovak Republic, but re-exported through Asian manufacturers. Manufacturers

are e.g. Samsung or Huawei, which manufacture the cell phones in Vietnam and subsequently export them to other countries through Slovak subsidiaries and under their name.

3.3 Intensity of Mutual Foreign Trade

In 2014 - 2018, the Trade Intensity Index of the Slovak Republic with Bosnia and Herzegovina, Montenegro, the Republic of North Macedonia and the Republic of Serbia achieved values greater than 1, which means more intensive export activities of Slovak exporters to the specified countries as would be expected given the position of Slovakia in the world economy during the monitored period. Index may reach values up to $+\infty$, therefore it cannot be considered a high intensity of trade. $TII_{SVK–SRB}$, reached the highest values, confirming that the Republic of Serbia is the most important Slovak export partner from the Western Balkan region. The index development trend in the period of 2014 - 2018 has been slightly decreasing. The highest TII of the Slovak Republic foreign trade in the monitored period was in 2014. $TII_{SVK–SRB}$ amounted to 3.49 in 2018. The course of the $TII_{SVK–ALB}$ index v 2014 – 2018 was slightly decreasing. In 2018 it amounted to 0.93. The above implies decreasing significance of Albania as an export partner for Slovakia. The Trade Intensity Index with Kosovo ($TII_{SVK–KO}$) in the monitored period reached values ranging from 0.81 in 2018 to 1.50 in 2015. Detailed overview of intensity development of Slovakia with Western Balkans in the monitored period is shown in Figure 1.

Fig. 1 TII trend between the Slovak Republic and the Western Balkans 2014 – 2018
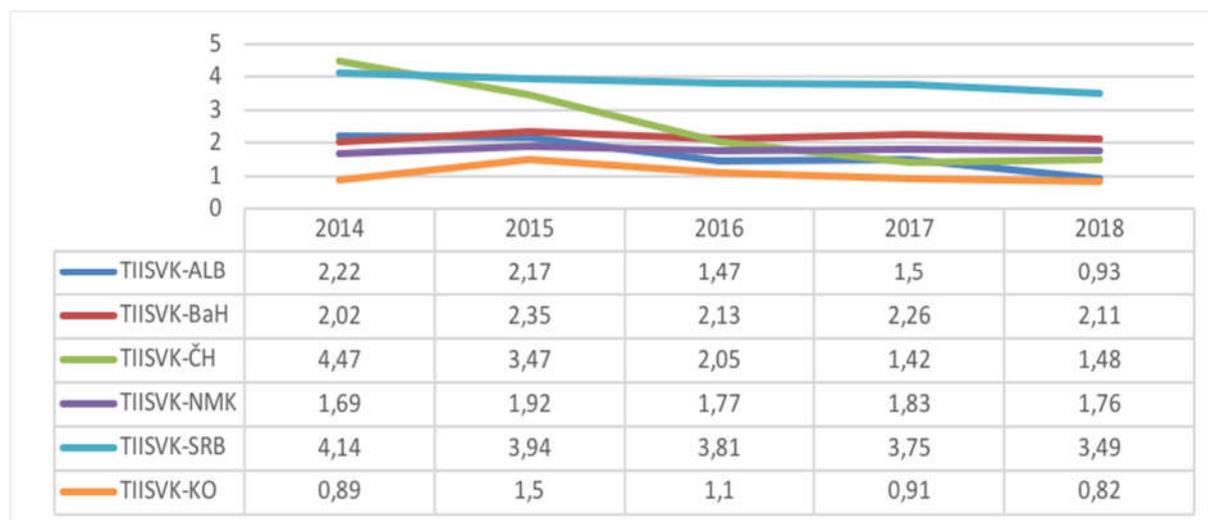
	2014	2015	2016	2017	2018
TIISVK-ALB	2,22	2,17	1,47	1,5	0,93
TIISVK-BaH	2,02	2,35	2,13	2,26	2,11
TIISVK-ČH	4,47	3,47	2,05	1,42	1,48
TIISVK-NMK	1,69	1,92	1,77	1,83	1,76
TIISVK-SRB	4,14	3,94	3,81	3,75	3,49
TIISVK-KO	0,89	1,5	1,1	0,91	0,82

Source: own processing according to the Statistical Office of the Slovak Republic and the International Trade Centre

Because the value of the $TII_{SRB – SVK}$ is higher than 1, the business relationship can be described as intense. The index development trend was slightly growing in the years 2014 - 2018; the above is due to the gradual growth of Serbian imports. The highest TII of the Republic of Serbia foreign trade in the monitored period was in 2018 (4.93). The Trade Intensity Index of Albania, Montenegro and Kosovo with the Slovak Republic had values lower than 1 in the years 2014 – 2018, which means low level of exporters' export activity to Slovakia. The Slovak Republic is not a major export partner of the specified territories of the Western Balkans; export reached low levels in the monitored period. The development of trade intensity between the Western Balkans and Slovakia in the monitored period is shown in Figure 2.

Fig. 2 TII trend between the Western Balkans and the Slovak Republic 2014 – 2018
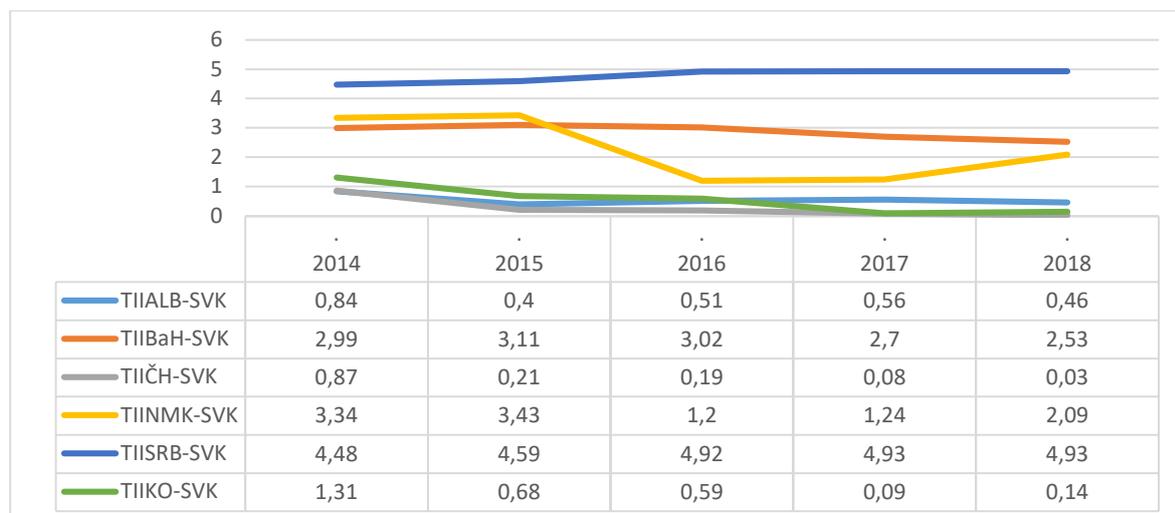
	. 2014	. 2015	. 2016	. 2017	. 2018
TIIALB-SVK	0,84	0,4	0,51	0,56	0,46
TIIBaH-SVK	2,99	3,11	3,02	2,7	2,53
TIIČH-SVK	0,87	0,21	0,19	0,08	0,03
TIINMK-SVK	3,34	3,43	1,2	1,24	2,09
TIISRB-SVK	4,48	4,59	4,92	4,93	4,93
TIIKO-SVK	1,31	0,68	0,59	0,09	0,14

Source: own processing according to the Statistical Office of the Slovak Republic and the International Trade Centre

3.4 Prospective Areas of Mutual Cooperation

The Western Balkan region is expected to be the next group of countries to join the European Union. The countries share a similar economic history with the CEE countries, which joined the European Union in 2004, 2007 and 2013, thus Western Balkan countries could learn from the experience of the CEE countries. However, none of these countries are ready to join the European Union in the next few years (Nagy, Siljak, 2019].

The economic cooperation between the Slovak Republic and Albania is limited by several factors. Slovak companies are not interested in investing and doing business in Albania. This is due to poor knowledge of the territory and local restrictions. The investment and business environment are at a low level. The above is caused by weak law enforcement, corruption and the amount of taxes and levies in comparison with neighboring countries (Ministry of Foreign and European Affairs of the Slovak Republic, 2019e).

The attitude towards Slovak companies is positive in Bosnia and Herzegovina. Currently, the energy sector, infrastructure projects and the construction of industrial parks appear to be the most promising for Slovak businesses entities (Ministry of Foreign and European Affairs of the Slovak Republic, 2019a).

Economic cooperation between the Slovak Republic and Montenegro lags behind the high level of political relations. Geographical distance, inadequate infrastructure, small Montenegrin market and low complementarity of economies cause disinterest of Slovak companies to invest and do business in Montenegro (Ministry of Foreign and European Affairs of the Slovak Republic, 2019f).

Kosovo is an extremely difficult economic area, the business environment o which discourages investors despite the positive results in 2018. The potential for development of bilateral cooperation is small for the Slovak Republic. In Kosovo, large companies from countries that recognized Kosovo's independence are succeeding, and they are struggling with extreme levels of corruption.

We can include the system of state support for foreign investors, linguistic and cultural proximity, low labor costs, favorable geographical location of the country at the crossroads of trans-European transport corridors and good transport connection with the Slovak Republic

among the advantages of doing business in the Republic of North Macedonia. Disadvantages in comparison with the Slovak Republic are weaker law enforcement, the size of the economy and small consumer market with low purchasing power of the population (Ministry of Foreign and European Affairs of the Slovak Republic, 2019d).

Slovak entrepreneurs are aware of the potential of the Serbian economy. Currently, several projects in the field of renewable energy utilization are being developed. Issues of innovation are becoming another important area of cooperation (Zorkóciová & Petríková, 2018). Engineering, petrochemistry, environment, agriculture, research and development can be also included among the promising areas of Slovak export.

CONCLUSION

Currently, the Western Balkan region is an important trading partner of the Slovak Republic from third countries, although the trade balance is relatively low. The most significant Slovak export and import partner among Western Balkan countries is the Republic of Serbia. It is the only country in the region with which the Slovak Republic has achieved passive trade balance in 2017 and 2018. The Western Balkan region is a potentially important partner from the viewpoint of suppliers of raw materials for further processing in Slovakia. The region as a whole specializes in export of labor-intensive products (clothing, shoes) and resource-intensive products (metal, wood). According to the course of the Trade Intensity Index in the years 2014 - 2018, trade between the Slovak Republic and the Republic of North Macedonia, Republic of Serbia, Bosnia and Herzegovina can be evaluated as mutually intense. Based on the results of the Trade Intensity Index, it can be noted that the Republic of Serbia is the most important trading partner from the Western Balkans for the Slovak Republic.

Mutual trade of the Slovak Republic with the Western Balkans is currently affected by the size of domestic markets, lower purchasing power of the population and unfavorable historical development of the region due to which the economies are struggling with several problems such as high unemployment, corruption in state institutions, organized crime and the shadow economy. However, the Western Balkans market represents significant economic potential whose utilization depends on implementation of reforms and promptness of standardization of business and investment environment of the Western Balkans. Ministries and organization organize business missions, intergovernmental conferences and assistance at trade fairs for Slovak companies to support their export.

ACKNOWLEDGEMENT

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Ukraine – EU: The Univariate Analysis of International Trade between Ukraine and the Slovak Republic

Oksana Kiforenko

ok.kiforenko@gmail.com

Uman National University of Horticulture, Faculty of Management, Department of Public Management and Administration

Uman, Ukraine

Abstract: The European Union is a very important partner for Ukraine. Between 2007 and 2011 the negotiations on the EU-Ukraine Association Agreement, including the deep and comprehensive free trade area (DCFTA), took place. The mentioned Agreement is a major tool for bringing the EU and Ukraine closer together as it promotes deeper political relations and stronger economic ties. The aim of the article is to analyze the dynamics and build the general trend line of the international trade between Ukraine and the Slovak Republic using the appropriate functions taking into consideration the value of R² coefficient. The univariate and the descriptive statistics analysis of the international trade between the countries follow afterwards. The time frame under research is 15 years – from the year 2004 till 2018 included. The dynamics of the trade between Ukraine and the Slovak Republic is changeable and can be divided into four periods. The general trend line, built using the power function, is upward.

Keywords: univariate analysis; international trade; descriptive statistics; trade turnover; the European Union; economic cooperation

INTRODUCTION

Today the idea of Europe is part of the self-understanding of very large segments of the population, in particular of young people, who have been born as European citizens. Letting aside, for now, the extent of the Europeanisation of identities, the important point is that since 1945, but going back the interwar-period, a cognitive shift occurred that had far-reaching political and cultural significance. After 1945 the idea of Europe came to signify a profound opposition to war, as in the phrase *Nie Wieder*, 'never again war'. The generation who forged the project of European integration that culminated in the Treaty of Rome was animated by the belief in the need to create a lasting peace in a continent that had within, living memory, witnessed three wars (Delanty, 2018).

The formation of the European Union (EU) by signing the Maastricht Treaty has advanced the European integration process. The principles of European integration are the core values of the EU based on respect for human dignity, liberty, democracy, equality, rule of law, and human rights, including minorities. EU cooperation and the achievement of financial, social, cultural, and political goals of the EU are built on the principles of the EU (Turečková & Nevima, 2016 in Lovciová & Pakšiová, 2018). For all the challenges and prevailing pessimism, the EU still has extraordinary strength. It should remain politically stable compared with much of the globe, some of its economies are among the most competitive in the world, and it has some of the healthiest, wealthiest and most equal societies. The challenge for the EU is to utilize these strengths and to build on the historic achievements of integration in a way that reflects economic needs and political realities over the coming decades (Hrivik, 2018).

The 2013 expansion of the European Union (EU) to include Croatia as its 28th Member State marks the latest move in the process of the EU's eastern enlargement. EU expansion is part of a broader process of intensified cooperation with the EU's Eastern neighbors. This includes countries that have already obtained candidate status, such as Macedonia, Montenegro and Serbia, as well as countries with which the EU initiated a program of intensified cooperation called the Eastern Partnership (EaP) in 2009. The EaP consists of six post-Soviet states, namely Ukraine, Belarus, Moldova, Azerbaijan, Armenia and Georgia, as well as the EU, and is meant to provide an institutionalized forum for the discussion of political and economic topics of joint relevance for all partners. It aims at providing the groundwork for an Association Agreement between the EU and the Eastern partners, which should eventually lead to the establishment of a free-trade zone comprising the 27 EU Member States and the six Eastern partners. In the long run, this might also result in the future membership of these countries (Fertig & Kahanec, 2015).

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 in Kašťáková & Barinková, (2019). Trade is an essential element of economic cooperation between countries and brings numerous benefits to them, both economic and non-economic ones (Malkowska, 2019). The EU is Ukraine's largest trading partner, accounting for more than 40% of its trade in 2016. The EU and Ukraine have provisionally applied their Deep and Comprehensive Free Trade Agreement (DCFTA) since 1 January 2016. This agreement means both sides will mutually open their markets for goods and services based on predictable and enforceable trade rules. This is part of the broader Association Agreement (AA) whose political and cooperation provisions have been provisionally applied since November 2014. The AA/DCFTA aims to boost trade in goods and services between the EU and Ukraine by gradually cutting tariffs and bringing Ukraine's rules in line with the EU's in certain industrial sectors and agricultural products. To better integrate with the EU market, Ukraine is harmonizing many of its norms and standards in industrial and agricultural products (European Commission 2020).

1 LITERATURE REVIEW

Among the researchers, who examined the various aspects of the relations between Ukraine and the Slovak Republic, the following ones should be mentioned Semenovych A, Miroshnychenko O., Kucheriv I., Vidnianskyi S., Serhiienko T., Hruschynska N., Lohinov Y., Yanchuk L. and others. The publications focused on the different spheres of cooperation between Ukraine and the Slovak Republic can be divided into three groups: the ones from the first group are focused on the political cooperation, that is describing meetings of the officials and different commissions; the publications from the second group are about trans-border cooperation between Ukraine and the Slovak Republic, that is focusing mostly on the regional cooperation between the countries and the ones from the third group are focused on the ways of fostering Ukrainian – Slovak cooperation. Taking into account everything mentioned above, let's deeper analyze the literature and Internet sources on the matter.

Kapitonenko (2018) states, that with approximately 97 km of common border, the two countries remain good neighbours and true friends. Both Slovakia and Ukraine are new states that emerged from the geopolitical transformations in Europe after the end of the Cold War. Both countries spent the first years of independence trying to build effective public institutions, carry out economic and political reforms, and identify major vectors of foreign policy. The parties may not have fully realized the potential of bilateral relations. Geography, history, public relations - all of this creates great potential for collaboration.

According to Vidnianskyi and Serhiienko (2002), many years of the Ukrainian – Slovak cooperation testify to the possibility of close partnership between the countries of Central and Eastern Europe, the ones that are so different in terms of its potential, size, nature and depth of the reforms. For the Slovak Republic, Ukraine is the largest neighbour, and for Ukraine, on the contrary, the Slovak Republic is the smallest among the countries bordering on it in the west. But this did not prevent the formation of equal Ukrainian-Slovak relations based on the principles of mutual respect for sovereignty and independence.

Artiomov (2014) affirms, that the Ukrainian-Slovak Euro-regional cooperation is one of the effective instruments of the European integration policy of Ukraine and formation of a special common spatial security zone as well as the European humanitarian values on both sides of the border as Ukraine and Slovakia traditionally have close links that promote mutually beneficial cooperation. That is why Ukraine's long-term strategy has the potential to take into account the factors of the new European Union's eastern policy. The enlargement of the EU in 2004 and 2007 and the emergence of a common Ukrainian-EU border have objectively led to the favorable situation for Ukraine to use its geostrategic position and to develop cross-border Euro-regional cooperation.

A profound research of the international relations between Ukraine and the Slovak Republic was made by Vorotniuk M. (2016), who states, that nowadays the interests of Ukraine and Slovakia coincide in several directions. Ukraine's interest in Slovakia lies in the economic sphere, namely in taking advantage of the two countries' neighbourhood, strengthening economic ties between the border regions of the countries and using the untapped potential of economic cooperation taking into consideration the FTA between Ukraine and the EU. The Slovak Republic's interests in Ukraine are to make more effective use of the economic cooperation potential, in particular, between border regions of the two countries, which would stimulate the economic growth of the eastern regions of Slovakia.

If we cast a look at the publications of the Slovak scientists, among the ones worth paying attention at, among others, is Duleba A. (2002), who gives an overview of the Slovak – Ukrainian relationships, dividing their development into three periods: 1) 1993-1998; 2) 1998-2000; and 3) since 2001. The author remarks, that the Slovak attitude toward Ukraine during the first period might be characterized like an „indifferent neighborhood". The diplomatic competition of the both countries within the UN for chairmanship of the 52 General Assembly followed by the competition for a seat in the UN Security Council representing the Central-European group of countries, has stunned the Slovak-Ukrainian bilateral relations in period of 1998-2000. But the course of matters changed after 2001 as both sides succeeded to reach an agreement on liberalization of the visa regime, Ukraine has stopped the process of denouncing the readmission treaty with Slovakia, both countries have reached an accord concerning cooperation in the transit of crude oil from the Caspian basin to the EU and Central-European markets, etc. Thus, the year of 2001 might be characterized like a new beginning in the modern Slovak-Ukrainian relationship.

The more recent time frame of the Slovak – Ukrainian relationships was analyzed by Lačný M. (2017), who divided the relations between the countries into the following periods: a) 1993-2004: the bilateral intergovernmental regime of the border; b) 2004-2016: the community regime of the border between the EU and Ukraine, and c) the new border regime after the signing and subsequent implementation of the Association Agreement between the EU and Ukraine, including the Deep and Comprehensive Free Trade Area Agreement (DCFTA), as well as an agreement on visa-free regime between the EU and Ukraine. He also explored the history and dynamics of Slovak-Ukrainian mutual economic interaction, as well as the recent conditions in the CBC area, the understanding of which may contribute to building capacities of CBC actors to make best use of opportunities brought by AA/DCFTA and thus consequently boost economic development of the Slovak-Ukrainian borderland regions.

According to Jarábik B. (2016) Slovakia`s foreign policy framework towards Ukraine is based on its immediate proximity, relative intensity of economic cooperation (particularly the natural gas connection), its own recent history of a complicated Euro-Atlantic integration and the need for stability on the eastern borders of the EU in order to avoid the "peripherization" of the region of Central Europe. Ukraine`s Association Agreement was a milestone for Slovakia to gradually tie Ukraine closer to the EU for its own national interest as well as a modernization trigger for its neighbor - both in terms of economy and especially state administration. Bratislava accelerated its relations accordingly, both via the Ministry of Foreign Affairs and President Kiska but also via numerous civic actors.

So, the sphere of international trade and economic cooperation between Ukraine and the Slovak Republic needs to be researched in a broader sense both empirically and statistically to better understand the present state of matters, to see the dynamics of it and not only make the projections for the future but, depending on the results, make the necessary corrections in the international relations and policy for the benefit of both countries.

2 METHODOLOGY

Successive EU enlargements have brought Armenia, Azerbaijan, Georgia, the Republic of Moldova, Ukraine and Belarus (the Eastern Partnership countries) closer to the EU. Over time, fostering the relationship with these countries has become an important policy action (Biavaschi& Zimmermann, 2014). One of the main directions of Ukraine's foreign policy is the cooperation with the EU countries in general and with the Slovak Republic in particular. The inter-state cooperation of Ukraine and the Slovakia in the economic sphere is very important nowadays. The common state border and the membership of the Slovak Republic in the EU determine Ukraine's interest in the building of good neighbourly relations with Slovakia (Mandryk, 2013). The aim of the article is to analyze the dynamics and build the general trend line of the international trade between Ukraine and the Slovak Republic. The dynamics of the trade between Ukraine and Slovakia was analyzed in terms of its changeability and differences if compared to the previous periods. Such descriptive statistics as 25th percentile, mean, median, 75th percentile, minimum and maximum values, sum, variance, standard deviation, range and interquartile range follow afterwards. The general trend line was built using the appropriate function (choosing from the exponential, linear, logarithmic, polynomial, and power functions) taking into consideration the value of R^2 coefficient.

The data analyzed in the paper were taken from the official publications of the State Statistics Service of Ukraine. The time frame under research is 15 years – from the year 2004 till 2018 included.

3 RESULTS AND DISCUSSION

The political cooperation between Ukraine and the Slovak Republic is characterized by the intensification of the bilateral political relations and Slovakia's support for Ukraine's European integration aspirations. As for economic relations between the countries, it should be stated that they take the leading role in the bilateral cooperation between the countries mentioned above and can be characterized as very dynamic throughout their whole history. According to the results of the year 2018 the Slovak Republic is among top 20 trade partners of Ukraine with the total trade turnover of more than 1.5 bln US dollars (Embassy of Ukraine in the Slovak Republic, 2019). As the confirmation of the point of view mentioned in the latter sentence, it should be stated that the structure of the Ukrainian exports of goods to Slovakia in 2018 was dominated by the deliveries of ores, slag and ash (39%), electric machinery (17.1%), organic chemicals (8.3%), meat and by-products (6.9%) and ferrous metals (6.4%). The structure of

the goods imported into Ukraine from Slovakia in 2018 was dominated by land transport except for rail (22.6%), nuclear reactors, boilers, machinery (11.4%), ferrous metals (11%), plastics, polymeric materials (7.5%). It should also be added that the structure of the Ukrainian exports of services to Slovakia in 2018 was dominated by transport services, business services, material processing services, telecommunication services, computer and information services. The imports of services into Ukraine from Slovakia in 2018 were dominated by transport services, telecommunication services, computer and information services, and business services (Embassy of Ukraine in the Slovak Republic, 2019). Among the trade partners of Ukraine in terms of the trade in goods in 2018 we can see Poland, Italy, Germany, Hungary and the Netherlands standing at the top of the list. If we talk about the trade partners of Ukraine in terms of the trade in services, then we find Germany, United Kingdom, Poland, Cyprus and Hungary as those taking the first places in the list (State Statistics Service of Ukraine, 2019). The total trade turnover between Ukraine and the Slovak Republic with differences if compared to the previous periods in millions of US dollars is presented in Figure 1.

Fig. 1 Total Trade Turnover between Ukraine and the Slovak Republic with Differences to the Previous Periods, mln.USD
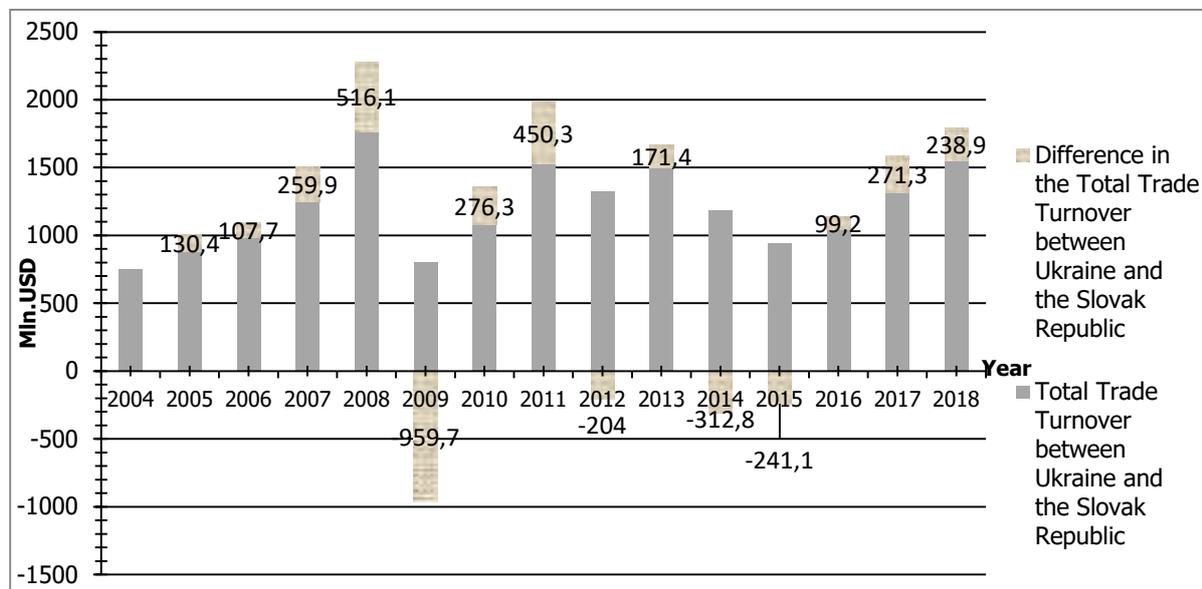
Source: author's own elaboration on the basis of the data from the State Statistics Service of Ukraine (2019)

The data presented in Figure 1 confirm the statement that the trade relations between Ukraine and the Slovak Republic are very changeable during the whole period of time under research. The upward trend in the time zone 2004 – 2008 was interrupted by a significant decrease of the total trade turnover of 959.7 mln USD in 2009. The explanation of such a huge fall may be the influence of the global financial crisis as no single country can function separately under such overwhelming globalization processes we experience nowadays. After the year 2009 we observe the next upward trend till the year 2011 included, after which we see another fall of 204 mln USD in the year 2012, followed by the other increase in the value of the total trade turnover of 171.4 mln USD. After 2013 we see a downward trend in the amount of the total trade turnover between Ukraine and the Slovak Republic till 2015 included. We can observe the next upward trend afterwards till the last year of the time frame under analysis included. The continuation of the upward trend in the total trade turnover between Ukraine and the Slovak Republic during three last years testifies to the right direction of the countries to the

improvement of their economic cooperation. The largest negative change inthe amount of the total trade turnover between the countries mentioned above can be observed in 2009 (959.7 mln USD) and the largest positive one – in 2008 (516.1 mln USD). Five lowest and five highest extreme values of the total trade turnover between Ukraine and the Slovak Republic are presented in Table 1.

Tab. 1 Extreme Values of the Total Trade Turnover between Ukraine and the Slovak Republic, mln.USD

Extreme Values of Total Trade Turnover					
Lowest			Highest		
Value	Year	Observation	Value	Year	Observation
748.9	2004	1	1325.9	2012	9
803.3	2009	6	1497.3	2013	10
879.3	2005	2	1529.9	2011	8
943.4	2015	12	1552.8	2018	15
987.0	2006	3	1763.0	2008	5

Source: author's own elaboration on the basis of the data from the State Statistics Service of Ukraine (2019)

Fig. 2 Box Plot for the Values of the Total Trade Turnover between Ukraine and the Slovak Republic

Total Trade Turnover between Ukraine and the Slovak Republic, mln.USD
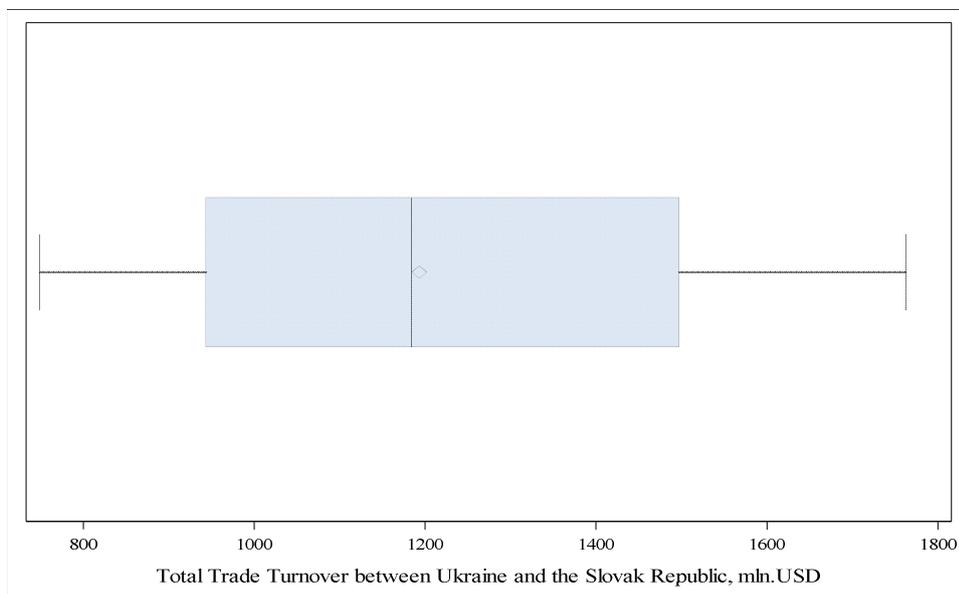
Source: author's own elaboration

The values presented in the table given above are designed in the descending order, that is the lowest value of the total trade turnover can be seen in the year 2004 (the first row of values) and the highest said value – in 2008 (the last row of values). Taking into consideration the data in Figure 1 and those in Table 1 as well as their analysis, the trade relations between Ukraine and the Slovak Republic can be divided into four periods:the first one from the year 2004 till 2008 included (upward), the second one – from 2009 till 2011 included (upward), the third one – from 2013 till 2015 included (downward) and the forth one is from the year 2016

till 2018 (upward), that is till the end of the time frame under analysis (the year 2012 was not included into any of the periods mentioned above as we can see a single decrease of the total trade turnover which occurred only once and cannot be considered as a period). In other words, the trade relations between Ukraine and the Slovak Republic can be divided into three upward and one downward period if judged by the amount of the total trade turnover between the countries. The visual presentation of the descriptive statistics of the variable "Total Trade Turnover between Ukraine and the Slovak Republic" can be observed in Figure 2.

The data depicted in Figure 1 allow us state that the minimum value of the variable "Total Trade Turnover between Ukraine and the Slovak Republic" for the time frame under analysis is 748.9. The 25th percentile or, in other words Quartile 1, equals 943.4. The mean, that is the average value, is 1193.22. The 50th percentile or, in other words median, is 1184.5. The 75th percentile, that is Quartile 3, equals 1497.3. The maximum value for the variable under analysis is 1763. The sum of the values of the total trade turnover between Ukraine and the Czech Republic for the time frame under analysis is 17898.3mln. USD. In addition, the variance is 91673.33 and the standard deviation is 302.78. The range is 1014 and the interquartile range is 553.9. To proceed with the analysis of the total trade turnover between Ukraine and the Slovak Republic, the trend line was built in Figure 3.

Fig. 3 Total Trade Turnover between Ukraine and the Slovak Republic, mln.USD
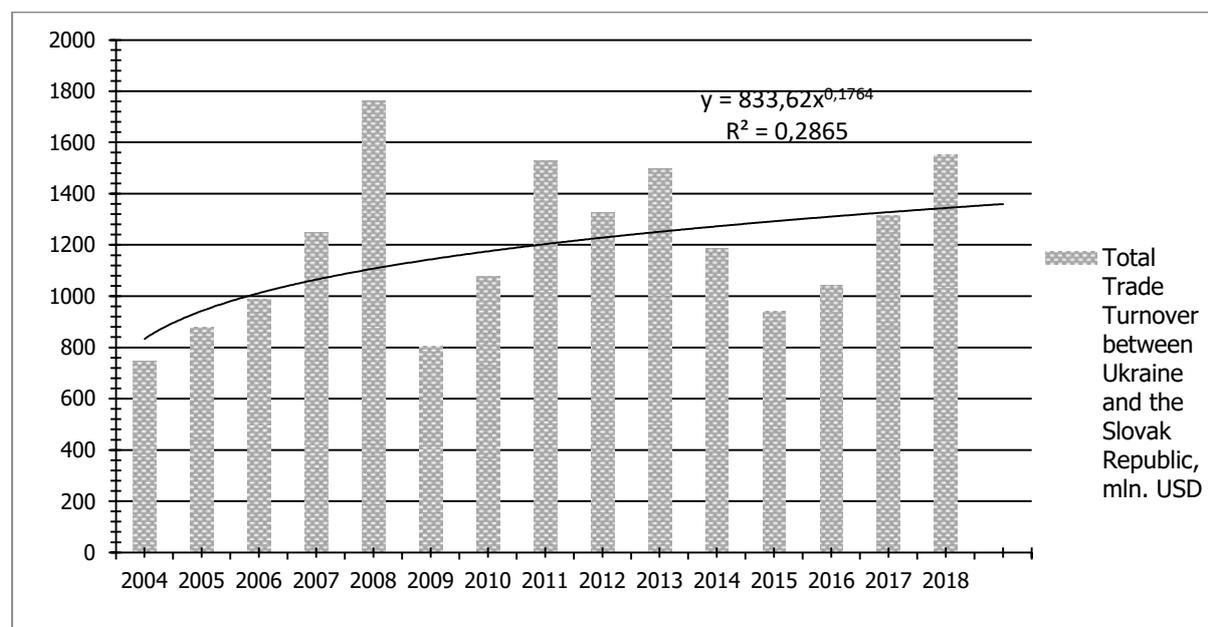
Source: author's own elaboration on the basis of the data from the State Statistics Service of Ukraine (2019)

The trend line presented in Figure 3 was built using the power function, chosen from the exponential, linear, logarithmic, polynomial, and power functions, taking into account the value of the R² coefficient. Though, the value of the mentioned coefficient of the chosen function is not that high (0.2865), it is the largest value of the functions under consideration. As it can be seen in the figure given above, despite the changeability of the values of the total trade turnover between Ukraine and the Slovak Republic, the trend line is upward not only during the time frame under analysis, but continues to be such during one more period taken as a projection one – here it is a year. Only one period of time, a year, was taken for the projection of the trend line direction because of the changeability of the values under analysis.

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CONCLUSION

The European Union is a very important partner for Ukraine. Between 2007 and 2011 the negotiations on the EU-Ukraine Association Agreement, including the deep and comprehensive free trade area (DCFTA), took place. The said Agreement is a major tool for bringing the EU and Ukraine closer together as it promotes deeper political relations and stronger economic ties. One of the main directions of Ukraine's foreign policy is the cooperation with the EU countries in general and with the Slovak Republic in particular. The inter-state cooperation of Ukraine and the Slovakia in the economic sphere is very important nowadays. The common state border and the membership of the Slovak Republic in the EU determine Ukraine's interest in the building of good neighbourly relations with Slovakia (Mandryk, 2013).

The political cooperation between Ukraine and the Slovak Republic is characterized by the intensification of the bilateral political relations and Slovakia's support for Ukraine's European integration aspirations. As for economic relations between the countries, it should be stated that they take the leading role in the bilateral cooperation between the countries mentioned above and can be characterized as very dynamic throughout their whole history. According to the results of the year 2018 the Slovak Republic is among top 20 trade partners of Ukraine with the total trade turnover of more than 1.5 bln US dollars (Embassy of Ukraine in the Slovak Republic, 2019).

The trade relations between Ukraine and the Slovak Republic are very changeable during the whole period of time under research. The continuation of the upward trend in the total trade turnover between Ukraine and the Slovak Republic during three last years testifies to the right direction of the countries to the improvement of their economic cooperation. The largest negative change in the amount of the total trade turnover between the countries mentioned above can be observed in 2009 (959.7 mln USD) and the largest positive one – in 2008 (516.1 mln USD). The trade relations between Ukraine and the Slovak Republic can be divided into four periods: the first one from the year 2004 till 2008 included (upward), the second one – from 2009 till 2011 included (upward), the third one – from 2013 till 2015 included (downward) and the forth one is from the year 2016 till 2018 (upward), that is till the end of the time frame under analysis.The trend line of the total trade turnover between Ukraine and the Slovak Republic, built using the power function, chosen from the exponential, linear, logarithmic, polynomial, and power functions, taking into account the value of the R^2 coefficient, is upward not only during the time frame under analysis, but continues to be such during one more period taken as a projection one – here it is a year. Only one period of time, a year, was taken for the projection of the trend line direction because of the changeability of the values under analysis.

The descriptive statistics analysis is the start point of every possible analysis of variables. It gives the general overview of the sample of values under analysis and helps detect any mistakes in the data input, if any. The univariate analysis of the total trade turnover between Ukraine and the Slovak Republic made in the article is the first step of the more sophisticated analysis.

Ukraine and the Slovak Republic have a great potential for the cooperation fostering in many spheres of the political, social and economic life of both countries. Among the most promising collaboration directions one should mention machine building, metallurgy, aviation, tourism and transit transportation spheres. The cooperation of the countries mentioned above in the sphere of energy is strategically important for the energy security of both Ukraine and the Slovak Republic. In addition, the collaboration of the countries in the sphere of technological innovations and start-ups could be rather interesting and profitable for both. Much has already been done in terms of the political cooperation fostering between Ukraine and the Slovak Republic, but even more should be done to promote economic collaboration between the two countries to strengthen the position of both on the European stage.

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Learning and Entrepreneurial Market Orientation of exporting SMEs

Izabela Kowalik – Lidia Danik – Agnieszka Pleśniak
izabela.kowalik@sgh.waw.pl, lidia.danik@sgh.waw.pl,
agnieszka.plesniak@sgh.waw.pl
Warsaw School of Economics, Collegium of World Economy, Department of
International Marketing
Warsaw, Poland

Abstract: The paper presents the results of a quantitative study of 240 Polish SMEs from the manufacturing sector, surveyed in 2019. It aims at determining whether and to what extent their learning is linked to entrepreneurial marketing orientation. As learning is a key element of both traditional and rapid internationalisation models, the second aim of the study is to show whether these relationships differ between exporting SMEs and the ones serving mainly the domestic market. Statistical analysis with the use of SEM modelling was applied to find out about the structure and relationships between variables. The results of the analysis indicate that company learning is related to firms' strategic orientation. Moreover, significant differences between the exporting and non-exporting enterprises regarding their approach to learning were found, however, the strength of relationships between learning orientation and entrepreneurial marketing is similar in both groups.

INTRODUCTION

The study aims at determining whether and to what extent the learning orientation of SMEs, and their market -sensing are linked to their entrepreneurial marketing orientation. Moreover, it is interesting to check if such relationships differ in exporting and non-exporting SMEs.

1 LITERATURE REVIEW

1.1 Market sensing of SMEs

According to Hagen and Zucchella (2018), the key functions of entrepreneurial marketing are concentrated on the market-sensing and boundary-spanning activities, innovation and business development, leveraging, extending and enriching scarce resources, and customer relationship building in connection with value chain management. Thus, when faced with environmental uncertainty, the internationalizing firms should be prepared to read all signals, especially those related to market information. The translation of these signals into opportunities leads to faster internationalization, and also exemplifies "doing more with less" – i.e. obtaining information at a cheaper cost.

The market-sensing capability involves substantive activities and routines needed to obtain knowledge from various sources (Salojärvi et al., 2015). Thus, these authors have suggested that market-sensing capabilities are expressed not only by the firm's propensity to perform

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certain activities, but also by the concrete "routines" needed for acquiring valuable knowledge about and from the foreign markets (p. 7). Day, 1994 pointed out that market sensing should lead not only to the assessment of the current environment, but also to forecasting the future stage of the market. This author identified the following types of market sensing: (1) sensing activities, (2) interpreting sensed information, and (3) evaluating activities, related to monitoring and assessment (Ardyan, 2016; Day, 2002).

According to Miocevic and Morgan (2018) the market-sensing capabilities belong to the group of absorptive operational capabilities which are necessary for export marketing success (see also: Teece et al., 1997). Miocevic and Morgan define the market-sensing capability as "the firm's propensity to actively and purposefully monitor the customers, competition, technology, and general environment", which helps SMEs "generate valuable knowledge that is essential in initial stages of value creation".

Since the beginning of studies on entrepreneurial and marketing orientations (EO and MO), information gathering had an important place in these concepts. Kohli et al. based the whole concept of MO and the MARKOR scale on different activities concerning market information processing (Kohli et al., 1993). In the models elaborated by next authors this approach has been broadened and developed.

1.2 Entrepreneurial marketing concept

One of the concepts connected with the development of marketing discipline has been the entrepreneurial marketing (EM) concept, which has been evolving for the last three decades. At first it was treated as an approach to marketing typical for SMEs (see: Toghraee et al., 2017). Later it started to be associated with the particular features of entrepreneurship (Morris et al., 2002; Sethna, 2013), and it was associated also with internal activities of larger firms. In this study we approach this concept from the perspective of internationalized SMEs. There have been several publications treating entrepreneurial marketing as especially useful for quickly developing SME exporters (Hallbäck & Gabrielsson, 2013; Knight & Liesch, 2016; Weerawardena et al., 2012; Yang & Gabrielsson, 2017). The reason for this approach is that the EM features, such as concentration on opportunities and customer focus make it helpful in fast expansion.

The characteristic approach to information gathering, associated with EM (Ionita, 2012; Stokes, 2000) consists of activities concentrated on learning from networks and customer intimacy connected with co-creation (Morrish, 2011). In EM formal marketing research is rather not popular (Stokes 2000). On the other hand, SMEs tend to scan opportunities in the environment via participating in fairs, collecting information from agents and learning from mistakes of others. The proposed operationalizations of EM include such dimensions as (Ionita, 2012; Morris et al., 2002): customer intimacy, resource leveraging, proactiveness, opportunity focus, value creation, innovation focus and low-risk marketing. Some of these dimensions were combined to form an entrepreneurial marketing orientation (EMO) concept (Jones & Rowley, 2011).

As it was already mentioned, market sensing is considered a crucial activity for entrepreneurial marketing (Hagen and Zucchella, 2018). Moreover, according to Foley (2004) the market-sensing capability is an antecedent of market orientation. Therefore, the hypothesis is proposed for this study:

H1: Market sensing intensity is positively correlated with the entrepreneurial marketing orientation of SMEs.

In this study market-sensing intensity is understood as the number and importance of the routines performed to acquire knowledge about the markets in which the firm operates.

In the international market setting such "architectural marketing capabilities" as market information gathering, information distribution and strategic analysis (Vorhies et al., 2009) are necessary to develop the "Learning Advantage of Newness", contributing to the venture's success (Autio et al., 2000). Therefore, the main goal of market sensing may be the exploitation of market niches, due to quick identification of opportunities.

On the other hand, the studies on international entrepreneurship also underline the importance of learning to the firm success. In studies by Dimitratos et al. (2012) and Gabrielsson et al. (2014) the construct of international entrepreneurial orientation, applied in relation to internationalizing SMEs, includes the learning orientation construct.

1.3 Learning orientation of SMEs

Learning orientation is a relatively new concept explaining the success of SMEs. It "refers to corporate behaviors and activities related to creating, acquiring, and using knowledge to develop or enhance a competitive advantage" (Lonial & Carter, 2015, p. 97). Learning-oriented companies encourage, or even require, employees to constantly question the organizational norms that guide their market information processing activities and organizational actions. The values associated with the firm's learning capabilities refer to a commitment to learning, open-mindedness and shared vision (Baker & Sinkula, 1999a).

The learning orientation is perceived to be one of the factors determining the positional advantage and therefore also the performance of SMEs (Lonial & Carter, 2015), as learning-oriented companies gather knowledge more quickly than their competitors, are able to introduce innovations (Baker & Sinkula, 1999a, 1999b; Sheng & Chien, 2016) and adopt faster to evolving business environment, providing improvements in both their marketing tools and other managerial solutions.

Weerawardena, Mort, Liesch & Knight (2007) state that the owner's global mindset, prior international experience and learning orientation shape a set of three distinctive capabilities comprising market-focused learning capability, internally-focused learning capability and networking capability. They support the marketing capability and the introduction of knowledge-intensive products and therefore contribute to the accelerated internationalisation. These authors interpret learning orientation as a construct related more to the values represented by the company's managers, than just to activities connected with knowledge-gathering.

According to the studies mentioned above, both market sensing and learning orientation are crucial in the development of firms' competitive advantage and international presence. Thus, we propose a hypothesis for study:

H2: The learning orientation of SMEs is positively correlated with their market-sensing intensity.

As shown in the study of Lonial and Carter, the best results are obtained by the companies, who simultaneously attend to the entrepreneurial orientation defined as „entrepreneurial strategy-making processes that key decision makers use to enact their firm's organizational purpose, sustain its vision, and create competitive advantage(s)" (Rauch et al., 2009, p. 763) and market orientation conceptualized as "company behaviors focusing on the generation of market intelligence through decision support systems, information systems, and market research; dissemination of that intelligence across company departments; and responding to changes in the competitive environment based on this intelligence" (Lonial & Carter, 2015, p. 96). All the three orientations, MO, EO and LO, seem to support each other and to be the necessary prerequisites of the company's success.

The relationship between market orientation and learning orientation is still not clear. For example, Baker and Sinkula (1999a) argue that while both market and learning orientation are needed to maximize the effectiveness of innovation, the strong learning orientation may be more important to the firm performance than a strong market orientation. However, in their other study published in the same year (Baker & Sinkula, 1999b, p. 422) they show that "In the absence of one or the other, it would be better for a firm to have a strong market orientation. A strong market orientation is likely to breed the type of adaptive learning that can keep a firm competitive in a dynamic market. A strong learning orientation may lead to an occasional "home run," but the beneficial effect of breakthrough innovations may be shortlived if they are not followed up by market-oriented processes that enable firms to make necessary strategic and tactical adjustments in responses to changes in the external market". The higher importance of market orientation was also confirmed by Farrell and Oczkowski (2002). The other studies show that learning orientation is a mediator between market orientation and innovativeness (Lin et al., 2008).

The above studies treat learning and market orientations as rather independent phenomena, not taking into consideration their potential interrelatedness, however, the studies on dynamic capabilities show, that learning about both customers and competitors is essential for effective marketing mix strategies and solving the marketing problems (Weerawardena et al., 2007). The argumentation of Slater and Narver is the other way round: they claim that market orientation is the basic cultural foundation of the learning organization (Slater & Narver, 1995).

Therefore, we suggest to test another hypothesis in the current study:

H3: The learning orientation in SMEs is correlated with their entrepreneurial marketing orientation.

Moreover, it is interesting for us to find out if such relationships differ between internationalized firms, and those who are only active locally. This research question was inspired by the studies on internationalized ventures underlying that small and medium companies need to gather knowledge not only at the beginning of their internationalization but also to support their expansion within existing foreign markets (Fletcher & Harris, 2012). Therefore, their learning should be strongly related to market orientation. On the other hand, the previous studies have yet not compared the LO of INVs and SMEs operating mainly locally, therefore we are not attempting to hypothesize about the potential differences regarding these firms.

2 METHODOLOGY

2.1 Sample and data gathering

The data for study were collected between May and June 2019 with use of the mixed-mode method, including207 interviews collected with the CATI (computer assisted telephone interviews) and 33 applying CAWI (computer assisted web interviews) technique. The sample was drawn from the database comprising 2969 companies. 1038 companies have not fulfilled the selection criteria and 1691 refused to participate in the study or interrupted the interview. The data was collected by an independent market research company AMS.

The final sample included 240 companies fulfilling the following criteria: existing and active Polish manufacturing firms with 10-249 employees; firms incepted after 2003, not being a result of a merger or takeover, never being a subsidiary of a foreign company. 120 companies were strongly internationalised companies having at least 25% export share in total sales (hereinafter referred to as exporters). The other 120 companies were not internationalised

companies with the export share not exceeding 25% (hereinafter referred to as non-exporters). The respondents were persons responsible for cooperation with foreign partners, mainly sales/export/marketing directors or firm owners. Almost 67% of the sample were small companies with 10-49 employees. The remaining 33% of the companies in the sample employed between 50 and 240 people. Most of the companies under study (almost 59%) did not reach the yearly turnover of 2 Mio Eur. 29% of the companies declared the total sales value between 2 and 10 Mio Eur and 12% - of 10-50 Mio Eur. Almost 73% of the internationalised companies started exporting after three years from inception and only 16% began exporting within the first one. 44.2% of the sample were companies serving both the B2B and B2C market. 30.5% served B2C clients only and 25,4% operated exclusively on the B2B market.

2.2 Applied scales

Company learning scale

Market-sensing measurement was based on market-sensing scale developed by Salojarvi et al. (2015), based on Day (2002) and Achtenhagen et al. (2013). It encompassed three statements (1 to 3 in Table 1). Furthermore, the learning orientation was assessed by the scale developed by Sinkula et al. (1997) and Galer et al. (1992), encompassing four statements - from 4 to 7 in Table 1. Summing up, seven statements described on 7-point Likert scales were used to evaluate companies' learning (Table 1). Before asking these questions, the following definition of learning was presented: „Company learning is understood as all forms of employee education (company-sponsored or individual) and acquisition of external knowledge".

Tab. 1 Company learning scale items used in the study of the Polish SMEs (n=240)

Question	Variable label
1 We have systematic processes, with which we interpret prevailing trends in the market environment	CL_1
2. We actively follow our competitors' procedures	CL_2
3 Our company's employees regularly discuss the effect of market trends and new products on our activities	CL_3
4 We quickly analyse and interpret changes taking place in market demand	CL_4
5 The sense around here is that employee learning is an investment, not an expense	CL_5
6 Learning in my organization is seen as a key commodity necessary to guarantee organizational survival	CL_6
7 In our corporate culture, the employees' learning is seen as very important	CL_7

Note: For questions 1-7 Likert-type seven-point scales were used with 1 – definitely disagree, 2 - disagree, 3 – rather disagree, 4 – neither agree nor disagree, 5 – rather agree, 6 - agree, 7 – definitely agree.

Source: Own elaboration based on: Salojarvi et al. (2015), Sinkula et al. (1997) and Galer et al. (1992).

First, we run the exploratory factor analysis (EFA) for items regarding company learning (CL) to check the unidimensionality of the CL scale. The EFA provided 2 factors with eigenvalues higher than 1. First factor explains 51% of variance and consists of three items with factor

loadings above 0.9. The second factor explains 20% of variance and comprises 4 items with factor loadings from 0.67 to 0.79. Both scales proved to be reliable (Cronbach's alpha >0.7). The results of EFA and reliability statistics are presented in table 2.

Tab. 2 Exploratory factor analysis and reliability statistics of the company learning scale

| Items | Loadings | | Communalities | Company learning dimension | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items |
| | Component [% of Variance] | | | | | |
	1 [51%]	2 [20%]				
CL_1		0.721	0.478	Market sensing	0.714	0.716
CL_2		0.785	0.585			
CL_3		0.747	0.597			
CL_4		0.673	0.522			
CL_5	0.929		0.876	Learning orientation	0.954	0.955
CL_6	0.970		0.926			
CL_7	0.973		0.943			

Source: Own elaboration.

Next, we estimated the measurement model for learning in exporters and non-exporters groups using structural equation modelling (SEM). Then we tested the measurement invariance by means of the multiple group confirmatory factor analysis (MGCFA) to check whether differences in the means of the observed items result from the differences in the means in market sensing and learning orientation. If measurement invariance doesn't hold, the differences across groups could be due to the different construct configuration or different understanding of questions across the groups.

The same measurement model of company learning was estimated in both groups. The model fitted the data (RMSEA=0.031, NFI=0.970, TLI=0.991, CFI=0,994). All regression weights between the company learning dimensions and their indicators (items) proved to be significant (p<0.05). Configurative invariance was supported, so the same items were connected to each dimension of company learning across the group. Then we tested whether the factor loadings are the same across groups to check metric invariance. Chi square difference test indicated that constraints didn't worsen model fit significantly (p=0,996), so the metric invariance holds as well. We concluded that exporters and non-exporters understood the market sensing and learning orientation similarly.

Scalar invariance is supported if the intercepts in regressions for items are equal across the groups, but it wasn't the case in our study (p=0.016). Lack of scalar invariance indicates that the observed differences in items' means can result both from different level of underlying company learning dimension and indicator intercepts.

As table 3 shows, the learning orientation scale is reliable in both groups (composite reliability >0.7). High factor loadings and average variance extracted indicate convergent validity and discriminant validity (max|rij|<0.85, MSV<AVE) and as a result also construct validity. Similarly, the reliability and validity of the market sensing scale for non-exporters are supported (for convergent validity AVE could be below the 0.5 if value of CR is accepted). When it comes to market sensing scale for exporters, the reliability is lower than recommended standards, but still acceptable, discriminant validity is supported, however, low value of AVE indicates low convergent validity.

Tab. 3 Reliability and validity assessment of the company learning model

item		Company learning dimension	exporters			non-exporters		
			Standardized estimate	CR	AVE	Standardized estimate	CR	AVE
CL_1	<---	Market sensing	0.446			0.626		
CL_2	<---	Market sensing	0.544	0.630	0.301	0.643	0.783	0.478
CL_3	<---	Market sensing	0.588			0.815		
CL_4	<---	Market sensing	0.604			0.665		
CL_5	<---	Learning orientation	0.895			0.858		
CL_6	<---	Learning orientation	0.949	0.963	0.897	0.955	0.947	0.856
CL_7	<---	Learning orientation	0.994			0.959		
Discriminant validity			max|r_{ij}|=0.382; MSV=ASV=0.146			max|r_{ij}|=0.574; MSV=ASV=0.329		

Source: Own elaboration. Note: CR – Composite reliability, AVE – average variance extracted, max\|rij\| - maximum inter-construct correlation, MSV - maximum shared variance, ASV-average shared variance.

Tab. 4 Company learning measurement model fit

Indices	Recommended standards		Model fit
	Good fit	Acceptable fit	Company learning model, exporters, N=120, non-exporters, N=118
χ^2; df; p-value			32.404; 31; 0.397
Bentler-Bonnet fit index (NFI)	>0.95	>0.90	0.97
Bentler-Bonnet nonnormed fit index NNFI/TLI			0.998
Comparative fit index (CFI)			0.999
GFI			0.965
AGFI	>0.90	>0.85	0.936
RMSEA	<0.05	<0.08	0.014 (0; 0.051)

Source: own elaboration. Note: RMSEA: Root mean square error. GFI: goodness of fit index. AGFI: adjusted goodness of fit index. df: degrees of freedom.

As table 4 shows, the company learning model prepared for this study, presented a good fit with the data.

Entrepreneurial marketing orientation scale

To measure the entrepreneurial marketing orientation, we used a five-dimensional construct, based on Fiore et al. (2013), which had been adapted and tested on a sample of Polish SME-exporters (Kowalik, 2020, forthcoming). The model includes five dimensions of EMO: Proactive orientation, Opportunity focus, Customer Orientation, Value Creation, and Low-risk marketing.

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These dimensions are consistent with the description in (Kowalik, 2020, forthcoming), therefore we provide here only the data regarding the model's quality.

Tab. 5 Reliability and validity assessment of the EMO model (n=240)

Construct	AVE	CR	Cronbach's Alpha
Proactive orientation (P)	0.777	0.913	0.913
Opportunity focus (OP)	0.692	0.818	0.818
Customer Orientation (CO)	0.669	0.858	0.857
Value Creation (VC)	0.907	0.951	0.951
Low-risk marketing (RM)	0.555	0.789	0.788
Discriminant validity	max$\|r_{ij}\|$ = 0.827, MSV = 0.684, ASV = 0.433		

Source: Own elaboration.

Note: CR – Composite reliability, AVE – Average variance extracted, max$\|r_{ij}\|$ - maximum inter-construct correlation, MSV - maximum shared variance, ASV-average shared variance.

As it can be seen from Table 5 above, the constructs making up the EMO model present acceptable reliability and validity levels.

Tab. 6 Entrepreneurial marketing orientation model fit, 2019 study

Indices	Recommended standards		Model fit
	Good fit	Acceptable fit	EMO model, N=240
χ^2; df; p-value			140.975; 55; 0.000
Bentler-Bonnet fit index (NFI)	>0.95	>0.90	0.939
Bentler-Bonnet nonnormed fit index NNFI/TLI	>0.95	>0.90	0.946
Comparative fit index (CFI)	>0.95	>0.90	0.962
GFI	>0.95	>0.90	0.923
AGFI	>0.90	>0.85	0.873
RMSEA	<0.05	<0.08	0.081; (0.065; 0.097)

Source: own elaboration. Note: RMSEA: Root mean square error. GFI: goodness of fit index. AGFI: adjusted goodness of fit index. df: degrees of freedom.

As table 6 shows, all indicators of model quality are within the acceptable standards.

The final conceptual model of relationships between company learning and entrepreneurial market orientation is presented in figure 1.

Fig. 1 Conceptual model of relationships between company learning and entrepreneurial market orientation of SME
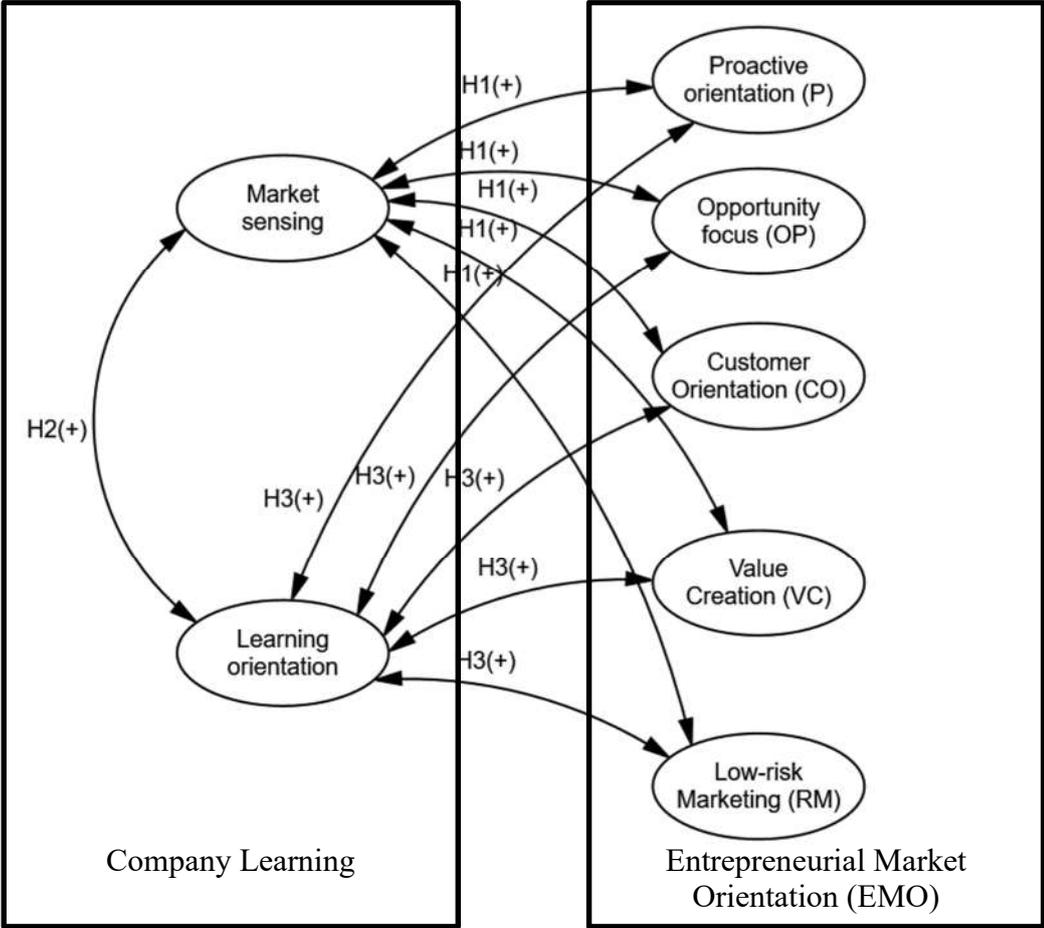
Source: Own elaboration.

3 RESULTS AND DISCUSSION

3.1 Company learning - variables distribution

Descriptive statistics of the variables referring to market sensing and learning orientation are shown in table 7.

The companies under study declare both to perform market sensing activities, as well as attach importance to learning. However, the means for the responses representing learning orientation and market sensing activities only slightly exceed the middle of the scale (4.0). The mean answers vary between 4.02 in case of variable CL_1 (We have systematic processes, with which we interpret prevailing trends in the market environment) and 5.6 for CL_4 (We quickly analyse and interpret changes taking place in market demand). The variable CL_4 is also characterised by the highest skewness (31% of the respondents choose answer 7, and 27.6% – answer 6, indicating strong agreement).

The exporting companies attached greater importance to learning orientation and market sensing than non-exporters. The Student t-test for independent samples revealed that most of the differences were significant (variables CL_1 and CL_3 are the only exceptions) – see table 8.

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Tab. 7 Company learning – descriptive statistics

Variable label		CL_1	CL_2	CL_3	CL_4	CL_5	CL_6	CL_7
N	Valid	239	239	239	239	238	238	238
	Missing	1	1	1	1	2	2	2
Mean		4.02	5.05	4.64	5.60	4.91	4.87	4.99
Median		4.00	5.00	5.00	6.00	5.00	5.00	5.00
Mode		4	5	5	7	6	5	5
Std. Deviation		1.647	1.620	1.689	1.353	1.590	1.562	1.566
Skewness		-0.277	-0.841	-0.624	-1.078	-0.585	-0.606	-0.638
Std. Error of Skewness		0.157	0.157	0.157	0.157	0.158	0.158	0.158
Kurtosis		-0.529	0.194	-0.258	1.203	-0.239	-0.080	-0.109
Std. Error of Kurtosis		0.314	0.314	0.314	0.314	0.314	0.314	0.314
Percentiles	25	3.00	4.00	4.00	5.00	4.00	4.00	4.00
	50	4.00	5.00	5.00	6.00	5.00	5.00	5.00
	75	5.00	6.00	6.00	7.00	6.00	6.00	6.00

Source: Own elaboration. Note: As a result of factor analysis, items CL_1, CL_2, CL_3, CL_4 make up the market sensing construct and items CL_5, CL_6, CL_7 make up the learning orientation construct.

Tab. 8 Company learning– the results of Student's t-test for independent samples

Variable label	Levene'as Test for Equality of Variances		t-test for equality of means							
	F	Sig/	T	df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
CL_1	1.295	0.256	0.470	237	0.639	0.100	0.213	-0.320	0.521
CL_2	1.117	0.292	2.960	237	0.003	0.611	0.206	0.204	1.017
CL_3	0.819	0.366	1.241	237	0.216	0.271	0.218	-0.159	0.701
CL_4	2.391	0.123	2.435	237	0.016	0.422	0.173	0.081	0.763
CL_5	0.006	0.937	2.777	236	0.006	0.565	0.203	0.164	0.965
CL_6	0.166	0.684	1.846	236	0.066	0.372	0.201	-0.025	0.769
CL_7	0.147	0.702	1.874	236	0.062	0.378	0.202	-0.019	0.776

Source: Own elaboration.

The fact that most of the indicators of learning orientation and market sensing activities are at significantly higher levels in case of exporters, compared with non-exporters, stays in line with the previous studies indicating that the learning needs, priorities and approaches vary depending on the internationalization stage (Anderson et al., 1998). The higher importance of learning in strongly internationalized companies may be explained with the need to overcome the liability of foreignness (Oviatt & McDougall, 2005). Moreover, the internationalizing

companies, except gaining the market knowledge, have to learn the market entry strategies and international market management (Fletcher et al., 2018), therefore their required scope of learning and also their learning orientation have to be higher.

3.2 Company learning and entrepreneurial marketing

Next, we decided to examine the relationships between company learning and EMO. The tables below describe the structural model fits for the groups of exporting and non-exporting SMEs (Table 9) and the correlations between variables referring to hypotheses 1-3 (Table 10).

Tab. 9 Company learning - EMO model fit – assessment in groups (metric invariance model)

Indices	Recommended standards		Model fit
	Good fit	Acceptable fit	Overall model estimated in groups
χ^2; df; p-value			534.111; 311; 0.000
Bentler-Bonnet fit index (NFI)	>0.95	>0.90	0.863
Bentler-Bonnet nonnormed fit index NNFI/TLI			0.914
Comparative fit index (CFI)			0.936
RMSEA	<0.05	<0.08	0.055 (0.047; 0.063)

Source: Own elaboration. Note: RMSEA: Root mean square error, df: degrees of freedom.

As table 10 shows, all indicators of model quality are within the acceptable standards. Next, we evaluated the relationships between company learning and entrepreneurial market orientation in groups of SME exporters and non-exporters.

Both the model for exporters, as well as the one concerning non-exporters, are well established to realize discriminant validity. The positive link between market-sensing and learning orientation (H2) may be explained with the idiosyncrasy of these constructs. The LO motivates companies to gather and utilize market information, but also to question the current business models for explaining the market situation and to try to "unlearn" obsolete market knowledge (Baker & Sinkula, 1999b). In order to achieve this, a high intensity of market sensing is needed. Moreover, some of the scholars (for example Foley & Fahy, 2004) indicate strong relationships between these constructs, claiming even that learning orientation is a component of market-sensing capability.

The positive relationships between company learning and entrepreneurial market orientation have been identified and are significant (H1 and H3). The comparison of these relationships shows they are stronger for non-exporting enterprises (although the differences are not statistically significant), which is rather surprising in the context of the studies on accelerated internationalization, underlying the role of learning orientation in developing superior marketing capability. Authors claim that it enables to position the firm rapidly in global niche markets, and these findings concern firms coming from both emerging and established markets (Kocak & Abimbola, 2009; Weerawardena et al., 2007). Thus, further studies should be carried out to interpret the results we obtained. However, the likely explanation may be related to high importance of networking in case of international market entry. The early internationalizing SMEs as opposed to "traditional" SME exporters often learn mainly through their channels/network partners or through cooperation with larger initial customers

(Gabrielsson et al., 2008). The network helps to acquire local market knowledge and customers, to diminish market barriers caused by firms' small size, and to assess the market situation (Gilmore, 2011; Rocks et al., 2005; Vasilchenko & Morrish, 2011). Therefore, the exporting SMEs' learning may be more network- and not market-oriented, what weakens the relationship between entrepreneurial market orientation and company learning.

Tab. 10   Relationships between company learning and entrepreneurial market orientation of SME[a]

Relationships			exporters		non-exporters		hypothesis	
			Correlation	p-value	Correlation	p-value		
Market sensing	<-->	P	0.384	0.003	0.577	***	H1(+)	supported
	<-->	OP	0.509	***	0.696	***		
	<-->	CO	0.514	***	0.562	***		
	<-->	VC	0.628	***	0.678	***		
	<-->	RM	0.561	***	0.608	***		
Market sensing	<-->	Learning orientation	0.432	0.003	0.489	***	H2(+)	supported
Learning orientation	<-->	P	0.340	***	0.463	***	H3(+)	supported
	<-->	OP	0.390	***	0.494	***		
	<-->	CO	0.427	***	0.496	***		
	<-->	VC	0.434	***	0.536	***		
	<-->	RM	0.158	0.143	0.278	0.008		LO-RM supported only for non-exporters

***p<0.001, [a] The table shows only the correlations referring to hypotheses 1-3.

Source: Own elaboration.

It is also worth noting that in both studied groups the correlations between both dimensions of company learning and value creation dimension of EMO are relatively the strongest among EMO components. The value creation construct includes statements: "We expect that every employee will create more value for customers" and "In our business, employees contribute the ideas to create value for customers". Thus, the emphasis on continuous learning about customers, and market sensing of firms seems to be strongly connected with the intention of customer value creation. This shows that the company learning in SMEs is backed by a strong customer focus. Such a result is in line with the research of Morrish (2011), who argues that the customer-centric view is important for small exporters to achieve a competitive advantage. It is also in-line with earlier qualitative studies of the Polish-based international new ventures (Kowalik & Danik, 2019), where the dimension called "understanding and delivering customer value" had a central role in marketing of such firms. The present study shows that this dimension is also crucial for the locally focussed SMEs.

Finally, the relationship between learning orientation and low-risk marketing dimension of EMO is not significant in case of exporting SMEs and weak in non-exporters. Low-risk marketing

indicates a cautious, step-by step approach to marketing innovations, and lack of willingness to invest a lot in new marketing activities (Fiore et al., 2013). Therefore, it seems to be unrelated or even contradictory to an emphasis on learning, which explains this result.

CONCLUSIONS

The presented study has provided evidence for the strong relation between small and medium-sized firms' learning and their marketing. Both environmental scanning, and an emphasis on continuous employee learning, seem to be important for such firms, and the exporting ones put more emphasis on learning than the locally active ones. The relationship between CL and EMO might however be bidirectional – as these concepts seem to influence each other. Therefore, further studies are necessary to explore this link, especially that learning constitutes an important point for creation of a competitive advantage of SMEs.

Apart from examining the - relatively unexplored - relationships between the strategic orientations in SMEs, we have tested a company learning measurement tool on the Polish SMEs. It proved to be reliable and valid, and thus may be applied in other firms from CEE markets. This study's limitation is the reliance on a Polish sample, caused by its exploratory character. Thus, in future, comparative studies of this topic, both across the CEE, and including markets with different background and structure, are advised.

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The Impact of Demographic Factors on Seasonal Shopping Sensitivity

Martin Kuchta – **Monika Stanková**
martin.kuchta@euba.sk, monika.stankova@euba.sk
University of Economics in Bratislava, Faculty of Commerce, Department of Business Information Technology / Department of Marketing
Bratislava, Slovakia

Abstract: Seasonality can serve as an eligible topic for adjustment of the shopper marketing activities. A purchase reaction of a shopper can be contingent on demographic factors. The main aim of the article is to identify the impact of the demographic factors on seasonal shopping sensitivity. The paper utilizes an observation in the selected supermarkets as a primary research method. Recorded objects were categorized in the defined demographic categories, which might have an influence on purchase sensitivity. A statistical data procession within the SPSS software was utilized for a data procession. The results of the paper confirm the importance of the seasonal shopper marketing strategies, however, deny the dependence of a consumer purchase behaviour on the defined demographic criteria.

INTRODUCTION

Since an offer surpass, a demand shopping behavior is one of the most important factors in the marketing strategies of brands. Shoppers have nowadays almost endless options of what products they will purchase and from which supplier. Marketing strategies of many brands focus on building the brand awareness of a brand or a particular product to lure an attention of a shopper in offline and online world. There are many approaches in terms of brand building and driving direct sales. Many of them take place directly during shopping activities within a store (Barnett, 2015). The activities are very often categorized as shopper marketing (Dewsnap & Hart, 2004).

The discipline is relatively new. It began to grow with expansion of supermarkets and hypermarkets. It can serve as very relevant additional source of profit for stores and brands. It can be perceived as B2B communication between a store and a brand to develop in-store activity, which has potential to visualize a product, build awareness and preferably also direct sales (Aastrup, Grant, & Bjerre, 2007). Due to recent researches, properly set shopper marketing activities have potential to increase sales and profits of brands and they also have potential to change brand and product preferences of shoppers. Shopper marketing activities often happen within a store and utilize various strategies. As the most common are considered special stands in store alleys. The stands can also have the supportive formats such as ground stickers, flyers, flags, etc. (Kurtuluş & Toktay, 2011). In fact, anything what a shopper can perceive during his or her shopping mission can be considered as a shopper marketing.

Shopper marketing strategies have to take in account many factors, which can positively or negatively influence final shopping decision making process of a shopper. External factors such as period of the year, weather, political situation in a country, social atmosphere, demographic factors etc. are very unpredictable, however can be effectively utilized in the shopping

marketing strategies (Cobb & Hoyer, 1986). Demographics and seasonality can serve as very relevant events to adjust shopper marketing activities and to drive direct sales and even brand awareness of brands or products. However, poor knowledge about the topic and insufficient shopper marketing preparation do not secure sales (Chandon, Hutchinson, Bradlow, & Young, 2009).

1 LITERATURE REVIEW

The brand building strategies caused that brands have nowadays their own personalities, which can mediate the relationship between brand innovativeness and quality and perceived value for a shopper (Coelho, Bairrada, & Matos Coelho, 2020). Due to the research of Aakers (1997) each brand personality has five dimensions:

1) sincerity – stands for a brand being perceived by consumers as honest, wholesome, cheerful, down to earth,
2) excitement – stands for a brand being perceived by consumers as spirited, daring, imaginative, up to date,
3) competence – stands for a brand being perceived by consumers as successful, reliable, intelligent,
4) sophistication – stands for a brand being perceived by consumers as charming, upper class,
5) ruggedness – stands for a brand being perceived by consumers as tough, outdoorsy.

Shopper marketing activities participate on building the brand personality in at least first three dimensions mentioned above.

Shopper marketing

Shopper marketing doesn't have to necessary serve only as a direct sales channel, but can be effective strategy to visualize product, build its brand and develop a brand equity and purchase loyalty (Corstjens & Lal, 2000). However, recent study indicates, that even a strong brand equity and sympathy to brand personality do not secure in-store purchases. The research findings reveal, that "approximately 40% of consumers exhibit high brand equity but low behavioral loyalty or vice versa. The relationship between brand equity and behavioral loyalty is accentuated by perceived in-store presence and importance of brand choice decision, and attenuated by the brand equity of competitors" (Hariharan, Desai, Talukdar, & Inman, 2018). Shopper marketing activities have significant influence on a purchase behavior and have ability to change even a strong brand loyalty. Due to the research of Ainslie and Rossi (1998) consumers are very sensitive to marketing mix variables and even (at first glance) negligible shopper marketing activity can trigger unplanned purchase decisions, change brand preferences and shopping behavior of a shopper.

"Several studies have shown that personality has a significant influence on the way consumers behave in their social and economic environment, on the way they approach and accept innovations and new developed products or on their shopping behavior" (Pelau, Serban, & Chinie, 2018).

The impact of demographics

The research of Luchs and Mooradian (2012) confirms gender impact on a consumption behavior. Shopping generally predates consumption, thus "gender effect" has an influence also on a shopping behavior of different genders. Males and females have different shopping

patterns. "Males were found to be more assertive and had slightly higher self-esteem than females. Females were higher than males in extraversion, anxiety, trust, and, especially tender-mindedness (Feingold, 1994). The behavior has a logically significant influence on a shopping behavior and on the final purchases.

Age, as another strong demographic factor, has also an impact on the purchase behavior. Previous researches point on the effect of shopping preferences, shopping behavior, unplanned shopping choices, shopping orientation and change of preferences of shopper in dependency of age category (Marjanen, Kohijoki, Saastamoinen, & Engblom, 2019).

Age categorization into generations provides an opportunity to identify shopping patterns within age groups in age ranges, that have similar shopping behavior. Modern age categorization works with five age categories, which consider age of a person and a period in which a person was born and raised:

1) Generation Z (age 07-22),
2) Millennials (age 23-38),
3) Generation X (age 39-54),
4) Boomers (age 55-73),
5) Silent (age 74-91) (Dimock, 2019).

Age and childhood conditions significantly influence shopping behavior, brand preferences and product loyalty optics. Age category affiliation has an ability to partially understand shopping behavior of a person, brand and product preferences and also preferred daytimes dedicated to shopping. It is important to take in account the age of a shopper to be able properly adjust a product offer and shopper marketing activities. Shoppers in different age categories are also differently sensitive to promotions, in-store marketing activities, seasons etc. Some of the age categories are more sensitive to thematic periods of the year. For example, Christmas, Valentine's day, Easter, Halloween, public holidays etc. Sensitivity for such periods has an impact on shopping behavior. Some of shoppers have tendency to change their shopping behavior and ignore a preferred brand in favor of seasonal product.

Seasonality and shopping decision making

Seasonality is a great opportunity for brands to take an advantage of a seasonal mass mood of shoppers driven by external factors. Organically increased demand for seasonal products is developed by historical habits and cultural heritage, thus is created free without any additional effort or costs of a brand. Seasonal shopping is an event, which longtermly influences logistic and stocks of stores, due to historically confirmed increased demand (Ehrenthal & Stölzle, 2013). Research of perception of seasonal products unveils, that seasonality has a specific agricultural meaning, is important for markets and has potential to positively influence local economic development and market operations (Wilkins, 2002). Some brands even adjust product life cycle to seasonality during a year (Radas & Shugan, 1998).

It is commonly known that some shoppers visit stores without a need to purchase something. They find pleasure in shopping and their shopping behavior depends on the factors influencing them during their store visit. Shopping behavior of such persons is highly dependent on cultural differences and personality factors (Mohammad Shafiee & Es-Haghi, 2017). Some shoppers perceive shopping as relaxation, within which they behave on base of following factors:

- symbolic acts – ritual oriented behavior,
- looking for deals – looking for random deals, initially without any particular shopping intention,
- deciding where to shop – subjective analyses of preferred shopping place, brands etc.,
- mapping out stores – research of stores and their offers,

- developing in-store action plans – shopping decision making process within a store closely connected to shopping behavior based on a personal brand and product preferences.

The mentioned behavior can serve as a relevant knowledge base for more effective marketing strategies for shoppers and also for more effective shopper marketing strategies (Bell, Weathers, Hastings, & Peterson, 2014). Relaxation dimension of shopping is highly connected to impulsive shopping behavior. Shopper with relaxation shopping intention often don't visit stores with a particular shopping intention. Their shopping decision is based on price and others surrounding factors. Shopping behavior of such persons can be influenced by in-store actions in various forms of shopper marketing.

Due to Ziliani and Ieva (2015) it is recommended to support in-store shopper marketing activities also by flyers and other subsidiary shopper marketing activities, which do not have to be necessary realized in store. The recommendation has even greater value in terms of seasonal activities.

2 METHODOLOGY

The main aim of the article is to identify the impact of the demographic factors on seasonal shopping sensitivity.

Introduction part of the article analyses already conducted researches on the topic. It unveils that seasonality can serve as a proper opportunity to adjust special offers within a store and indicates that demographic parameters request special approaches in shopper marketing activities.

The authors of the paper chose observation as a primary research method. Observations were conducted in five different supermarkets. Observations were focused on special Christmas offers placed in special shop stands usually in the middle of a store alley. We observed behavior of 205 individuals going through the Christmas stands, from which 107 (52%) represented women and 98 (48%) of them were men. Observations were recorded as audio files in smartphone and subsequently overwritten into a summary table. The observations were focused on eight key factors: (1) attention of a shopper, (2) demographics, (3) trolley size, (4) supermarket brand, (5) shopping center, (6) price, (7) form of special shop stand and (8) place.

Due to extensive research this article researches only the relation between attention of a shopper and defined demographics. The authors observed three key behaviors within the attention factor:

1) walked – observed object walked around a special stand, however, didn't pay attention to the stand.
2) observed – observed object paid attention on items within a stand, however, didn't take an item.
3) took – observed object paid attention to a special stand and took an item.

The authors observed two indicators within the demographic factor:

1) Gender – objects were segmented into two categories:
   a. men,
   b. women,
2) Age – estimated age of an object, subsequently categorized into five groups:
   c. ages 07-22 classified as Generation Z,
   d. ages 23-38 classified as Millennials,
   e. ages 39-54 classified as Generation X,

     f. ages 55-73 classified as Boomers,

     g. ages 74-91 classified as Silent.

The age category sample data were as followed. The total number of respondents categorized into Generation Z counts for the value 12, the number of respondents categorized as Millenials is 49, there are 73 respondents categorized as Generation X, a generation called Boomers represents 63 people, and last but not least, the Silent generation represents the number of 8 respondents.

Some of the observed factors were processed into graphs for a better visualization and interpretation. The main outcome of the research is the identification of relations between the observed demographic factors and the actions took within the attention category.

Tab. 1 Attention status (1), (2)

	Attention status (1)		Attention status (2)
1a.	stopped – the observed object stopped at the shopper marketing Christmas offers displays	1b.	took – the observed object took an item from the shopper marketing Christmas offers displays
2a.	walked away – the observed object walked away from the shopper marketing Christmas offers displays	2b.	didn't take – the observed object didn't take an item from the shopper marketing Christmas offers displays

Source: Authors' research

The attention category was divided into two attention statuses to examine the association between two nominal variables. In the first case, the association between the demographic factors and the attention status (1) was tested. The attention status (1) indicates whether the observed object stopped or walked away from the shopper marketing Christmas offers displays. In the second case, the association between the demographic factors and the attention status (2) was tested. This time, the attention status (2) indicates whether the observed object, who stopped at the Christmas offers displays, took an item or didn't take anything from the displays (Tab. 1). To test the abovementioned relations, 4 sets of hypotheses were proposed (Tab. 2).

Tab. 2 The hypotheses proposal

		H0	H1
Gender	1.	There is no significant association between the gender and the attention status (1).	There is a significant association between the gender and the attention status (1).
	2.	There is no significant association between the gender and the attention status (2).	There is a significant association between the gender and the attention status (2).
Age	3.	There is no significant association between the age category and the attention status (1).	There is a significant association between the age category and the attention status (1).
	4.	There is no significant association between the age category and the attention status (2).	There is a significant association between the age category and the attention status (2).

Source: Authors' research

To evaluate the correlation in the defined hypotheses, Pearson's Chi-Square test of independence was conducted. Statistical data procession was conducted in IBM SPSS Statistics software. The research was conducted in the month of December 2019, two weeks before Christmas. A time for the observation in one store was 45 to 60 minutes.

3 RESULTS AND DISCUSSION

The research was conducted in five different stores. During the observation, as primary research method, 205 people were observed in total within the stores.

Evaluation of gender observation

The total number of respondents counts for 107 women and 98 men. The percentage of females who stopped at the shopper marketing Christmas displays was 68%, which in absolute terms corresponds to the value of 73 respondents. Out of all 73 women who stopped at these displays, 38 of them (35%) took some product or products, and 35 of them (33%) didn't take anything. The rest 34 females (32%) walked away from the displays and didn't even notice them. On the other hand, the percentage of males who stopped at the shopper marketing Christmas displays was 58%, which in absolute terms corresponds to number 57. Out of all 57 men who stopped at the displays, 24 of them (24%) took some product / products, and 33 of them (34%) didn't take anything. The rest 41 of them (42%) just walked away from the displays without even noticing them (**Chyba! Nenalezen zdroj odkazů.**).

Fig. 7 Overview of the genders according to their attention status
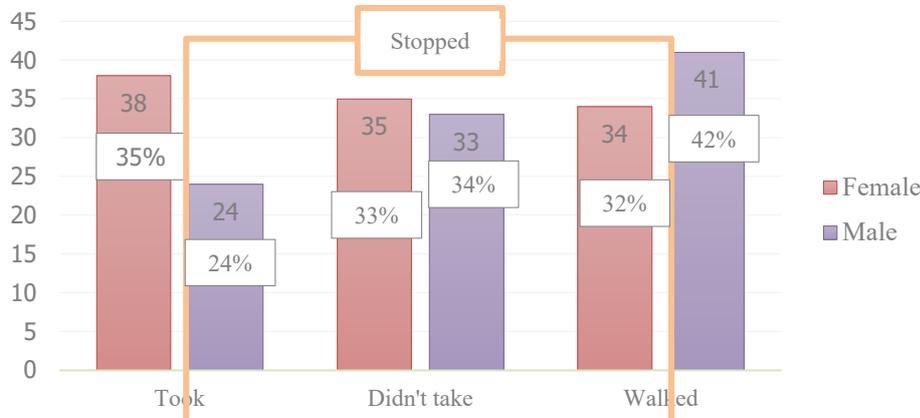
Source: Authors' research

Besides the gender status, authors of the paper were also focused on the approximate age of the respondents.

Evaluation of age categories observation

According to the results of the research, 5 different age categories were recognized among all 205 people. The percentage of respondents, categorized as Generation Z, who stopped at the shopper marketing Christmas displays was 33%, which in absolute terms corresponds to the value of only 4 people. All of them as well took the product or the products and therefore there was no one from the generation who didn't take anything. The rest of the generation

(67%), who walked away from the displays and didn't even notice them, counts for 8 people. The percentage of respondents categorized as Millenials who stopped at the shopper marketing Christmas displays was 59%, which in absolute terms corresponds to number 29. Out of all 29 of them who stopped at the displays, 11 of them (22%) took some product / products, and 18 of them (37%) didn't take anything. The rest 20 of them (41%) just walked away from the displays without even noticing them. The number of respondents categorized as Generation X, who stopped at the shopper marketing Christmas displays, counts for 46 people, which is in percentage terms equivalent to 63%. Out of all 46 of them, 25 people (34%) took some product / products and 21 of them (29%) didn't take anything. The rest of Generation X (37%) walked away from the displays and did not even notice them. The percentage of Boomers who stopped at the displays represents 72%, which in absolute terms corresponds to number 45. Out of all 45 of them, 20 respondents took the product / products (32%) and 25 people (40%) didn't take anything. The rest of the generation who just walked away counts for 18 respondents (28%). Last but not least, the Silent generation, who stopped at the displays, counts for only 6 people, which in percentage terms corresponds to 75%. The number of people from the generation, who took some product / products, represents the value 2 (25%), and the number of respondents, who didn't take anything, counts for 4 people (50%). The rest 2 people (25%) from the Silent generation walked away and didn't even notice the displays (Fig. 2).

Fig. 8 Overview of age categories according to their attention status
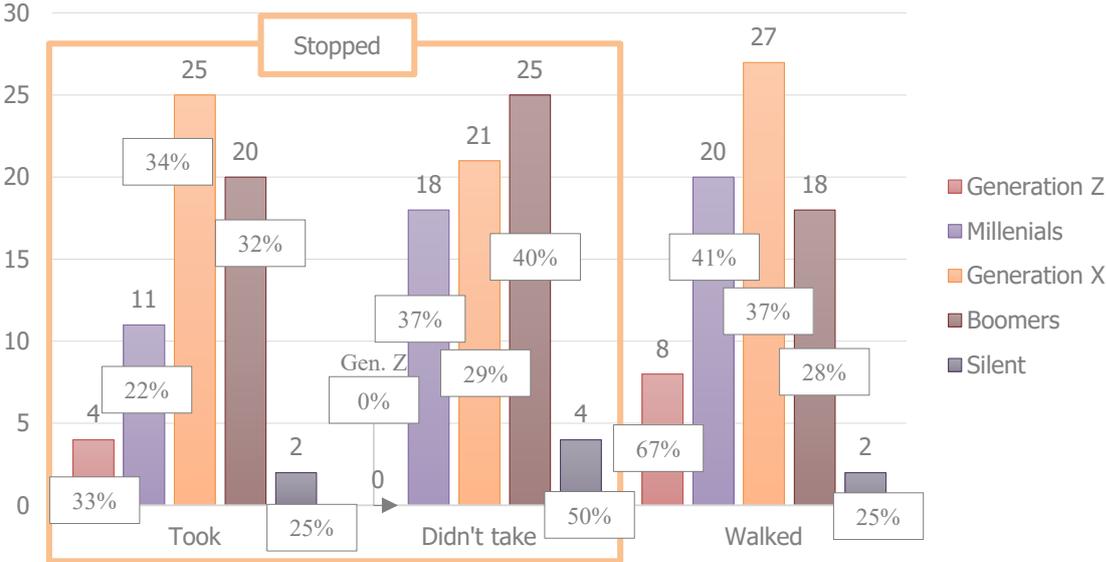
Source: Authors' research

Both researched factors, gender and age, might have had an impact on the shopping behavior of an observed shopper during the store visit.

The impact of gender on attention status (hypotheses verification)

To test the hypotheses proposed, thus to determine whether there is a significant correlation between the gender and the attention status, a Pearson's Chi-square test of independence was conducted. The statistical analyses were conducted via IBM SPSS Statistics software and the results of the tests are shown in the following tables (Tab. 3, Tab. 4).

Tab. 3 Pearson's Chi-square test of independence between the gender and the attention status (1)

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	**2,232[a]**	1	**0,135**		
Continuity Correction[b]	1,819	1	0,177		
Likelihood Ratio	2,233	1	0,135		
Fisher's Exact Test				0,149	0,089
N of Valid Cases	205				

Source: Authors' research results interpreted by IBM SPSS Statistics software

The chi square statistic appears in the "Value" column of the above table (Tab. 3) immediately to the right of "Pearson Chi-Square". As we can see from the results, the value of the chi-square statistic counts for 2,232. At the standard significance level α = 5%, and the degrees of freedom dF = 1, the critical value of the chi-square distribution is 3,841. The result is significant if this value is equal to or less than the value of the chi-square statistic. In this case, 3,841 > 2,323, thus we reject the first alternate hypothesis and support the first null hypothesis which states that there is no significant association between the gender and the attention status (1). The results can also be interpreted by the "Asymptotic Significance (2-sided)" column. We can see that the probability value (p-value) counts for 0,135. The result is significant if this value is equal to or less than the designated alpha level (0,050). In this case, 0,135 > 0,050, therefore the first H0 is supported.

Tab. 4 Pearson's Chi-square test of independence between the gender and the attention status (2).

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	**1,270[a]**	1	**0,260**		
Continuity Correction[b]	0,903	1	0,342		
Likelihood Ratio	1,273	1	0,259		
Fisher's Exact Test				0,291	0,171
N of Valid Cases	130				

Source: Authors' research results interpreted by IBM SPSS Statistics software

Based on the results above (Tab. 4), we can see that the value of the chi-square statistic counts for 1,270. At the standard significance level α = 5% and the degrees of freedom dF = 1, the critical value of the chi-square distribution is 3,841. The result is significant if this value is equal to or less than the value of the chi-square. In this case, 3,841 > 1,270, thus we reject the second alternate hypothesis and support the second null one which states that there is no significant association between the gender and the attention status (2). The results can also be interpreted by the "Asymptotic Significance (2-sided)" column. We can see that the p-value counts for 0,260. The result is significant if this value is equal to or less than the designated alpha level (0,050). In this case, 0,260 > 0,050, therefore the second H0 is supported.

The impact of age category on attention status (hypotheses verification)

Following the previous data procession method, the authors utilized Pearson's Chi-square test of independence to evaluate the association between the age category and the attention status (1 and 2). SPSS statistical software was utilized as a tool for the data procession (Tab. 5, Tab. 6).

Tab. 5 Pearson's Chi-square test of independence between the age category and the attention status (1).

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	**7,270**[a]	4	**0,122**
Likelihood Ratio	7,133	4	0,129
N of Valid Cases	205		

Source: Authors' research results interpreted by IBM SPSS Statistics software

Based on the results above (Tab. 5), we can see that the value of the chi-square statistic counts for 7,270. At the standard significance level α = 5% and the degrees of freedom dF = 4, the critical value of the chi-square distribution is 9,488. The result is significant if this value is equal to or less than the value of the chi-square statistic. In this case, 9,488 > 7,270, thus we reject the third alternate hypothesis and support the third null one which states that there is no significant association between the age category and the attention status (1). The results can also be interpreted by the "Asymptotic Significance (2-sided)" column. We can see that the p-value counts for 0,122. The result is significant if this value is equal to or less than the designated alpha level (0,050). In this case, 0,122 > 0,050 therefore the third H0 is supported.

Tab. 6 Pearson's Chi-square test of independence between the age category and the attention status (2).

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6,998[a]	4	0,136
Likelihood Ratio	8,559	4	**0,073**
N of Valid Cases	130		

Source: Authors' research results interpreted by IBM SPSS Statistics software

a. 4 cells (40,0%) have expected count less than 5.

Based on the results above (Tab. 6), we can see that 40% of cells have expected count less than 5, which in this case violates the assumption. Thus, instead of looking at "Value" column and the "Pearson Chi-Square" row, we have to read off the result from the "Asymptotic Significance (2-sided)" column and the "Likelihood Ratio" row and compare it with the designated alpha level (0,050). The result is significant if this value is equal to or less than α (0,050). In this case, 0,073 > 0,050, therefore we reject the fourth alternate hypothesis and support the fourth null one, which states that there is no significant association between the age category and the attention status (2).

CONCLUSION

Shopper marketing and its various forms are nowadays frequently utilized marketing approaches within stores interiors. Its main purpose is to build a brand awareness of promoted brands and support direct sales of promoted products. They have ability to lure an attention of shoppers and, in ideal conditions, to also influence shopping behavior and change brand preferences of a customer. Properly set shopper marketing activities can lead to impulsive decision-making shopping process and lead to shopping of unexpected products. Shopping of initially unplanned products has its peak during various seasons throughout a year. Seasonality creates common mood in society and develop increased demand for products. Seasonally adjusted packaging or development of seasonal mood around a product can secure direct sales. Seasons are the great opportunity for stores and brands to catch a wave of increased demand developed by society. And in addition, all of this happens without any additional costs of stores or brands for a development of such the atmosphere. Different customers can have different shopping behavior and one of the most relevant factors is demographics. Gender and age influences decision making process and different genders in various age categories utilize different optics for shopping. Some of them might be more sensitive for seasonal offers than others.

The main aim of the article was to identify the impact of the demographic factors on seasonal shopping sensitivity. The verification of the first and the second set of hypotheses showed that there is no significant association between the gender and the attention status as, in both of the cases, the null hypotheses were supported. In other words, we can say that the attention status is not dependent on the gender, which means that both men and women are similarly sensitive when it comes to seasonality. The verification of the third and the fourth set of hypotheses about the association between shopping sensitivity and age categories also unveils, that there is no significant dependency. Thus, we can say that the attention status for special seasonal store stands is not dependent on the age category. It means, that all age categories are similarly sensitive to seasonal product offers.

The main finding of the article is, that demographic factors have no significant impact on seasonal shopping sensitivity. Seasonality and atmosphere in the society is a factor strong enough to suppress gender and age shopping differences and preferences. Shopping stores as well as brands should reflect the findings in their shopper marketing activities and focus on seasonal products offers. Or at least develop a seasonal atmosphere around the products via special seasonal packaging or seasonal adjustment of surroundings of the product since seasons seem to be a great opportunity to trigger additional sales within the stores.

Further research could focus on other external factors which might have an impact on seasonal shopping sensitivity and also on research of the impact of demographic factors on shopping sensitivity during off-season.

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The Position of the Eurasian Economic Union in the EU's Foreign Trade Relations

Anabela Luptáková – Elena Kašťáková
anabela.luptakova@euba.sk, elena.kastakova@euba.sk
University of Economics in Bratislava, Faculty of Commerce, Department of
International Trade
Bratislava, Slovakia

Abstract: Under current context of geo-economics changes that are taking place in the international economic environment, the Eurasian Economic Union (EAEU) plays an important role in the EU's external trade relations. The aim of this paper is to examine the position of the EAEU in the EU's foreign trade relations. The paper points out the current economic state of the EAEU and the economic background of the formation of the grouping. The results of work focus on a detailed analysis of the development of foreign trade relations between the EAEU and the EU and assess it through several single-factor calculation indices. Although in recent years, trade between unions has declined as a result of sanction war between the EU and Russia, and a decline in oil prices in the years 2015 - 2016, Russia continues to be one of the most important trading partners. The EAEU plays an important role as a major supplier of energy materials and imports machinery and transport equipment.

INTRODUCTION

The relationship between globalization and regional integration is becoming a current question. Globalization, which is a diverse process of development of the world economy acts as a catalyst for new integration blocks. Regional integration is a complex phenomenon without any general rules existing, which largely depends on the characteristics of its participants. According to Chusaunov (2015), the contradictory nature of the interaction of globalization and regional integration processes suggests that the creation of new integration entities is a natural response to the negative effects of globalization, which are intensified under conditions of global economic instability. In addition, engaging many countries in integration clusters ensures that each national economy is more competitive. At present, the whole world is a set of regional blocks. According to Ružeková (2013), the reasons and objectives of their creation were different, but in the globalization of the world economy, they are all aimed at promoting the national interests of the member states. Their strength is incomparable with the capabilities of each country alone. In this context, national prosperity depends on the ability to function effectively in integration clusters while preserving national interests.

The European Union can be considered as the most successful example of the implementation of regional integration in the world. Nevertheless, it is facing many challenges currently, such as: the impact of Brexit on the EU27, the change in ECB policy, China's expansion in the context of the Belt and Road initiative, the unstable US foreign policy and other factors affecting the already stagnating EU competitiveness. While the EU remains skeptical of the EAEU, it is justified to reassess the position of the countries of this emerging integration in the EU's external trade relations.

1 LITERATURE REVIEW

In the context of the globalizing society and the increasingly intensifying interdependence of states, the idea of "Eurasianism" becomes relevant. Integration processes in the post-Soviet space started from the formation of the CIS, through the Customs Union and the EurAsEC to the EAEU. After the fall of the Soviet Union in 1991, Russia lost its position as a superpower. Almost half of the territory, population, ports in the Baltic and Black Seas and strategic resources were lost. It also has lost almost all allies except Belarus in the west and Kazakhstan in the east (Drieniková, 2018). Russia faced many challenges, as well as other post-Soviet states in intense competition in a globalizing world. The theoretical basis for the development of the idea of the Eurasian Union can be found in the works of Nazarbaev (1997; 2000; 2009): Evrazijskij Sojuz: idei, praktiky, perspektivy, Strategiya transformacii obshestva i vozrozhdenie evrazijskoi civilizacii or Izbrannye rechi, who first presented the idea of the Eurasian Union at the Lomonosov Moscow State University in 1994.

According to Korolev (2015), the integration tendencies in the post-Soviet bloc can be divided into the following stages. The period from 1991 to 1994 can be described as the first stage of the regional integration processes of the countries of the former Soviet Union. Based on Soviet Union, an interstate association – the Commonwealth of Independent States (CIS) – was formed. Russia's first post-Soviet government began to carry out radical social and economic reforms in that period, which increased the prices of goods. This has resulted in the displacement of other CIS countries from the "ruble zone". The foreign policy presented by the Foreign Minister Kozyrev was aimed at intensifying cooperation with the current countries of the European Union. This caused the declension of the CIS countries from the Russia, which resulted primarily in the process of forming national legislations that were different from Russian reality. Although joint authorities have been created within the CIS, they have not been able to resolve issues of further integration processes. Most of the resolutions adopted at the CIS level were recommendations and therefore were not implemented. After the first decade since the establishment of the CIS, national parliaments have only initialed 8 % of jointly accepted documents. In the second stage (1995 – 2000), integration processes were intensified, affecting the financial, economic, political and security spheres. In 1995, Belarus, Kazakhstan and Russia signed a Customs Union Agreement. The three countries of Russia - Kazakhstan - Belarus represent the core of the deepening of the integration processes in the Eurasian space. Kyrgyzstan and Tajikistan also joined the Customs Union. The agreement aimed at removing barriers to ensure free trade cooperation and fair competition. However, there has been no practical implementation of the agreements. The reasons were several, firstly it was strong centrifugal forces in the 1990s and the crisis in 1998 contributed significantly as well. The Customs Union was the first integration fiasco in the Eurasian region (Knobel et al., 2019).

The next step was the negotiation on the creation of a common economic area between Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan. The Eurasian Economic Community (EurAsEC) was established in October 2000. The main difference from CIS was the rejection of the possibility of selective participation in agreements. But even the Eurasian Economic Community has not fulfilled its expectations. Despite the large volume of concluded agreements and other documents, the depth of integration did not significantly increase. However, it would be incorrect to consider this organization as a failure. Institutions such as Eurasian Development Bank (2006) and Anti-crisis fund of EurAsEC (2009) have been created (Mostafa & Mahmood, 2018).

Overall, integration processes can be considered unsatisfactory by the middle of the first decade of the 21st century. The situation began to change since 2005, when Russia and Kazakhstan gained resources for economic development due to a sharp rise in oil prices. Their bilateral trade started to grow intensively, as did the volume of investment and there was an

increase in labor migration. Strengthening economic ties required a functioning institutional framework. Another incentive to enhance relations was based on the global financial crisis of 2007-2009, which had a major impact on all Eurasian economies. In October 2007, Russia, Belarus and Kazakhstan approved an action plan to create a Customs Union. Given the previous failures, only few have believed in the success of the new attempt. Nevertheless, the single customs tariff entered into force on 1st of January 2010. It is the first post-Soviet initiative that is truly a supranational institution. The Customs Union was the turning point that later developed into the Common Economic Area and the Eurasian Economic Union (Evrazijskij Ekonomicheskij Sojuz, 2017).

Jantovskij & Širov (2014) discussed the perspectives of EU – EAEU cooperation, according to which the intensification of bilateral trade can be an important resource for creating sustainable economic dynamism in post-Soviet countries. The EU is the most important trading partner of the EAEU, hence the development of economic relations between the two largest integrations in the Eurasian region meets the objectives of long-term economic development. The economic efficiency of liberalization of foreign economic relations is determined not only by the degree of cooperation between integrations, but also by the comparability of the key parameters of economic development. This applies in particular to the efficiency of production and the competitiveness of the country's goods.

Various methods are used to measure and analyze comparative advantages. The most common indicator of measuring, analyzing and comparing the development of competitiveness and export performance in international markets is the so-called Revealed Comparative Advantage (RCA). This index is used to assess the country's net trading performance and takes into account the possibility of simultaneous export and import in a particular commodity group (WTO, 2012). The RCA indicator was first used in the work of Balassa (1965). Since then it has been refined and revised several times (Balassa,1977) and (Balassa,1989). There are other methods of calculating this index, since other authors have also been working to improve and calculate the RCA index, namely Marrewijk and Hinloopen (2001), Vollrath (1991), Yeats (1985) and others.

Another indicator of measuring trade relation is the Trade Complementarity Index (TCI), first introduced by Garnaut and Drysdal (1982). The Trade Complementarity Index reflects the extent to which countries are natural trading partners. From this perspective, the index measures whether the export of the first trading partner overlaps with the import of the second trading partner, and also indicates whether the export of one trading partner is involved in the import of the other trading partner. The high degree of trade complementarity envisages and indicates significant prospects for successful business arrangement. A remarkable advantage of the index is that it defines complementary sectors in foreign trade irrespective of whether the trade between the countries under comparison takes place. On the other hand, TCI shows that it is becoming less and less compatible over the next few years as it does not take into account sectors that are not suitable for trade. Based on this, the components of the commodity structure that increase the export base or expand the trading partner's import base are identified. This index represents the theory that both countries can benefit from increased trade between them, which can be especially useful when evaluating bilateral or regional trade relations (World Bank, 2016). However, the trade complementarity index is not appropriate for all countries. This case applies to countries that are very geographically distant and therefore incur high geographical and transaction costs, which does not make the countries ideal trading partners, even though the trade complementarity index is gaining high value (Kašťáková & Bebiaková, 2017).

According to Vinokurov (2016), EAEU countries will have a keen interest in concluding a comprehensive agreement with the European Union, which will cover a much wider range. The traditional free trade zone would not be beneficial for either Russia or Kazakhstan –

countries exporting raw materials. Due to the structure of their trade, they are not interested in a free trade regime with the EU in the narrower sense (the same applies to Armenia, Belarus and Kyrgyzstan, although to a lesser extent). According to Vasileva (2017), intensified economic cooperation between the EU and the EAEU is desirable for several reasons. Firstly, it provides a neutral platform for convergence between the EU and Russia. The second reason is that economic cooperation and trade increase the well-being of all participants. Furthermore, harmonization of technical standards and trade policies would be beneficial for both sides. Other measures aimed at improving the effectiveness of cooperation may relate to the establishment of a common energy policy that will ensure European partners' priority access to energy resources in exchange for technology, as well as the development of transport infrastructure and logistical corridors in the west-east and north-south directions.

2 METHODOLOGY

The aim of this paper is to examine the position of the EAEU countries in the EU foreign trade relations through analysis based on indexes of revealed comparative advantages and trade complementarity.

The authors reviewed the current contractual framework between the countries of the Eurasian Economic Union and the European Union. We analyzed the trade exchange between the EU and the EAEU in terms of territorial structure, pointing out the position of the EAEU countries in terms of trade turnover. Through the indices of the revealed comparative advantage and trade complementarity, we examined the commodity structure and identified the main export commodities. Data used in this paper is coming from the databases of International Trade Center, Eurostat and UN Comtrade. Data from 2018 at HS4 level was used to calculate the RCA and TCI indices. The Balassa index was used to identify commodity groups in which individual countries achieve comparative advantages. It is formally recorded as:

$$RCA_{ij} = (X_{ij}/X_{it}) / (x_{wj}/X_{wt}) \tag{1}$$

where x_{ij} and x_{wj} represent export values of product i to country j and world exports of product j and Xi_t and X_{wt} refer to total country exports and total world exports. An RCA of less than one means that the country has a comparative disadvantage in the product. Similarly, if the index exceeds unity, the country was found to have a clear comparative advantage in the product. If the RCA index is less than 1, the country has a comparative disadvantage in the product. Similarly, if the index exceeds 1, the country was found to have a clear comparative advantage in the product.

In analyzing the perspectives of cooperation between the EU and the EAEU countries, we have quantified the trade complementarity index (CTI). In our case we use Michaely's specification (2017), which CTI defines as:

$$c^{ij} = 100 \left[1 - \sum_{k=1}^{m} \frac{\left| m_k^i - x_k^j \right|}{2} \right] \tag{2}$$

Where x_k^j is the share of product k in total exports of country j and m_k^i is the share of product k in total imports of country i. With a perfect correlation between export and import shares, the index is 100 and none equals 0.

3 RESULTS AND DISCUSSION

3.1 Contractual framework of cooperation between the EU and the EAEU countries

The Eurasian Economic Union (EAEU) has been fully operational since 1st of January 2015. Its members involve Russia, Kazakhstan, Belarus, Armenia and Kyrgyzstan. Within the EAEU, there is a Common Economic Space, which ensures the free movement of goods, services, capital and labor. According to article 4 of the EAEU, the main objectives of the Union are: 1) stable development of Member States' economies and raising the living standard of the population; 2) the creation of a single market with goods, services, capital and labor; 3) modernizing and enhancing the competitiveness of national economies in the context of globalization.

It is obvious that EAEU is not similar to EU or other regional integrations. It is a typical economic union headed by the Eurasian Economic Commission, with some supranational functions left behind. However, it is undeniably emphasized that the Union does not interfere with the sovereignty of the member states. The main "integrator", Nazarbayev, proposed the prospect of extending the membership of the EAEU for example to Turkey, to prevent the assumption that the EAEU is a project to revive the USSR.

According to Dynkin (2018), the EAEU faces major challenges: the lack of competitiveness of their economies, the high sectoral energy dependence, the import of high-tech goods. The structure of industrial production in Russia and Kazakhstan is dominantly made up of mining sectors, while Belarus has the largest share of manufacturing (more than 86 % of total industrial production). Strategic analyst Kurtov (Dedkov & Šeberin, 2014) believes that further development of the Eurasian integration is accompanied by the following limits:

- authoritarianism - characteristic of many post-Soviet countries, which can be seen in the absence of a transfer of powers to supranational authorities, unlike the European Union;
- the absence of strong legislative power within the EAEU;
- prioritizing national interests over the interests of whole organization.

Till today, there is no comprehensive contractual framework for the cooperation between the EU and the EAEU. The economic relations between the Member States of the EAEU and the EU are regulated separately. For a constructive interaction between the EU and the EAEU, it is essential to remedy the geopolitical context of EU-Russia relations.

Over twenty years since the conclusion of the Partnership and Cooperation Agreement (PCA), mutual relations between the Russia and the European Union have undergone a comprehensive trajectory. The past years have brought some positive results, particularly in creating a coherent legal basis for their interaction. The current EU – Russia relations are based on three legal levels (Kalinichenko, 2017). The first is the Partnership and Cooperation Agreement and other EU–Russia agreements. The PCA is a non-preferential arrangement and thus the most favored nation treatment has been granted by the parties. The second level consists of "road maps" of four common spaces which can be considered as so-called "soft law". Their purpose was the gradual formation of common spaces in the four most important spheres of cooperation, namely: economic, justice, external security and education and culture. The last level is represented by Russian legislation and the EU acquis in the context of the sectoral cooperation. However, this legal framework would need a more up-to-date revision. After the Ukrainian crisis in 2014, EU-Russia relations have entered a new era. The negotiations on the new agreement have been suspended. The Russian Foreign Ministry in a statement to the anniversary of the PCA questioned the nature of the strategic partnership

between Russia and the EU. Similarly, Frederica Mogherini also spoke on behalf of the EU, emphasizing that due to activities in the eastern part of Ukraine, Russia cannot be considered a strategic partner.

Relations between the EU, Belarus and Armenia are developing in the Eastern dimension of the European Neighborhood Policy. The priorities of the Eastern Partnership are security, stability and prosperity, the promotion of democracy and the rule of law. In exchange for carrying out political and economic reforms, the Eastern Partnership offers new contractual relations, representing deep and comprehensive free trade agreements. Relations between the European Union and Armenia are based on the Comprehensive and Enhanced Partnership Agreement 2017.

Bilateral relations between Belarus and the EU are still governed by the Trade and Cooperation Agreement concluded by the European Community with the Soviet Union and approved by Belarus in 1989. This is because the EU has not ratified the 1995 Partnership and Cooperation Agreement due to Belarus's lack of commitment to democracy, universal fundamental freedoms and human rights. (European Commission, 2019). Despite this, a progress has been made over the last three years in EU-Belarus relations, which have actively started to participate in the Eastern Partnership. The European Union also supports the process of Belarus's joining to the World Trade Organization. (European Union, 2019a).

Kazakhstan and the EU signed the Enhanced Partnership and Cooperation Agreement (EPCA) on 21st of December 2015. It is the first of its kind in terms of the countries of the Central Asian region. It provides a broad framework for strengthening political dialogue, promoting mutual trade and investment, and focuses on cooperation in some key areas: energy, research, climate change, education and others (European Union, 2019b).

The EU-Kyrgyzstan contractual cooperation framework is based on the Partnership and Cooperation Agreement, which has been in force since 1999 (European Union, 2019c). Negotiations on a modernized comprehensive agreement are currently ongoing. The European Union has granted Kyrgyzstan GSP + status, which creates Kyrgyzstan opportunities to strengthen the economy.

3.2 Mutual development of foreign trade

The cumulated share of EAEU exports in total EU imports was 3.4 % and the share of EU countries' exports to the EAEU in total EU exports was 1.83 % in 2018. If we exclude the EU's intra-trade observations, there will be a sharp change in the share of both exports and imports. In 2018, the share of EU imports from EAEU countries in total imports from third countries was 9.81 % and the share of exports to EAEU in the total EU was 5.04 %. On the other hand, the share of EAEU imports from EU countries in total was 35.95 % and the share of EAEU exports in their total exports to EU countries was 38.78 %. The analysis of these relationships suggests that the EAEU countries are more dependent on EU customer and supplier networks, and vice versa, for the EU, this dependency is lower.

As can be seen in Figure 1, Russia is the dominant EAEU country in terms of the volume of goods traded with the EU. This is mainly due to the economic dimension of the country. Since 2014, it has also been possible to observe a visible decrease in the volume of trade, which was caused by the imposition of sanctions and, on the other hand, by the unfavorable development of the oil price, which is Russia's main export item. Similarly, the development of trade turnover between the EU and Kazakhstan showed a year-on-year decline of approximately 24 percentage points between 2015 and 2016, and since 2017, there has been a renewed increase in business activity. In the case of Armenia and Kyrgyzstan, there has been a continuous increase in trade turnover with the EU. During the 9 years, EU turnover

with Kyrgyzstan doubled, but still has a negligible share in terms of total EU-EAEU trade turnover. On average, turnover between Armenia and the EU increased year-on-year by 5 %. Belarus holds a specific position in the EU-Russia relationship as it benefited in 2014 as a re-exporter of sanctioned goods. However, the mechanisms put in place by Russia since 2015 prevented the sanctioned goods from flowing through Belarus, which was also reflected in a subsequent decrease in EU and Belarus trade turnover.

Fig. 1 EU trade turnover with EAEU countries from 2010 to 2018 (in thousands EUR)
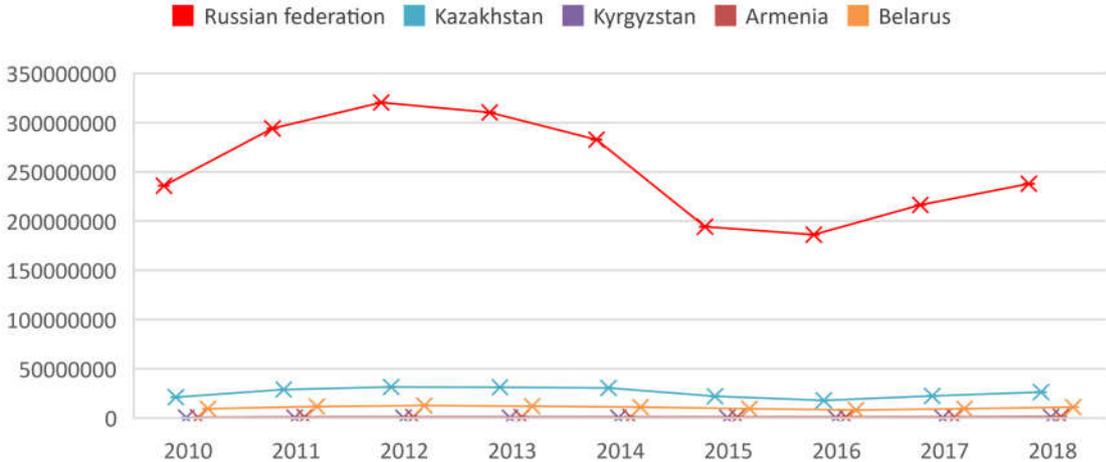
Source: Calculated by the authors based on ITC database, 2020.

Based on the analysis of the commodity structure of exports and imports between the EU and EAEU, we can identify 5 major export and import items, which are shown in Table 1.

Tab. 1 The major export commodities of the EU and the EAEU

European Union	Eurasian Economic Union
Machinery, mechanical appliances, nuclear reactors, boilers;	Mineral fuels, mineral oils and products of their distillation; bituminous substances;
Vehicles other than railway or tramway rolling stock	Commodities not elsewhere specified
Pharmaceutical products	Natural or cultured pearls, precious or semi-precious stones, precious metals
Electrical machinery and equipment and parts thereof	Iron and steel
Plastics and articles thereof	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals
Articles of iron or steel	Copper and articles thereof

Source: Calculated by the authors based on ITC database, 2020.

According to the analysis of the commodity structure of trade between the EU and the EAEU, the EU countries export goods with higher added value, while the dominating export of the EAEU is mainly mineral fuels, which are mostly exported by the Russia and Kazakhstan (Belarus

again in the position of re-export). A significant proportion of metallurgical products can also be observed in the export of EAEU countries.

We see the potential for growth in goods exchange from the point of view of EAEU countries exports to the EU in production with higher added value.

3.3 Revealed comparative advantages and trade complementarity of foreign trade

To determine the export potential, we quantified the index of revealed comparative advantages (according to 1 relationship in the methodology section) for each member country of the EAEU and aggregated for the EU.

Tab. 2 RCA of the EAEU

Russia
• Commodities not elsewhere specified (RCA 7,14)
• Fertilisers (RCA 5,99)
• Nickel and articles thereof (RCA 4,37)
• Mineral fuels, mineral oils and products of their distillation (RCA 4,07)
• Cereals (RCA 3,99)
Kazakhstan
• Lead and articles thereof (RCA 7,48)
• Products of the milling industry; malt; starches; inulin; wheat gluten (RCA 7,37)
• Mineral fuels, mineral oils and products of their distillation (RCA 5,39)
• Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals (RCA 5,12)
• Copper and articles thereof (RCA 5,00)
Belarus
• Fertilisers (RCA 31,29)
• Dairy produce; birds' eggs; natural honey; edible products of animal origin (RCA 13,03)
• Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn (RCA 8,14)
• Wood and articles of wood; wood charcoal (RCA 5,51)
• Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates (RCA 3,97)
Armenia
• Tobacco and manufactured tobacco substitutes (RCA 47,51)
• Ores, slag and ash (RCA 20,82)
• Beverages, spirits and vinegar (RCA 14,98)
• Articles of apparel and clothing accessories, not knitted or crocheted (RCA 5,34)
• Clocks and watches and parts thereof (RCA 5,14)
Kyrgyzstan
• Natural or cultured pearls, precious or semi-precious stones, precious metals (RCA 11,05)
• Edible vegetables and certain roots and tubers (RCA 8,87)
• Copper and articles thereof (RCA |7,25)
• Cotton (RCA 6,60)
• Salt; sulphur; earths and stone; plastering materials, lime and cement (RCA 6,36)

Source: Calculated by the authors based on ITC database, 2020.

As can be seen in Table 2, Russia achieves the highest revealed comparative advantages for the commodity group not elsewhere specified. According to the interpretation of the statistics, only those commodities which are involved in trade in a minimum proportion and which cannot be included in other groups should be included in this group. Commercial reality, however, shows that under this classification are often hidden weapons and armed equipment. The RCA index for fertilizer commodity was high for both Belarus and Russia. Belarus has the highest revealed comparative advantages in the agri-food group, in which case it is possible to speak of the "inherited" comparative advantage resulting from the re-export of these products as a result of Russian sanctions. Tobacco is the Armenian product with the highest RCA index, in the case of Kyrgyzstan these are pearls and precious stones. Kazakhstan has the largest revealed comparative advantages for lead and products of the milling industry.

Table 3 lists the 5 commodity groups for which the EU has the greatest revealed comparative advantages. This index also revealed those commodities that do not occupy a significant position in the existing commodity exchange, namely the cork and its products or living trees and plants. The export of dairy products from the EU is limited by Russian sanctions, which also served as a tool to boost Russia's food sovereignty. Agricultural products were chosen because of the easy reorientation of Russian imports from other countries. (Zabojník & Hamara, 2015)

Tab. 3 RCA of the EU

- Cork and articles of cork (RCA 2,83)
- Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage (RCA 2,15)
- Pharmaceutical products (RCA 2,03)
- Dairy produce; birds' eggs; natural honey; edible products of animal origin (RCA 1,94)
- Beverages, spirits and vinegar (RCA 1,90)

Source: Calculated by the authors based on ITC database, 2020.

Another approach through which we assessed the potential of cooperation between the EU and the EAEU was to express the trade complementarity index (according to 2 relationships in the methodology section).

Tab. 4 Calculating of trade complementarity index between the EU and the EAEU in 2018

Country	TCI value for the EU as an exporter	TCI value for the EU as an importer
Russia	80,5157331	35,6973143
Kazakhstan	79,5438978	23,9623077
Belarus	66,0094276	59,824979
Armenia	70,2636096	29,1615781
Kyrgyzstan	60,1440261	35,1807752

Source: Calculated by the authors based on ITC database, 2020.

Table 4 shows the calculations for EAEU countries from the EU perspective as an exporter, which represents the supply of EU goods. As can be seen, Russia and Kazakhstan are the most natural partners in this group, given the commodity structure they possess. Armenia took third

place, indicating unused potential, followed by Belarus and the last of this group was Kyrgyzstan. As we can see, the situation is different when expressing the TCI index in terms of the supply of goods from the countries of EAEU, which are now in the position of exporter. The commodity structure of exports of the EAEU countries is less complementary than the EU. Of the EAEU group, Belarus is the most appropriate partner. Russia and Kyrgyzstan reached almost the same value of the trade complementarity index. While Armenia was an attractive destination in terms of demand for EU goods, the trade complementarity of Armenian supply is less than half that of the EU. Despite the fact that goods exchange between the EU and Kazakhstan is higher compared to other EU countries except Russia (Fig. 1), trade complementarity of Kazakhstan's supply was the lowest within this group.

CONCLUSION

As a result of the negative effects of globalization, regional integration processes are intensifying, which motive remains – promotion of national interests of groups of states. The European Union is the most successful implementation of regional integration in the world, yet it faces many challenges at present, such as Brexit, changing ECB policy, China's expansion in the context of the Belt and Road initiative, the unstable US foreign policy and other factors affecting its stagnating competitiveness. The emerging regional integration of the EAEU is a potential partner for strengthening trade links on the Eurasian continent. The prospects for potential growth are also determined by the analysis of the territorial structure of EU external trade, in which the share of exports to the EAEU countries was only 5.04 % in 2018. On the other hand, the share of EAEU exports to the EU accounted for 38.78 % of the total export in the same period. This points to an asymmetric dependence between these unions. The review of the commodity structure has defined the nature of their trade relations, while the EAEU countries mainly export mineral fuels and metallurgical products, the EU exports goods with higher added value such as pharmaceuticals, electronic equipment, vehicle machinery and equipment.

The RCA index revealed the export potential of the EU and the individual EAEU countries. The EU achieves the highest comparative advantages in the product group cork and its products and live plants. Both Russia and Belarus have high revealed comparative advantages for fertilizers. Other potential export commodities from EAEU countries include cotton, inorganic chemicals, products from the milling industry and others.

Calculating the trade complementarity index from the EU perspective as an exporter has revealed that the EAEU countries are natural trading partners. The highest value was reached by the Russia and Kazakhstan. These are the countries with which the current trade exchange is highest. It revealed a high potential for Armenia, followed by Belarus. Kyrgyzstan ranked last in this ranking, which is understandable given the country's economic dimension. On the other hand, the trade complementarity of the offer of the EAEU countries was significantly lower than TCI of the EU and therefore it cannot be concluded that they are ideal trading partners. This is due to significant quantitative differences in production levels between the EU and the EAEU.

Unstable situation in the global environment creates desirable conditions for a formal adjustment of contractual relations between the EU and EAEU, that could serve as a platform to rectify the geopolitical situation in relations between the EU and Russia, while it would set new rules mutually beneficial business relationships.

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Social Networks in Human Resources Management

Monika Matušovičová
monika.matusovicova@euba.sk
University of Economics in Bratislava, Faculty of Commerce, Department of Marketing
Bratislava, Slovakia

Abstract: Nowadays the world labour market revolves around the social networks. They are seen as a global phenomenon and have also become a new tool for employers and HR experts. The article is focused on concentrating and evaluating the current knowledge base in the field of searching for employees using social networks. The aim is to present partial results of primary research directed at examining respondents' opinions and attitudes with the use of social networks in general and targeting looking for work. The result of the research is that this progressive tool of job mediation is not yet systematically used in our conditions, it serves rather as a supportive tool for recruitment and job search. A clear and attractive social networking profile that should include an appropriate photo, a concise headline, an understandable summary, work capability, flawless grammar, recommendations, linking and regular updating of the profile, contact and indication of interest should help increase the chances of getting new jobs.

INTRODUCTION

Modern technologies are increasingly being used in the field of human resources management. Companies use them not only to recruit and select new employees, but also to educate their employees (e-learning, videoconferencing, online simulation), to post job offers, to communicate in the professional field and to establish working contacts. The use of new interactive technologies (such as social media, chat rooms and mobile devices) allows candidates and employees to communicate interactively with a human resources manager or company manager.

Internet social networks hold the position of a dynamic and innovative tool for searching and selecting human resources. Nowadays, their popularity is growing among head-hunters, personnel consulting companies and recruiters looking for employees. Recruitment through social media is an effective way to reach potential candidates and attract new talent. Jobseekers should therefore be active on the professional social network and present themselves accordingly with a well-developed profile, which is a kind of a modern biography.

Many spend multiple hours on social networks. But very few Slovaks can actually make use of their potential, for example for job seeking. This was confirmed by a survey by Adecco (2016) conducted in 24 countries including Slovakia. Although a quarter of the Slovaks surveyed confirmed that they were contacted through a social network by a human resources officer, only 9% of respondents were actually employed this way. The explanation for such case is the fact that Slovaks consider social networks as a place where they can quickly get in touch with friends and communicate effectively. However, they place less importance to the fact that social networks can also be a valuable personal assistant by job search.

1 LITERATURE REVIEW

A social network can be characterized as the interaction of people, organizations or groups with each other within the said network (Landers & Schmidt, 2016). According to Jindal and Shaikh (2014), social networks consist of entities and relationships between them. These entities, also referred to as nodes, can represent individuals, organizations, or companies.

Vasiľová (2016) describes social networks as a social medium that enables the creation of a user profile, browsing profiles of other users for the purpose of mutual communication and publishing of information and knowledge about common interests. Bednář (2011) among the main processes that users can perform on social networks includes:

- collect information about what are their friends and acquaintances doing on social networks,
- share (publish) your content.

There is presented a diverse typology of social networks in the professional literature. For the field of human resource management, Mary G. White (2017) typology defines seven particular types of social networks: Social Connections (Facebook, Twitter, Google+, Myspace), Multimedia Sharing (YouTube, Flickr), Professional (LinkedIn), Informational (Super Green Me), The Educational (The Student Room), The Hobbies (Oh My Bloom) and Academic (Academia.edu).

While in the world, Jobvite is the number one network for professional networking and LinkedIn being the one for job search, as according to Jobvite's Social Recruiting Survey Results (Koch-Gerber & de Klerk, 2018), in Slovakia is this task overtaken by the most visited one - being Facebook. According to an Adecco survey (2016), more than a third of respondents are looking for jobs through Facebook, as compared to LinkedIn being used by only 18 percent of respondents.

In general, Facebook can help you by search for a job candidate by reaching out to friends, distributing information to other people through your contacts, as well as getting references (Nikolaou, 2014). However, the effectiveness of such search is questionable. On the other hand, LinkedIn is considered to be an effective, relatively secure and trustworthy online job placement tool (Koch-Gerber & de Klerk, 2018). The specificity of this social network lies in the focus on professional and business environment, whereas most other social networks focus on the user's personal environment (Allden & Harris, 2013). For this reason, it is being called a professional social network (Armstrong & Taylor, 2015). Users - candidates use LinkedIn to present themselves and find a job. Users - companies use it to search for a suitable candidate for a job, searching for talents, searching for business relationships, but also cooperation on projects, discussions or problem solving (Zide et. al., 2014).

A social network focused on professional contacts is also XING. It is essentially an alternative to the US LinkedIn platform and is popular mainly in Europe - Germany, Austria, Switzerland, but also in China (Storz-Renk, 2014). Social network Twitter is used for Microblogging and exchange of short message up to 140 characters on base of On-Demand (Safko & Brake, 2009). Essentially, jobseekers can instantly receive a report on up-to-date job offers and at the same time publish a short report of their work experience.

In Slovakia, according to LMC data (Hlavačková, 2018), about half of the candidates are currently looking for jobs directly on the websites of potential employers, more than one third on career portals that collect job vacancies. Almost a third of respondents use Facebook and only 15% use LinkedIn.

Böhmová and Pavlíček (2013) compare the methods of advertising on the job portal, company website and social networks with their corresponding advantages and disadvantages. Mentioned advantages of Facebook advertising are the display of shared content and so-called

digital footprints, and increasing visit traffic to corporate FB page. The disadvantage presented is the uncertainty of whether someone will answer the ad or possible mistrust for Facebook. Benefits of advertising on LinkedIn include CV viewing, the ability to read previous references, and check group of connections or interests. The main disadvantage is that the activity must be spent by a human resources specialist. Twitter allows easy addressing of well-known experts and specialists; the disadvantage is the limited number of characters and the fact that it is rarely used in the Czech Republic and Slovakia.

Social networks are a progressive and promising tool of job mediation, but they have their advantages and disadvantages (Olexová & Čorba, 2013). The options that social networks offer to both job-seekers and recruiters include: (1) facilitating contact with people that are connected in some way, (2) creating a user profile, (3) creating an organization profile, (4) linking social networks with job-related job portals, (5) the possibility of obtaining user references and (6) verifying information on job-seekers. The limitations that arise from using social networks include: the necessity to update data, a limited database of jobseekers, and the possibility of discrimination.

Recruitment through social networks speeds up and adds effectivity to the matching of candidates to employment opportunities (Shih, 2009). Recruiters assign candidate their according status as active or passive candidate. The greater potential of social networks is in the discovery of passive candidates, who make up 80% of the workforce (Kadlec, 2013).

The power of social networks in personnel management lies in mutual visibility. Recruiters can check candidate data and candidates can check employer reputation (Bondarouk & Olivas-Luján, 2013). Companies can therefore use social networks to present themselves as a sought-after and credible employer (Landers & Schmidt, 2016).

2 METHODOLOGY

Social networks are undoubtedly a new trend in human resource management. Many recruiters and jobseekers consider them a progressive way of mediating employment. In this context, the article focuses on concentrating and evaluating the current knowledge base in the field of searching for employees using social networks. The aim is also to present partial results of primary research aimed at examining respondents' opinions and attitudes with the use of social networks in general and with the aim of looking for work.

The application of scientific methods used in the article includes description and comparison of theoretical knowledge of domestic and foreign authors as well as analysis of available information and obtained data. We also synthesized the analytical data of the personnel companies Adecco and Jobvite. Then we used the deduction method to rationalize the conclusions.

The primary research was carried out using the standardized query method. We conducted the inquiry using a questionnaire, which we distributed electronically. The questionnaire contained 14 questions of various types. We used closed-ended questions with choice of one or more answers and 1 question with scale. Statistical and mathematical quantitative methods were used by processing of the obtained data into tables and graphs.

3 RESULTS AND DISCUSSION

3.1 Research focused on the use of social networks in job search

Social networks are a progressive tool of job mediation, which is not yet sufficiently used in our conditions. Through the conducted research we wanted to identify the opinions and attitudes of respondents to social networks and the possibilities of their use in finding a job.

An empirical research survey focused on the experience of students of the University of Economics in Bratislava was carried out from March to April 2019. The research was attended by 200 respondents, of which 115 were women (57.5%) and 85 were men (42.5%). We did not investigate the age category because the questionnaire was directly targeted only to students aged between 19 and 26. We naturally assumed that university students were social network users and that they had already been looking for, are looking for, or will in the near future be looking for work. The filtering question was used to determine whether all respondents are active on social networks. Ultimately, 7 respondents (3.5%) who do not use social networks did not continue to fill in the questionnaire.

Below are the most important results and findings that summarize the experience of using social networks as an innovative method of recruiting. Research has shown that up to 191 (98.9%) respondents are active on Facebook, 134 respondents (69.4%) on Instagram and 105 respondents (54.4%) on YouTube (Figure 1).

Fig 1   Representation of respondents according to the social networks they use
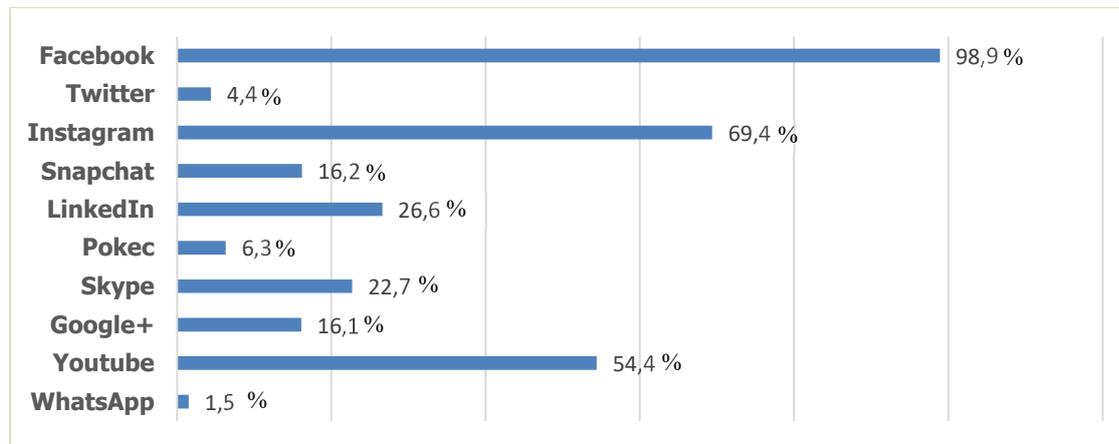
Source: own processing

Up to 92.2% of respondents visit social networks several times a day, 4.7% once a day, 2.6% several times a week, and only 1 respondent (0.5%) uses social networks several times a month.

In the section of job searching were respondents also able to choose more answers from the options offered. For approximately 83.2% of respondents is the most preferred way to look for work on the internet (company websites and job portals), reference programs are used by 68.6%, social networks up to 24.4%, fairs and job exchanges 23.7%, 21.9% of the respondents of students reported advertising in the daily press and 19.3% chose personnel agencies.

We also investigated what activities social network students use. Up to 94.8% of respondents use social networks to communicate, 57.0% to follow acquaintances, and 54.9% of students receive through social networks various study information. We were most interested in using

social networks to find work. Around 22.7% of respondents mentioned this as possibility (Figure 2).

Fig 2 Representation of respondents by social network activity
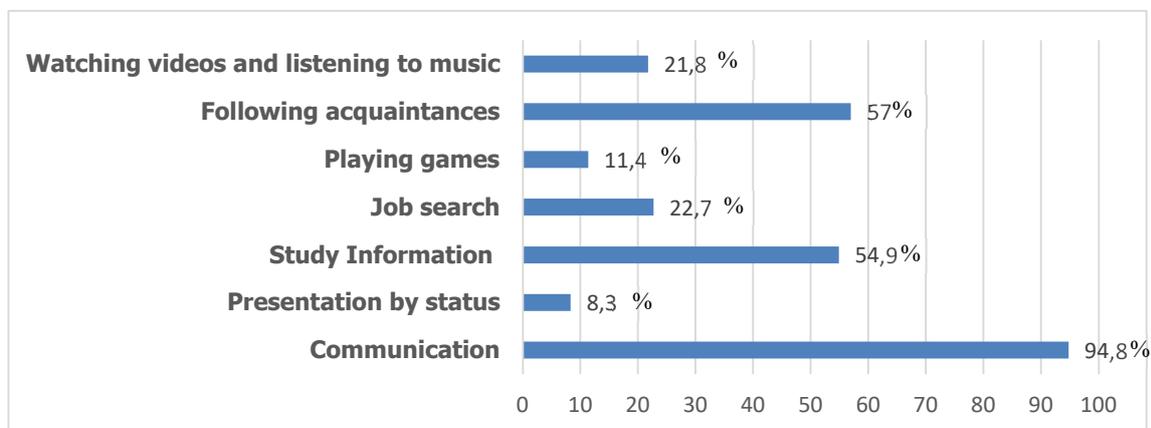
Source: own processing

We were also interested in how respondents perceive social networks when looking for a job. Most respondents 80 (41.5%) considered them less trustworthy, 21 (10.9%) considered them trustworthy, as untrustworthy were selected by roughly 18 (9.3%) respondents. Up to 74 (38.3%) of respondents could not comment on the question.

One of the most important findings is knowledge and use of professional social network LinkedIn, which has a wide range of applications in personnel management. Out of 193 respondents, 157 (81.4%) students know this network, but only 58 respondents (30.1%) are also active on LinkedIn. For 37 (19.2%) LinkedIn social network is a completely unknown concept.

Respondents also had the opportunity to evaluate job search activities through social networks. As Table 1 shows, the most interviewed (50.2%) are mainly interested in references on potential employer of their respective acquaintances. Approximately the same number (49.9%) views advertised job positions as well as the employer's profile page (45.8%). Less than one-third of candidates send applications or makes use of professional networking via social networks.

Tab 1 Job search activities through social networks

Rank	Activity	% count
1	Finding references from acquaintances	50.2 %
2	Searching for job positions	49.9 %
3	Viewing potential employer pages	45.8 %
4	Sending employment applications	33.0 %
5	Professional networking	30.3 %
6	Personal branding	23.5 %

Source: own processing

Survey data also displayed whether respondents already looked for a job through social networks. Approximately 114 respondents (59.1%) have already looked for work this way and additional 28 (14.5%) respondents have not yet looked for any opportunities to work via social networks, but plan to use this option in the future. Consequently, 51 respondents (26.4%) did not look for work in this way and even do not plan to in the future.

Concerning the experience of contacting HR personnel through social networks, 71 respondents (36.8%) responded positively, while up to 122 respondents (63.2%) did not receive any job offers or invitations to a job interview via social networks.

When summarizing the survey results, it should be noted that up to 96.5% of respondents are active on social networks. The social network Facebook is being used by up to 98.9% of the addressed students. Facebook is currently emerging as the best social network for this target group for purpose of recruiting. The reason - in addition to higher traffic - in our opinion, is that Facebook was not created as a career medium, but to connect with friends. Contacts are more personal there than at LinkedIn. If people know each other better, they are more confident in recommending a job to a potential candidate or suggest a suitable candidate for an open position.

When comparing preferred work search methods, only less than a third of respondents use social networks for job search, and up to 26.4% said they do not plan to look for work this way in the future. In comparison with the fact that abroad 7 out of 10 recruiters look for employees through social networks (Koch-Gerber & de Klerk, 2018), this shows that such type of recruiting is yet not used effectively in our labour market.

One of the significant findings was that most respondents know the professional social network LinkedIn, but only 30.1% of all respondents are actively using it. Insufficient use of the potential of social networks was also confirmed by our further findings of the survey. Over 63.2% of respondents have not yet received a direct job offer through social networks. There may be two reasons for this. (1) Internet social networks are currently used by recruiters only as a supporting tool in recruiting and selecting employees, in particular to obtain information on jobseekers. Companies and recruitment agencies use primarily business websites, job portals, and references to find employees. (2) Young people, as job seekers, are not sufficiently active on social networks. They mainly use social networks to communicate, entertain and follow their acquaintances. While most students know the LinkedIn network, they are not particularly an active user on them. But at the same time, the profile on this network acts as a modern form of curriculum vitae and has a great influence on the selection of a suitable candidate.

3.2 Profile on a professional social network

Social networking on LinkedIn is an effective way to attract attention from your potential employer or business partner - through your online CV. The completed profile is comparable with a professional card of the candidate and a specific form of presenting his / her identity on the labour market. Creating a LinkedIn profile opens up opportunities for new collaboration offers, personal growth, and especially for professional development.

To make your LinkedIn profile transparent and attractive to your employers, we suggest that you follow these recommendations:

Properly selected photo

Nothing tells you more about a person than his current photo. The photo posted on LinkedIn should be professional in the form of a portrait, commensurate with the current profession or the one you are applying for. Group photos within a group of people or with partner should be avoided, images with inappropriate backgrounds, as well as photos from long time ago.

Regular update of the summary

Summary is the most important part of the user profile, so it is necessary to include in this section a description of the keywords that characterize a person and refer to their personality and career direction.

Description of working activities

It is important to briefly summarize the employee's history, to clarify your current work position, or to describe the activities accomplished in the past.

The most important is the list of skills

This Skills section should include current, easy-to-find and in-outline organized words that match the individual's professional skills and strengths.

Network of contacts

It is recommended to add old friends, friends, classmates, current and former colleagues or business partners to your Connections.

Function Endorsement

This function serves as a tool to evaluate rate the skills of the contacts and thus confirm their professional level.

Tracking - news from the selected field

Adding people well-known or successful people in particular business field to your contacts allows you to follow their contributions and posts, which can often be inspiring and helpful.

Activity in interest groups

Groups can be a good way to establish and cultivate new connections with people, participation in expert discussion forums also encourages trust and improves the reputation of an expert in given industry.

Attached multimedia content

Images, videos, presentations, text documents, or the entire portfolio of a work on which one has worked so far can be inserted between individual sections.

Add your own posts

Your own opinions and interests can motivate other people.

Volunteer activities and hobbies

Information about how an individual spends his free time outside the office tells a lot about the personality and character of a person. Note, however, that this information should not be the dominant part the profile.

An individual who builds up professional profile by reason of job-seeking, is expected to be not too brief and to provide factual, specific and, of course, truthful information. It is anticipated that a user's profile can gradually replace the CV.

CONCLUSION

Social networks present a new progressive trend in human resources management. At present, their popularity is growing among head-hunters, recruitment agencies and personnel recruiters looking for employees.

Searching for potential employees also depends on whether people interested in working actually use social networks. The research showed that most respondents (96.5%) actively use social networks, so there is a high probability of reaching them. According to a study by Jobvite (2017), jobseekers are more likely to be recruited by recruiters with the increasing number of social networks they use. Despite the fact that our respondents use several social networks, only 36.8 % of them were directly contacted via social networks. This may be due to the fact that university students use social networks primarily to communicate (chat), entertain, follow people, but less to look for job offers. This is probably related to another of our findings that more than half of respondents consider social networks less trustworthy or untrustworthy, most often due to the fear of misuse of personal information.

Most respondents know LinkedIn's professional network, but they aren't its users. Setting up a profile on this network also increases the chances of getting new job offers. A recommended, well-processed and trusted profile must include photo, a concise headline, an understandable summary, work capability, flawless grammar, recommendations, linking and regular updates of the profile, contact and indication of interest. At the same time, it is necessary to be active on the network, regularly receive news from employers' sites and effectively build up your professional networking. The optimal time to start with its development is the period of higher education.

In conclusion, social networks can be applied in personnel management, but their potential is not yet fully utilized. We assume that the level of popularity of social networks in the future will mainly depend on recruiters and jobseekers' experience of their use, development of applications for the needs of recruiters, and of course attitude to the publication of personal data on the Internet.

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It's the Tone that Makes the Music – Tone Management in 8-K Disclosures and its Influence on the Share Price

Jan-Hendrik Meier – Nina Lembke – Andreas Scheiermann
Jan-Hendrik.Meier@fh-kiel.de
Kiel University of Applied Sciences, Business School, Institute of Accounting and Auditing
Kiel, Germany

Abstract: The paper examines the influence of the sentiment of 8-K corporate news on the company's share price development. Using event study methodology, it can be shown that the form of 8-K sentiment has a highly significant positive influence on the five-day cumulative abnormal return. A highly significant positive influence can also be detected in the analysis of the influence of sentiment on the three-day cumulative abnormal return after the publication of the report corrected by the stock market reaction before report publication. This way, the disclosed facts and the tonality can be examined separately, since the information about the facts is already included in the share price by insiders before the 8-K is published, whereas the tonality can only develop its effect after disclosure. It can also be shown that the tone of three specific event categories induces particularly significant market reactions.

INTRODUCTION

Capital market research is mainly characterized by quantitative analyses. In contrast to this and with reference to the influence of company-specific news on future earnings figures and share price returns, Tetlock, Saar-Tsechansky, and Macskassy (2008) conclude that, the texts also contain relevant information for readers of financial statements and stock market participants in addition to the disclosed quantitative data. This qualitative information usually addresses aspects that would otherwise be difficult to access. Through their choice of words, companies can control the sentiment of the disclosures and thus influence the capital market. Huang, Teoh, and Zhang (2014) refer to the choice of tone level as ´tone management´. The authors find that companies consciously use positive language when there is an incentive to influence investors positively. For example, when analysts' forecasts are only just met or exceeded. The abnormally positive tone has a positive short-term impact on the stock market and the resulting mispricing is only corrected by the market with a certain delay.

This paper examines the influence of the sentiment of Form 8-K publications on the capital market. Form 8-K is a reporting form which companies registered at the United States Securities and Exchange Commission (SEC) must publish immediately on certain events. (SEC 2012) It is therefore comparable with the publication obligation pursuant to EU Regulation No 596/2014 of the European Parliament and of the Council of 16 April 2014 ´Market Abuse Regulation´ (MAR). Meanwhile, the 8-K publication obligation includes 31 events, so-called items, which must be disclosed. (SEC 2012)

In the course of the present study, the sentiment of 50,253 Form 8-Ks of the companies listed in the Standard and Poor's 500 Index (S&P 500) is determined for the period from January 1st 2010 to December 31st 2017. The sample of Form 8-Ks includes reports on 25 of the 31

defined items. Using the event study methodology, the influence of the tone on the cumulative abnormal return of the share price is measured over an event window of five days. In addition, the event window is divided into the period before the publication of the Form 8-K and after the publication of the Form 8-K. The facts underlying the news are often already known to insiders and are included in the share price on publication date. The tone of an 8-K news item, on the other hand, can only have an impact from the time of publication. By exploiting this circumstance, the influence of the tone can be analyzed isolated from the facts of the news and thus tone management can be uncovered.

The results of the investigation show that there is a highly significant positive correlation between the sentiment of the Form 8-K and the five-day cumulative abnormal return. This influence on the share price can be due to both to the facts underlying the message and the tone of the message. Tonality and facts are likely to be highly correlated, since positive (negative) news is also written in a positive (negative) tone. A highly significant positive correlation can also be seen in the analysis of the influence of sentiment on the three-day cumulated abnormal return after report publication corrected for the stock market reaction before report publication. Assuming that insiders were already active in the stock market before the news was published and that this led to a reaction of the stock market - as various studies have shown (i.a. Meulbroek 1992, Keown & Pinkerton 1981, Ke, Huddart, & Petroni 2003) - this means that tone can also have an influence in isolation from the facts and that tone management very probably plays a role. Differentiating between the tone of the different events in the study also shows a significantly positive correlation for three distinct items out of the 25 items analyzed. The item 1.04, which describes mine safety and is used to report closures or other violations, the item 2.02, which stands for operating results and the financial condition of the company and the item 3.02, which contains unregistered sales of equity securities. (SEC 2012)

Section one of the paper provides an overview of the literature and the current state of research. Section two describes the sample and the methodology used. Section three describes and interprets the results. The paper concludes with a summary.

1 LITERATURE REVIEW

1.1 The influence of the sentiment on different reporting formats

Primarily the tone of income press releases, MD&As, 10-K reports or news is analyzed in works on sentiment analysis. Davis, Piger, and Sedor (2006) are investigating the tone of income press releases to see if managers can influence the market by their choice of language in communicating information about expected future company performance. Their research provides a significantly positive (negative) correlation between optimistic (pessimistic) tonality and future company performance. A significant positive correlation can also be seen in the influence of optimistic language on the market, which the authors measure by the influence on the three-day cumulative abnormal return.

Davis, Piger, and Sedor (2012) determine in another paper the influence of the tone of income press releases on the future return on assets and the three-day cumulative abnormal return. The authors show that the net degree of optimistic language, i.e. the difference between the percentage of optimistic and pessimistic language, is predictive of future asset returns. The authors show a significantly positive correlation with the three-day cumulative abnormal return if the tone is unexpectedly optimistic. This indicates that investors perceive the choice of language used by managers as credible to a certain extent.

Davis and Tama-Sweet (2012) analyze whether managers use language differently in income press reports than in the MD&As included in 10-Q and 10-K reports. The authors recognize that managers use more optimistic and less pessimistic language in income press reports, although a similar choice of language would be expected based on the report content. Especially companies with a strategic incentive use a lower degree of pessimistic language in income press releases more often. For example, when analysts' forecasts are only just met or exceeded. Analysis of the tone of the MD&As shows that pessimistic language can predict future company performance. However, the authors do not find any significant results that suggest a negative correlation between pessimistic language in MD&As and future abnormal returns.

In analyzing press releases in connection with merger negotiations, Ahern and Sosyura (2014) note that managers consciously use news to influence the public. In the period from the start of negotiations to the public announcement of those, the bidding companies publish on average more news than before the start of negotiations in order to increase their own share price. This way, the companies gain an advantage in determining the share exchange ratio in the merger. The authors describe this procedure as ´active media management´. In analyzing the sentiment of the reports, Ahern and Sosyura note that in the affected period not only more news is published, but at the same time less negative news.

Huang, Teoh, and Zhang (2014) note that an abnormally positive tone in income press releases can predict negative future income and operating cash flows. Like Davis and Tama-Sweet (2012), the authors show that the tone is particularly positive when companies have incentives to positively influence their investors. The authors refer to this procedure as tone management. In addition, Huang, Teoh, and Zhang conclude that an abnormally optimistic tone immediately causes an overly optimistic reaction in the stock market. However, the stock market returns to the original price in the aftermath of the event.

That companies which narrowly meet or exceed their sales targets tend to use a higher number of positive words in income press releases is shown by Huang, Krishnan, and Lin (2018) in their analysis of the sentiment of 22,188 releases published between 1998 and 2007. This way, companies want to present the financial figures they publish in a positive light, as these must later be reported to the SEC in other financial reports such as the Form 10-K or 10-Q. The results imply that managers consciously choose the tone of income press releases to influence investor perceptions.

Dimitrov and Jain (2011) also find results in their work that suggest that managers try to influence shareholders by manipulating tone. The authors analyze the tone of two types of corporate news. Income reports and reports on management forecasts. The authors show that managers publish positive news prior to annual shareholder meetings in response to share-holder pressure. In the 40-day window before the meetings, the authors can demonstrate significantly positive average cumulative abnormal returns. These are significantly higher when it is likely that shareholder dissatisfaction is higher, as evidenced by a weak performance of the share price in the past.

The question of whether companies deliberately keep bad news away from investors and publish it later than good news is raised by Kothari, Shu, and Wysocki (2009). In analyzing announcements of dividend increases and decreases, the authors show, using the change in the five-day abnormal return, that the stock market reacts more strongly when the dividend decreases than when it increases. This result is also reflected in the analysis of the influence of voluntarily published forecasts of earnings by management. However, the authors can show that the difference between market reactions to good and bad news has narrowed after the introduction of the Fair Disclosure regulation by the SEC. This regulation requires that companies must now publicly disclose information that they have in the past only made available to a limited group of people. Basically, based on the results, the authors come to the

conclusion that managers hold back bad news and publish bundled news at a later date, while good news are given immediately to the market, which explains the stronger market reaction to the bad news.

Meier, Esmatyar, and Frost (2018) examine the sentiment of 19,390 10-K annual and 10-Q quarterly financial statements and show that the tone can be used to forecast future company results. The sentiment indicator has a significant incremental forecasting quality for the immediately following quarter and the quarter after.

Tetlock (2007) examines the influence of optimism and pessimism in the media on stock market prices by looking at the column "Abreast of the Market" from the Wall Street Journal. The author shows that a high level of media pessimism pushes the market price down, but that it then returns to its original value. Tetlock also demonstrates that an unusually high or low level of pessimism leads to temporarily high trading volumes in the market.

Based on the work of Tetlock (2007), Tetlock, Saar-Tsechansky, and Macskassy (2008) examine the tone of company-specific messages. The authors show that negative words in the news examined predict low revenues. The authors also note that the stock market does not react sufficiently to the information contained in negative words. The prices on the stock market absorb this information only after a short delay. The authors conclude that the words do not contain superfluous information, but aspects that are otherwise difficult to capture.

Ahmad, Han, Hutson, Kearney, and Liu (2016) also deal with media tone and show that negative sentiment in articles about companies has a negative impact on the stock market. The authors analyze the tone of more than five and a half million articles about 20 large American companies. However, the authors find no evidence that the market subsequently returns to its original value, which leads the authors to suspect that media tone contains fundamental information about the company value.

In their work, Johnman, Vanstone, and Gepp (2018) examine the influence of article sentiment on the daily excess return and volatility of companies listed in the Financial Times Stock Exchange (FTSE) 100 Index. The authors focus on articles published by the Guardian Media Group (The Guardian, The Observer, among others). The authors conclude that sentiment has no influence on excess returns, but does have an impact on volatility. A negative tone increases the susceptibility of stocks to fluctuations, a positive tone reduces them.

In the field of social media, Sprenger, Tumasjan, Sandner, and Welpe (2014) investigate the tone of tweets. The authors analyze the content of about 250,000 stock-related tweets and find a positive correlation between the sentiment of the tweets and the abnormal return. The authors come to the conclusion that tweets contain valuable information that is not yet fully included in current stock market barometers.

By examining the tone of analysts' reports, Huang, Zang, and Zheng (2014) analyze the influence of sentiment on the stock market and choose the two-day cumulative abnormal return from the publication date as a dependent variable. The authors recognize a positive correlation between sentiment and cumulative abnormal returns. Further tests allow the authors to provide insights into the cross-sectional determinants of the information content of analyst reports. The authors show that investors find text more useful when news are negative and the significance of other information signals in the report is perceived as low.

That managers should be careful when using optimistic language is shown by Rogers, Van Buskirk, and Zechman in their work. The authors deal with the question whether optimistic language in corporate income statements increases the risk of being sued by shareholders. The authors show that the income statements of the sued companies are unusually optimistic compared to those of companies in the same industry and in the same economic situation. In addition, the plaintiff's lawyers usually focus their prosecution on these unusually optimistic parts of the reports. The authors also deal with the influence of insider sales on litigation risk

and find that insider sales are only associated with litigation risk if optimistic tone is used at the same time. However, an optimistic tone is generally associated with increased litigation risk, even if insiders do not sell their shares.

1.2 State of research in the field of Form 8-K

The tone of the Form 8-K report chosen in the context of this work has so far rarely been investigated. Form 8-K was introduced by the Securities Exchange Act of 1934 and is intended to provide investors with information on current events. In 2004, the Form 8-K guidelines were amended by the SEC to provide investors with faster and better information about important corporate events. (SEC 2004)

At 19%, the 8-K report is now the second most requested report in the SEC's Electronic Data Gathering, Analysis and Retrieval (EDGAR) database after annual financial statements. (Drake, Roulstone, & Thornock 2015) The relevance of regular publication of information has already been pointed out by Zhao (2017). The author examines Form 8-Ks for the frequency of publication and the resulting influence on stock returns. If information is published more frequently, future stock returns and future volatility will be lower.

Goldstein and Wu (2019) are the first authors to conduct a sentiment analysis to determine the tone of Form 8-Ks. The authors analyze the influence of tone on punctuality and abnormal returns. Their research shows that companies on average take longer to publish negative news than positive ones. In the four-day window around the submission date, in the case of positive news a longer delay leads to significantly lower abnormal returns. However, negative news leads to significantly higher abnormal returns.

In their work, Henry and Leone (2016) compare different methods of sentiment analysis. However, when using the Form 8-K, the authors refer only to the sentiment of item 2.02, which relates to operating results and the financial situation of the enterprise. The authors show that in all methods there is a significantly positive correlation between the change in tone from one quarter to the next and the three-day cumulative abnormal return.

Segal and Segal (2016) also examine the tone of Form 8-Ks, but only those whose contents are not related to income. The authors examine the relationship between the tone and the three-day cumulative abnormal return and show that reports with a positive tone show an average positive cumulative abnormal return. However, reports with a negative tone show on average negative cumulative abnormal returns.

1.3 Formulation of the hypotheses

The influence of sentiment on the stock market, as measured in the existing literature, shows that the tone of reports fundamentally influences the market. Huang, Zang, and Zheng (2014), when looking at analysts' reports, and Davis, Piger, and Sedor (2012), when looking at income press releases, have shown that this influence can be measured by the cumulative abnormal returns. Especially the work of Goldstein and Wu (2019), Henry and Leone (2016), and Segal and Segal (2016) suggest that such an influence also exists between the Tone of Form 8-Ks and the cumulative abnormal yield. Based on these findings, the following hypothesis is formulated for the present study.

> *Hypothesis 1: "There is a significant relationship between the sentiment of Form 8-Ks and the five-day cumulative abnormal return"*

If an influence on the tone by the management of the company should also have an impact on the cumulative abnormal return, this should only be measured in the days following the

publication of the report. The facts that need to be reported have often led to share price reactions due to the actions of insiders before the publication date. This happens regardless of the tone of the message, which is unknown at this point in time. Corrected for the reaction of the stock market prior to the publication date, it is to be expected in this context that the sentiment of the Form 8-K will continue to have a significant influence on the three-day cumulative abnormal return after report publication if tone management plays a role. For this reason, a second hypothesis is formulated.

> *Hypothesis 2: "There is a significant association between the sentiment of Form 8-Ks and the three-day cumulative abnormal return after publication of Form 8-K - even when corrected for the insider-induced stock market reaction that carries the information about the facts. "*

The division of the Form 8-K into different items also suggests that a significant influence of sentiment on the cumulative abnormal return cannot be measured for each item. This assumption is based, among other things, on the fact that the items deal with very different topics, the text of some items is written very freely while the texts of other items are often very similar or often only refer to another item or some items have a long appendix that other items do not have. On this basis, the following third hypothesis is formulated.

> *Hypothesis 3: "The significance of the relationship between the sentiment of Form 8-Ks and the three-day cumulative abnormal return after publication of Form 8-Ks differs for the different items. Not for all items a significant correlation between the variables can be measured."*

2 METHODOLOGY

As a sample for the present study, 50,253 8-K reports were downloaded from the EDGAR database. These have been published between January 1st 2010 and December 31st 2017 by companies that were listed in the S&P 500 Index on April 10th 2017. The Form 8-Ks, which are available as HTML documents, have been cleaned of HTML tags and numbers. (´parsing procedure´, see Loughran and McDonald 2016)

In order to determine the sentiment of the form 8-Ks, the Loughran and McDonald (2011) word lists have been used, which include 354 positive and 2,355 negative words. The following formula (1) according to Henry and Leone (2016) has been applied to determine the sentiment:

$$\mathbf{SENTI_i} = \frac{(\mathbf{Npos_i} - \mathbf{Nneg_i})}{(\mathbf{Npos_i} + \mathbf{Nneg_i})} \tag{1}$$

The sentiment indicator of the report i is represented by $\mathrm{SENTI_i}$ described. The number of positive words from the word list in the report i is represented by $\mathrm{Npos_i}$. $\mathrm{Nneg_i}$ describes the number of negative words from the word list that are used in report i. A sentiment indicator of +1 thus describes a text whose tone is completely positive, while an indicator of -1 stands for a completely negative tone. If the sentiment indicator is 0, the tone of the report is considered neutral.

The assignment of the reports to the items is done by reading out the corresponding text markings within the reports. It can often be observed that a single report has been assigned to several items by the reporting company. For this reason, some reports are included in several items in the statistics.

In order to calculate the cumulative abnormal returns, first the abnormal return $AR_{a,t}$ has been calculated using the following formula (2), taking historical share prices and the S&P 500 index from the Thomson Reuters Eikon database:

$$\mathbf{AR_{a,t} = R_{a,t} - ER_{a,t}} \tag{2}$$

$R_{a,t}$ describes the continuous yield R of the observed share a on the day t. $ER_{a,t}$ is the expected rate of return and is derived by applying Sharpe's market model. (Sharpe 1964) The values have been calculated with the Event Study Metrics program, where an estimation window of [-221, -21] has been selected to parameterize the model.

The cumulative abnormal returns for each 8-K report i have then been calculated using the following formula (3):

$$\mathbf{CAR_i = \sum_{t=t_1}^{t_2} AR_{a,t}} \tag{3}$$

In the context of the present study, the relationship between the cumulative abnormal return and the sentiment of the Form 8-K is examined. For this purpose, the event window $[-2, +2]$ is selected. In the course of a further analysis, this event window is then divided into the event windows $[-2, -1]$ and $[0, +2]$. This way, possible influences of insiders' actions can be filtered out in the analysis. Consequently, both the influence of tone on shareholders alone and the influence of insiders' actions on shareholders' behavior can be examined.

To measure the impact of the sentiment on the cumulative abnormal return, the cumulative abnormal return $CAR_{[t_1, t_2]}$ is applied as explained variable in OLS regression. The explanatory variable is therefore the tone $SENTI_i$. According to the procedure of Meier, Esmatyar, and Frost the following control variables are applied: the company size $SIZE_i$ as logarithmic market capitalization (Li 2008), the leverage LEV_i in the form of the debt ratio (Modigliani/Miller 1963), and the market-to-book ratio MBR_i as a market capitalization / book value ratio. The OLS is completed by applying $YEAR_y$ and $ITEM_x$ dummies.

To avoid outlier-induced results, the abnormal and cumulative abnormal returns have been winsorized on the first and 99th percentile before the analyses were performed. (Meier, Esmatyar, and Frost 2018)

This results in the following OLS regression model:

$$\mathbf{CAR_{[t_1, t_2]} = \alpha_i + \beta_1 \times CAR_{[-2,-1]} + \beta_2 \times SENTI_i + \beta_3 \times SIZE_i + \beta_4 \times LEV_i}$$
$$\mathbf{+ \beta_5 \times MBR_i + \beta_6 \times YEAR_y + \beta_7 \times ITEM_x} \tag{4}$$
$$\mathbf{+ \beta_7 \times SENTI_i \times ITEM_x + \varepsilon_i}$$

For the first model, the interval [-2, 2] was selected as the event window. For models two and three the interval [0, 2] was selected and corrected by the CAR on the interval [-2, -1]. The interaction effects between the sentiment and the items are only included in the third model. By means of the interaction effects, it can be analyzed for which items there is a stock market reaction to the sentiment of the corresponding report and for which this is not the case.

3 RESULTS AND DISCUSSION

The reports analyzed are fairly evenly spread over the period 2010 to 2017, as Table 1 shows. However, with regard to the distribution of the items, the picture is different. Thus, less than 1,000 reports can be assigned to the majority of items, although it should be noted that a report can in principle contain more than one item. This explains why the sum of the items counted is greater than the sum of the reports considered. The item that has by far the most reports is item 9.01, which includes financial reports and their attachments.

Tab. 1 Frequencies of 8-K reports by year and item - single reports can carry several item attributes

Year		Items			
2010	5,855	Item101	5,374	Item401	46
2011	6,217	Item102	684	Item402	12
2012	6,466	Item103	3	Item501	19
2013	6,213	Item104	36	Item502	8,936
2014	6,303	Item201	580	Item503	1,852
2015	6,492	Item202	14,932	Item504	88
2016	6,360	Item203	2,896	Item505	52
2017	6,347	Item204	43	Item507	3,570
		Item205	264	Item508	9
		Item206	159	Item701	11,332
		Item301	45	Item801	12,450
		Item302	280	Item901	37,970
		Item303	264		
Sum	50,253			Sum	101,896

Table 2 shows the descriptive statistics for the metric variables of the model. On average, there is a positive cumulative average abnormal return (CAAR) from the events over the entire event window [-2, +2] of 0.0004. In other words: Adjusted for stock market influences, an 8-K message leads to a positive reaction of 0.04% within five days. But also, the shorter cut event windows before and after the event date show positive values.

The measured values of the sentiment, which range from -1 to 1 according to the methodology, show an average value of - 0.067, which indicates that the tone of the reports is on average slightly negative. However, this value is also due to the fact that the Loughran and McDonald (2011) word list used in this work contains significantly more negative than positive words.

As can be seen in the correlation matrix in Table 3, the sentiment of the reports correlates only slightly with the cumulative abnormal returns. This applies both to the five-day cumulative abnormal return (correlation coefficient = 0.014) and to the three-day cumulative abnormal return after publication of the Form 8-K (correlation coefficient = 0.011) and the two-day

cumulative abnormal return before publication of the report (correlation coefficient = 0.011). This result is to be expected, since the cumulative abnormal returns are determined by a large number of other disturbances that reduce the correlation. The correlation of the sentiment with the two-day cumulative abnormal return cannot be causally attributed to an influence of the sentiment on this figure, since the tone of the news, as described above, is not known until the report is published.

Tab. 2 Descriptives of metric variables

	n	mean	sd	var	min	q1
CAR [-2; +2]	50,253	0.0004	0.0390	0.0020	-0.1130	-0.0200
CAR [-2; -1]	50,253	0.0001	0.0190	0.0004	-0.0570	-0.0090
CAR [0; +2]	50,253	0.0003	0.0340	0.0010	-0.1050	-0.0150
SENTI	50,253	-0.0670	0.5160	0.2660	-1.0000	-0.4890
SIZE	50,253	23.5810	1.0270	1.0540	19.9110	22.8740
LEV	50,253	0.6440	0.2020	0.0410	0.0340	0.5180
MBR	50,253	3.7550	51.9670	2,700.5990	-2,103.1960	1.7490
	median	q3	max	IQD		
CAR [-2; +2]	0.0005	0.0210	0.1100	0.0400		
CAR [-2; -1]	0.0001	0.0100	0.0560	0.0190		
CAR [0; +2]	0.0002	0.0160	0.1010	0.0310		
SENTI	-0.1900	0.2590	1.0000	0.7480		
SIZE	23.4380	24.1930	27.5180	1.3190		
LEV	0.6470	0.7670	2.0300	0.2490		
MBR	2.8150	4.7460	1,603.2130	2.9980		

The results of the regression analysis can then be taken from Table 4. All regression models have in common that they have highly significant positive constants. This is because the average market reaction to an 8-K message results in a positive stock market reaction - also corrected for tone and other variables. It is possible, but not evident here, that the vast majority of news is positive news, which would at least indicate a publication bias.

The results of the first model show that there is a highly significant positive correlation between Form 8-K sentiment and cumulative abnormal returns over a five-day event window. The coefficient for the sentiment indicator is 0.002, which means that a completely positive sentiment compared to a neutral report leads to an average of 0.200% higher five-day returns in the event window. This is equivalent to a 0.040% one-day return that is calculated here to be comparable to other results in shorter windows. The results are consistent with those of Huang, Zang, and Zheng (2014) and Davis, Piger, and Sedor (2006), who found similar results when examining other forms of reporting. The results support our hypothesis 1, but as Table 4 shows, the model has a very low coefficient of determination R^2. Despite their high significance, the independent variables are not sufficiently well suited to explain the cumulative abnormal returns.

Tab. 3 Correlation

	CAR [-2; +2]	CAR [-2; -1]	CAR [0; +2]	SENTI	SIZE	LEV	MBR
CAR [-2; +2]	1.0000	0.4800	0.8710	0.0140	-0.0170	-0.0010	-0.0060
CAR [-2; -1]		1.0000	-0.0040	0.0110	-0.0010	-0.0010	0.0030
CAR [0; +2]			1.0000	0,0110	-0.0190	-0.0020	-0.0090
SENTI				1.0000	-0.0160	-0.0270	0.0040
SIZE					1.0000	-0.0060	0.0200
LEV						1.0000	-0.0140
MBR							1.0000

Tab. 4 Results of OLS regressions

	OLS-Model					
Dependent Variable	(1) CAR [-2; +2]		(2) CAR [0; +2]		(3) CAR [0; +2]	
SENTI	0.002*** (0.0004)		0.001*** (0.0003)		0.0005 (0.001)	
CAR [-2, -1]			-0.009 (0.008)		-0.009 (0.008)	
SIZE	-0.0005*** (0.0002)		-0.001*** (0.0002)		-0.001*** (0.0002)	
LEV	0.0003 (0.001)		0.0002 (0.001)		0.0003 (0.001)	
MBR	-0.00000 (0.00000)		-0.00001* (0.00000)		-0.00001* (0.00000)	
YEAR2011	-0.001 (0.001)		-0.0001 (0.001)		-0.0002 (0.001)	
YEAR2012	-0.0001 (0.001)		0.00000 (0.001)		-0.00002 (0.001)	
YEAR2013	-0.001* (0.001)		-0.0004 (0.001)		-0.0004 (0.001)	
YEAR2014	0.001 (0.001)		0.001 (0.001)		0.001 (0.001)	
YEAR2015	-0.001 (0.001)		-0.0004 (0.001)		-0.0004 (0.001)	
YEAR2016	-0.001 (0.001)		-0.0003 (0.001)		-0.0002 (0.001)	
YEAR2017	-0.002*** (0.001)		-0.002*** (0.001)		-0.002*** (0.001)	
ITEM101	0.003*** (0.001)		0.002** (0.001)		0.002* (0.001)	SENTI:ITEM 101	0.0005 (0.002)
ITEM102	-0.0004 (0.002)		0.0004 (0.001)		0.002 (0.003)	SENTI:ITEM 102	0.003 (0.006)
ITEM103	-0.014 (0.023)		-0.005 (0.020)		-0.002 (0.021)	SENTI:ITEM 103	0.011 (0.037)
ITEM104	0.010 (0.007)		0.004 (0.006)		0.052*** (0.017)	SENTI:ITEM 104	0.074*** (0.025)

ITEM201	0.0005 (0.002)	-0.0005 (0.001)	-0.0004 (0.002)	SENTI:ITEM 201	0.001 (0.003)
ITEM202	0.001* (0.001)	0.001 (0.0005)	0.001* (0.001)	SENTI:ITEM 202	0.004*** (0.001)
ITEM203	-0.001 (0.001)	-0.001 (0.001)	0.0003 (0.001)	SENTI:ITEM 203	0.002 (0.003)
ITEM204	0.0002 (0.006)	-0.001 (0.005)	0.004 (0.008)	SENTI:ITEM 204	0.012 (0.016)
ITEM205	-0.006*** (0.002)	-0.006*** (0.002)	-0.006** (0.003)	SENTI:ITEM 205	0.004 (0.006)
ITEM206	0.0001 (0.003)	0.001 (0.003)	0.002 (0.005)	SENTI:ITEM 206	0.003 (0.010)
ITEM301	-0.004 (0.006)	-0.001 (0.005)	-0.001 (0.006)	SENTI:ITEM 301	0.001 (0.017)
ITEM302	-0.002 (0.002)	-0.001 (0.002)	0.002 (0.003)	SENTI:ITEM 302	0.010** (0.005)
ITEM303	-0.002 (0.003)	-0.002 (0.002)	0.0001 (0.004)	SENTI:ITEM 303	0.004 (0.008)
ITEM401	0.004 (0.006)	0.002 (0.005)	0.001 (0.007)	SENTI:ITEM 401	-0.002 (0.015)
ITEM402	0.008 (0.011)	0.005 (0.010)	0.011 (0.018)	SENTI:ITEM 402	0.013 (0.034)
ITEM501	0.014 (0.009)	0.006 (0.008)	0.010 (0.010)	SENTI:ITEM 501	0.013 (0.021)
ITEM502	-0.0001 (0.001)	-0.001 (0.0005)	-0.0004 (0.001)	SENTI:ITEM 502	0.0003 (0.001)
ITEM503	0.001 (0.001)	-0.0003 (0.001)	-0.001 (0.002)	SENTI:ITEM 503	-0.001 (0.003)
ITEM504	0.003 (0.004)	0.0003 (0.004)	-0.0003 (0.005)	SENTI:ITEM 504	-0.002 (0.014)
ITEM505	0.016*** (0.005)	0.008 (0.005)	0.010 (0.006)	SENTI:ITEM 505	0.006 (0.011)
ITEM507	0.001 (0.001)	0.001* (0.001)	0.0001 (0.001)	SENTI:ITEM 507	-0.002 (0.002)
ITEM508	-0.039*** (0.013)	-0.029*** (0.011)	-0.026** (0.012)	SENTI:ITEM 508	0.027 (0.019)
ITEM701	0.0001 (0.0005)	-0.0005 (0.0004)	-0.0002 (0.0005)	SENTI:ITEM 701	0.0002 (0.001)
ITEM801	0.0003 (0.001)	-0.0003 (0.0004)	-0.0002 (0.0005)	SENTI:ITEM 801	0.0002 (0.001)
ITEM901	0.001* (0.0005)	0.001* (0.0004)	0.001* (0.0004)	SENTI:ITEM 901	-0.0002 (0.001)
Constant	0.011*** (0.004)	0.012*** (0.004)			0.013*** (0.004)
Observations	50,253	50,253			50,253
R^2	0.002	0.002			0.003
Adjusted R^2	0.001	0.001			0.001
Residual Std. Error	0.039 (df = 50216)	0.034 (df = 50215)			0.034 (df = 50190)
F Statistic	2.999*** (df = 36; 50216)	2.506*** (df = 37; 50215)			2.044*** (df = 62; 50190)
*p<0.1; **p<0.05; ***p<0.01					

As in the first model, the second model shows a highly significant positive correlation between the Form 8-K sentiment and the cumulative abnormal return of 0.001, which corresponds to a 0.100% three-day cumulative abnormal return or a 0.033% one-day cumulative return. The comparatively slightly lower return is due to the fact that model 2 is corrected for insider trade due to insider information about the facts. The return measured in this way is therefore exclusively due to the tonality, but not to the reported facts. The results support our hypothesis 2. Between the two-day cumulative abnormal return before publication of the Form 8-K and the three-day cumulative abnormal return from the publication of the report, the results of the investigation show an insignificant negative correlation. Like the first model, however, the second model also has a very low coefficient of determination R^2.

In order to be able to make a material statement on the influence of the tone of specific items, it must first be ensured that the item texts are not standardized or that the reporting companies use largely standardized text modules. A standardization of an item would lead to a constant sentiment of the item and a measured influence of the tone is therefore not due to the company's choice of words. However, the SEC does not issue standardized templates for the Form 8-K items. Thus, for various items only points are specified which must be described in the report. (SEC 2004) However, due to the different topics of the items, for example, the reports within an item may be more similar than the reports within other items.

The results of the third model show a significant impact of the sentiment of the reports on the three-day cumulative abnormal return after report publication for three out of the 25 items in the sample. The affected items come from three different categories and are included in 15,248 of the 50,253 analyzed Form 8-Ks. There is a highly significant positive impact of the sentiment of the item 1.04 reports on the three-day cumulative abnormal return after publication of 0.074, which corresponds to a three-day return of 7.400% or a converted one-day return of 2.408%. Item 1.04 stands for Mine Safety and is used to report mine closures or other violations. (SEC 2012) Therefore, the item is rather rarely used and is only published by companies of a specific industry. Furthermore, the events to be published in this item can generally be freely described by the company and are usually also relevant for the shareholders' decisions. For example, frequently reported with this item are violations of safety guidelines, accidents, and mine closures.

The analysis of the sentiment of item 2.02 also shows a highly significant influence of the tone on the cumulative abnormal return with a coefficient of 0.004 or a three-day return of 0.400%, which corresponds to a one-day return of 0.133%. The content of item 2.02 is operating results and the financial situation of the enterprise. (SEC 2012) For example, Form 8-Ks often contain an appendix to this item in which, for example, information on the balance sheet or financial figures is given. Accordingly, the content is similar to that of income press releases, for which the connection between the two variables has already been established in the literature. (Davis, Piger, and Sedor 2006) It also supports Henry and Leone's (2016) results for item 2.02 in relation to the cumulative abnormal return and the influence of the quarterly change in tone.

The third item for which a significant influence of the sentiment on the three-day cumulative abnormal return after the publication of the report was found is item 3.02 with a coefficient of 0.010, i.e. a 1.000% three-day return, which corresponds to a converted 0.332% one-day return. Item 3.02 reports unregistered sales of equity securities. (SEC 2012) The significant results of the study can possibly be explained by the fact that the text on this item can vary greatly due to the subject matter. Conspicuously often the item in question is reported in mixed 8-K reports that also contain other items.

A negative correlation between the three-day cumulative abnormal return after and the two-day cumulative abnormal return can also be measured in this model. As in the second model,

however, the measured correlation is again not significant. Just like the first two models, this model also has a very low coefficient of determination R^2 of under 1%.

Nevertheless, the results of the third model support the previously established hypothesis 3, since only for a small part of the items significant influences of sentiment on the three-day cumulative abnormal return after report publication could be measured.

CONCLUSION

This paper contributes to the understanding of the influence of the sentiment of reports on the stock market, especially the sentiment of 8-K reports. In the present analysis, the influence of Form 8-Ks sentiment on the stock market was examined. The sentiment shows a highly significant positive influence on the stock market, although initially it is not possible to distinguish between the facts and the tone of the report. For this purpose, the analysis is extended and a distinction is made between the period before the notification and after the notification is made. Before the report becomes known, only insiders can exploit their knowledge of the facts. The tonality is not yet known at this stage. Once the report has become known, external parties will react to both the facts and the tone of the report. Even if the influence of insider information is corrected for - i.e. a distinction is made between facts and tonalities - the influence of the tone is still highly significant.

The validity of the results found can be attributed to three items in 8-K reports, item 1.04 "Mine safety", item 2.02 "Operating results and financial condition" and item 3.02 "Unregistered sales of equity securities".

The significance of the results is limited, among other things, by the fact that, in principle, several items are published in an 8-K report and the measured tone cannot therefore necessarily be assigned to a specific item. In addition, some of the items are only included in a very small number of reports and a higher number of occurrences of these events may also make it possible to measure a significant influence of the sentiment.

In future work, for example, the influence of the sentiment of other report forms than those primarily investigated so far can be analyzed. Furthermore, the influence of the sentiment of Form 8-K similar reporting formats in markets other than the American market can be investigated. Further techniques of Natural Language Processing are still completely lacking.

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The Impact of Corporate Social Responsibility on Corporation Success in Czech Administration Proceeding

Tomáš Moravec
tomas.moravec@vse.cz
Prague University of Economics and Business, Faculty of International Relations,
Department of Business and European Law
Prague, Czech Republic

Abstract: The paper focuses on investigation between the corporate social responsibility and success or failure of corporations in administration proceeding according to Czech bankruptcy law. The paper examines whether the corporations with stronger implementation of corporate social responsibility avoid or overcome the default easily in administration proceeding. The paper examines corporations that were involved in administration proceeding according to Czech bankruptcy law in period from 2008 to 2019 and that concluded the administration proceeding.

Keywords: corporate social responsibility; bankruptcy; administration proceeding; corporate governance

JEL Classification codes: G30, G33, M14

INTRODUCTION

The corporate social responsibility is spoken in many ways. Over past decades, the importance of the corporate social responsibility is increasing. The corporate social responsibility is usually connected with higher financial performance of corporations. So, there should be positive reference between corporate social responsibility and financial performance of corporations (Margolis et al., 2009). Furthermore, there is correlation between financial results assessed according to the selected ratios from financial analysis and the number of information companies present concerning corporate social responsibility (Myšková & Hájek, 2019).

Also, the bankruptcy or financial default might be connected with some problems. Czech insolvency law sets that the default of corporations shall be solved through liquidation or administration of corporation. In the process of liquidation, the firm's assets are sold out opposite to the administration process that leads to the rescue of corporation.

According to Cooper (2019) the stronger corporate social responsibility corporations are less likely to become bankrupt relative to weaker corporate social responsibility corporations. This opinion corresponds with previous theories of corporate social responsibility.

The paper focuses on investigation between the corporate social responsibility and success or failure of corporations in administration proceeding according to Czech bankruptcy law. The success of corporation in administration proceeding has meaning that corporation fulfills the administration plan and so overcomes default. The paper examines whether corporations with stronger implementation of corporate social responsibility avoid or overcome the default easily in administration proceeding.

In paper, I focus on Czech corporations from 2008 to 2019 that claim for administrative proceeding according to Czech insolvency law. Are there any differences between satisfactions of creditors' claims in administrative proceedings involved corporations with stronger

implementations of corporate social responsibility principles or without implementation of corporate social responsibility principles? In addition, I have to ask, whether we could find some probability of correlation between corporations that claim for bankruptcies and their success in administration proceeding due to implementation of corporate social responsibility.

My analysis is based on 208 corporations that have claimed for administrative proceedings during the period of 2008 to 2019. I suggest that the corporate social responsibility affects the administration proceeding according to Czech insolvency law. There is also limited evidence that bankrupted corporations with strong corporate social responsibility will be challenged with repeated bankruptcy.

I suppose that impact on corporation in bankruptcy proceedings is given by involved groups in the bankruptcy, especially management, investors, creditors and affected legal entities by administrative proceeding. Furthermore, the bankruptcy affected also employees due to losing of income, shareholders due to losing of profit share, creditors due to probability of payment of claims.

So, I think that the paper might explain the impact of implementation of corporate social responsibility on success in administrative proceeding according to Czech insolvency law. Moreover, the paper explains whether the success in administrative proceeding is partial or the threat of financial default is more probable in corporations without implementation of corporate social responsibility principles. The result of the paper could set the optimal consecution in insolvency proceeding for debtor.

The paper involves literature review in section 1, methodology in section 2, the result and discussion in section 3 and conclusion in last section.

1 LITERATURE REVIEW

The literature corresponding to the topic could be divided into two categories, first corresponding to corporate social responsibility and second, corresponding to bankruptcy and administration proceedings.

1.1 Corporate social responsibility

Corporate social responsibility was defined as the responsibility of enterprises for their impacts on society. The enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders. The World Business Council (1999) also created definition of corporate social responsibility as a business commitment to sustainable economic development, working with employees, the family, the local community, and society as a whole to improve the quality of life.

Moreover, there is a huge number of research studies on the nature, effects, and impacts of CSR. Myšková, R., & Hájek, P. (2019) focus on the correlation between financial results assessed according to the selected ratios from financial analysis and the number of information companies present concerning corporate social responsibilities. Worse financial results are linked to less information on corporate social responsibilities.

The possibility of exculpation from criminal liability has examined Andreisová, L. (2017) in Czech law and paper focus on exculpation due to ethical codes and implementation of corporate governance rules.

Furthermore, Cooper, E., & Uzun, H. (2019) have found that there was an inverse relationship between debt and information on corporate social responsibilities activities.

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Lin K., C., & Dong X. (2018) examined correlation between positive corporate social responsible engagement and deep financial distress. They showed that moral capital reduces bankruptcy likelihood when corporations grow larger. On the other hand, the exchange capital mitigates bankruptcy likelihood when corporations rely on intangible assets to operate and when corporations operate in more litigious business environment.

1.2 Bankruptcy and administration proceedings

The reasons for bankruptcy are different. According to Kamalirezaei, et al. (2020) the collapse of corporations occurs when the control of firms goes away from one or more groups of stakeholders and managers cannot attract the support of stakeholders who adopt the opposing position. The cause of the lack of stakeholder protection occurs when one or more stakeholders focus on analyzing financial statements. Many of corporations that are bankrupt have not been able to attract stakeholder support through accounting information. Moreover, the cost of creditors in administration proceeding is analyzed Eckbo (2016) that concluding the creditors bear most of the direct cost of bankruptcy. The shareholders could be affected by bankruptcy even more than creditors.

From different point of view, the bankruptcy is analyzed according to number of corporations. The number of corporations have claimed for administrative proceedings is mentioned in Richter (2011b). According to Richter (2011a) the changes of Czech insolvency law have got a positive impact on number of administrative proceeding. The number of bankrupt entrepreneurship is mentioned in Moravec (2013).

The connection between bankruptcy and corporate social responsibility is possible to find by another authors. Cooper, E., & Uzun, H. (2019) find that stronger corporate social responsible corporations are less likely to become bankrupt relative to weaker corporate social responsible corporations, all else being equal. This conclusion of Cooper, E., & Uzun, H. (2019) is in line with the stakeholder theory of corporate social responsibility. On the other hand, the existence of a reorganization plan does not automatically mean it will successfully emerge from bankruptcy (Cooper, E., & Uzun, H., 2019).

Moreover, James (2016) has founded that relationships with stakeholders as measured by executory contracts influence the probability of whether a corporation subsequently emerged as a going concern from administrative proceeding. Some studies examine the relationship between corporate governance and risk of the bankruptcy (Robinson, et al. 2012; Darrat et al. 2016 and Eckbo et al. 2016). Furthermore, Kamalirezaei, et al. (2020) conclude that corporate social responsibility has a significant inverse relationship with the probability of bankruptcy, and when the market structure moves to a monopoly, the probability of market bankruptcy is reduced due to high market entry costs for other companies.

According to the above discussions and literature, this paper examines the relation between corporate social responsibility and potential success of corporation in administrative proceedings.

2 METHODOLOGY

The aim of paper is examinations of relationship between the corporate social responsibility and success or failure of corporations in administration proceeding according to Czech bankruptcy law. The success of corporation in administration proceeding is connected with the fulfillment of the administration plan opposite to failure of corporation. The failure of corporation means that the administration proceeding is conversed to liquidation.

The paper investigates the following hypothesis:

Hypothesis 1: Corporations with implemented corporate social responsibility principles overcome more easily the financial default in administration proceeding according to Czech bankruptcy law.

Hypothesis 2: Corporations with implemented corporate social responsibility have higher probability of success in administration proceeding according to Czech bankruptcy law.

The paper uses descriptive ex post correlation method. The paper is based on dataset from publicly opened insolvency register from 2009 to 2019. This dataset involves number of corporation claimed for administrative proceeding, the number of corporation succeed in administrative proceeding, the number of corporation failed in administrative proceeding and the number of corporation in progress of administrative proceeding. Furthermore, the research in literature was done in JSTOR, EBSCO and the corresponding manuscripts were found.

To achieve data on corporate social responsibility, the accounting report, web pages of corporations and publicly accessed data from commercial registrar has been used. According to analysing the publicly accessed statement of corporation were matched the corporation implementing the corporate social responsibility principles. In our paper, the corporation implemented the corporate social responsibility is corporation that fulfilled standards and stated that is common with corporate social responsibility principles. This criterion has been used for following examination.

Second part of examination was yielding data from publicly opened Czech insolvency registrar. The insolvency registrar involves all data on bankruptcy human or legal entities in Czech Republic. The bankruptcy proceeding might be solved by liquidation, administration or debt relief. The administration proceeding is convenient for entrepreneurship and the all administration proceeding in Czech Republic has been investigated the period from 2008 to 2019.

Corporations involved in administrative proceeding was divided into three groups, (i) failed administrative proceeding, (ii) successful administrative proceeding and (iii) administrative proceeding in progress.

In these three groups of corporations, the paper also analysed the ratio of corporation that implemented corporate social responsibility principles. Moreover, it focused on correlation between the percentage of corporations' implemented corporate social responsibility in each category and the possible outcome of administrative proceedings.

Furthermore, the correlation between potential percentage of satisfaction of creditors and corporations implemented corporate social responsibility principles was also examined. Among others, the correlation between percentage of voting creditors and corporation implemented or not implemented corporate social principles is also discussed in the paper.

Moreover, the paper focused on relationship between corporate social responsibility and entering corporations into bankruptcy proceeding after successful administration.

The size of corporations has been not taken into account due to lack of relevant data. Unfortunately, the insolvency registrar has not information about number of employees or turn over.

3 RESULTS AND DISCUSSION

The insolvency registrar involves over three hundred thousand entries and the number of administration proceeding is 208 entries. As has been mentioned above, the number of administration proceeding was divided into three groups, (i) failed administrative proceeding, (ii) successful administrative proceeding and (iii) administrative proceeding in progress. Each

group has also potential number of involved corporation implemented corporate social principles.

In the paper is supposing, that corporations with implemented corporate social responsibility succeed in administration proceeding easily. The total number of corporations claim for administrative proceedings is 208 corporations. In my dataset, 111 corporations failed, 64 corporations succeed and 33 corporations are in progress. As showing table 1, the percentage of successful corporations with implemented corporate social responsibility claiming for administration proceedings oscillates around 24 percent. Opposite to this, corporations claiming for administration proceedings are corporations that transferred into liquidation. In this group, the percentage of corporations with implemented corporate social responsibility is only 0.9 percent. The representation of corporations with implemented corporate social responsibility is 24 times higher in administration proceeding.

Tab. 1 The Number of Administration Proceedings

The Number of Administration Proceedings				
The Group of Proceedings	The total number of corporations	The number of corporations without CSR	The number of corporations implemented CSR	The Percentage of corporations with implemented CSR
The Liquidation	111	110	1	0.9%
The Successful Administration	64	49	15	23.4%
The Administration in Progress	33	25	8	24.4%
Total	208	184	24	13%

Source: own elaboration; insolvency registrar; commercial registrar; web pages of corporations

The second part of examination is focusing on analysing successful administration and the probability of success in administration proceeding. From the dataset is obvious that there were 64 successful administrations and was found that 49 corporations represented the corporation without implemented of corporate social responsibility principles and 15 corporations represented the corporation with implemented of corporate social responsibility the corporation without implementation of corporate social responsibility. After calculation of the percentage of satisfaction of creditors has been found, that average number of satisfaction of corporation without implemented corporate social responsibility principles is 17.5 percent and the average number of satisfaction of corporation with implemented corporate social responsibility principles is 2.58 percent. The debtor without implemented system of corporate social responsibility shall increase satisfaction of creditors 6.78 times to creditors with implemented corporate social responsibility principles. The one of the explanations could be the trust of creditors to the debtor with implemented corporate social responsibility principles and belief of sustainable business of this debtor.

Moreover, the analysis has focused on the quorum needed for the approval of resolution confirming administration proceeding. Although the satisfaction of creditors, corporate social responsible debtor, is 6.78 times lower than the satisfaction of creditors, no corporate social responsible debtor, the quorum of approving the resolution is higher by corporate social responsible debtor. The average quorum for approving administration resolution for corporate

social responsible debtor is 97.8 percent and the average quorum for approving administration resolution for debtor without implementation of corporate social responsibility is 82 percent.

Tab. 2 The Successful Administration

The Administration in Progress	The Number of Corporations	The Percentage Satisfaction of Creditors	The quorum approved a Successful Administration
The number of corporations without CSR	49	17.5%	82%
The number of corporations implemented CSR	15	2.58%	97.8%
Total	64	14%	87.5%

Source: own elaboration; insolvency registrar; commercial registrar; web pages of corporations

The similar analysis has been made for the administration in progress and the results are similar. Because of the progress in administration process the dataset is without the quorum that approved resolution on administration plan. The proposal for administration also contains different numbers concerning satisfaction of creditors of debtor. The average debtor's, without implementation of corporate responsibility, proposal for satisfaction of creditor is around 25 percent. In the case of corporate social responsible debtor, the proposal for satisfaction of creditors is 6.7 percent. Also, in case of proposal for administration the satisfaction of creditors is lower by the debtor implemented corporate social principles, and it is approximately four time lower.

Tab. 3 The Administration in Progress

The Administration in Progress	The Number of Corporations	The Percentage Satisfaction of Creditors	The quorum approved a Resolution on Administration
The number of corporations without CSR	25	25.03%	N/A
The number of corporations implemented CSR	8	6.7%	N/A
Total	33	20.59%	N/A

Source: own elaboration; insolvency registrar; commercial registrar; web pages of corporations

The last point of analysis is recovery success after administration proceeding. In this part, the paper has compared matched sample of corporate responsible corporations to the sample of non responsible corporations that claim again for bankruptcy. The paper focuses on probability of debtor that will be repeatedly in financial failure or default. According to dataset of 208 administration proceeding the data shows that the percentage of unsuccessful recovery in administration is same. In the case of unsuccessful recovery, the repeated failure of debtor without implementation of corporate social principles has probability of 6.12 percent. In the case of corporate social responsible debtor the probability of unsuccessful recovery is 6.66 percent. We might conclude that the probability of unsuccessful recovery is same by the both type of debtors, due to small sample of debtors.

Tab. 4 The Claim for Liquidation after Successful Administration

The Claim for Liquidation after Successful Administration	The Number of Successful Administration	The Number of Corporations claim for Liquidation	The Percentage of Unsuccessful Corporations
The number of corporations without CSR	49	3	6.12 %
The number of corporations implemented CSR	15	1	6.66%
Total	64	4	6.25%

Source: own elaboration; insolvency registrar; commercial registrar; web pages of corporations

After the research, preponderance of evidence indicates a relationship between the easiness of administration proceedings and implementing corporate social responsibility principles. The debtor implemented corporate responsibility principle might propose lower satisfaction of creditors and the higher number of creditors approve the administration resolution. Unfortunately, due to lack of data, it is unable to compare the percentage number of corporations' implemented corporate social responsibility claimed for administration to the percentage number of corporations' implemented corporate social responsibility in Czech Republic.

So, the implementation of corporate social responsibility principles has positive impact on success of debtor in administration proceeding.

There is no difference between corporation implemented or unimplemented corporate social responsibility principles in unsuccessful recovery of debtor due to same percentage rate.

The paper concludes dataset of insolvent companies, but it is limited, that part of companies was released from insolvency registrar. Moreover, the implementation of corporate social responsibility is based on publicly shared documents by corporations. Also, the dataset might be small in the case of unsuccessful recovery. Also, the insolvency registrar does not contain data concerning board size and board independence and these data are not mentioned in the administration plan.

CONCLUSION

The paper has found the relationship between the implementation of corporate social responsibility und success or easiness in administration proceeding. There is no correlation between unsuccessful recovery and implementation of corporate social responsibility.

The theory suggests that corporate social responsibility could help a corporation by engaging stakeholders and can use that support for financial gain. This principle has been confirmed in paper because it was found that engaging stakeholders are satisfied in lower pecuniary amount in administration proceeding. The result of paper might be use for planning of optimal satisfaction and distribution of debt in administration proceeding.

The further research should focus on the reasons for lower satisfaction of creditors in the administration proceeding with corporate social responsible debtor. One of the reasons might be trust of creditors to the debtor.

The future research can also compare ratio of corporations implemented corporate social responsibility principles in administrative proceeding and ratio of corporations implemented corporate social responsibility.

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Impact of International Environment on the Entrepreneurial Marketing Orientation of Small and Medium Enterprises

Adam Oleksiuk – Agnieszka Pleśniak – Izabela Kowalik
aoleksi2@sgh.waw.pl, akulik@sgh.waw.pl, iza123@sgh.waw.pl
Warsaw School of Economics, Collegium of World Economy, Department of
International Marketing
Warsaw, Poland

Abstract: Background: A company with transnational ambitions operates, reacts and undertakes its activities within the broadly understood international environment. The article aims at assessing the relationship between the international environment hostility (ENV) and the entrepreneurial marketing orientation (EMO) of Polish SME-exporters. Methodology: Two analyses – one on a sample of 300 Polish SME-exporters, interviewed with CATI/CAWI method in 2018, and the second – on a sample of 240 SMEs, interviewed in 2019, were conducted. The recently elaborated EMO construct was applied to assess the attitudes of the surveyed companies towards market opportunities and customers; while the environment characteristics were assessed with commonly used scales. Findings: The majority of surveyed enterprises did not perceive the external environment as hostile, regardless of the economic slowdown observed in 2019. Moreover, contrary to earlier findings, no relationship between ENV and EMO has been ascertained, which might be due to the respondents' characteristics, or to the type of marketing strategies applied.

INTRODUCTION

A company with global ambitions cannot operate in a "vacuum", it functions, reacts and undertakes its activities within the broadly understood international environment. External factors of a cross-border nature constitute a considerable challenge in the modern, turbulent, changing, global environment from the point of view of the applied strategic orientation of an organization. This variability is of key importance for decisions made in the company by managers, specialists and marketing practitioners. In order to succeed, organizations face the challenge of responding to the dynamics and uncertainties in the business environment. Strategically, managers need to be aware of how changes in the competitive environment are going and developing in order to be more responsive to changes in their customers' preferences. The business environment is divided into internal and external. This paper focuses on the international environment (political, legal, economic, technological, cultural, demographic, and ecological) that influences the decisions made by managers, especially in smaller entities. Therefore, it is desirable to continuously acquire and read the entire range of these external influences/factors. This skill is crucial because a bad "filtering" of knowledge can result in an excess of unnecessary and inadequately selected information. Thus, the aim of the article is to identify the relationship between the key factors of the international environment and the Polish SME's marketing orientation.

1 LITERATURE REVIEW

1.1 Environment characteristics and internationalization of SME

The end of the 20th century and the first decades of the 21st century was a period of dynamic development of the process of SME internationalization, which was gaining in importance (McDougall & Oviatt, 1996; Crick & Jones, 2000; Nakos & Brouthers, 2002; Vrontis & Vronti, 2004; McDougall & Oviatt, 2005; Agwu & Onwuegbuzie, 2018; International Monetary Fund, 2019a). This was primarily due to the role played by SMEs in the economic growth of individual countries. Researchers in their work (e.g. Agndal & Chetty, 2007; Musso & Francioni, 2014; Musso, Francioni, Cioppi, 2015) focused on two key strategic decisions related to the process of SME internationalization, such as the appropriate choice of the foreign market and possible options on how to internationalize. The former can be described as "the process by which companies choose where or with whom to conduct transactions". (Andersen & Buvik, 2002); the latter concerns the choice of a form of governance and generally a favorable external environment for transactions on transnational markets (Ji & Dimitratos, 2013). Therefore, also in the context of the external environment, the process of making strategic decisions has become one of the most important topics for many researchers (Musso, Francioni, Cioppi, 2015; Dimitratos et al., 2011).

From the point of view of the internationalization of SMEs, one of the main factors of the external environment influencing the functioning of small and medium-sized enterprises its political stability. The political dimension of the environment affects the economic activity of smaller market "players". If it is predictable, SMEs can grow and implement international business strategies with greater certainty, reducing the risk of undefined events. If, on the other hand of a country frequently change the direction of their public policies, then long-term planning becomes more complicated and difficult; companies will be forced to adopt a short-term perspective, rather a pragmatic approach will prevail. Research shows that companies operating on foreign markets usually perfectly understand the specificity of differences in the political environment in different regions of the world (Mintzberg, 2003, 133-154; Vrontis & Vronti, 2004, 389-398, Vignali, Vrontis, Vranecevic, 2003). Also, the philosophy in the approach to state management by the political parties in power directly influences the business models and practices of SMEs. The political environment is to determine what integrated SMEs can and cannot do at a given time. It is increasingly complex; it affects companies directly. Political factors include elements of the system such as government stability, social policy, trade regulations, tax policy and rules on the mode/barrier of entry into a given market, which facilitate or restrict business opportunities. Policy decisions can also affect many business-related areas such as education or the quality of transport infrastructure. The legal environment also affects the conditions in which businesses and consumers operate. The introduction of legislation to combat discrimination based on age, gender, disability, etc., the setting of minimum wage levels, requirements for organisations to recycle waste are examples of laws and regulations that have a strong impact on SMEs (Arnold & Reynolds, 2003, 10-15). Therefore, more and more difficult for SMEs to undertake foreign activities without facing various legal and regulatory problems. The existence of different bureaucratic systems and cultures in the international environment is crucial for making decisions on investing across borders. It is worth noting that the law is made based on local values and often certain assumptions that are in a way built into national ideologies. The type of "culture of law" in which "negotiations" are carried out based on personal premises and benefits, rather than legal, is of great concern. Thus, the positive impact of the International Monetary Fund, the World Bank, the European Commission and other international bodies in creating a "culture of law", which politicians, national public institutions and businesses are obliged to respect, should be highlighted. The legal environment can affect companies in various ways, e.g. how

their products are manufactured, promoted and sold. Monetary and fiscal policies applied by governments have a direct impact on economic activity. The monetary policy shaped by the central banks influences the amount of money supply and interest rates. At the same time, it should be stressed that each country has its legal system and, when a company internationalizes, it must comply fully with its own legal system (Daniels, Radebaugh, Sullivan, 2007, 21-26). This is particularly important when developing individual elements of the marketing mix on foreign markets; this requires small and medium-sized enterprises, adapt to the requirements of a specific foreign market. In many countries, the government and its regulations have a direct impact on product creation in international markets. The state often imposes certain minimum/special requirements on a particular product, e.g. shape, type, sometimes name (Daniels, Radebaugh, Sullivan, 2007, 11-12). There are numerous examples of the above mechanism. As Agwu and Onwuegbuzie argue, for example, commercial advertising is not allowed in Libya, and several European countries restrict child abuse in Libya; in India, alcohol advertising is prohibited (Agwu & Onwuegbuzie, 2018). In the EU and the US, as Agwu and Onwuegbuzie stress, "competition rules also apply in the public interest" (2018). The fight against all kinds of monopolies is a significant goal of implementing these regulations. If governments change rules and regulations, this can have serious consequences for doing business in a country. When a new party takes power, there is uncertainty about the direction of possible changes in public policies. At the same time, even if the same political party wins the elections, again and again, one cannot be convinced that the economic policy of the government and thus in the regulations will not change to the detriment of entrepreneurs. For the SME sector this seems to be of key importance, smaller companies are more vulnerable and susceptible to this type of system unrest. Regulatory stability is therefore essential, as decisions taken in this area can have a positive or negative impact on the functioning of SMEs in international markets. These smaller actors are particularly vulnerable to the lack of such instability; it is they who are the first to be affected by changes in political and legal dimensions.

The internationalization of SMEs is also influenced by the global economic environment, which can be described as the entire international economic system within which SMEs operate in foreign markets. Economic factors influencing the possibilities of SME internationalization for variability include a balance of payments, business cycle phase, income redistribution within the community, monetary and fiscal policy (see International Monetary Fund, 2019a; International Monetary Fund, 2019b). At the same time, it is worth noting that often political factors can be transmitted to linked economic factors; for example, taxation is usually decided by politicians, based on a set of variables of both political and economic nature. Other key economic factors affecting the performance of marketing activities include gross domestic product, exchange rates, interest rates, inflation, income growth, debt and savings, which affect the amount of money available in the economy and strengthen or weaken consumer and business confidence. An example of the volatility of economic factors can be the modern turbulent international financial market, including the global securities market. When analysing the volatility of the contemporary international economic environment, numerous threats to doing business in a transnational dimension are observed (Francioni, Pagano, Castellani, 2016). This raises the question of what kind of action is needed to correct the 'cracks' in the global economy and to stimulate more dynamic economic growth, especially for SMEs and their global business opportunities?

An important aspect influencing the internationalization of SMEs is the socio-cultural dimension of the environment. It consists of customs, lifestyles, values that characterise the society in which organisations and consumers operate. As Arnold and Reynolds emphasize, socio-cultural elements of the environment influence SME's ability to obtain resources, produce goods and services and the functioning of the organization in society (Arnold & Reynolds, 2003, 77-95). Demographic variables, growing level of education, norms and values, attitudes towards

corporate social responsibility including its ethics are examples of socio-cultural environment. Demographic factors such as population size, growth dynamics, age structure, life expectancy, family size, occupational status and employment structure influence the demand for goods and services. The markets with a growing population and income are growth markets (Hamel & Prahalad 1994; Hamel, 2007). The rapidly growing population indicates a growing demand for many specific products and services. The high rate of population growth also indicates a huge increase in labor supply. In most of today's developing countries we see a significant increase in population and thus in surplus labor. Governments in developing countries, therefore, tend to encourage labor-intensive production methods. Capital-intensive methods, automation and even rationalization are opposed by workers employed in professions where robots and artificial intelligence can be used quite easily (International Monetary Fund, 2019a). The rate of population growth is therefore an important factor in the international environment, influencing the operation of companies in foreign markets. The cheap labor force and emerging markets have encouraged many not only multinational corporations but also SMEs to invest in developing countries. The professional and spatial mobility of the population has a direct impact on business. If the workforce is mobile between different occupations and regions, its supply will be relatively stable, and this will translate into wage developments. The problem will appear, when the workstream is highly heterogeneous e.g. in terms of language, religion, ethnic origin, etc., then in such condition's management may become much more complex. It is also worth remembering that a heterogeneous population with different tastes, preferences, beliefs, temperaments, etc. gives rise to different patterns of demand and requires different marketing niche strategies. Jin and Cho stress "once SMEs enter international markets, marketing capabilities are needed to address consumer needs, differentiate their products and services from those of competitors, and attain their intended strategic goals. Consequently, SMEs with strong international entrepreneurial orientation will invest resources and efforts into developing their marketing capabilities in international markets" (Jin, Cho, 2018, 588).

Technology is an increasingly important aspect of the environment for virtually all companies with global ambitions; therefore, it is technological factors that must be taken into account when internationalizing SMEs and developing international marketing strategy plans. Technological changes can both create new opportunities for the company and threaten the survival of the product, the company or the entire industry. According to Porter, technological changes are the main driving force of competition (Porter 1985, 15-34). Technology can change consumers' lifestyles and shopping patterns. Recent developments in technology have broadened the potential customer base and only confirm the countless opportunities for businesses to engage in business over the Internet. The rapid emergence of the Internet has meant that any company can be more competitive internationally, even if it sells goods and services only on a local or regional market, because the distance barrier is removed, thus 'clearing' the path to the customer. However, at the same time, technological change is a key determinant of entry barriers, changes the bargaining relationship between industry and its buyers and suppliers, changes the nature and basis of competition between existing competitors, and creates new products or product applications that replace others, and extends or reduces industrial barriers (Porter, 1985, 1547). Many authors stress "technological turbulence may reduce the importance and benefits of responsive market orientation. The optimum level of responsive market orientation is potentially lower for firms that have the opportunity to establish a competitive advantage through technological innovation. In addition, consumer predictions of their responses to radical innovations are often unreliable" (Yejing et al., 2018). According to Jin and Cho "SMEs with strong international entrepreneurial orientation will invest in developing their technological capabilities. SMEs with limited financial resources struggle to compete effectively in international markets without technological advancement". (Jin, Cho, 2018, 589). In organisations with a low level of technology, the emphasis is only on the use of technology, while in organisations with a high level of technology, technology is decisive, and therefore new innovative solutions are created and created in terms of

technological advantages. Technological factors can sometimes create specific problems, and a company that cannot cope with technological change may not survive in international competition. Moreover, the diverse technological environment of different markets or countries may require product modification. Rapid changes in technology also create problems for businesses as they make their products age faster. Today, products have a much shorter life cycle than in the past, which requires constant investment and improvement of their businesses (Feenstra, Hanson, 2005).

Environmental (ecological) factors address many key issues. The 21st century brought an exacerbation of new phenomena related to the use of the natural environment, such as air pollution in cities, acid rain, the so-called ozone hole, the greenhouse effect, marine pollution, shortages of drinking water, the decline of forest areas and changes in the biological resources of the world (International Monetary Fund, 2019c). These phenomena are mostly international and global in scope. The above changes may affect many industries, e.g. agriculture, tourism, transport, banking, etc. (Andrews 1987, Mintzberg, 2003). The equally high rate of global population growth indicates a huge increase in labor supply. A population with different tastes, preferences, beliefs, temperaments, etc. is causing an increasingly diverse pattern of demand and requires different marketing strategies (this is both a challenge and an opportunity for SMEs). There is a general consensus that climate change will reduce world gross domestic product. At the same time, with greater environmental awareness, this external factor is becoming an important guideline for companies, as the global pro-environmental trend influences new patterns of demand and creates pioneering opportunities for international business (International Monetary Fund, 2019c). The government's policy to maintain the cleanliness of the environment and ecological balance, and the protection of resources, creates additional burdens for SMEs. Some of them result, among others, in increased production and marketing costs. Thus, negative externalities have become an important problem that small and medium-sized enterprises must to deal with.

1.2 The external environment as a determinant of entrepreneurial marketing orientation

In light of the phenomena described above it is worth testing the following hypothesis:

H1: The greater the hostility of an environment on the international market, the stronger the entrepreneurial marketing orientation of Polish SME exporters.

The essence of the entrepreneurial marketing orientation concept is the subject of many publications, debates and academic discussions. When reviewing the literature, two dominating approaches to this issue can be seen. One treats entrepreneurial marketing orientation essentially as a kind of corporate philosophy and the other treats it mainly as a kind of corporate behavior. More specifically, in order to define marketing orientation, Drucker states that "marketing orientation should, first of all, apply to the entire organization, secondly, it must be seen from the customer's perspective". (Drucker, 1954). This view is supported by Felton, who also described the company with more emphasis on the characteristics of the marketing orientation concept. He considered this to be 'a way of thinking in running a business that is based on integrating and coordinating all marketing activities, which in turn interacts with other areas of the company to maximize long-term profitability'. (Felton, 1959, 55-65). Swartz treated the organization and concept of marketing orientation differently. While the marketing organization was used to describe the functional department of the company that carries out activities directly related to marketing (e.g. pricing, distribution channels, promotion tools, etc.), the concept of marketing orientation is related to a specific way of thinking about the most important priorities and objectives of the company (Swartz, 1990). Similar opinions are expressed by Deshpande and Webster, who, however, attribute more

philosophical and cultural characteristics to the marketing orientation. Trying to explore the novelty of Japanese organizations, they used marketing orientation to explain the inclination of companies to be innovative (Deshpande, Webster, 1989, 3-15). To this end, they used the term "customer orientation" to describe a specific set of beliefs that puts the interests of customers first, before the interests of all other stakeholders (e.g. owners, managers, employees, etc.). In their view, this set of beliefs should be seen as part of a broader and more fundamental innovative corporate culture (Deshpande, Webster 1989, 3-15). It takes a similar approach to the Baker marketing orientation concept. Although it avoids its specific definition of orientation, it makes it clear that, in order for SMEs to grow systematically, 'key changes in the way we think about a business' are necessary, as it says (Baker 1989, 1-4). It indirectly describes these necessary changes, while adding that the marketing philosophy is actually very easy to understand. In his view, manufacturers must make 'diligent' efforts to identify and specify the exact needs of their customers and then mobilize their companies' assets to meet those needs in a mutually satisfactory and beneficial exchange (Baker, 1989, 1-4). Nowadays authors (Kotabe, Helsen, 2017, 15, 17e) present convergent views, treating marketing orientation mainly as a kind of corporate philosophy. If the adoption of a marketing orientation requires a change in the prevailing set of beliefs and attitudes in the organization, then it defines a specific culture.

The final intention of the marketing orientation according to Kohl and Jaworski is to increase the adaptability of the company to the external environment. Therefore, marketing orientation consists in developing both a set of attitudes and business practices aimed at maximizing the company's adaptability to the changing international environment (Kohli, Jaworski, 1992). According to many authors (Ji & Dimitratos, 2013; Musso, Francioni, Cioppi, 2015; Francioni, Pagano, Castellani, 2016) the international environment is very important from the point of view of certain categories of enterprises such as SMEs. This is crucial for industries directly dependent on imports or exports as well as domestic industries competing with imports. Therefore, a good understanding of a specific foreign market enables the company to develop a more cost-effective product range and strengthen its position on the domestic market. Many SME's starting their activities abroad and planning expansion and international activities adjust their production and investment capacities, taking into account in their strategies the volatility of these new markets (Francioni, Pagano, Castellani, 2016). Well implemented, i.e. adaptable export marketing thus facilitates the achievement of optimal capacity utilization; the company may be able to mitigate the effects of the economic slowdown, political turbulence in the home market by increasing its export activities. However, SMEs that are highly dependent on the export market may also face numerous barriers (Francioni, Pagano, Castellani, 2016).

In light of the above discussion, the entrepreneurial marketing (EM) is a concept extending and developing the basic concepts of marketing and market orientation. It has been defined as "the proactive identification and exploration of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resource leveraging and value creation" (Morris et al., 2002). Gilmore has emphasized networking, innovative marketing and managerial competencies as the pillars of this concept. Other authors (e.g. Stokes 2000; Ionita 2012) have compared the traditional "administrative" approach to marketing with the new, entrepreneurial one. They have underlined the key differentiating features of EM within the fields of company orientation, strategic decision making, marketing methods and information gathering. To operationalize this concept Jones and Rowley (2011) have described EM as comprising four dimensions: entrepreneurial orientation (EO), market orientation (MO), innovation orientation (IO) and customer orientation (CO). So far however, these authors have not used it to perform quantitative research. Another team of authors though has developed an EM scale, extensively tested and validated for use in quantitative research (Fiore, Niehm, Hurst, Son & Sadachar, 2013). The scale comprises four dimensions

of the EM concept, proposed by Morris et al. (2002). These dimensions are opportunity vigilance, consumer-centric innovation, value creation, and risk management.

2 METHODOLOGY

2.1 Sample and Data Collection

The data for analysis was gathered in two quantitative studies. The first set of data was collected between January and May 2018 with the use of a multi-mode method incorporating the CATI (computer-assisted telephone interviews) and CAWI (computer-assisted web interviews) techniques. A randomized algorithm in the software for telephone surveying was used to select the respondents. The GUS (Polish Central Statistical Office) database combined with the Bisnode database updated at the end of 2017 and containing information about companies operating in Poland served as a sampling frame. The firms were drawn from the population of 8750 existing and active Polish manufacturing firms with 10-249 employees. The interviews began with screening questions that allowed to eliminate the companies not fulfilling the following criteria: manufacturing companies founded after 1997, not being a result of a merger or takeover, never being a subsidiary of a foreign company, and having at least 25% export share in total sales. Among the companies meeting these preconditions, the response rate was 78.4%.

The primary respondents were persons responsible for cooperation with foreign partners, mainly sales/export/marketing directors or firm owners. Alternatively, the sales/export/marketing managers were interviewed. These respondents were chosen, as they were expected to be most knowledgeable about the studied topics. The final sample comprised 304 SME, 4 of which were excluded from the analysis due to inconsistent answers. Most of them (93%) were owned exclusively by the Polish capital. In other companies, the Polish capital prevailed. About 25% of the companies in the sample started exporting within the first year from inception, 48% went abroad between the first and third years after establishment and 26% needed more than three years for that.

As for the second database - The data were collected between May and June 2019 with the use of the same mixed-mode method (207 interviews were collected with the CATI and 33 applying CAWI techniques). The sample was drawn from the database comprising 2969 companies. 1038 companies have not fulfilled the selection criteria and 1691 refused to participate in the study or interrupted the interview. The final sample included 240 companies fulfilling the following criteria: existing and active Polish manufacturing firms with 10-249 employees; incepted after 2003, not being a result of a merger or takeover, never being a subsidiary of a foreign company. 120 companies were strongly internationalized companies having at least 25% export share in total sales, while the other 120 companies were active mainly locally, with the export share not exceeding 25%. The respondents were persons responsible for cooperation with foreign partners, as in the first sample from 2018. Almost 67% of the sample were small companies with 10-49 employees. The remaining 33% of the companies in the sample employed between 50 and 249 people. Almost 73% of the internationalized companies started exporting after three years from inception and only 16% began exporting within the first year.

2.2 Applied scales

The environmental hostility scale used in the study was based on Dimitratos 2011, and Khandwalla 1977. It contained the statements translated into the Polish language, shown in Table 1.

Tab. 1 Environmental hostility scale used in the study

Question: Please give your opinion on the pairs of statements concerning the environment of company activity. The company environment in the main foreign market is:	Variable Label
statement 1. Very secure (a few threats for the company activity) vs. statement 2. Very risky (each wrong decision can lead to company failure)	E_1
statement 1. Friendly, full of opportunities (investment, marketing) vs. statement 2. Stressful, hostile (it is difficult to follow the other players, stay on top of things)	E_2
statement 1. Easy to be controlled vs. statement 2. Uncontrollable, dominant, (company initiatives have little power against the competitive, political or technological factors)	E_3
statement 1. Stable, easy to forecast (concerning customer preferences technological trends) vs. statement 2. Unstable, volatile	E_4

Note: the answers were put on semantic differential scales ranging from (2019) "1"- SF-strong agreement with the first statement, "2" -F- first statement, "3" – RF – a rather first statement, "4" -N-neutral, "5" -RS – a rather second statement, "6" -S- second statement, "7" -SS – strong agreement with the second statement. In 2018 an analogical five point-scale was used.
Source: Own study.

The distribution of answers concerning the assessment of environmental hostility by the study participants in 2018 and 2019 is shown in Table 2.

Tab. 2 Distribution of answers concerning the assessment of foreign market environment by the studied SME in 2018 and 2019

Item no.	2018, N=300*							
		F	RF	N	RS	S		total
E_1		16.3%	46.0%	24.0%	10.3%	3.3%		100%
E_2		16.0%	47.7%	21.0%	14.3%	1.0%		100%
E_3		17.3%	37.0%	24.7%	20.3%	0.7%		100%
E_4		13.3%	42.3%	16.7%	27.3%	0.3%		100%

Item no.	2019, N=120**							
	SF	F	RF	N	RS	S	SS	total
E_1	15.0%	17.5%	17.5%	25.8%	12.5%	8.3%	3.3%	100%
E_2	15.8%	19.2%	21.7%	20.8%	10.0%	11.7%	0.8%	100%
E_3	13.3%	15.0%	15.0%	23.3%	14.2%	13.3%	5.8%	100%
E_4	11.7%	15.0%	18.3%	20.0%	15.0%	15.0%	5.0%	100%

Source: Own study. Note: SF-strongly first statement, F- first statement, RF – a rather first statement, N-neutral, RS - rather the second statement, S- second statement, SS – strongly second statement. * In 2018 a five-point scale was used. **In 2019 the analysis covers only 120 exporting firms with at least 25% export to total sales ratio.

It can be seen that in both years the majority of respondents agreed with positive characteristics of the foreign market environment. For a more complete picture, Table 3. presents the descriptive statistics concerning environmental characteristics perceived by firms in 2018 and 2019.

Tab. 3 Descriptive statistics concerning the environmental hostility scale items

		2018*				2019**			
		E_1	E_2	E_3	E_4	E_1	E_2	E_3	E_4
N	Valid	300	300	300	300	120	120	120	120
Mean		2.38	2.37	2.50	2.59	3.42	3.28	3.73	3.77
Median		2.00	2.00	2.00	2.00	3.50	3.00	4.00	4.00
Mode		2	2	2	2	4	3	4	4
Std. Deviation		.986	.950	1.023	1.039	1.633	1.599	1.762	1.733
Skewness		.665	.505	.179	.182	0.210	0.264	0.059	0.052
Kurtosis		.118	-.386	-.970	-1.182	-0.711	-0.857	-0.946	-0.973
Percentiles	25	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	50	2.00	2.00	2.00	2.00	3.50	3.00	4.00	4.00
	75	3.00	3.00	3.00	4.00	4.00	4.00	5.00	5.00

Source: Own study. Note: * In 2018 a five-point scale was used for assessment of the environment.
** In 2018 a seven-point scale was used for assessment of the environment

Also, in Table 3 the positive asymmetry in the distribution of answers from both years can be seen, i.e. there were relatively more answers not exceeding the mean of scales, and the evaluation of foreign market environment by the studied firms was rather positive. Robust tests of the homogeneity of means supported the discriminative power of all scale items in both studied years. The reliability statistics for scales were acceptable (Cronbach's Alpha Based on standardized items was equal to .691 in 2018 and .840 in 2019). The exploratory factor analysis has confirmed that the ENV scale was unidimensional.

Summing up the ENV scale can be described as a reliable and homogenous construct capable of evaluation of the foreign market environment characteristics by the SME from Poland.

As for the entrepreneurial marketing scale, in both samples we have used the construct proposed by Fiore et al. (2013) and adapted by this author team (Kowalik, 2020). The multidimensional entrepreneurial marketing orientation (EMO) construct comprised Proactive orientation, Opportunity focus, Customer Orientation, Value Creation and Low-risk marketing dimensions. This construct had been tested for reliability and validity and had been used in a study of EMO in INVs.

In addition, we included in the analysis the data regarding competitive strategies applied by the studied firms. The strategies were classified as: "standardization vs. adaptation", where a question "Does the company offer on the foreign markets any products standardized or adapted to the needs of customers?" was asked[1]. Moreover, the strategy of "similarity vs. differentiation", was analyzed, where a question: "To what degree do the company's products differ from the products offered by the closest competitors on the foreign markets?" was

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[1] Answers on a five-point semantic scale ranging from 1 - "whole product range standardized" to 5 – "whole product range adapted to the client needs".

asked[2]. Finally, the use of "niche strategy" was studied with the use of a question "Does the company target the offering to a specific type of client (narrow market niche)?"[3]

The distribution of answers concerning strategies applied in 2018 and 2019 was the following (Table 4).

Tab. 4 Main types of strategies followed by the studied SMEs

Strategy type	2018, n=300	2019, n=120
adaptation strategy (answers „4" or „5")	43.3%	40.0%
differentiation or mixed strategy (answers "3", „4" or „5")	55.0%	56.7%
niche strategy (answers „1" or „2")	62.7%	49.2%

Source: Own study.

3 RESULTS AND DISCUSSION

3.1 Relationship between environmental hostility and entrepreneurial marketing orientation

As a first step, correlation analysis was performed to check if environment perception is related to the entrepreneurial marketing orientation of studied SMEs (Table 5). Non-parametric correlation indicators were analyzed, as they are less sensitive to non-linear relationships than Pearson's correlation.

Tab. 5 Correlation between environmental hostility and entrepreneurial marketing orientation (Kendall's tau-b coefficient)

EMO dimension	Environmental hostility 2018, n=234		Environmental hostility 2019, n=120	
	Correlation Coefficient	Sig. (1-tailed)	Correlation Coefficient	Sig. (1-tailed)
Proactive orientation (P)	.010	.418	.007	.454
Opportunity focus (OP)	.008	.433	-.012	.427
Customer Orientation (CO)	-.040	.194	-.008	.448
Value Creation (VC)	.010	.413	-.010	.438
Low-risk marketing (RM)	-.055	.117	-.025	.347

Source: Own study. Note:**Correlation is significant at the 0.01 level (1-tailed), *Correlation is significant at the 0.05 level (1-tailed). In the database from 2018 the EMO model was assessed only for 234 firms, who were serving B2B or B2B & B2C, customers.

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[2] Answers on a five-point semantic scale ranging from 1 – "whole product range similar to competitive products" to 5 – "whole product range different from the competitive products", where "3" means: "half of the products are similar and half are different".

[3] Answers on the three-point scale: 1 – "we offer products to specific buyers from small market niches", 2 – "we offer products to customers from a few market segments", 3 – "we offer products to a wide range of customers".

As it is shown in Table 5, all the correlation coefficients are very low, and the assessment is not statistically significant. Thus, no relation between environmental hostility and EMO of studied firms can exist, and hypothesis 1 is not supported.

3.2 Relationship between environmental hostility and strategies applied in 2018 and 2019

To check if there is any relationship between the environment perception and the chosen marketing strategies regression analyses were run with the strategies mentioned earlier as dependent variables. For the purpose of regression analysis, the variables concerning marketing strategies were dichotomized (see Table 6, 7). In 2018 only one strategy emerged as dependent on ENV assessment. (see Table 6).

Tab. 6 Relationship between environmental hostility and differentiation strategy, results of logistic regression analysis - Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1ᵃ	Environmental hostility	-.083	.041	4.107	1	.043	.920	.849	.997
	Constant	1.022	.422	5.847	1	.016	2.777		

a. Variable(s) entered on step 1: Environmental hostility. Note: For differentiation strategy answers "3", "4", and "5" were coded as "yes". Source: Own study.

As Table 6 shows, the worse the environmental assessment, the lower the chance differentiation or mixed strategy would be used. An increase in ENV by a unit, understood as an increase in the tendency to assess the environment as hostile/unfriendly, etc. by a unit, leads to a decrease in the odds ratio of the fact that the firm will apply a differentiation strategy by 8%.

In 2019 also one strategy emerged as dependent on ENV assessment. (see Table 7)

Tab. 7 Relationship between environmental hostility and niche strategy, results of logistic regression analysis - Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1ᵇ	Environmental hostility	.081	.035	5.358	1	.021	1.084	1.012	1.161
	Constant	-1.186	.534	4.933	1	.026	.305		

a. q11b = exporters, b. Variable(s) entered on step 1: Environmental hostility. Note: For niche strategy answers "1", and "2" were coded as "yes". Source: Own study.

As a result, it can be said that the assessment of the environment as hostile increases the probability that a niche strategy is used. Table 7 above shows that an increase in ENV by a unit understood as an increase in the tendency to assess the environment as hostile/unfriendly

etc. by a unit, leads to an increase in the odds ratio of the fact that the firm will apply a niche strategy by 8.4%.

CONCLUSION

In this work, a commonly applied environment hostility scale was used the first time to assess the perception of the international environment by the SME-exporters from Central Europe. It proved to be reliable and valid and therefore may be used in further studies of the Polish and central European SMEs.

What is surprising, contrary to our forecasts, most Polish SMEs do not consider the environment to be hostile, both in the study of 2018 and 2019. Despite the visible symptoms of the economic slowdown in 2019, the majority of studied firms did not perceive the foreign markets as hostile. It may result from an optimistic attitude towards international business and the so-called "global vision" of entrepreneurs described in many studies of born-globals/international new ventures (Danik, Kowalik &Kral, 2016; Ganotakis&Love, 2012).

Contrary to the literature, both classical (Kohli and Jaworski, 1992) and more recent (Qureshi, Aziz&Mian, 2017; see also: section 1.2 of this article), talking about the impact of environmental turbulence on MO and EO, there is no connection between the perception of environmental hostility and EMO of firms, revealed in our analysis. It may lead to the conclusion that strategic orientations of firms are unaffected by factors in the environment and the tendency towards superior customer service, market responsiveness, as well as focus on opportunities remain stable despite the external changes. On the other hand, the dominating perception in the studied samples, that the environment is not hostile, might have weakened the strength of the relationship between ENV and EMO.

However, there is a visible influence of the perceived environmental hostility on the type of marketing strategy used. The perception of the environment as hostile leads to choosing less risky strategies (choosing more narrow target markets and offering products similar to the competing ones). Such finding is similar to earlier studies (e.g. Gabrielsson, Gabrielsson & Seppala, 2012). The results concerning the application of niche and similarity strategies may evidence an attempt of the Polish SMEs to adapt to the hostility of the environment, however, the influence of environmental perception on marketing strategies is not strong. One other explanation may be, that the companies are quicker at adapting the production and investment strategies and not marketing plans, to the changes which occur in their environment (Francioni, Pagano & Castellani, 2016).

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The Adoption of the Circular Economy Principles in Manufacturing Supply Chains

Milan Oreský

milan.oresky@euba.sk

University of Economics in Bratislava, Faculty of Commerce, Department of Marketing
Bratislava, Slovakia

Abstract: The issue of traditional supply chains in production sectors is currently under development and the theory and practice bring very sophisticated solutions. In practice, the economy is more network-based. The circular economy brings the need to more intensively apply the processes of integrating the development of demand and supply in individual companies and entire production networks. It is also necessary to introduce new flows within the circular economy, whether material, information or financial flows. Changes to process settings are required. In this article we write about the starting points for changes and the necessary consequences in the production sectors.

Keywords: circular economy; supply chain; production sector; linear economy; closed-loop systems.

JEL Classification codes: M30, Q50

INTRODUCTION

Right from the beginning let us remember the limits of linear consumption. Throughout its evolution and diversification, our industrial economy has hardly moved beyond one fundamental characteristic established in the early days of industrialization: a linear model of resource consumption that follows a take-make-dispose pattern. Companies harvest and extract materials, use them to manufacture a product, and sell the product to a consumer, who then discards it when it no longer serves its purpose. The situation is now more dramatic than in the recent past. In terms of volume, some 65 billion tons of raw materials entered the economic system in 2010, and this figure is expected to grow to around 82 billion tons in 2020 (data presented by the World Economic Forum, 2014)

Recently, many companies have also begun to notice that this linear system increases their exposure to risks – most notably higher resource prices and supply disruptions. More and more businesses feel squeezed between rising and less predictable prices in resource markets on the one hand and high competition and stagnating demand for certain sectors on the other (Webster, 2015). The turn of the millennium marked the point when real prices of natural resources began to climb upwards.

As the World Economic Forum states at the same time, price volatility levels for metals, food and non-food agricultural output in the first decade of the 21st century were higher than in any single decade in the 20th century. If no action is taken, high prices and volatility will likely be here to stay if growth is robust, populations grow and urbanize, and resource extraction costs continue to rise. With three billion new middle-class consumers expected to enter the market by 2030, price signals may not be strong or extensive enough to turn the situation around fast enough to meet this growth requirement (World Economic Forum, 2014).

Other trends indicate that the power of the linear model is reaching its limits (Ellen MacArthur Foundation, 2015):

- In modern manufacturing processes, opportunities to increase efficiency still exist, but the gains are largely incremental and insufficient to generate real competitive advantage or differentiation.
- An unintended consequence of eco-efficiency has been accelerating energy use and resource depletion due to the rebound effect which has negative impacts when improvements to energy and resource efficiency drive increases in the real amounts of materials and energy used.

1 LITERATURE REVIEW

The production of goods leads to undesirable externalities, including waste pollution and environmental damage. The linear economy model assumes that there is an unlimited supply of natural resources and that the environment has an unlimited capacity to absorb waste and pollution. Cooper (1999) claimed that the circular economy reduces energy and raw material permeability. The aim of the circular economy is, therefore, to restore or minimize any damage in sourcing by ensuring that a small amount of waste is generated during the production process. Obviously, this construct is based on previous concepts of sustainable development, including sustainable consumption and production (Cooper, 2012, 1999; Porter & Van der Linde, 1995). Its basic idea is to balance economic development with environmental and resource protection; leads to higher operational efficiency through lower energy consumption and lower pollutant emissions (Hanuláková, 2017).

1.1 From linearity to circularity

The practice and way of thinking in the mainstream economy has been a linear value chain, the flow of capital and nature through an open-ended economy, as shown in Figure 1. In a traditional economy that builds on weak sustainable development, there are no physical constraints on the input side, only relative restrictions through prices and subsequent technological innovation (Geissdoerfer et al., 2017). What we call a traditional economy still forms a substantial part of global economic activity today. The value chain in Figure 1 is stopped by "consumption" because the output is considered to have no value by definition. Of course, Figure 1 is a very simple outline of the economic system, but the main point is that the physical boundaries of nature are being attacked on two sides: the extraction of raw materials on the input side and the production of waste and pollution from economic activity on the production side.

Fig. 1 Linear value chain

Source: author' own processing

A circular economy is an industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models.

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Such an economy is based on a few simple principles, as shown in Figure 2. First, at its core, a circular economy aims to design out waste. Products are designed and optimized for a cycle of disassembly and reuse. These tight components and product cycles define the circular economy and set it apart from disposal and even recycling, where large amounts of embedded energy and labor are lost. Second, circularity introduces a strict differentiation between consumable and durable components of a product. Unlike today, consumables in the circular economy are largely made of biological ingredients or 'nutrients' that are at least non-toxic and possibly even beneficial, and can safely be returned to the biosphere, either directly or in a cascade of consecutive uses. Durables such as engines or computers, on the other hand, are made of technical nutrients unsuitable for the biosphere, such as metals and most plastics. These are designed from the start for reuse, and products subject to rapid technological advancement are designed for upgrade. Third, the energy required to fuel this cycle should be renewable by nature, again to decrease resource dependence and increase systems resilience (for example to oil shocks).

Fig. 2 Principles and implementation of circular economy
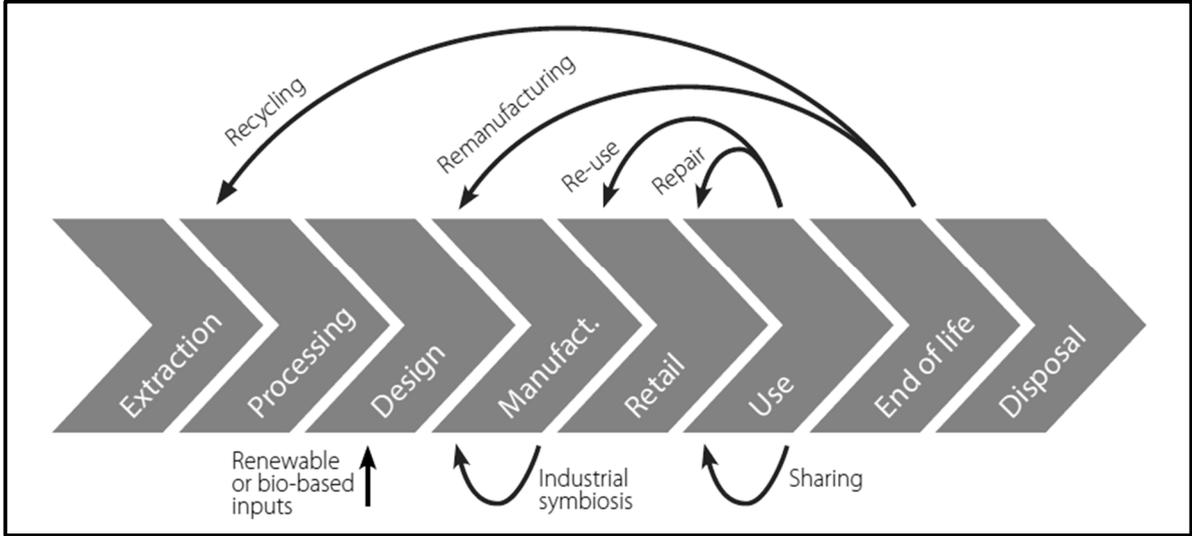
Source: C. Weetman, 2017

The circular economy, beyond the present model of production and consumption, helps optimize natural resource use through efficiency increase towards a transition from open to closed cycles of materials and energy and to less wasteful industrial processes.

It prevents the loss of valuable materials and supports the concepts put forward of waste as a potential resource rejects the concept itself of waste (Brunner, 2010). For this to happen, their use at the end of life cycle should be planned in the design phase evidence that this latter stage acquires and plays a central role in the circular economy reinforcing its benefits (mainly focused on resource use) as eco-design aims to reduce all environmental impacts in the life cycle of a product (Eco-business, 2015).

The adoption of a cradle to cradle perspective embedded in a circular economy while preventing the loss of valuable materials allows a reduction of the costs for the companies and municipalities, due to a reduction of the problem of waste management as well as to a reduction of the externalities for the society (lower pollution), new jobs opportunities and increased welfare for low-income households (Camilleri, 2017).

1.2 The hierarchy of resource use

The resource use hierarchy consists of the same steps as the circular economy. The main difference is that the hierarchy gives priority between levels and that the main focus must remain at higher levels (based on the laws of thermodynamics). From the circular thinking in Figure 3, it is possible to read the order of priorities, but it is not as explicit as in the waste hierarchy. The hierarchy recommends the following order in resource management in the economy, as shown in the inverted pyramid in Figure 3) reduction of raw materials use, 2) reuse, 3) recycled materials, 4) heat recovery combustion, 5) landfill (Cecere, Mancinelli et al. 2014). The term "resource hierarchy" or "resource use pyramid" is better than the waste management hierarchy. In this paper, the difference in wording is simply that there is no other practical or theoretical difference between waste and resources. We prefer to use the term resource use hierarchy.

Fig. 3 The hierarchy of resource use
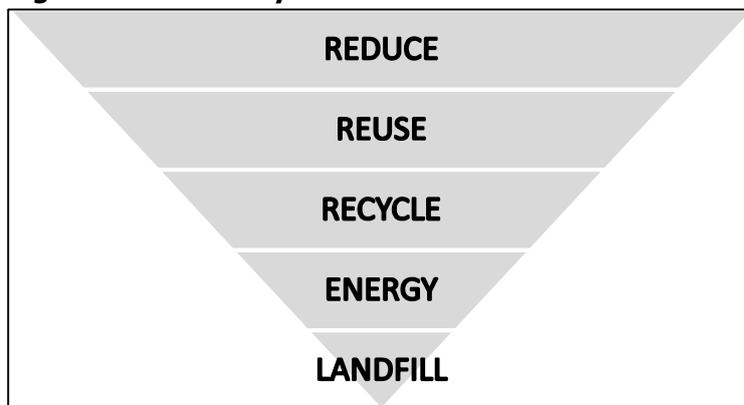
Source: authors' elaboration based on Cecere, Mancinelli et al., 2014, pp. 163-176

The main interest of our research is at the higher levels of the hierarchy, and therefore we will pay less attention to describing subsequent levels. In addition to the hierarchy, *reducing and reducing the use of raw materials* is a prerequisite for strong sustainable development. This is also the most effective environmental approach to addressing a particular problem, whether it is waste or resource depletion. Another alternative is to replace the material - call it material A - with another material B.

Recycling can be product recycling, material recycling and raw material recycling. The first means that the chemical and the physical composition of the material are retained, but the product is not used for its original purpose. Two examples are tires or glass bottles recycled into building material. The recycling of material means that the chemical composition of the material is retained, but the physical composition changes. This form of recycling includes, for example, metal melting and reprocessing and composting of biogenic materials. The last type, raw material recycling, changes the physical as well as the chemical composition of the material.

The difference between reuse and recycling, and hence the priority order in the hierarchy, is the increase in entropy. In recycling, entropy increases more than in reuse. In addition, recycling requires more energy than reuse – in general.

1.3 Structure stratification of the circular economy and limits of the concept

The vertical approach implies the shift of the circular economy from the low level of analysis – *micro-level* (company or single consumer level) to the higher hierarchical levels – meso-level

(e.g. eco-industrial parks) and *macro-level* (cities, provinces and regions). The horizontal dimension implies a link between industries, urban infrastructures, cultural environment and the social consumption system (Broecklehurst et al., 2015).

At the end of a short theoretical definition of the circular economy, it also requires note the limitations of this concept. Currently, we can summarize these constraints in six areas, as shown in Table 1. At the same time, there are also challenges motivating to find solutions.

Tab. 1 The limits of circular economy concept

Limitation	Problem/challenge
Thermodynamic limits	Cyclical systems consume resources and create wastes and emissions
System boundary limits	- Spatial: problems are shifted along the product life cycle - Temporal: short term non-renewables use can build long-term renewable infrastructure
Limits posed by the physical scale of the economy	the Rebound effect, Jevon's paradox*, a boomerang effect
Limits posed by path-dependency and lock-in	First technologies retain their market position despite of in-efficiency
Limits of governance and management	Intra-organizational and intra-sectoral management of inter-organizational and inter-sectoral physical flows of materials and energy (level of SCM)
Limits of social and cultural definitions	- The concept of waste has a strong influence on its handling, management, and utilization - The concept is culturally and socially constructed - The concept of waste is always constructed in a certain cultural, social and temporal context and this context is dynamic and changing

*When technological progress or government policy increases the efficiency with which a resource is used (reducing the amount necessary for any one use), but the rate of consumption of that resource rises due to increasing demand.

Source: authors' elaboration based on literature sources

Based on key literature *"… we define the circular economy as a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling"* (Oresky, 2019).

2 METHODOLOGY

In the paper, we present partial results of the research carried out within the VEGA project No. 1/0587/19 Possibilities and perspectives of marketing during the transition period on the circular economy in Slovakia as a new business model.

The research analyzes the approach of production companies, their readiness and their involvement in selected processes belonging to the concept of the circular economy. Our research questions are focused on the identification of circular flows in the supply chain in the

following forms: reuse, remanufacture, recycle in the field of plastics processing and usability of so-called circular inputs.

We used a qualitative analysis of secondary sources but for the results part of the paper mainly expert opinions and information. We contacted 45 companies from the TOP 100 plastic processing companies in the Slovak economy. By the time of preparation of the article, we obtained the experts' reports from 23 companies, which were supplemented by personal interviews. We expect to obtain a broader base of information that will be processed quantitatively.

3 RESULTS AND DISCUSSION

3.1 Material productivity approach

For technical nutrients, the circular economy largely replaces the concept of a consumer with that of a user. This calls for a new contract between businesses and their customers based on product performance. Unlike in today's buy-and-consume economy, durable products are leased, rented or shared wherever possible. If they are sold, there are incentives or agreements in place to ensure the return and thereafter the reuse of the product or its components and materials at the end of its period of primary use.

These principles all drive four clear-cut sources of value creation that offer "arbitrage opportunities", it means ways to take advantage of the price difference between used and virgin materials.

- The *power of the inner circle* refers to minimizing comparative materials use vis-à-vis the linear production system. The tighter the circle, i.e. the less a product has to be changed in reuse, refurbishment and remanufacturing and the faster it returns to use, the higher the potential savings on the shares of material, labor, energy and capital still embedded in the product, and the associated externalities (such as greenhouse gas emissions, water and toxicity).
- The *power of circling longer* refers to maximizing the number of consecutive cycles (be it repair, reuse, or full remanufacturing) and/or the time in each cycle. Each prolonged cycle avoids the material, energy and labor of creating a new product or component.
- The *power of cascaded use* refers to diversifying reuse across the value chain, as when cotton clothing is reused first as second-hand apparel, then crosses to the furniture industry as fiber-fill in upholstery, and the fiber-fill is later reused in stone wool insulation for construction – substituting for an inflow of virgin materials into the economy in each case – before the cotton fibers are safely returned to the biosphere.
- The *power of pure inputs,* finally, lies in the fact that uncontaminated material streams increase collection and redistribution efficiency while maintaining quality, particularly of technical materials, which in turn extends product longevity and thus increases material productivity.

These four ways to increase material productivity are not merely one-off effects that will dent resource demand for a short period time when these circular setups are introduced. Their lasting power lies in changing the run rate of required material intake. They can therefore add up to substantial cumulative advantages over a classical linear business-as-usual case (World Economic Forum, 2014).

## 3.2 Remanufacturing and recycling in plastics processing

The first phase of the research, within the VEGA project No. 1/0587/19 Possibilities and perspectives of marketing during the transition period on the circular economy in Slovakia as a new business model, was carried out within production companies in the Slovak economy. The conditions for such research are very suitable within the current structure of the Slovak economy. The share of industries in the total GDP of the Slovak economy is almost 30%. The scope of research is relatively wide, we use a strong representation of the automotive industry, electronics production, chemical industry, but also intensive activities in the construction industry. In this paper, we present partial results of research from enterprises with the main business activity - plastics processing. These are companies processing LDPE (low-density polyethylene), MDPE (medium-density polyethylene), HDPE (high-density polyethylene), EPS (expandable polystyrene), PP (polypropylene).

We have contacted 45 selected companies from the TOP 100 companies in the industry - chemical production, rubber processing, plastic processing. We received data from 23 companies, personal data were used to obtain data and we conducted about a dozen expert consultations.

Why did we start with plastics? In the circular economy, plastics, plastic products, plastic waste are cited as the number one problem. On the other hand, the author of the article has a lot of experience in practice and business in this area and personal contacts with experts in the Slovak economy were used.

Structure of addressed companies by technology - extrusion, injection moulding, roll moulding, EPS expansion, cast-film extrusion and by application areas – manufacturing of components (for assembling in automotive, electronics), construction industry, packaging (food and non-food product packaging). The proportion of the different types of plastics processing is shown in Figure 4.

Fig. 4 The structure of information sources according to prevailing technologies
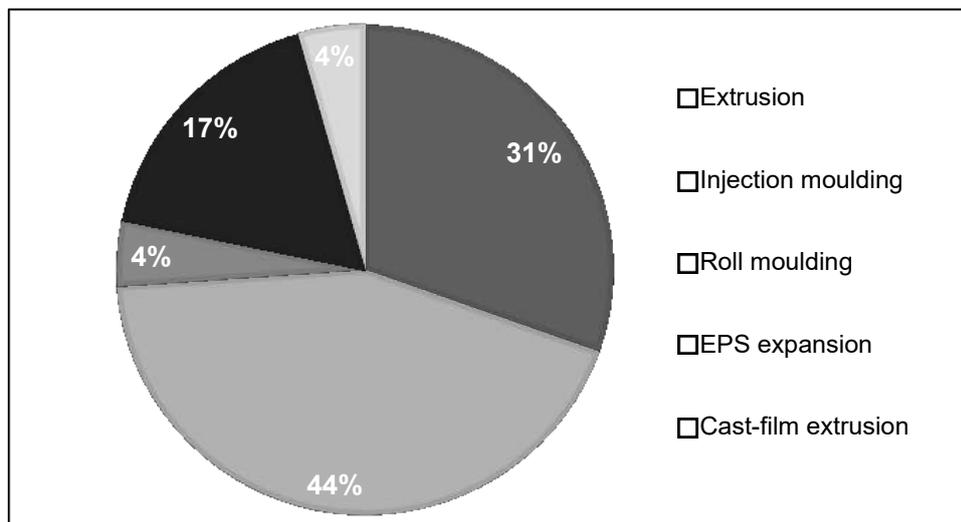
Source: authors' elaboration based on research

Due to the large automotive subcontractor base in Slovakia, the largest number of the companies are with injection moulding technology. A large number of companies produce packaging films or films for green houses by extrusion technology. EPS expansion processing supplies products for construction industry and packaging products. Roll moulding and cast-film extrusion technologies are among the specialized technologies. Roll moulding technology

allows the production of large plastic products, such as waste containers, sewage treatment plants, etc.

One of the partial goals of the research was to identify the actual situation and potential of increasing the productivity of materials as mentioned in the previous section, and in particular: the power of *the inner circle and the power of the circling longer*. Both of these approaches have an impact on the future design of supply chains.

Despite the widespread opinion, the potential for using the approach we have identified as material productivity within all kinds of technologies examined has been confirmed. In the inner cycle, all of the investigated plastics with current technologies are reusable even with the generation of partial wastes. For example, EPS can be recycled in the internal process at least 25 times, resp. an infinite number of times, but of course it is a problem of contamination potential. We are talking about EPS for applications as an insulating material or packaging.

Practically similar situation in the production of PE film by extrusion. Even in these technologies, any partial waste can be immediately reprocessed. The technological discipline is important - the material must not be contaminated with impurities or exposed to long-term UV radiation, which has an impact on the level of physical and chemical parameters of the material. Critical factors are - the quality of the technology used and the technological discipline. Extremely precise conditions require sophisticated technologies such as cast-film extrusion used in the production of BOPP films.

A major challenge for the research group of plastics products, in general and those of interest, is to control material productivity through the power of circling longer. This process means: repair, reuse or full remanufacturing. In the case of plastics, this is remanufacturing = recycling.

The second researched approach to increasing material productivity - the power of circling longer - can be identified with recycling in the case of plastics. The critical factors for manufacturers' approach to plastic recycling have been identified as shown in Figure 5.

Fig. 5 The critical factors for manufacturers' approach to plastic recycling
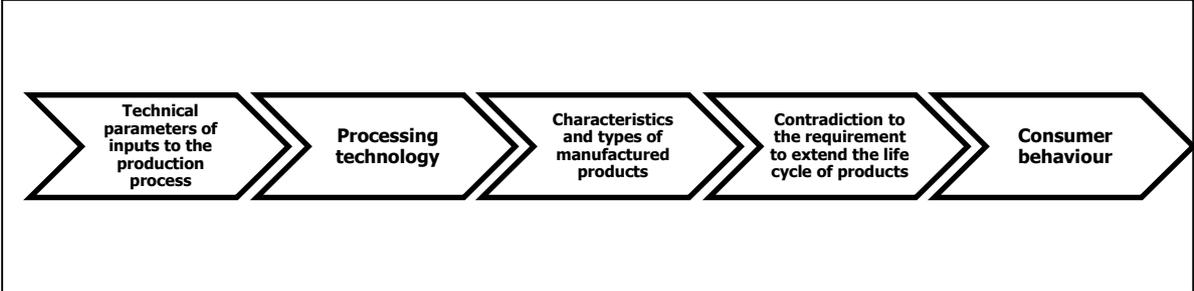
Source: authors' elaboration based on research

Technical parameters of inputs to the production process. Recycle = material supplied by reverse logistics or a newly designed supply chain structure as input material must meet at least two basic conditions. The material must be homogeneous and uncontaminated. Slightly contaminated plastics with current technologies have limited processability. They are predominantly intended for energy production.

Processing technology. Recycled plastic is processed mainly in combination with new input material. For some types of products, it is not allowed to add recycled material, e.g. in the production of food packaging, in the production of components in the automotive industry. Conventional packaging materials (such as waste bags, plastic products for gardening, etc.) are produced with relatively high recycled content. All addressed companies confirmed that

they see further potential in the development of new technologies and technological processes, which will bring new possibilities of decontamination of recycled plastics and the use of recycled material as full-fledged input material.

Characteristics and types of manufactured products. Plastics and plastic products are subject to degradation. These are processes - natural ageing, climatic ageing, biological ageing, thermo-oxidative and thermal ageing and other types of degradation. These processes currently affect the production of recycled products. Limits are set for plastic products that come into contact with food, medicines, baby products. Safety issues are also important, for example, components in the automotive industry usually have to withstand both ultraviolet radiation and high temperatures. Passenger car bumpers are currently made of plastics and must meet crash test conditions, which requires first-class input materials or composite materials.

Contradiction to the requirement to extend the life cycle of products. One of the leading ideas of a circular economy is to prolong the life cycle of products, but in the case of plastic recycling and its use as input to new products, the physical and chemical parameters are influenced by ageing processes - as mentioned in the previous point. Rather, the idea of applying the planned lifetime concept prevails. It is an open question that we must also discuss from the aspect of setting up marketing tools to support the concept of a circular economy.

As another critical factor, we identified *consumer behaviour* as expressed by the demand for plastic products made using recycled feedstock. Here the situation is very different from such recycled raw materials as iron and paper. The current situation also reflects positive trends. Consumers accept conventional plastic products with different recycled proportions, basically accepting a potentially lower quality level and shorter life cycle. These are mainly simpler products for the home, for gardening, hiking, etc. A high degree of retention of safety parameters for products directly related to safety regulations can be expected. We need to make it clear that the implementation of the circular economy concept cannot plan to reduce safety requirements. New technologies must emerge that will bring new solutions.

CONCLUSION

Supply chains implications based on our research are formulated in the following points.

- At first. The specific characteristics of the plastics group as *input products do not allow the application of circular flow reuse, but only remanufacture and recycle. And as circular inputs for production processes, could be only classified as recycled under the condition of safe and secure*.
- Secondly. Supply chains processes are described as a *closed-loop* and *open loop*. Closed-loop is an in-company process and open-loop includes other businesses within and outside the plastics processing industry.
- Third. Despite a large amount of information and facts obtained, the documents obtained so far have limitations. This is due to the orientation of the research only to the Slovak economy, although all companies have business and business activities beyond the region.

ACKNOWLEDGEMENT

marketing during the transition period on the circular economy in Slovakia as a new business model.

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International Tax Competition and Income Inequality

Tetiana Paientko
tetiana.paientko@gmail.com, tpayentko@kneu.edu.ua
Kyiv National Economic University named after Vadym Hetman, Faculty of Finance,
Department of Finance
Kyiv, Ukraine

Abstract: The paper deals with theoretical and real business problems of international tax competition and income inequality. The purpose of the article is to study the influence of international tax competition on income inequality. The theoretical part of the research is focused on the measurement of international tax competition and income inequality. The empirical part of the research is focused on the influence of tax competition on economic inequality. The sample for empirical research consists of OECD countries. The main findings prove that international tax competition is not harmful for OECD countries. International tax competition has a positive impact on pre-tax income distribution and Gini coefficient.

INTRODUCTION

Income inequality is a complex concept. Income inequality in various forms is the main source of injustice, the cause poverty, and sometimes conflicts. In the most general approach, inequality is measured through the distribution of income and wealth. Inequality indicators can be calculated for a country and for different population groups. This article focuses on income inequality between countries.

Why is inequality a problem? Equality, like justice, is an important value in most societies. Deteriorating inequality within a country can lead to its destruction. Widening inequality has serious consequences for growth and macroeconomic stability; it can concentrate political and decision-making power in the hands of a few, lead to suboptimal use of human resources and cause political and economic instability. Political and economic instability in the present circumstances cannot be localized in one country. A crisis in a single country has a negative impact on neighboring countries, at least through increased possible emigration. Inequality between countries is not a problem by itself. The problem is when inequality deepens to the point where one country gains unfair competitive advantages from others through aggressive taxation policies. Major imbalances in the redistribution of resources between countries arise, and can negatively affect economic development.

The relationship between inequality and the development of countries has long been of interest to researchers. The idea that inequality can affect the quality and pace of economic growth was published by Kuznets (1955), and Kadlor (1956) in the middle of the last century. There was a great deal of interest in inequality in the 1990s, for example, Van de Gaer (1993), Alesina and Rodrik (1994), Bénabou (1996), Roemer (1998). This interest stemmed from the search for mechanisms to influence poverty, crime, the shadow economy and other attributes of inequality in order to help developing countries achieve the desired level of economic development. Despite the large number of studies on inequality, this problem has not lost its relevance in our time.

Many scholars have linked inequality to the distribution of national income and wealth. Considering the intensity of globalization processes, more attention should be paid to factors that affect several countries simultaneously. One of these factors is international tax competition. A country's tax system is an important factor in determining its economic performance. A well-structured tax law that is easy for taxpayers to comply with can contribute to economic development while at the same time providing sufficient income for the government. On the contrary, a poorly structured tax system can be costly, distort economic decision-making, and harm a country's economy. Tax competition arises when different countries seek to attract investment and multinational companies by offering lower tax rates.

Economic theory anticipates that tax competition leads governments to lower taxes on more mobile assets, such as corporate capital, and sometimes on labor. In most cases, tax competition arises when a government chooses to attract resources from abroad. It is not only about attracting financial resources, but also labor and any other mobile factors of production. Therefore, tax competition can reduce as well as exacerbate inequality. The purpose of the article is to study the influence of international tax competition on economic inequality.

The paper is organized as following:

1) The next part is devoted to a literature review about income inequality, and international tax competition.
2) The second part describes the methodology of the research and sources of data.
3) The results of the calculations and their discussions are presented in the third part.

The article contributes into the theory of influence the international tax competition on income inequality.

1 LITERATURE REVIEW

Although the problem of inequality has long been researched, interest in this topic has increased significantly since the 2008-2009 crisis. Stiglitz (2013); Piketty (2015); Collins (2016); Sitaraman (2017); Boushey et al. (2017) examine inequality in terms of negative social consequences. Conard (2016); Watkins and Brook (2016) argue that inequality is not a negative factor in economic growth because it allows for the distribution of benefits according to the contribution of everyone to the development of the state. Therefore, these researchers believe that combating inequality can harm economic development because it will discourage citizens to work more productively.

In my opinion, there is no absolute equality, so the combating of inequality as a phenomenon is a fruitless pursuit. Inequality between individuals, groups of people and between countries will always exist. However, it is important to determine when inequality becomes dangerous. Above all, inequality becomes harmful if it becomes a source of power and wealth for a small number of people (Fuentes-Nieva & Galasso (2014)). The same is true for countries. Inequality becomes hazardous when redistribution contributes to the concentration of financial resources and professional labor in few countries and their outflow from other countries.

According to Therborn (2013), inequality is not a natural condition, but rather something socially constructed. Then the question arises: what contributes to increasing economic inequality? There are many causes of income inequality. Many of them are due to historical factors. These are not addressed in this article. A more critical issue is why income inequality is deepening, why rich countries continue to be rich and poor countries continue to be poor. One such factor is taxation. Even though taxation rules are imposed by individual countries, it is necessary to take into account the fact that, in the context of globalization, part of the tax base is mobile. The issue of tax equity and tax competition should therefore be addressed at

the international level. Part of this problem is explored in Brock (2008); Ronzoni (2009, 2014, 2016); Dietsch and Rixen (2014a, 2014b); Dietsch (2015).

It should be noted that fiscal policies of individual countries can be strategically motivated and detrimental to effective fiscal self-determination at the international level. This leads to unequal taxation conditions for mobile resources and, subsequently, to their non-optimal allocation. Crivelli, De Mooij, and Keen (2015) proved that international tax competition has a negative impact on developing countries. This is because tax competition contributes to the erosion of tax bases in these countries. In fact, international tax competition can remain harmless until individual countries adopt aggressive tax policies to attract mobile resources. Such policies may be shown directly, for example, by reducing tax rates. Also, governments may indirectly support aggressive tax planning in their countries without considering this action unethical.

FitzGerald (2013) justified that international fiscal policy can contribute to a reduction of global poverty. Ostry, Berg, and Tsangarides (2014) stated that inequality may impede growth at least in part because it calls forth redistribution efforts that themselves undercut growth. In such a situation, even if inequality is bad for growth, taxes and transfers may be precisely the wrong remedy.

In practice, tax competition takes various forms. Most often, corporate and individual taxes are an instrument of tax competition, as these taxes are one of the forms of capital taxation (Zucman, 2014). Physical relocation of business operations or change of residence in a jurisdiction with lower tax rates is one of the strategies to reduce the tax burden, and thus to move the tax base. While such a strategy is legitimate, it is not the exclusive one.

In the area of personal taxation, there is a significant number of illegal tax evasion by wealthy individuals who hide taxable capital in offshore jurisdictions that do not inform the country of origin about their existence. At the corporate level, a number of tax evasion strategies are used (de Mooij and Ederveen, 2008). First, corporations reduce their tax burden by transferring profits to subsidiaries in jurisdictions with low or zero corporate tax. For example, a subsidiary of a multinational corporation in a high-tax jurisdiction can reduce its profits on paper by paying exaggerated royalties for the intellectual property of another subsidiary that is registered in a low-tax jurisdiction.

Secondly, many jurisdictions provide preferential tax treatment to specific corporations, which allows companies to reduce their tax burden by adjusting their legal form.

Also, one form of aggressive tax planning is to reduce the tax burden by increasing debt in capital. However, a number of European countries have taken action to limit the amount of interest that can be taken into account in calculating taxable profits, which partially neutralized this method of tax optimization (Buettner, Overesch, Schreiber, and Wamser (2006), de Mooij (2011), Gravelle (2010)).

Tax competition is becoming a source of income for some countries (Genschel and Seelkopf, 2016). For many other countries, however, tax competition has become a source of problems and has reduced the ability to increase tax revenues on capital. For high-income countries, the main effect of tax competition is likely to be to shift the tax burden towards less mobile factors such as labor income and consumption (Clausing, 2016). Low-income countries often cannot compensate for their losses in corporate tax revenue, in part due to a lack of institutional capacity to increase other types of taxes (Dietsch and Rixen, 2014b). Thus, the impact of international tax competition on economic inequality has been extensively explored by contemporary scholars. At the same time, empirical research in this area should be constantly updated as the institutional environment for taxation changes. This is especially true for developing countries. Tax competition for them in different periods can be both a positive and

negative factor of development. It is important to determine in which period and why tax competition contributes to deepening economic inequalities.

2 METHODOLOGY

Tax competition occurs when jurisdictions strategically set their tax policies to attract a mobile tax base (Wilson and Wildasin, 2004). Therefore, indicators of international tax competition were chosen as independent variables, and indicators of economic inequality by income were chosen as dependent variables.

The International Tax Competitiveness Index (ITCI) seeks to measure the extent to which a country's tax system adheres to two important aspects of tax policy: competitiveness and neutrality. According to reports from the International Tax Competitiveness Index, ITCI, this index examines more than forty tax policy variables. These variables measure not only the level of taxes, but also how taxes are structured. The Index looks at a country's corporate taxes, individual income taxes, consumption taxes, property taxes, and the treatment of profits earned overseas. The ITCI gives a comprehensive overview of how the tax codes from developed countries compare, explains why certain tax codes stand out as good or deficient models for reform, and provides important insight into how to regard tax policy (Tax Foundation, 2020). As independent variables, Overall Score, Corporate Tax Rank, Individual Taxes Rank were chosen because they indicate differences in income taxes redistribution. These indicators are publicly available from Tax Foundation website (Tax Foundation, 2020) and allow cross-country assessments.

Indicators of income inequality included pre-tax national income top 10% share, pre-tax national income top 1% share, and Gini coefficient. These indicators are publicly available from World Inequality Data Base (World Inequality Data Base, 2020).

The sample consists of data from OECD countries. This choice is due to the fact that the tax systems of these countries are not harmonized, as in EU countries. In addition, the sample includes both high-, middle-, and low-income countries. The period from 2014 to 2019 is selected for the study, as the international tax competition index is only available for this period. For testing correlation between income inequality indicators (pre-tax national income top 10% share, and pre-tax national income top 1% share), and ITCI Canada, Israel, Korea, Mexico, Slovakia, and Japan were excluded from the sample, because data about income inequality is not available. Lithuania was excluded from the sample because data about ITCI is not available for this country. For testing correlation between Gini coefficient, and ITCI Canada, Israel, Korea, and Japan were excluded from the sample, because data about Gini coefficient is not available for those countries.

The data was organized in the form of panels. Data shown this way allows the combination of spatial (in our case, the countries) and time series (in our case, the annual income inequality, and tax competitiveness indicators) to be clearly displayed. This also allows more meaningful models for studying the causal relationship between different variables to be built. Panel data allows more easily the individual heterogeneity of the objects under study to be seen. In addition, panel data contains a large number of observations characterized by greater variation and less collinearity of the explanatory variables, giving a greater number of degrees of freedom and providing greater efficiency in the estimates.

The study states two hypotheses.

Hypothesis 1. International tax competition has a negative impact on pre-tax national income distribution in OECD countries.

Hypothesis 2. International tax competition has a negative impact on Gini coefficient in OECD countries.

The analysis was carried out using R software. Three models were used for the analysis, specifically: pooling, random, and within. All three models can be written as follows (1):

$$y_{it} = \alpha + x'_{it}\beta + z'_i\gamma + c_i + u_{it} \qquad (1)$$

$z'_i\gamma$ is the vector of characteristics that are not changing in time,

c_i and u_{it} are random components;

$E(c_i) = 0$, $E(u_{it}) = 0$.

In the model with random effects (Random Effects, RE) it is assumed that $E(c_i | z_i, X_i) = 0$.

In the fixed effects model (Fixed Effects, FE), it is assumed that $E(c_i | X_i)$ depends on X_i. The model with fixed effects does not allow us to estimate α and γ.

In the pooling model, it is assumed that $c_i = 0$.

Models were tested with the F-test, the Lagrange Multiplier Test (Breusch-Pagan), and the Hausman test.

3 RESULTS AND DISCUSSION

3.1 Pre-tax income distribution, and international tax competition

Income inequality can be measured by several indicators. In this paper only pre-tax national income top 10% share, and pre-tax national income top 1% share were used, because data for the chosen sample of countries and that period of study was available with those coefficients. Pre-tax national income is the sum of all pretax personal income flows accruing to the owners of production, labor, and capital before taking into account the operation of the tax system, but after taking into account the operation of pension, unemployment insurance as well as other social insurance systems (World Inequality Reports, 2014-2019). Income distribution indicators show the income gap between the richest and poorest segments of the population. This gap arises not only from the impact of foreign investment on the economic development of countries. The gap also arises because the wealthiest people can transfer their assets to low-tax jurisdictions and evade taxes. In other words, tax competition can erode the tax base, resulting in countries with higher income taxes losing tax revenue from income taxes. International tax competition has different types of influence on income distribution. Some countries gain from it because they can attract much foreign capital (Genschel and Seelkopf, 2016). Some countries lose tax revenue due to tax base erosion. Some countries adjust and shift of the tax burden towards less mobile factors such as labor income and consumption (Clausing, 2016).

To understand what kind of impact international tax competition has on income inequality in OECD countries, the first hypothesis was tested. Three models were tested (2-4):

m.pooled <- plm(PTI10 ~ ITCI+CTR+ITR, data = PD.GB2, model = "pooling") (2)

m.re <- plm(PTI10 ~ ITCI+CTR+ITR, data = PD.GB2, model = "random") (3)

m.fe <- plm(PTI10 ~ ITCI+CTR+ITR, data = PD.GB2, model = "within")   (4)

where:

PTI10 – pre-tax national income TOP 10% share;

ITCI – international tax competitive index, overall score

CTR – corporate tax rank;

ITR – individual tax rank.

Calculations were conducted in R using package "plm" for panel data regression analysis. Three tests were made to compare models:

1) F-test – to check fixed effects against pooling regression.
2) Hausman test – to check fixed effects against random effects.
3) Lagrange Multiplier Test - (Breusch-Pagan) – to check random effects against pooling regression.

The regression results for the first hypothesis are presented in Tables 1-2.

Tab.1 Description of results for Hypothesis 1 (pre-tax national income TOP 10% share)

	Dependent variable:		
	PTI10		
	Pooling	Random effects	Fixed effects
ITCI	-0.002***	0.000	0.000
	(0.001)	(0.000)	(0.000)
CTR	0.001	0.000	0.000
	(0.001)	(0.000)	(0.000)
ITR	-0.003***	-0.000	-0.000
	(0.001)	(0.000)	(0.000)
Constant	0.5***	0.3***	
	(0.1)	(0.02)	
Observations	180	180	180
R^2	0.1	0.004	0.01
Adjusted R^2	0.1	-0.01	-0.2
F Statistic		8.0*** (df = 3; 176) 0.8	0.3 (df = 3; 147)
Note:			*p<0.1; **p<0.05; ***p<0.01

Source: calculated by author based on sample information

As can be seen from the data presented in Table 1, only pooling regression should be used. Models with random and fixed effects are not applicable for the sample under study. Pooling regression is meaningful if cross sections are randomly sampled. In our case pooled cross-

sections are useful for evaluating the impact of certain events or fiscal policy interventions. Also, it means that both country and time effects should be considered.

The conclusion us supported by F-test, Hausman Test, and Lagrange Multiplier Test - (Breusch-Pagan).

F test for individual effects

$F = 1169.1$, df1 = 29, df2 = 147, p-value < 2.2e-16

alternative hypothesis: significant effects

Hausman Test

chisq = 14.873, df = 3, p-value = 0.001929

alternative hypothesis: one model is inconsistent

Lagrange Multiplier Test - (Breusch-Pagan) for balanced panels

chisq = 401.6, df = 1, p-value < 2.2e-16

alternative hypothesis: significant effects

According to the results received, the first hypothesis should be rejected. This means that for the chosen sample, international tax competition does not have a negative impact on income inequality. As can be seen from the Table 1, changes in corporate taxation (corporate tax rank) does not affect income inequality. Changes in income taxation during the study period contributed to a reduction of income inequality (the coefficient of elasticity is -0.003). Also, the international tax competitiveness index shows a positive influence on the reduction of income inequality (-0.002).

Tab.2 Description of results for Hypothesis 1 (pre-tax national income TOP 1% share)

	Dependent variable		
		PTI1	
	Pooling	Random effects	Fixed effects
ITCI	-0.002***	0.000	0.000
	(0.000)	(0.000)	(0.000)
CTR	-0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
ITR	-0.001***	-0.000	0.000
	(0.000)	(0.000)	(0.000)
Constant	0.2***	0.1***	
	(0.03)	(0.01)	
Observations	180	180	180
R^2	0.1	0.01	0.02
Adjusted R^2	0.1	-0.004	-0.2
F Statistic	7.7*** (df = 3; 176) 2.3		1.0 (df = 3; 147)
Note:			*p<0.1; **p<0.05; ***p<0.01

Source: calculated by author based on sample information

As can be seen from the data presented in Table 2, only pooling regression should be used.

F test for individual effects

F = 508.14, df1 = 29, df2 = 147, p-value < 2.2e-16

alternative hypothesis: significant effects

Hausman Test

chisq = 3.808, df = 3, p-value = 0.283

alternative hypothesis: one model is inconsistent

Lagrange Multiplier Test - (Breusch-Pagan) for balanced panels

data: PTI1 ~ ITCI + CTR + ITR

chisq = 404.62, df = 1, p-value < 2.2e-16

alternative hypothesis: significant effects

As can be seen from Table 2, changes in corporate taxation (corporate tax rank) do not affect income inequality. Changes in income taxation during the study period contributed to a reduction of income inequality (the coefficient of elasticity is -0.001). Also, the international tax competitiveness index shows a positive influence on the reduction of income inequality (-0.002). According to the results of the calculations, the first hypothesis should be rejected.

3.2 Gini coefficient and international tax competition

To test the second hypothesis the Gini coefficient was used as a dependent variable. Economic inequality is described by the Gini coefficient in many research papers (Berndt, D. J., J. W. Fisher, R. V. Rajendrababu, and J. Studnick. (2003), Zorn, P. (2005), Kovacevic, M. (2010), Furman, E., Wang R., and Zitikis R. (2017)). The Gini coefficient is based on the comparison of cumulative proportions of the population against cumulative proportions of income they receive, and it ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality[4].

To understand what kind of impact international tax competition has on income inequality in OECD countries, the first hypothesis was tested. Three models were tested (5-7):

m.pooled <- plm (GI ~ ITCI+CTR+ITR, data = Data_CEEB_2, model = "pooling")   (5)

m.re <- plm (GI ~ ITCI+CTR+ITR, data = Data_CEEB_2, model = "random")   (6)

 m.fe <- plm (GI ~ ITCI+CTR+ITR, data = Data_CEEB_2, model = "within")   (7)

where:

GI – Gini coefficient;

ITCI – international tax competitive index, overall score

CTR – corporate tax rank;

ITR – individual tax rank.

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[4] https://data.oecd.org/inequality/income-inequality.htm

Calculations were conducted in R using package "plm" for panel data regression analysis. Three tests were made to compare models:

1) F-test – to check fixed effects against pooling regression.
2) Hausman test – to check fixed effects against random effects.
3) Lagrange Multiplier Test - (Breusch-Pagan) – to check random effects against pooling regression.

The regression results for the first hypothesis is presented in Table 3.

Tab.3 Description of the results for Hypothesis 2

	Dependent variable:		
		GI	
	Pooling	Random effects	Fixed effects
ITCI	-0.1^{**}	-0.01	-0.01
	(0.05)	(0.02)	(0.02)
CTR	0.2^{***}	0.002	-0.003
	(0.05)	(0.02)	(0.02)
ITR	-0.2^{***}	-0.01	-0.01
	(0.05)	(0.01)	(0.01)
Constant	38.8^{***}	33.4^{***}	
	(4.1)	(1.8)	
Observations	180	180	180
R^2	0.2	0.01	0.01
Adjusted R^2	0.2	-0.01	-0.2
F Statistic	18.6^{***} (df = 3; 176) 1.3		0.3 (df = 3; 147)
Note:		*p<0.1; **p<0.05; ***p<0.01	

Source: calculated by author based on sample information

F test for individual effects

F = 376.9, df1 = 29, df2 = 147, p-value < 2.2e-16

alternative hypothesis: significant effects

Hausman Test

chisq = 27.778, df = 3, p-value = 4.044e-06

alternative hypothesis: one model is inconsistent

Lagrange Multiplier Test - (Breusch-Pagan) for balanced panels

chisq = 384.14, df = 1, p-value < 2.2e-16

alternative hypothesis: significant effects

As can be seen from the results of calculation, only pooling regression should be used. Furthermore, from Table 3, changes in corporate taxation (corporate tax rank) has a negative effect on economic inequality (the coefficient of elasticity is +0.2). Changes in income taxation during the study period contributed to a reduction of income inequality (the coefficient of elasticity is -0.2). Also, the international tax competitiveness index shows a positive influence on the reduction of income inequality (-0.1). According to the results of the calculations, the second hypothesis should be rejected.

Countries differ mainly because of the difference in income among the population. Personal income depends on wage rates and the number of hours worked. Total country income includes capital income and income of self-employed persons. The income of the population depends on the degree of business activity in the country. Therefore, the negative impact of corporate tax may increase the inequality in personal income. This is due to the relocation of the tax base to low-tax jurisdictions. As a result, countries that have faced the problem of erosion of the tax base tend to lose both corporate and personal income tax revenues. If these countries are unable to shift the tax burden to a less mobile tax base, the loss of tax revenue will reduce public sector financing. This means a decrease in the incomes of the part of the population employed in the public sector. In fact, tax competition can increase income inequality in some countries and reduce it in others.

Based on the analysis for OECD countries, international tax competition has no negative impact on income inequality. On the contrary, tax competition in OECD countries contributes to reducing income inequality among the population. The fact that the general tax competition index is more influential than the individual income tax index indicates that indirect taxes also have an impact on income inequality.

CONCLUSION

The issue of inequality has recently increased in relevance, as inequality often has a negative impact on a country's economic development. Inequality is described by different indicators, but only income inequality indicators have been investigated in this article (top 10% share of pre-tax national income, top 1% share of pre-tax national income, and the Gini coefficient).

The results of the analysis showed that one of the factors affecting inequality is international tax competition. Tax competition can have both positive and negative effects on inequality. In OECD countries, tax competition has no negative impact on income inequality. On the contrary, tax competition contributes to reducing income inequality. This is due to the fact that tax competition in the countries studied does not contribute to the outflow of capital and does not erode the tax base. This is partly due to the fact that tax competition contributes to capital inflows to OECD countries, and partly to the possibility of diversifying taxation and shifting the tax burden on a less mobile tax base.

The article has several limitations:

1 The sample size and duration of the period can be increased.
2 The study used a limited number of indicators of inequality, as not all data for the period under study were available. As soon as they are available, this data will be included in the study.

The prospect of further research is to determine the impact of tax competition on inequality in selected clusters of countries, which will be determined based on the characteristics of tax systems and institutional environment.

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Students' Expectations towards Corporate Social Responsibility in Russia

Ivan Pivovarov

ivan_pivovarov_@mail.ru

Russian Presidential Academy of National Economy and Public Administration,
South Russia Institute of Management, Department of Management
Rostov-on-Don, Russia

Abstract: The two biggest researches on public expectations towards CSR in Russia were conducted in 2003 and 2012. Nevertheless, time has passed and the most intriguing question is, what are the expectations of young people towards CSR in Russia if there are any? The methodology of the present study bases on public opinion polls, while RANEPA students acted as respondents. The questions concerned the following aspects: the criteria of socially responsible behavior; the importance of big companies for society; students' awareness of big companies' social activity; influence of ecological safety of goods to consumer behavior; types of CSR activities performed by companies. The results of the study can shed a light on the problem of young people expectations towards CSR in Russia. They can also be beneficial for big companies' managers in terms that they can reflect a public request for changing CSR programs of their companies.

Keywords: corporate social responsibility; social responsibility; Russia, public expectations; community relations

JEL Classification codes: M14

INTRODUCTION

The common point of view regarding corporate social responsibility is that this is company's voluntary activity, which helps society to solve problems that have a great social importance. However, some people treat CSR no more than a tool of self-advertisement, and see it as a PR-campaign. In Western Europe and America CSR has traditions and a long-time history, and people see it as something evident for big companies, while in Russia the market economy emerged less than 30 years ago and companies started practicing CSR even later. Thereby, many Russian companies are presently at the begging of their long way towards integration of corporate social responsibility into their business strategies

From the other side, the society in Russia is still far away from a multi-beneficial dialogue with corporate sector. Many people see big companies strictly as monopolies, which pursue only individual goals of their shareholders. Hence, the reasonable question arises: what are the public expectations towards corporate social responsibility? The two biggest researches on public expectations towards CSR in Russia were conducted in 2003 and 2012 respectively and they showed that at that time Russian society did not actively participate in helping companies improve their CSR practices and that public influence in CSR programs was quite minimal. In other words, the society was not the main stakeholder of CSR programs and, as a result, many CSR programs did not reach their target groups while many social investments by companies were made in nowhere.

Nevertheless, time has passed and the new question arises: are there any changes in public expectations towards CSR? What are the expectations right now? And the most intriguing question is, what are the expectations of young people towards CSR in Russia if there are any?

The present article tries to find answers to the last question. Presently we are the eyewitnesses of generational changes when the new generation of people becomes managers and is getting (or at least is going to get in the nearest future) top positions in big companies. At the same time their younger fellows, who are doing their university studies, still represent the same generation. That is why it is interesting to study their expectations towards CSR, which can help us identify two things: firstly, what are the expectations of the younger generation towards CSR and, secondly, in what way can CSR be transformed in the nearest future when younger generation of managers completely replaces the older one?

The results of the study can shed a light on the problem of young people expectations towards CSR in Russia. They can also be beneficial for big companies' managers in terms that they can reflect a public request for changing CSR programs of their companies.

1 LITERATURE REVIEW

The problem of public expectations and CSR in general is widely presented in academic literature. Golob et al. (2008) explores how personal and situational factors impact consumer expectations of (CSR). A study was conducted in order to examine the effect of values and issue involvement on consumer CSR expectations, categorized as economic, legal, ethical, and philanthropic. The study's findings demonstrated that consumers generally have high expectations of CSR, especially in the legal and ethical-philanthropic domains. According to survey's results expectations for the ethical-philanthropic dimension of CSR are higher amongst consumers holding high self-transcendent values and practicing high involvement. Kim and Ferguson (2014) examined what consumer-publics expect from companies' CSR communications through surveying a representative sample of the general public. Their findings suggested that publics wanted to know "who is benefiting" from the companies' CSR more than any other CSR information. The topic of consumer expectations also finds development in paper of Feldner and Berg (2014) who state that with increased stakeholder scrutiny, it is increasingly salient to consider how corporations make the case that their CSR activities are sufficient, appropriate, and successful. According to authors' point of view the CSR report is the vehicle by which companies communicate the breadth of activities they engage in to make a difference in society. Using rhetorical analysis and surveys, they argue that the CSR report functions as a means by which corporations manage stakeholder expectations and seek to legitimate corporate behaviors. Their findings indicate that most reports are structured based on external guidelines but include the use of classic rhetorical strategies of ethos, pathos, and logos to establish the rightness. Finally, the study shows the value of moving past a catalog of activities, a consideration of channels, and a description of message attributes to focus on the rhetorical strategies employed by corporations. Another interesting survey was conducted by Berndtros and Martensson (2014) who investigated how consumers' expectations of CSR practices in SME's differ concerning five areas of CSR, in particular, environmental, social, ethical, human right and labor rights to provide suggestions on how SME's could allocate their resources on CSR. The main managerial implication of their research indicates that SME's should allocate a majority of their resources to ensuring labor rights.

The special interest cause academic papers devoted to CSR in Russia. The paper of Glebova et al. (2013) covers the issues related to the Russian practice of socially responsible corporate behavior of the companies representing various strategically important sectors of the Russian economy. Authors have developed technique to evaluate corporate social responsibility based

on nonfinancial reporting, that allowed them to reveal a number of problems and contradictions in this area and to formulate requirements for regulatory, organizational and methodological support efforts to promote further the image of Russian companies as socially responsible economic entities on the basis of mutual concurrence of interest between government and business. Another study by Crotty (2016) presents a contextualized critique of CSR undertaken in Russia. Based on a qualitative study involving managers within privatized Russian firms, author explores the type, nature, and scope of CSR undertaken and attendant motivation of firms to engage in CSR practice. By taking account of the historical and cultural antecedents of both the Soviet Union and the post-Soviet transition period, the author reveals that while the market is driving conventional forms of CSR within some Russian firms, the historical legacy of both the Soviet Union and more recent political developments have a stronger influence on the type and nature of CSR undertaken.

Despite a big number of current researches on CSR in Russia for the purposes of this survey the methodology from study of Association of Managers of Russia (2003) was used. This study was conducted within the scopes of the international research project "Corporate social responsibility: public expectations" which started in November 2002 and captured Russia, Ukraine, Czech Republic, Hungary and Poland. In all countries the common approach was applied assuming 1000 interviews with public interested in CSR problems (in Russia 1200 interviews were conducted), 20 in-depth interviews with public opinion leaders (governmental officials, NGOs, mass media, businessmen and academics), and the results of the study was discussed in every country by expert groups, which included representatives of business, social and governmental organizations.

2 METHODOLOGY

The methodology of the present study bases on public opinion polls. The questionnaire is taken from the studies of Association of Managers of Russia (AMR), investigating public expectations towards CSR in Russia (2003, 2012). However, unlike the original study, where different public groups were questioned, within the scopes of the present study students of five big Russian universities acted as respondents. They are as follows: Russian Presidential Academy of National Economy and Public Administration (RANEPA), Lomonosow Moscow State University, Saint Petersburgh State University, Ural Federal University as well as Baltic Federal University.

The number of respondents is 390 students, both bachelors and masters, studying their 3rd or 4th year (bachelors) and 1st year (masters), academic programs – Management, Public Administration, Economy, both females and males, aged 19-23. The questionnaire was distributed by means of Google Forms, responds were collected from online in November 2019 - February 2020.

The types of questions used in this survey are multiple choice questions, Likert-type scales as well as open-ended questions.

The questions concerned the following aspects:

- level of activity of respondents in participation in social and political events;
- trust in ability of social institutes to act in favor of social development;
- role of big companies in social development;
- attitude of respondents to CSR in general;
- awareness about big companies' activities in field of CSR;
- impact of positive or negative CSR information on consumer behavior;
- ways respondents understand socially responsible behavior;
- identifying companies with "good" and "bad" corporate social behavior;
- importance of different CSR activities;

- evaluation of companies' performance in field of CSR.

The main goal of the present study is to find out in what way companies' activities in the field of CSR meet students' expectation towards CSR.

3 RESULTS AND DISCUSSION

The first question illustrates the level of activity of respondents in participation in social and political events during the past 2 years. The results you can see in Figure 1.

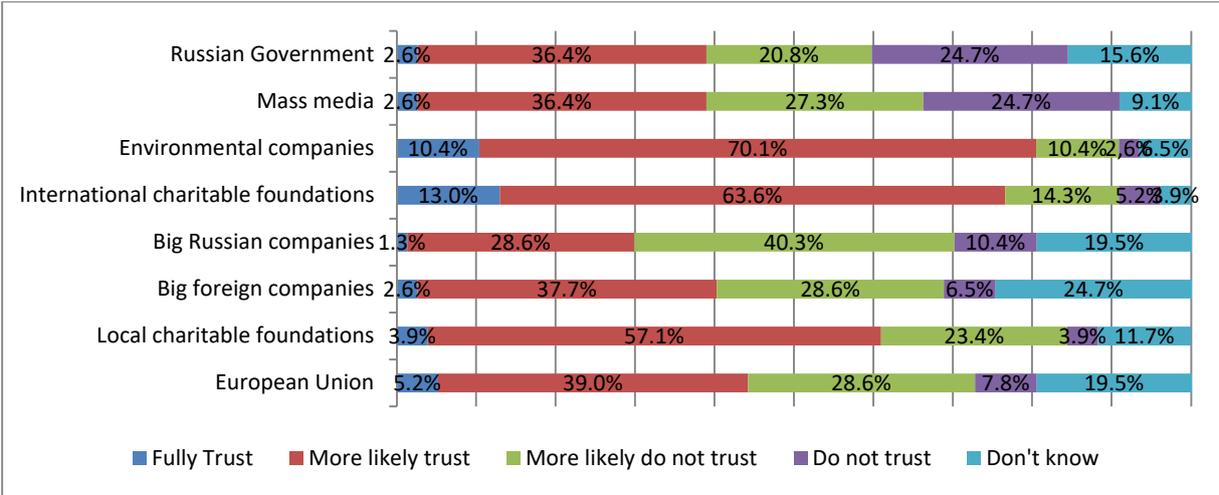**Fig. 1 Level of civic engagement**
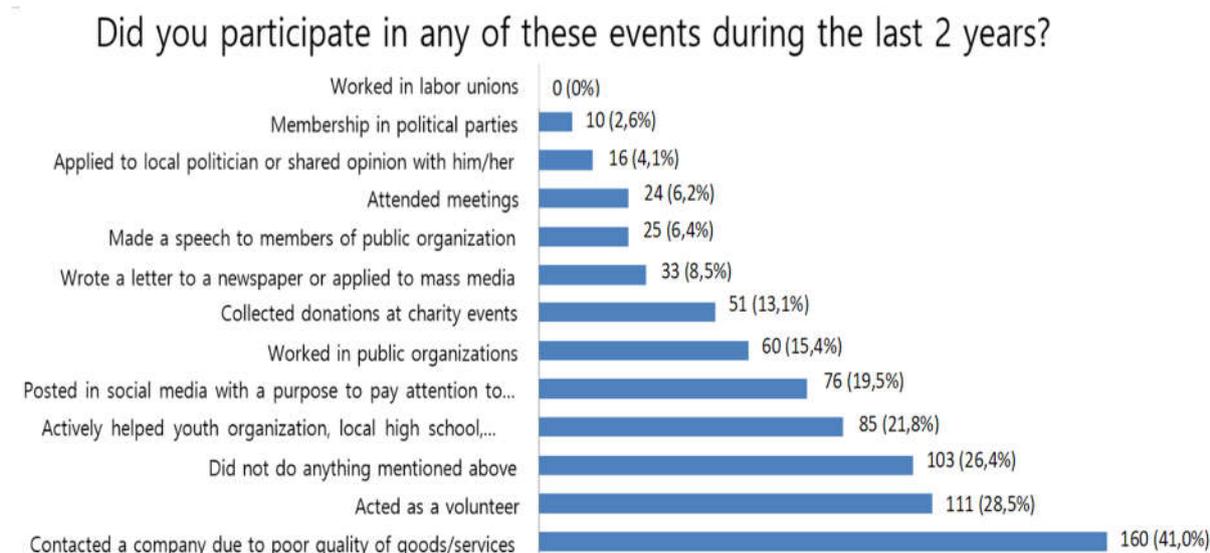
Source: Results of author's research

The results demonstrate that just like in survey of 2003 the most popular answer among the respondents was that they contacted a company due to poor quality of goods/services. However, the percentage of those who did it is much higher (41 % in comparison with 11% of 2003). The explanation can be as follows: from one side, it is obvious that our sample is not as representative as the sample of 2003 survey due to a number of respondents; from the other side, our results might prove an assumption that millennials are really more engaged in social activity than their older fellows. The last statement can be also proved by the second highest voted option "Acted as a volunteer" that greatly demonstrates young people's attitude to social activity. Indeed, on basis of personal observations lots of young people in Russia are engaged in voluntary activity. It became especially obvious during the days of football World Cup 2018.

The answers to the second question (Figure 2) demonstrate that students trust more to international social institutes than Russian ones, including governmental institutions, non-profit as well as private companies. From this point of view, foreign companies are perceived as more socially responsible than domestic ones (40.3% and 29.9% correspondingly).
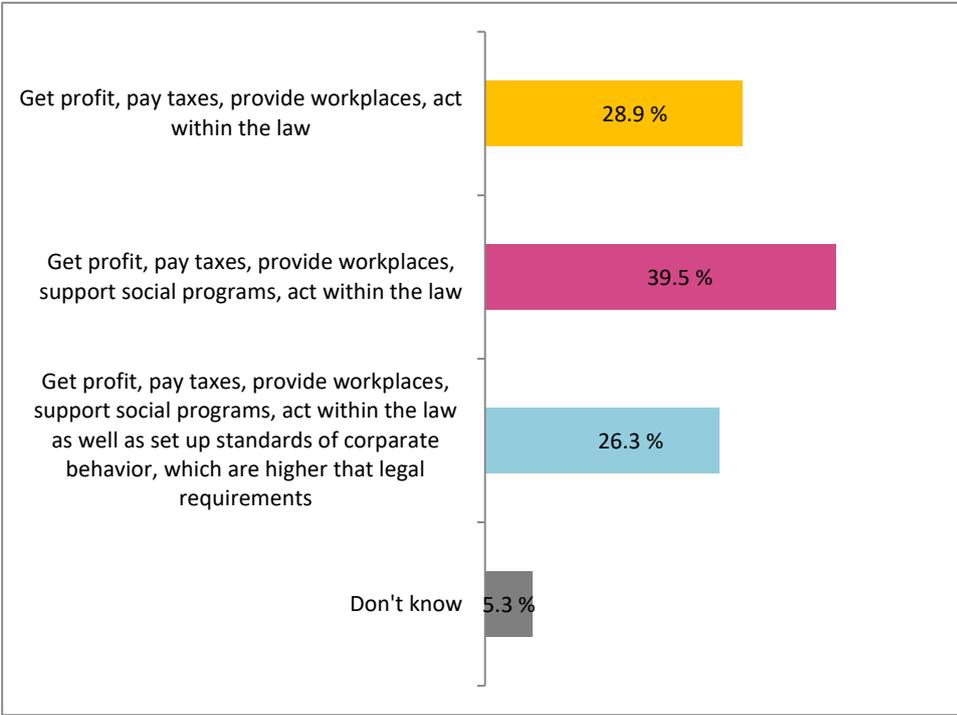
Regarding the role of big companies in social development the majority of respondents (68.4 %) consider that companies must do more than just "get profit, pay taxes, provide workplaces as well as act within the law", i.e. there is a social demand for social programs (39.5 %) as well as for higher standards of corporate behavior (26.3%).

Fig. 2 Trust in ability of social institutes to act in favor of social development

	Fully Trust	More likely trust	More likely do not trust	Do not trust	Don't know
Russian Government	2.6%	36.4%	20.8%	24.7%	15.6%
Mass media	2.6%	36.4%	27.3%	24.7%	9.1%
Environmental companies	10.4%	70.1%	10.4%	2.6%	6.5%
International charitable foundations	13.0%	63.6%	14.3%	5.2%	3.9%
Big Russian companies	1.3%	28.6%	40.3%	10.4%	19.5%
Big foreign companies	2.6%	37.7%	28.6%	6.5%	24.7%
Local charitable foundations	3.9%	57.1%	23.4%	3.9%	11.7%
European Union	5.2%	39.0%	28.6%	7.8%	19.5%

Source: Results of author's research

Fig. 3 Role of big companies in social development

|	
Get profit, pay taxes, provide workplaces, act within the law	28.9 %
Get profit, pay taxes, provide workplaces, support social programs, act within the law	39.5 %
Get profit, pay taxes, provide workplaces, support social programs, act within the law as well as set up standards of corparate behavior, which are higher that legal requirements	26.3 %
Don't know	5.3 %

Source: Results of author's research

Question 4 concerned attitude of respondents to CSR in general (Figure 4). Most of the students agreed that the most successful companies are the most socially responsible (85.5%); big international companies greatly contribute to solve problems in developing countries (78.9%); the fact that a company is socially responsible is very important while taking decision to buy or not to buy goods (63.1%).

The data from Figure 5 demonstrate that most of the students think that CSR is profitable for business (85.3%); 78.6% of respondents don't believe in companies' seriousness of intentions in the field of CSR ("more talks than activities"); companies must jointly elaborate general standards of socially responsible behavior (72%).

Fig. 4 Attitude of respondents to CSR in general
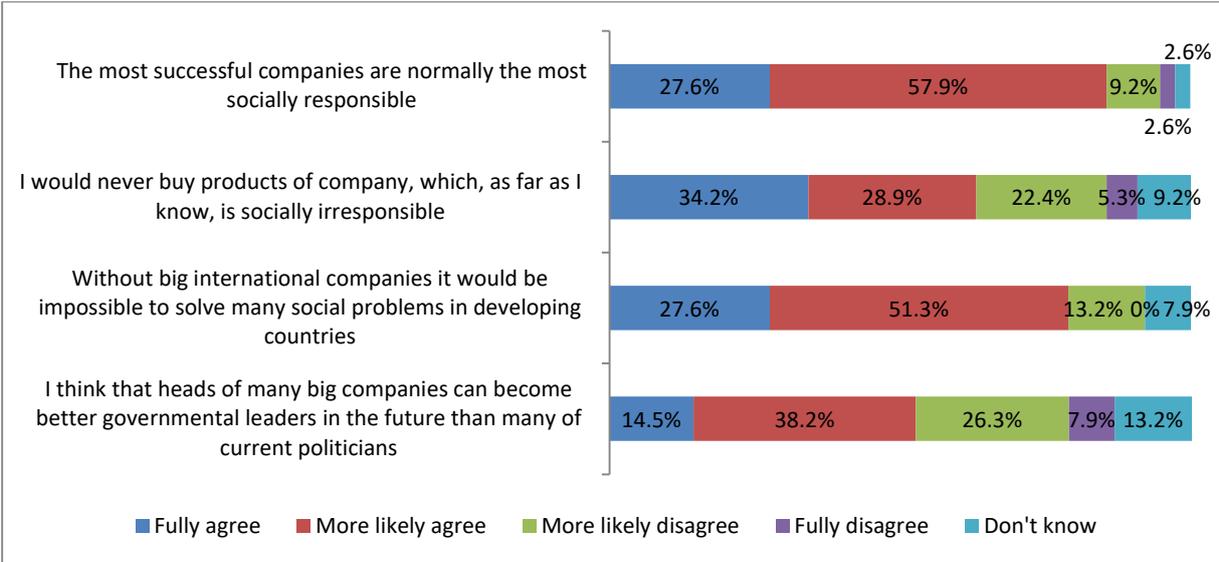
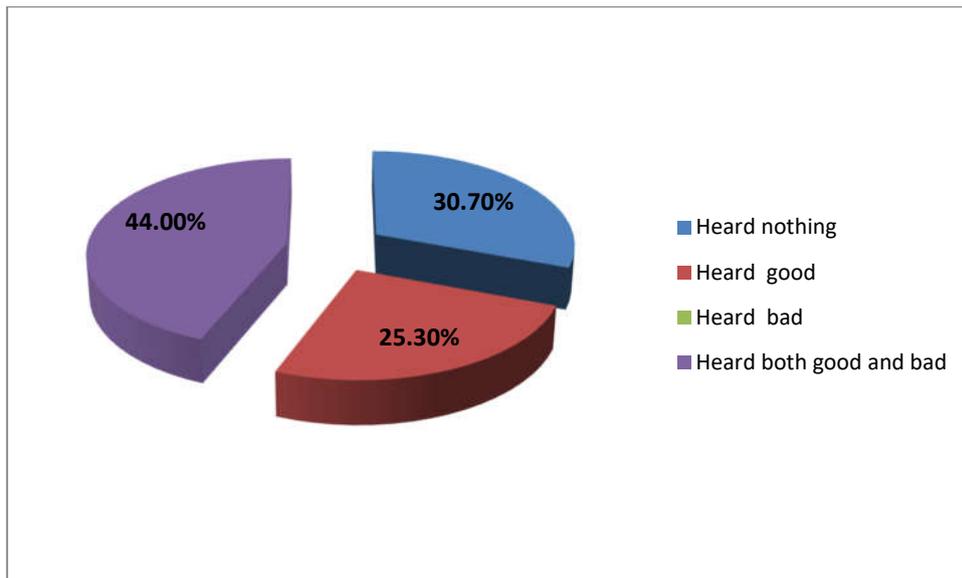
Source: Results of author's research

Fig. 5 Importance of CSR for business
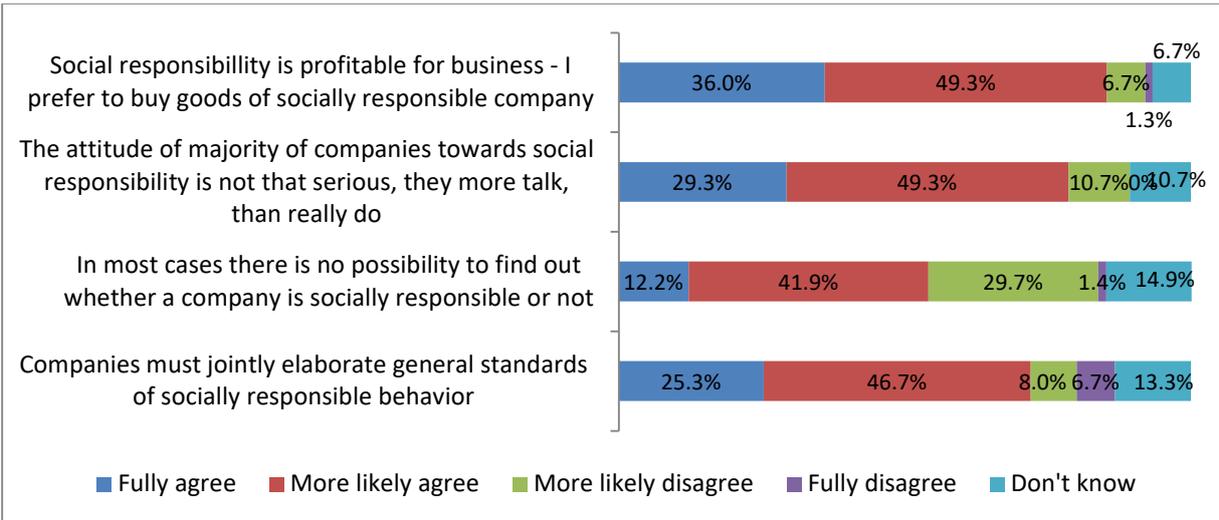
Source: Results of author's research

The students' awareness about big companies' activities in field of CSR is as follows (Figure 6): 30.7% of respondents cannot remember any news about CSR, while the quarter of them (25.3%) heard good news and the rest of them (44%) heard both good and bad. It greatly contrasts with the survey of 2003: the percentage of those who heard good news increased 5 times. Another important finding is that none of the students indicated bad results in our survey. On basis of these results two assumptions can be made: first, companies might have really improved their CSR performance during this time period (2003-2019); second, the respondents represent the younger generation and they watch TV and another traditional mass media not that often as their older fellows and, probably, here is the explanation of zero percent for bad news. However, this assumption seems not very vital because the percentage of those who didn't hear any news in our survey is considerably smaller than in the survey of 2003 (30.7% and 48% correspondingly).
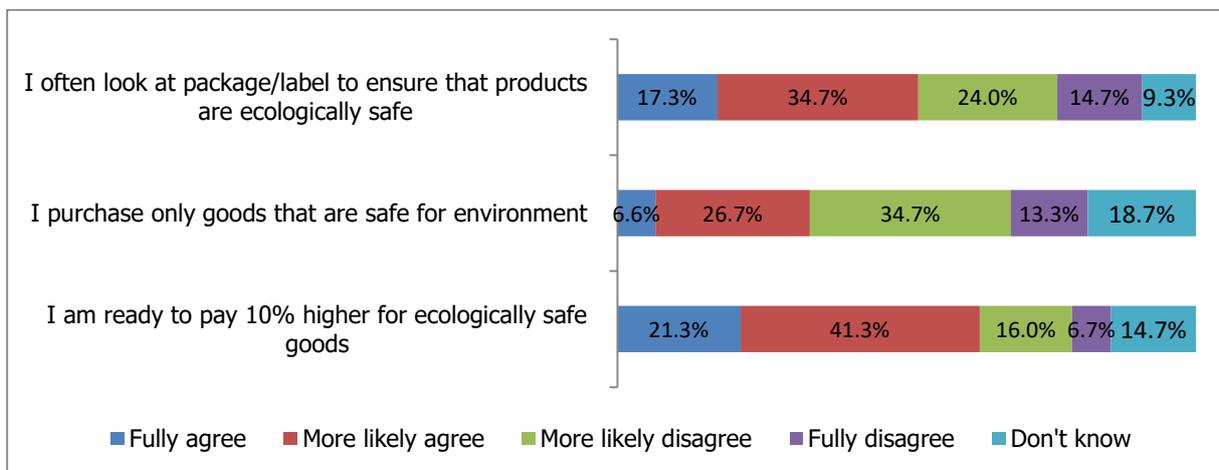
Fig. 6 Have you recently heard about big companies' results in the field of CRS?

Source: Results of author's research

It's worth mentioning that positive or negative CSR information impacts on consumer behavior and it can be seen on Figure 7.

Fig. 7 Impact of CSR information on consumer behavior

Source: Results of author's research

Despite the fact that proportions are the same as in the survey of 2003 (for instance, the percentage of respondents who replied "fully agree" is highest for "I am ready to pay 10% higher for ecologically safe goods" and lowest for "I purchase only goods that are safe for environment") the results in absolute terms for "fully agree" are lower in our survey. These results can be explained by the fact that our respondents, i.e. students, have lower income than their older fellows who were respondents in 2003 survey.

The next step was that respondents were asked multiple choice question "What kind of good and bad news about CSR did you hear?" The results presented below allow estimating students' vision of CSR.

'Good' news are as follows: companies invest in charity and social programs (72.0%), companies increase quality of goods/services (54.7%), companies provide discounts for goods/services (54.7%), companies srarted paying more attention to environmental problems (53.3%), companies invest in social and sports events (42.7%), companies create new workplaces (41.3%), companies take into account interests of their employees (25.3%), companies invest in education, higher schools, educational programs for children (22.7%), companies behave in a more honest way (16.6%), companies increase salaries of employees (13.3%).

In turn, here is how 'bad' news look like: pollution of environment in general (78.7%), prices increase (65.3%), bad quality of goods/services (60.0%), air and water pollution (54.7%), companies overuse their monopolists status (49.3%), companies are interested only in profit (46.7%), company was closed and as a result employees lost their jobs (45.3%),companies don't pay taxes (45.3%), companies' products can make a harm to your health (34.7%), salaries decreased (26.7%), companies don't respect the law (25.3%).

The information effect of positive CSR information was tested by the question "How 'good' CSR news affected you?" The results are as follows: "decided to purchase goods/services of the company (12,3%)"; "I will more likely buy goods/services of the company in future (49.3%)"; "talked about the company with other people (16%)"; "didn't affect me (22%)". The difference with the results 2003 is notable: the percentage of those who decided to purchase goods/services after receiving positive CSR information is very low in our survey (12.3% in comparison with 49% in 2003), however, the percentage of those who will more likely buy goods/services in the future after receiving positive CSR information is significantly higher (49.3 in comparison with 29% in 2003). These results demonstrate us that positive CSR information still has an impact on the younger generation in terms of purchasing goods/services, however, younger people need more time to take their decision in comparison with their older fellows.

The information effect of negative CSR information was tested by the question "How 'bad CSR news affected you?" The results are as follows: "from now on I refuse to buy company's goods/services" (15.1%); "I will less likely buy goods/services of the company in future" (49.3%); "criticized company during talks with other people" (16%); "didn't affect me" (22%). The difference with the results 2003 is not that significant: a number of respondents who refused to buy goods/services after receiving negative CSR information is more or less comparable with results of 2003 (15.1% in comparison with 24% in 2003), however, the percentage of those who will less likely buy goods/services in the future after receiving negative CSR information is significantly higher (49.3 in comparison with 29% in 2003). These results prove the statement mentioned above, that the younger generation takes more time to make a decision. Another observation is that young people almost don't discuss positive or negative CSR information with their peers unlike the older generation from 2003 survey.

The next question that was asked concerned the ways respondents understood socially responsible behavior. The question was a multiple choice and the results look as follows: Assistance in solving social problems of city, region, country (63.0%); protection of environment (56.2%); production of high quality products (53.4%); social protection of employees and their families (47.9%); support of charity events (31.5%); creation of workplaces, job security (26.0%); payment of taxes (21.9%); higher salary (19.2%); fulfillment of promises (17.8%); provision of reliable job (16.4%); support of schools, educational institutions (15.1%); protection of Russian interests at international markets (12.3%); support of poor people (9.6%). Comparing these results with the results of 2003 survey it's worth mentioning that top-5 of the present study includes the same variants of answers except the only one: there is no variant "higher salary" that shows that younger generation probably don't associate salaries increase with CSR.

Further, the respondents were asked to identify companies with "good" and "bad" corporate social behavior and what is more important to give the examples of "good" and "bad" corporate social behavior. Here is the list of the "good" corporate social behavior examples: conducts cleaning days; educational programs for children; protects environment; invests in staff development; eco-friendly products and packaging; high quality of products; doesn't test products on animals; social packages; recycling; conducts sports and social events; improves services; implements innovations; creates workplaces; pays good salary; pays lots of taxes; motivation systems.

Along with examples of "good" corporate social behavior the following examples of "bad" corporate social behavior were mentioned: low qualification of staff; inadequate territorial planning (for development companies); laws breaking (doesn't pay taxes); corruption; bad quality of products; tests products on animals; violates rights of employees; sets up too high prices; cuts jobs; doesn't pay for working overtime; introduces penalty systems.

Next step implied that the respondents rate various activities in the field of CSR on the level of importance. In particular, they were asked to rate 26 activities, and the grading scale was as follows: "very important", "important", "not very important", "not important at all", "don't know". The top-10 highest rated activities are listed below from highest to lowest position according to number of respondents who indicated "very important" as a type of answer: honest information about ingredients of goods (71.8%); healthcare programs for employees and adherence to occupational safety rules (66.7%); meeting all legal requirements (64.8%); production of high-quality goods on reasonable prices (63.4%); protection of environment (62.5%); receive of profit by fair means (56.9%); publication of open and transparent information about company and its products (56.3%); refusal from testing on animals (56.3%); maintenance the high quality of products in every country where companies operate (54.2%); non-participation in any forms of bribery and corruption (54.2%).

The positions 11-20 are as follows: company doesn't use child labor (52.8%); fair attitude to employees (52.1%); assistance in reducing number of cases of human rights violation (50.7%); products promotion by means which do not make harm to society (47.9%); job security (45.8%); prevention of contraband (44.4%); open and reliable financial statements (41.7%); fighting poverty (38%); changing the way of doing business in reply to criticism (38%); company's contribution to Russian economy (37.5%).

The least 6 important CSR activities according to students' opinion are provision of aid during natural disasters and catastrophes (37.5%), targeted aid (31.9%), support charitable organizations and local communities (30.6%), companies respect Russian culture and national values (25%), companies support Russian government's market regulation (20.8%); companies support artists and cultural events (17.1%).

Comparing the results with the survey 2003 it's worth mentioning that in 2003 the highest voted activity was "production of high-quality goods on reasonable prices", while in 2019 the number one activity was "honest information about ingredients of goods (71.8%)". However the percentage doesn't differ so greatly (63.4% in 2019 and 79% in 2003). All in all, 7 of 10 activities in top-10 are the same as in 2003 except the following ones: job security (45.8%), company's contribution to Russian economy (37.5%), fair attitude to employees (52.1%). Instead of them, several new activities were ranked: receive of profit by fair means (56.9%)

maintenance the high quality of products in every country where companies operate (54.2%); non-participation in any forms of bribery and corruption (54.2%).

Another stage of survey implied defining types of CSR activities where companies really succeeded. Here, like for the previous question the respondents were given the same list of CSR activities and then they were asked to rate them according to real achievements of companies. The grading scale was as follows: "most companies behave in socially responsible

ways"; "some companies behave in socially responsible ways"; "very few companies behave in socially responsible ways"; "don't know". The top-10 highest rated activities are listed below from highest to lowest position according to number of respondents who indicated "most companies behave in socially responsible ways" as a type of answer: neither company, nor its suppliers or distributors use child labor (50.7%); companies ensure job security (45.1%); companies meet legal requirements (31.4%); companies honestly inform consumers about ingredients of goods (24.3%); companies refused to test products on animals (24.3%); companies prevent contraband (23.2%); Companies are fair to employees (22.9%); companies take care of employees' health and adhere to occupational safety rules (21.4%); companies promote products by means which do not make harm to society (17.1%); companies publish open and transparent information about their activity and products (17.1%).

The positions 11-20 are as follows: receive profit by fair means (14.5%); publish open and reliable financial statements (14.3%); support artists and cultural events (14.1%); maintain the high quality of products in every country where they operate (14.1%); change the way of doing business in reply to criticism (12.9%); protect environment (10.1%); publish reliable information about negative consequences of products consumption (10%); investment in Russian economy, creation of new workplaces (8.6%); Support Russian government's market regulation (7.1%); provide targeted aid (5.8%).

The remain 6 spheres of activities with the smallest CSR success according to students' opinion are support charitable organizations and local communities (5.7%); non-participation in any forms of bribery and corruption (5.7%); provision of aid during natural disasters and catastrophes (5.6%); not making harm to environment (4.3%); conduction of activities against poverty (1.4%); support artists and cultural events (0%).

Comparing the results with the survey 2003 the following observations can be made: first of all, the percentage of respondents who chose type of answer "most companies behave in socially responsible ways" significantly increased, for instance, in 2003 only one sphere of CSR activity ("neither company, nor its suppliers or distributors use child labor") obtained 25% in this type of answer while in 2019 it became two times higher (50.7%) for this particular sphere of CSR activity. The same situation is with the rest of CSR activities: none of them received more than 12% in terms of "most companies behave in socially responsible ways" in 2003.

In turn, according to results of survey 2019 we can see that some great changes happened in comparison to 2003, i.e. companies have made the biggest breakout in the following spheres of CSR activity (percentage of votes for "most companies behave in socially responsible ways"): meeting legal requirements (31.4% in 2019 and 6% in 2003); companies honestly inform consumers about ingredients of goods (24.3% in 2019 and 9% in 2003); companies refused to test products on animals (24.3% in 2019 and 5% in 2003); companies prevent contraband (23.2% in 2019 and 9% in 2003); companies promote products by means which do not make harm to society (17.1% in 2019 and 8% in 2003); companies publish open and transparent information about their activity and products (17.1% in 2019 and 7% in 2003).

The biggest finding that can be made during this study is to identify the failed expectations of students towards CSR. For these purposes we took ten most important CSR activities and group them according to percentage of companies performing these activities in a socially responsible way. The results are presented in Table 1.

Tab. 1 Failed expectation regarding ten most important CSR activities

CSR activity	Level of importance	% of companies behaving in socially responsible way
1. Non-use of child labor	52.8%	50.7%
2. Meeting all legal requirements	64.8%	31.4%
3. Provision of honest information about ingredients of goods	71.8%	24.3%
4. Refusal from testing products on animals	56.3%	24.3%
5. Healthcare programs for employees and adherence to occupational safety rules	66.7%	21.4%
6. Publication of open and transparent information about company and its products	56.3%	17.1%
7. Receiving profit by fair means	56.9%	14.5%
8. Maintenance of the high quality of products in every country where companies operate	54.2%	14.1%
9. Protection of environment	62.5%	10.1%
10. Non-participation in any forms of bribery and corruption	54.2%	5.7%

Source: Results of author's research

CONCLUSION

To sum up, among the most important CSR activities where companies behave in socially responsible way, is only non-use of child labor (50.7%), while in other ten most important activities the percentage of socially responsible behavior is significantly lower and varies from 10 to 31 %, including such important activities as meeting legal requirements (31.4%) as well as provision of honest information about ingredients of goods (24.3%). The most failed expectations concern non-participation in any forms of bribery and corruption (only 5.7% of companies act in socially responsible way according to students' judgements), protection of environment (10.1%) as well as maintenance of the high quality of products in every country where companies operates (14.1%). All in all, the conclusion can be made, that student's expectation towards CSR are failed taking into account the fact that in only one CSR activity the percentage of companies acting in socially responsible way was higher than 50%.

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The Impact of Investment in Transport Infrastructure Development on the Country's GDP

Ekaterina Potaptseva – Alexander Martynenko
ekaterina.potaptseva@gmail.com, amartynenko@rambler.ru
Institute of economics, the Ural branch of Russian Academy of Sciences
Ekaterinburg, Russia

Abstract: The article examines the impact of investment in transport infrastructure in economically developed and developing countries. To achieve this goal, statistical, descriptive, and econometric analysis methods were used. Two groups of States with different levels of economic development were considered. Data from the Organization for Economic Co-operation and Development (OECD) was used as the research base. The article is structured as follows. The first section provides a summary of the results of a review of existing studies evaluating the return on investment in the development of transport infrastructure. The second section provides information about empirical data, tools, and research methods. The third section presents the main results of the study. In the last section, conclusions are formulated and directions for further research are defined.

INTRODUCTION

One of the common issues in empirical research is to assess the nature and an effect that transport infrastructure has on the economy. However, the question of how investments in transport infrastructure affect a country's economic growth has a clear positive answer: more investment is needed to develop the economy. Is that the case?

Many researchers assess the efficiency of investments in transport infrastructure in order to note that transport infrastructure is necessary for the efficient functioning of the country's economy, as it is one of the most critical factors in terms of determining economic growth. The lack of developed transport infrastructure hinders the development of the economy and, on the contrary, the developed infrastructure helps to reduce the transport costs of companies, increase labor mobility, spur trade (including export, create jobs and increase labor productivity), which, of course, has a positive impact on the competitiveness of the country as a whole. These factors encourage states and regions to make considerable investments in the development of transport infrastructure in anticipation of rapid economic growth.

Our study aims to assess the impact of investments in the development of transport infrastructure to various groups of countries, divided by GDP per capita. The study of the return (effect) of investments in the development of transport infrastructure is highly relevant to Russia, which has a great potential for participation in international production chains through the development of the transport sector.

1 LITERATURE REVIEW

The problem of return on investment in transport infrastructure development has been actively studied over the past 50 years. It is generally believed that investment in transport infrastructure has a positive impact on the economic development of countries by: a) reducing transport costs; b) improving transport accessibility and mobility; C) increasing private investment in the development and expansion of production; d) stimulating trade; e) creating jobs and indirectly increasing productivity, etc.

In the work (D. Aushauer, 1989) it was proved that infrastructure stimulates economic development. This work initiated large-scale studies of the contribution of transport infrastructure to aggregate factor productivity and economic growth using various macroeconomic models. Many studies (Bhatta S. et al., 2003; Holvad T. et al., 2005; Lakshmanan, 2011; Berg et al., 2017) show a positive return on investment in transport infrastructure development. Similar results were obtained in the works (Fritsch B. et al., 1997; Louw E. et al., 2013). where it has been proven that road infrastructure stimulates economic growth in France and has a positive impact on the labor market in the Netherlands by increasing worker mobility. It was also found that in Russia, increasing the efficiency of the transport sector by 10% increases GDP by 0.8% (Kolik A. et al., 2015). Investment in transport infrastructure accelerates the economic development of regions in Spain and China (Matas A. et al., 2018; Yu et al., 2012) and in Pakistan (Yasir et al., 2016). There are studies of the impact of investment in certain types of transport infrastructure on the economic development of countries, regions and cities: highways in the United States (Boarnet et al., 2000); rail transport (Banister et al., 2011); seaports, etc.

Tab. 1 Approaches to assessing the impact of transport infrastructure investments

Approach	The essence of the approach	Authors
The macroeconomic modeling	Studies on the impact of transport infrastructure investments on productivity and economic growth. Limitations: Models that link infrastructure and economic productivity, confirming statistically significant dependencies, have different quantitative estimates.	Bhatta etc., 2003; Fisher, 1997; Romp etc., 2007; Devarajan etc., 1996; Evans etc., 1996; Evans etc., 1994; Garcia-Mila` etc., 1996; Mera,1973; Aschauer, 1989
Cost-Benefit Analysis (CBA)	Cost-benefit approach: (a) Direct time and cost savings through improvement of transport infrastructure; b) direct costs for the establishment and development of transport infrastructure. Constraint: Externalities that have both cross-sectoral and spatial dimensions are not considered.	Mohring, 1993; Mackie etc., 2001; Sactra, 1999; Venables etc., 1999; Lakshmanan etc., 2002
Approach based on spatial effects	Accounting for spatial externalities that lead to the underestimation (or overestimation in the case of negative externalities) of infrastructure contributions	Holtz-Eakin etc., 1995; Kelejian etc., 1997; Boarnet, 1998, Kolomak E.A., 2012; Isaev A.G., 2015; Moreno etc., 2007; Owyong etc., 2001; Cohen etc., 2008

Source: composed by the authors

For example, Banister and Thursday-Goodwin (2011) showed that investments in rail transport proved their impact on the local economy in three dimensions: 1) macro-level: increase in

output and productivity growth; 2) meso-level: increase in agglomeration effects; 3) micro-level: changes in prices on the land and real estate market.

According to OECD (2002), it makes sense to evaluate the return on investment in transport infrastructure over a longer period. Infrastructure has an impact on increasing employment in the medium term (6-8 years) and creating new industries in the long term (15-20 years) (Alam et al., 2005).

Thus, most studies of the return on investment in transport infrastructure focus on determining the effect of investment in transport infrastructure development, either on the example of a specific country or on the example of a specific type of transport. Our research is devoted to an empirical assessment of the impact of investment in the development of transport infrastructure in two groups of countries with significantly different levels of economic development.

An overview encompasses the main approaches which used to assess the impact of investments in transport infrastructure development is provided in (Lakshmanan, 2011). The existing approaches to assessing the impact of investments in transport infrastructure are presented in Table 1.

This research is based on previous studies and explores the contribution of transport infrastructure to the economic development which is divided into two groups of countries: developed and developing.

The purpose of this study is to assess the impact of investments in the development of transport infrastructure on the country's GDP.

Objectives of the study are:

- to analyze the dynamics and structure of investments in the development of transport infrastructure of countries with different levels of economic development;
- to build regression models that describe the impact of investments in transport infrastructure (among other factors) on GDP growth;
- to compare the effects of infrastructure investments on countries with different levels of economic development, based on the obtaining regressions models.

Several researchers [Kolomak, 2011, 2012; Lakshmanan, 2011] note that transport infrastructure alone does not contribute to regional economic growth, but is a condition for economic growth in countries where institutional and economic conditions are favourable. Accordingly, the impact of transport infrastructure development can be assessed in economically developed countries. In developing countries (countries with transit economies), which are characterized by very uneven location of transport infrastructure, lack of transparency in the choice of investment objects, the presence of corruption, which leads to a significant cost of any infrastructure project, it is very difficult to assess the contribution of transport infrastructure. Therefore, in our study we tried to assess the impact of investing in transport infrastructure development in economically developed and developing countries.

2 Methodology

The study is based on OECD statistics. The data are a panel that involves the following indicators:

a) GDP per capita;
b) number of employed in the economy;
c) investments in transport infrastructure development;
e) data on passenger and cargo turnover;

f) capital investments (net of investments in infrastructure) in 34 economically developed and developing countries for the period from 1997 to 2017.

Data analysis methods: Statistical and correlation regression analysis had been used. Data processing and computations are performed in Wolfram Mathematica 12.0 environment.

The approach used to solve the problem: The study used a traditional approach to assessing the impact of investments - the production function of Cobb-Douglas, which allows evaluating the return on investment in the development of transport infrastructure on the economic development of the countries studied. The production functions are familiar to most analysts and can be easily interpreted. If the connection between the increase of investments in the development of transport infrastructure and the growth of GDP per capita in the country is positive and significant, one can argue that investment in infrastructure is an essential determinant of economic development. The present study uses the dependence of the Cobb-Douglas production function for growth rates of the indicators:

$$\hat{Y}_{it} = A_i \times \hat{K}_{all,it}^{\alpha} \times \hat{L}_{it}^{\beta} \times \hat{K}_{tr,it}^{\gamma} \times e^{\varepsilon_{it}},$$

whereabouts

$$\hat{Y}_{it} = Y_{it} \Big/ Y_{i(t-1)},$$

$$\hat{K}_{all,it} = K_{all,it} \Big/ K_{all,i(t-1)}, \quad \hat{L}_{it} = L_{it} \Big/ L_{i(t-1)}, \quad \hat{K}_{tr,it} = K_{tr,it} \Big/ K_{tr,i(t-1)},$$

где   Y – is the GDP per capita, mln. USD

K_{all} – capital investments in the economy[5] (net of transport infrastructure investments), mln. USD

K_{tr} - investments in transport infrastructure development, mln. Euro

L_{it} - the number of employees in the economy, thousands of people

$i = 1,..., 34$

$t = 1, ..., 20$

As a definition of "transport infrastructure investment" in this study, we will refer to the definition used by OECD. Investment in transport infrastructure refers to investments and the cost of maintaining and capitalizing roads, railways, inland waterways, seaports and airports. Unfortunately, there is still no generally accepted practice for measuring transport infrastructure costs, which makes cross-country comparisons challenging. This is due to the

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[5] The International Transport Forum (ITF) collects on an annual basis from all its member countries data on investment and maintenance spending on transport infrastructure. Data are collected from Transport Ministries, statistical offices and other institutions designated as official data sources. The survey used for this exercise is the "ITF Investment in Transport Infrastructure questionnaire". The original data is collected in national currency, current values. For analytical purposes and data comparisons, data are converted and published in million euros, both current and constant. The variables collected are investment and maintenance expenditures and capital value for road, rail, inland waterways, maritime ports and airports.
The lack of common definitions and practices to measure transport infrastructure spending hinders comparisons between countries. Data for road and rail infrastructure are the most comprehensive while data on sea port and airport spending are less detailed in coverage and definition. While our survey covers all sources of financing, a number of countries exclude private spending, including Japan and India. Approximately 65% of countries report data on urban spending. Indicators such as the share of GDP needed for investment in transport infrastructure, depend on a number of factors, such as the quality and age of existing infrastructure, maturity of the transport system, geography of the country and transport-intensity of its productive sector. Caution is therefore required when comparing investment data between countries. However, data for individual countries and country groups are consistent over time and useful for identifying underlying trends and changes in levels of spending, especially for inland transport infrastructure.
//https://stats.oecd.org/

fact that data on road and rail infrastructure are the most complete, while data on sea ports and airports costs are less detailed in the scope and definition.

3 RESEARCH RESULTS AND DISCUSSION

To distinguish the group of economically developed countries (countries with transit economy) and developing countries GDP per capita is taken from the list of 34 countries for the period 1997-2017.

From the general list of countries, two groups of 10 countries are selected:

Group I: countries with the lowest GDP per capita;

Group II: the countries with the highest GDP per capita.

For each country, average values for the period 1997-2017 were taken as the value of GDP per capita. The breakdown into groups is presented in Table 2.

Tab. 2 The value of GDP per capita in countries with different levels of economic development*

Group I: countries with the lowest GDP per capita		GDP per capita. thousands of dollars	Group II: the countries with the highest GDP per capita		GDP per capita. thousands of dollars
Country			Country		
1.Turkey	TUR	12860.02	Belgium	BEL	31504.41
2.Bulgaria	BGR	12920.29	Germany	DEU	31764.43
3.Mexico	MEX	13357.88	Sweden	SWE	32382.39
4.Romania	ROU	15321.58	Austria	AUT	32519.16
5.Latvia	LVA	16221.24	Canada	CAN	32889.39
6.Poland	POL	16948.31	Denmark	DNK	35482.86
7.Croatia	HRV	18160.57	USA	USA	38587
8.Lithuania	LTU	18508.08	Norway	NOR	44601.37
9.Russia	RUS	18540.04	Switzerland	CHE	44883.43
10.Hungary	HUN	19727.46	Luxembourg	LUX	59041.12

*China was excluded from the calculations as an outlier

Source: calculated by the authors on the basis of data OECD (2019) //https://stats.oecd.org/

3.1 Analysis of investment dynamics in transport infrastructure development in countries with different levels of economic development

Analysis of the dynamics of transport infrastructure investment in countries with different levels of economic development revealed the following features: 1) between 1994 and 2017, transport infrastructure investment in developing countries alone could exceed €2,000 million in Turkey, Mexico, Poland and Romania, while the rest were below that figure. Moreover, in Russia, transport infrastructure investment was significantly higher than in all other developing countries. Russia spent a record EUR 20.5 billion on transport infrastructure development in 2012 (Fig. 1b).
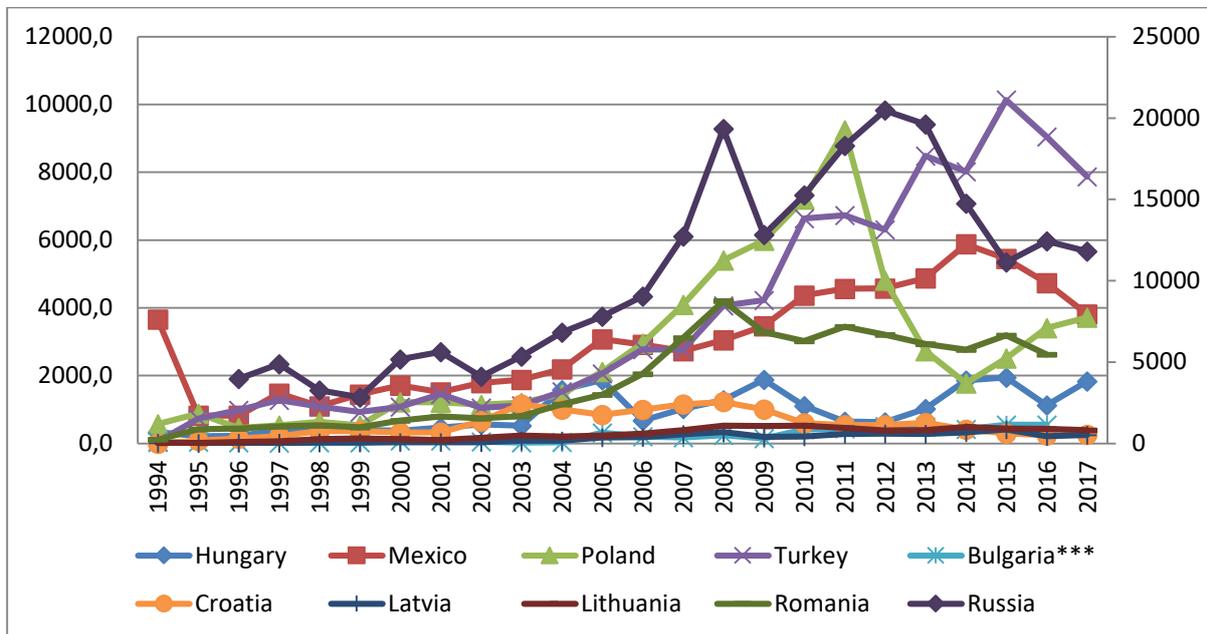
Fig.1 Investments in development of railway and road transport infrastructure, mln. euro

a) Group I - economically developed countries
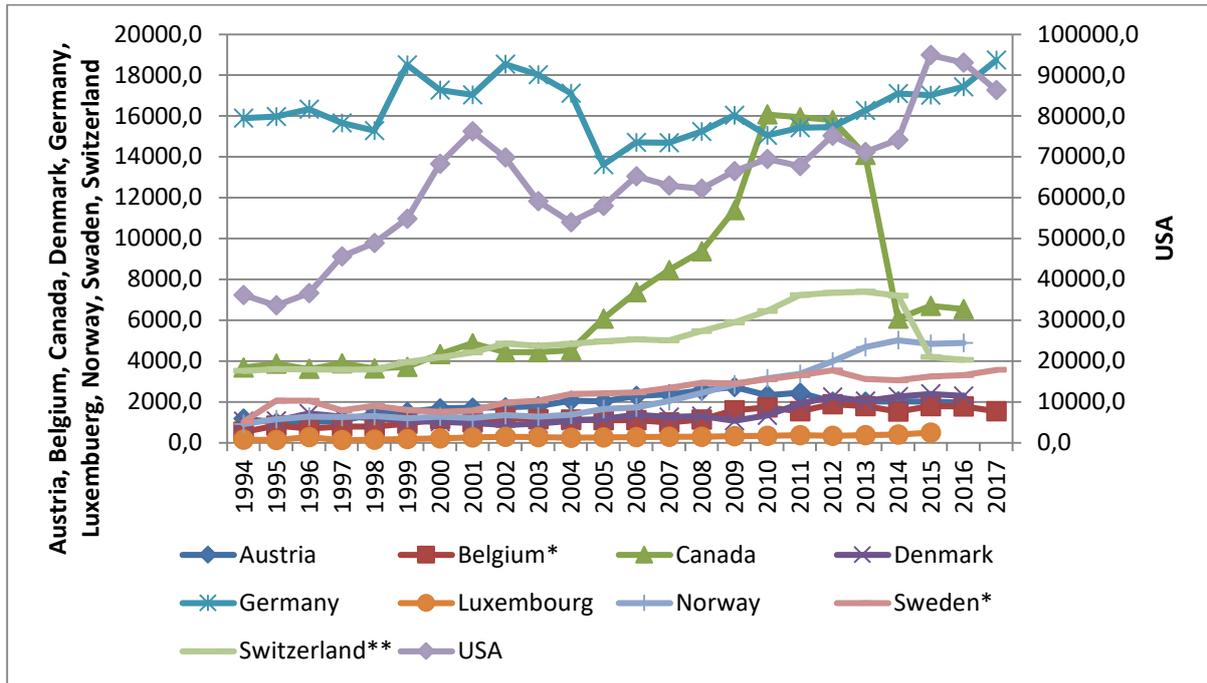
Source: calculated by the authors on the basis of data OECD (2019) //https://stats.oecd.org/

b) Group II - economically developing countries

*only Rail, 1994

** only Rail, 2015, 2016
*** only Rail, 1994-2004

Source: calculated by the authors on the basis of data OECD (2019) //https://stats.oecd.org/

However, despite this, investment in transport infrastructure in Russia is significantly lower than the leader in the US developed country group and did not exceed 31% of US rail and

road infrastructure spending during the period under review; 2) in the group of economically developed countries, the US (leader), Germany and Canada made the most considerable investments in transport infrastructure (Fig. 1a). Thus, large countries tend to invest more in transport infrastructure development.

3.2 Model Specification

For each group of countries, the dependence between criterion variable Y and regressors Kall, L and Ktr is investigated. Let's consider the following specification of the model:

$$Y_{it} = A_i \times K_{all,it}^{\alpha} \times L_{it}^{\beta} \times K_{tr,it}^{\gamma} \times e^{\varepsilon_{it}} \tag{1}$$

where i=1,...,10; t=1,... 21.

After logarithmization, the dependence (1) takes the form of:

$$\ln Y_{it} = \ln A_i + \alpha \ln K_{all,it} + \beta \ln L_{it} + \gamma \ln K_{tr,it} + \varepsilon_{it} \tag{2}$$

The correlation coefficients between $\ln(Y)$, $\ln(K_{all})$, $\ln(L)$ and $\ln(K_{tr})$ values for Groups I and II are given in the following table 3.

Tab. 3 The correlation coefficients in countries with different levels of economic development

	$\ln Y$	$\ln K_{all}$	$\ln L$	$\ln K_{tr}$
Group I. Countries with a lower GDP per capita (Turkey, Bulgaria, Mexico, Romania, Latvia, Poland, Hungary, Lithuania, Croatia, Russia)				
$\ln Y$	1	0.98	0.98	0.87
$\ln K_{all}$	0.98	1	0.93	0.91
$\ln L$	0.98	0.93	1	0.79
$\ln K_{tr}$	0.87	0.91	0.79	1
Group II. Countries with a higher GDP per capita (Belgium, Germany, Sweden, Austria, Canada, Denmark, USA, Norway, Switzerland, Luxembourg)				
	$\ln Y$	$\ln K_{all}$	$\ln L$	$\ln K_{tr}$
$\ln Y$	1	0.99	0.99	0.97
$\ln K_{all}$	0.99	1	0.98	0.97
$\ln L$	0.99	0.98	1	0.96
$\ln K_{tr}$	0.97	0.97	0.96	1

Source: calculated by the authors

High values of correlation coefficients between regressors $\ln(K_{all})$, $\ln(L)$ and $\ln(K_{tr})$ show the presence of strong multicollinearity in the model (2). This is a consequence of the fact that

the considered values have strong time trends. In order to remove (reduce) the influence of trends on the model, let us proceed to the first differences of prologarized values, which for the initial values corresponds to the dependence in the form of the Cobb-Douglas production function for the growth rates of indicators:

$$\hat{Y}_{it} = A_i \times \hat{K}_{all,it}^{\alpha} \times \hat{L}_{it}^{\beta} \times \hat{K}_{tr,it}^{\gamma} \times e^{\varepsilon_{it}}, \tag{3}$$

where

$$\hat{Y}_{it} = {Y_{it}}/{Y_{i(t-1)}},$$

$$\hat{K}_{all,it} = {K_{all,it}}/{K_{all,i(t-1)}}, \quad \hat{L}_{it} = {L_{it}}/{L_{i(t-1)}}, \quad \hat{K}_{tr,it} = {K_{tr,it}}/{K_{tr,i(t-1)}},$$

$$i = 1, \dots, 10, \ t = 2, \dots 20.$$

After logarithmizing, the dependency (3) takes the form of:

$$\ln \hat{Y}_{it} = \ln A_i + \alpha \ln \hat{K}_{all,it} + \beta \ln \hat{L}_{it} + \gamma \ln \hat{K}_{tr,it} + \varepsilon_{it} \tag{4}$$

The calculated interfactor correlation coefficients show the absence of significant multicollinearity. Therefore, we further consider the specification (3).

Descriptive statistics are presented in the table 4.

Tab. 4 Descriptive statistics

	Estimate	Standard Error	t-Statistic	P-Value
Group I. Countries with a lower GDP per capita (Turkey, Bulgaria, Mexico, Romania, Latvia, Poland, Hungary, Lithuania, Croatia, Russia)				
1	0.018134	0.002349	7.717	5.91×10^{-13}
$\ln \hat{K}_{all}$	0.140646	0.017030	8.259	2.16×10^{-14}
$\ln \hat{L}$	0.519047	0.086501	6.000	9.35×10^{-9}
$\ln \hat{K}_{tr}$	0.019412	0.005642	3.441	0.00071
R^2	0.520197	Adjusted R^2	0.512853	
Group II. Countries with a higher GDP per capita (Belgium, Germany, Sweden, Austria, Canada, Denmark, USA, Norway, Switzerland, Luxembourg)				
1	0.007693	0.001466	5.248	3.97×10^{-9}
$\ln \hat{K}_{all}$	0.153958	0.022610	6.809	1.17×10^{-10}
$\ln \hat{L}$	0.481085	0.104108	4.621	0.0000069
$\ln \hat{K}_{tr}$	0.005823	0.007389	0.787	0.432
R^2	0.471	Adjusted R^2	0.463	

Source: calculated by the authors

From the results of the Broysch-Pagan test, it follows that for both Groups I and II, there is no reason to reject the hypothesis of no individual effects. Therefore, preference should be given to transversal regressions, the estimates of which are presented in Table 4. The result obtained is quite natural for the specification (3), since there are usually no individual effects for the growth rate.

Reviewing the results of our study, the most relevant outcoming is that for the first group of countries the factor $\hat{K}_{tr}$ is significant, while for the second group of countries it is not. Taking into account the obtained estimation for the elasticity coefficient γ, the final conclusion can be made as follows: for developed countries in Group II, investments in infrastructure do not have a significant impact on GDP, while for developing countries in Group I, investments in infrastructure affect GDP: a 1% change in the rate of growth of investments in infrastructure (with the same values of other factors) leads to an increase in the GDP growth rate by 0.019%.

CONCLUSION

The impact of the transport infrastructure on the country's economic development has been empirically evaluated over the past 30 years and there are still no unequivocal conclusions on this research issue.

It is believed that transport is a necessary condition for creating a single economic space. The low level of transport infrastructure development has a negative impact on the efficiency of the country's economy. Accelerated development of transport infrastructure can have a significant impact on economic growth: investment in transport infrastructure in the short term creates new jobs, solves social issues, in the medium term stimulates economic growth in the region and territories, and in the long term creates an effect that reduces transport costs in general.

The impact of investments in transport infrastructure development is not the same for economically developed and developing countries. Thus, our research has shown that for developing countries the effect of investing in transport infrastructure is positive. The effect in economically developed countries is not so obvious, which, in our opinion, is primarily associated with significant costs of maintaining the already established infrastructure in the country. Due to the presence of already developed transport infrastructure in these countries, the creation of new elements of transport infrastructure does not bring such a return as in countries where this infrastructure is absent or underdeveloped. Thus, by investing in the development of transport infrastructure, developing countries can get a qualitative "breakthrough" in their economic development.

Our study has a number of significant limitations associated with an unbalanced sample of countries, which is explained by the lack of data for a number of countries; lack of consideration of external shocks, such as this year's coronation crisis, etc.

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Intra-group Transactions and Tax after BEPS (Base Erosion and Profit Shifting) Action Plan Initiated by OECD/G20: BEPS Risk Assessment of a Selected Enterprise in Czechia

Petr Procházka
xprop46@vse.cz, peprochazka@gmail.com
Prague University of Economics and Business, Faculty of International Relations,
Department of International Business
Prague, Czech Republic

Abstract: In 2015, working groups of OECD experts submitted 15 recommendations in their 'BEPS Action Plan' on how tax base erosion and profit shifting (BEPS) by transnational corporations 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, a selected multinational corporation is analysed to see how it changed their internal processes and transaction in Czechia as a response to BEPS measures. Methodology recommended under BEPS Action 11 is used, plus a local view through a case study is added.

Keywords: international tax planning; base erosion and profit shifting; transfer pricing; intra-group transactions

JEL Classification codes: H26, F38, H25

INTRODUCTION

OECD and G20 have been collaborating on a set of pressing issues in the area of lawful but immoral tax avoidance and aggressive international tax planning using loopholes in the relative tax systems. The so-called 'BEPS Action Plan' (OECD, 2015a) has brought about 15 concrete actions on how to overcome base erosion and profit shifting. This effort has been continuing in the "post-BEPS" discussions up to date and is still in the process of being implemented in many cases in jurisdiction forming the Inclusive Framework.

An overview of the BEPS Action Plan and its actions was offered in last year's conference proceedings (Procházka, 2019) to see how selected countries in Central and Eastern Europe implement the EU directives associated with the BEPS Action Plan. In this analysis, the same updated data will be used, in order to question which of the new laws apply and have affected a selected multinational enterprise. This chosen enterprise, and specifically its branch located in Czechia (being subject to Czech law) will undergo a deep analysis of the evolution of its intra-group processes and transactions that have happened as a response to the newly implemented rules – in particular, with focus on transfer pricing and its documentation, permanent establishments and partly VAT directive and anti-tax avoidance directive applications.

1 LITERATURE REVIEW

Tax avoidance through intra-group transactions can take a lot of shapes: BEPS Action Plan (OECD, 2015a) includes three associated actions: hybrid mismatch arrangements (Action 2), controlled foreign company (Action 3), interest deductions (Action 4), permanent establishment avoidance (Action 7) and transfer pricing (Actions 8-10). Cobham and Janský

(2020) provide an overview of the existing research on the nature and scale of the illicit flows, including intra-group movements as they speak about "*transfer mispricing*". As main channels, they identify debt shifting, location of intangibles and intellectual property and strategic transfer pricing. Similarly Clausing (2003) found that there is a correlation between a jurisdiction's tax rate and the price of intragroup transactions.

Transnational corporations (TNCs) have reacted to the BEPS Action Plan and its measures quite swiftly; many of the stakeholders and their associations were taking part in the consultation process with the aim to influence the discussions outcome. According to another recent analysis (Procházka, forthcoming 2020), 66% of businesses supported the BEPS process initiated by the OECD; yet only 29% were in favour of a closer global tax system - either analytical or normative, they produced arguments against the ongoing process of a deeper regulation.

Post-BEPS world has seen companies adjust their internal processes as the TNCs present in jurisdictions that form part of the BEPS Inclusive Framework, had to adapt to new universal norms, such as tighter thin capitalization rules, creating of permanent establishments under wider scope of options, obligatory reporting of aggressive tax planning, country-by-country reporting with master/local files on transfer pricing requested in some countries - all in all, most rules mean higher compliance costs and more opportunities for consulting firms while the market and sales remain the same. Moreover, TNCs have to face unilateral taxes in some countries - similar to the proposed tax on digital sales in Czechia, regardless of profit. However, the literature on this is rather scarce as the links are difficult to be measured. We can see some proxy effects - effective tax rates increased in China after anti-avoidance measures were implemented (Wang, Chen, 2020). Intangibles have to be priced according to the underlying substance, not merely per TNC's wish (Grassinger, 2017). To wrap up, one quality research (Tørsløv, Wier, Zucman, 2020) finds out that tax authorities analyze and focus their efforts on transactions among high-tax and/or highly-developed jurisdictions, crowding out the really risky transactions with low-tax "global periphery" where data, willingness to cooperate or law enforcement is scarcer.

2 METHODOLOGY

As mentioned in the introduction, a selected enterprise has been analysed. The choice has been made because of the detailed information was available to me so I could gain the understanding of the processes. The data is provided based on an agreement given by the enterprise but the name of it is not disclosed - still, this case study offers individual information to get the needed results (Yin, 2009).

Methodology of the analysis is based on recommendations set in OECD Action 11 - "*Establish methodologies to collect and analyse data on BEPS and the actions to address it*". In particular, each enterprise shall go through a risk assessment which has a number of indicators. If a majority of the indicators is fulfilled, based on OECD the chances that a given enterprise takes part in base erosion and profit shifting is considerably high. These 6 indicators are (OECD, 2015b):

    A. Disconnect between financial and real economic activities

1. Concentration of high level of foreign direct investment (FDI) relative to GDP/turnover

    B. Profit rate differentials within top global MNEs

2. Differential profit rates compared to effective tax rates

3. Differential profit rates between low-tax locations and worldwide MNE operations

C. MNE vs. "comparable" non-MNE effective tax rate differentials

4. Effective tax rates of large affiliates relative to non-MNE entities with similar characteristics

D. Profit shifting through intangibles

5. Concentration of high levels of royalty receipts relative to research and development (R&D) spending

E. Profit shifting through interest

6. Interest expense to income ratios of MNE affiliates in high-tax locations

After a close look at the indicators proposed by the OECD, we can imply these indicators can be applied onto the level of whole economies/jurisdictions (to indicate for "tax havens") or the level of MNEs (to indicate "tax avoiders"). The rationale behind the choice of these indicators is mentioned in the same final report of Action 11 (OECD, 2015b). Approximate data on the jurisdiction level have been aggregated by participating tax authorities and published by the OECD in the form of Corporate Tax Statistics (OECD, 2019). In this paper, I intend to analyze the results of a particular MNE to see if these are in line with the expectations set by Corporate Tax Statistics on the jurisdiction level. A part of this methodology was also used in recent research by Nerudová et al. (2019)

Moreover, to this "global" approach of an MNE analysis, I will add a local approach - analysing intra-group contracts and transactions going into/out of the Czechia branch to see whether there is any pattern and obvious BEPS activities going on - all of this in a dynamic way to compare how the MNE reacted to the new measures.

3 RESULTS

3.1 Description of the enterprise

For obvious reasons, the name of the company is being kept private, yet I have the authorization of the company to use, analyze and publish anonymous data. The selected multinational enterprise (MNE) has two sections, the logistics section and the moving and relocation section. The sections complement each other occasionally, but normally they are independent; the same is the case for their management, finances and reporting. In this paper, I am analysing the moving and relocation business section. The section has around 56 physical offices in 34 countries - headquartered in Belgium, it has strong presence in Central and Eastern Europe6. It builds upon coordination of the offices and single presentation of its product towards customers. There are two shared service centres (so-called competence centres) in Bucharest and Zagreb that accumulate and handle operations for the remaining offices.

Law on Income Taxes of the Czech Republic (par. 23(7)) mentions the situations under which parties are deemed as related, and thus a series of regulations concerning transfer pricing would apply to them. In the case of this selected enterprise, despite mentioning in many documents and contracts that the Czech branch and headquarters are independent, with separate ownership, they are indeed related one with the other because:

- parties are connected by capital; 100% of Czech branch capital is owned by the headquarters in Belgium

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[6] To be exact, countries of former block of Warsaw Pact - all of them, including all former USSR republics.

- one of the parties is participating in controlling and managing the other party

3.2 Local situation in Czechia

In this subchapter, I will describe BEPS-related intra-group documents and transactions and how they had to be amended / added through the time as new national laws have been implemented as a result of new OECD recommendations / EU directives. There are five dimensions where BEPS-related intra-group transactions get into play in recent years: (1) intercompany rates for intra-group business, (2) Administrative service agreement, (3) Country representation contract, (4) headquarters loan, and (5) individual property transactions.

1. intercompany rates for intra-group business

The whole network works on the idea of mutual support and reciprocity, booking a job in one origin country automatically generates revenue for the office in the destination country, if the company has an office there. There are agreed rates that are getting updated yearly. The idea is to spread the full profit among the booker who performs the sale and the agent who handles a part (or sometimes even the bulk) of the service. The intercompany rates are lower than the rates given to 3rd parties / customers. To be competitive, an agent cannot apply a normal market margin on their costs and then the booker applies another margin on the top of it. The reasoning is that even if the agent performs the full service, not all the work has been done by them - in particular, the booker still performs the marketing, sales and customer service activity, and is ultimately responsible for the customer satisfaction.

From the perspective of Czech law, there is a Law on Income Taxes where a provision on transfer pricing among related parties is included since 1992 using arm's length principle - As per par. 23(7), all transactions among related parties shall bear same amounts as transactions with unrelated parties would (comparable uncontrolled price - CUP method). In case there is no such a transaction, an official pricing document will work; this includes advance pricing agreements issued by the Ministry of Finance at the request of the taxpayer as per par. 38(nc) of the Law of Income Taxes.

Further guidelines on the application of various methods of transfer pricing, General Financial Directorate has issued a directive as a guideline (GFD, 2019). Sato (2012) provided an overview of the methods. For the purpose of determining the correct transfer price for intercompany business, a comparable uncontrolled price (CUP) method is used - being deduced by 5% as compared to market rates in the form of a tariff readily available for industry partners (so-called agents). This applies in all cases for the Czech branch rates as a compensation for the lower sales/marketing costs as described above that is necessary to generate the same amount of revenue.

2. Administrative service agreement

The headquarters is in Belgium and the brand is being developed there, with support functions like management, IT, marketing, law and insurance services located there. For all of these services, a monthly fee based on a yearly contract is charged to the local branch - which has been introduced only in 2019. The amount is calculated yearly based on average revenue and number of employees and other marginal factors. In regards to the management, every Branch Manager reports to one Regional Operations Manager and to one Regional Finance Manager. Obviously, their employer - the Belgian headquarters - does not have any immediate profit from the activities of these, so the costs of them (141 EUR per month) have to be shared among the branches they manage. Regarding IT (855 EUR monthly), software and auxiliary services are provided equally to all branches and employees within the group. IT hardware is being sold or lent to the branches (sold in case of Czechia), but software is already bought and serviced by headquarters. Regarding corporate image and marketing, a monthly fee of

110 EUR is included, but this also includes services of the marketing team - publishing social media posts, revising marketing branded materials, promotional articles etc. Further, the headquarters invoices services of finance and controlling (453 EUR monthly), global representation (247 EUR), risk management and legal representation (108 EUR) and quality management (14 EUR).

All of the services mentioned above can be handled by Czech General Financial Directorate Directive on low value adding intra-group services (GFD, 2012), as they do not constitute core business of the branch, and they do not exceed 20% of costs (or 50 million CZK) of the receiver; and 10% of the revenue (or 50 million CZK) of the provider. In case of an inspection, the following is analysed: subject names, description of services, reasoning for its use, transfer pricing method, costs and margin (should be 3-7%). In case of unsatisfactory results, the taxpayer has to provide functional/risk analysis, cost plus method analysis, market analysis and further information of the group. The most important point is the materiality of the service. Cases where another arrangement is required by law have to be excluded - for example, where management performs a full-time job but is employed by another entity, or where profit is being shifted across border. Neither of these is the case in our analysis.

The analysed enterprise does not receive invoices on administrative services without a supplementary contract; a formal contract has been requested by the local accounting in order to be ready for a potential inspection, having the documentation readily available. However, due to the relatively low price, I personally regard this probability of a tax inspection low. In perspective, the invoiced amount in 2019 reached around 18% of the overhead costs, or 8.1% of the total revenue, for 2020 the amount was set at 23,612 EUR per year, around 24% of the overhead costs, or 6.2% of the projected revenue due to COVID-19 crisis, it will definitely be a higher proportion, despite the HQ has decided to reduce the invoiced amount as well.

3. Country representation contract

Country representation contract is a transfer pricing document that backs up all the activities that the branch is doing in the name of the headquarters in the territory of the Czech Republic. Having a Country Representative and an office in the region means an investment. The employees in Czechia actually defend the interests of headquarters and perform sales activities on behalf of it, with many of the sales wins having an overflow to other countries or regions where the enterprise operates, or could operate in future. The fact that the sales activities are not performed only in the name of the Czech branch, but also for the headquarters actually mean the branch shall be rewarded for these; thus, the contract and charges are more than appropriate.

The question is, what is the correct amount to be invoiced. The situation is somehow unique and sales never have a direct result, so we cannot really use alternative transfer pricing methods. The amount of country representation reward was an amount equivalent to 28% of the yearly revenue in 2019. If we would use the Cost Plus method, we shall take the share of the time the employees spend on tasks described in the contract (sales in the name of another group company) and the resources used and then apply a fixed margin of somewhere around 3-7%. This contract is actually an advanced and mature tool implemented by the headquarters and is a way how to contribute the fair share to the local branch and local economy, in contrast to the standard perception of foreign headquarters "exploiting" the local resources in subsidiaries. Such a contract thus brings more security to local employees in the Czech branch so that they see the branch is appropriately rewarded.

4. headquarters loan

As the Czech branch is in a long-term loss, apart from one year in recent history (fiscal year 2017), the group decided to finance the loss of the branch through a loan. This loan is being increased every time the branch gets into cash flow troubles. As of the end of 2019, the loan

stood at around 93% of yearly operating revenue of the branch. As per the loan contract, 2% of yearly interest is paid to headquarters over the average amount of the loan throughout the year. If we compare this with market lending rate, we see this rate is very low in the Czech market, which was exactly the basic repo rate of the Czech National Bank for most of 2019. The lending rate is below the market rate but does not have to be adjusted regularly according to market evolution - for comparison, until 2007 the market rate for tax purposes was determined as 140% of the basic central bank lending rate. As per Czech Law of Income Taxes, par. 23(7), the intra-group debt interest does not have to follow the arm's length principle in case it is lower than the current market rate and the lender is a Czech tax non-resident. This rule has been effective since 1st January 2014, until then it had to follow the market rate. In case it did not, the whole cost could not be used for tax base deduction.

Thin capitalization rules as per the anti-tax avoidance directive (ATAD - EC, 2016) implemented as §25 Par. 1w) of the Law of Income Taxes limit the ratio of borrowing costs to EBITDA to 30%. This would be the case, but there is an exception for all costs that do not exceed 3 million EUR yearly.

5. individual property transactions

There have been individual intra-group sales transactions of property. The warehouse was getting shut down in late 2019 with the vision of reducing overhead costs so materials left behind had to be used. Some of it was given to subcontractors; some of it was destroyed; most of it was distributed among other branches. Materials are being priced as shopping price plus transport into the Czech warehouse. There was some material (stock) sold to Romania which had not suffered any deterioration. Moreover, the Romanian branch paid for the transport. As per management decision, this was priced at original prices without the transport amount. There was some old IT equipment sold to the Croatian branch; the amounts were set up unilaterally as an estimation of the current value (accounting value had long been nil) - this was not questioned by the receiver. There was a forklift transported at the expense of the Czech branch to Belgium; this was valued unilaterally by the headquarters with a lot of reservation concerning its bad state so it ended up to be a relatively low price; and there was some IT equipment sent at the expense of the Czech branch to Belgium - after being informed that transfer pricing laws apply, headquarters decided to destroy these with zero value left. As we can see from the above, only the materials that still have its value have been priced at the market level; the rest of the items lacked a clear market value and thus have been given ad hoc amounts for the transfer pricing purposes. What is most important, no documentation but a quick email communication is present to cover the decisions on how the prices have been set up.

3.3 Global indicators

1. Concentration of high level of foreign direct investment (FDI) relative to GDP/turnover

This is inherently a jurisdiction-level measure. Were we to analyse the capital that is invested by headquarters into the branch, we would come at these numbers: 100 000 CZK of capital + 345,000 EUR of headquarters loan sum up to 94% of 2019 revenue. Thin capitalization rules (BEPS Action 4) do not capture this situation as mentioned above; yet the proportion is relatively high which translates into high degree of disconnection between financial and economic activity. It could mean that the headquarters is artificially maintaining the operations while there is no profit - obviously, the reasons do not have to be tax-related.

2. Differential profit rates compared to effective tax rates

In the local Czech branch, as there is a long-standing loss, this comparison cannot take place. If we analyze the only year when the branch had profit, 2017, we see a net profit (EBITDA)

rate to revenue of 3.3%, which after accounting for interest stood at 2.7%. Tax paid was zero, as losses from previous years got offset. Still, it is important to note that in 2017, none of the potential channels of profit shifting mentioned above were used with the exception of a headquarters loan, and this cannot be regarded as a risky instrument, as the interest rate stood at 2%, well below the market level.

3. Differential profit rates between low-tax locations and worldwide MNE operations

The profit of Czech branch has been nil except 2017, yet the group as a whole has seen large increases in revenue. To compare, Romanian branch had profit rate around 1-7% over the past 5 years, and also maintained the revenue growth steady. There is no group-wide information on profit publicly available, yet we can see that the Belgian headquarters had a revenue of 26.38 million EUR in 2018 and an operating loss of 0.68 million EUR (Belgian Central Balance Sheet Office 2020). Between 2011 and 2018, the company reported operating profit only in four years, with a maximum profit to revenue rate of 1.9%. Unfortunately, data for all the branches is not available. Obviously, there must be a reason why a long-sustained economic activity is maintained if it does not bring much profits, other than giving employees salaries and serving to customers. We can see the comparison of statutory corporate income tax rate in jurisdictions where group operates in Fig. 1 below.

Fig. 1 Comparing CIT rates in jurisdictions where group operates
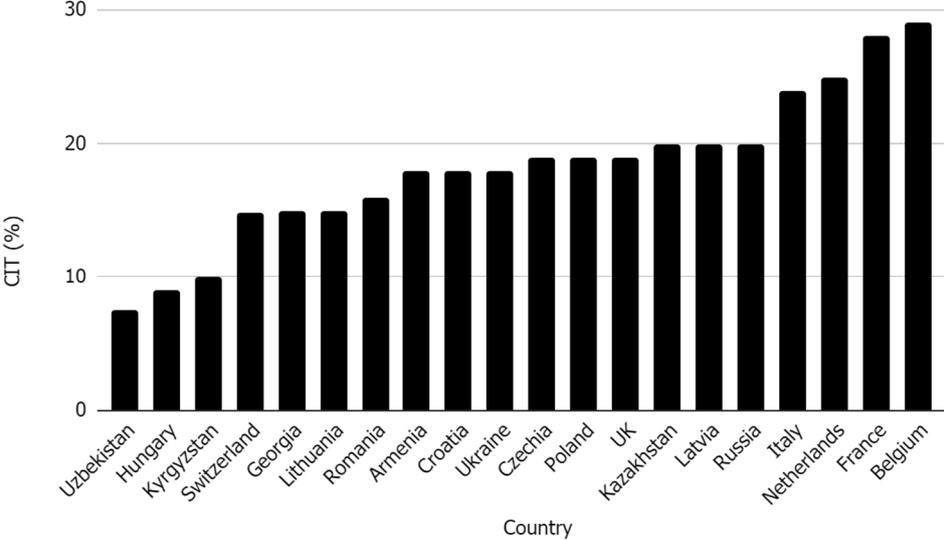
Source: OECD 2019

4. Effective tax rates of large affiliates relative to non-MNE entities with similar characteristics

As the Czech branch lacked profit for most of its recent history besides 2017, the effective tax rate on the corporate income tax has been nil. As per Czech Chamber of Commerce (2017) actually entities with sustained loss over many years are the most suspicious and are aimed by tax inspections. Again, according to popular conception, there is a risk of misalignment of real economic activity and information reported to the tax authorities.

5. Concentration of high levels of royalty receipts relative to research and development (R&D) spending

Administrative service agreement does not explicitly mention royalty payments. If I analyze the agreement's amounts, I do not see much space for the royalty payments to be done in an

opaque way. All the amounts look to be relatively appropriate and connected to real, tangible administrative activities and not only to brand usage.

6. Interest expense to income ratios of MNE affiliates in high-tax locations

In case of the Czech branch, interest rate of the headquarters loan is actually below the market level. This is fine from the perspective of the Czech law, as tax base could be lower than it is. However, from the headquarters point of view, this is a potentially vulnerable issue - their total sum of all loans is probably relatively high, and compared among the branches, the Belgian corporate income tax is one of the highest. Analyzing the financial statements from Belgium 2011-2018 (Belgian Central Balance Sheet Office, 2020), we see that in all years, financial costs are higher than financial income with the exception of 2015-2016, when there is a large amount of "other" financial income, which could be a result of one-off transactions. The explanation of this situation is that even though headquarters is receiving interest from branches, it maintains a certain level of debt to offset financial income and reduce effective tax rate.

CONCLUSION

Based on the global indicators proposed by the OECD in the BEPS Action 11 - Measuring BEPS, we see that suspicious BEPS behaviour can occur outside of the scope of the proposed analysis criteria. Even in case that tax administration inspectors of the Ministry of Finance of the Czech Republic analyse the appropriateness and lawfulness of the existing contracts and performed transactions, most likely they will agree that all the actions have been done in accordance with existing norms. Moreover, most of the behaviour is motivated by operational and business rationale, and not by tax avoidance - a fact that many corporations were emphasising in their comments to the OECD (Procházka, forthcoming 2020). Only an informed, insider's view, can truly understand the true motives and see whether the creation of such intra-group transactions has intrinsic motivation or they are driven by base erosion and profit shifting factors.

Voices of many transnational corporations seem to be reasonable in many cases. The complexity of transfer pricing documentation does not necessarily add up to the precision of data and global justice. However, it definitely adds up to compliance costs that both taxpayers and tax authorities have to bear. As a group of enterprises "Business at OECD" commented on one of BEPS Actions Discussion drafts (OECD, 2016):

"The transfer pricing changes proposed...in addition to the documentation requirements under Action 13 will impose a substantially increased compliance burden on all MNEs. That compliance burden doesn't just relate to the volume of documentation required, but also to the complexity and detail of the analysis needed to feel confident that the terms and conditions of a related party transaction, as well as the conduct of the parties, can be robustly defended. Given that the arm's length principle will, by its nature, continue to be subjective, increasing the complexity of its application significantly drives up the compliance burden, without necessarily mitigating the risk of dispute. The additional level of detail taxpayers must provide may not reduce ambiguity for tax authorities about the appropriateness of the transfer price; rather the result may be a wider range of potential outcomes."

A solution to stop tax optimization techniques would be to impose one universal taxation system globally.

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Predictors of Aviation Companies' Competitiveness in the Republic of Kazakhstan

Zhanna Serikbayeva – Amina Chivazova – Galiya Jaxybekova
zhanna_sd@inbox.ru, ch_amina@mail.ru, dgn_galiya@mail.ru
Almaty Management University, School of Management
Almaty, Kazakhstan

Abstract: The current stage of economic development of the country sets a task for domestic civil aviation companies to fully integrate into the global community. In this issue the authors have set a goal to critically analyse the current state of civil aviation in Kazakhstan and to propose models for evaluating the competitiveness of civil aviation companies. The authors developed a systemic approach to the study of the problem with critical analysis of the works of domestic and foreign specialists. It was guided by the basic provisions of the theory of competition for consumers of transport services used the method of comprehensive analysis of statistical data in the dynamics over a long period of time (2008-2018 years), the method of expert evaluation, as well as financial modelling to study the competitiveness of civil aviation companies. The analysis of external and internal predictors of the company's competitiveness is carried out in the article. The author's model of assessment of competitiveness of civil aviation companies is presented. The authors suggest the directions of increasing the competitiveness of domestic civil aviation companies.

Keywords: competitiveness; predictors; modelling; civil aviation

JEL Classification codes: O18, R42

INTRODUCTION

The formation and organization of the effective operation of the transport complex, which is an integrated economic system, is of crucial strategic importance both for expanding the domestic market and for deepening foreign trade relations of the Republic of Kazakhstan. In addition, the geographical position of Kazakhstan determines its significant connecting role in the development of trade relations on the Eurasian continent. Kazakhstan is one of the countries on which the formation of new transport directions directly depends.

To increase the competitiveness of the national economy in international markets, the effective development of transport infrastructure is required that can fully satisfy the existing needs and development prospects of the country. This will have a multiplier effect on the country's economy, trade growth, development of inter-farm relations, and development of market infrastructure. For Kazakhstan, which occupies the 9th place in the world in terms of territory size, not only freight transportation is associated with transport, but also the socio-economic development of the regions, the solution of many problems, such as population employment, reducing inflationary pressure on prices, improving the quality and standard of living of people and etc. At the same time, in 2018, the share of the transport industry in Kazakhstan's gross domestic product is only 8%. In the countries of the European Union, this indicator is 20-25%, which indicates the decisive role of the transport and logistics sector in the economy.

1 LITERATURE REVIEW

The competitiveness of a country as a whole is defined as a set of competitive advantages that are created by state authorities for the effective functioning of state, business and public structures in order to improve the quality level life of the population, and in addition, as a set of prerequisites guaranteeing country leading position at the world level (Kutikova I.N., 2007).

Competitiveness refers the formation and the development of a set of interrelated factors within each organization that oppose the impact of many crisis situations by creating an information technology complex. That allows the formation of supportive institutional structures of the future cluster, which facilitate the transition from quantitative aspects of planning the future state of organizations to increase the quality. To visualize progressive or regressive trends in industrial dynamics, as well as set the vector of enterprise development in accordance with the specifics of the industry (Dvortsin, 2007).

A lot of researchers, such as M. Yu. Porter, Friedrich A. von Hayek, R. A. Fathutdinov, and others, studied the competitiveness of enterprises. They determined various factors that can affect the competitiveness of companies in various fields. In this paper, we will consider and investigate such factors affecting the competitiveness of enterprises that formed the basis of the approach of Michael Eugene Porter. From his point of view, such factors as the threat of entry of new firms into the industry, the threat of the appearance of substitute goods and services, the marketing activities of suppliers, the struggle of enterprises located in the same industry, and the market power of consumers of these services have a significant influence on the competitiveness of firms (Porter, 2000).

It is worth noting that the analysis of the competitiveness of companies was carried out in various sectors: the hotel business (Tavitiyaman, 2011), an analysis of public urban transport (Ortega, 2014), the bakery industry (Renko, 2010) and in others. However, the passenger transportation industry, and in particular the aviation industry, is not affected in the analysis.

A special place is occupied by matrix methods of competitiveness analysis. They are based on the idea of considering the processes of competition in dynamics. The theoretical basis of these methods is the concept of the product life cycle and the technology developed by R. Vernon (Vernon, 1979).

The problems of improving management in general are the subject of issues of D.A. Aaker (Aaker, 2011) and I. Adizes (Adizes, 2009). Investigation civil aviation problem considered in issues of Borzova (Borzova, 2017). Additional research examining the current state of the material and technical base of civil aviation and the development of the aviation industry in the country (Khalturin, 2012, Fridlyand, 2016). Moreso, research on the problems of increasing competitiveness, has revealed in the general plan by R.A. Fathutdinov, in the field of the air fleet were considered (Voropaeva, 2017, Friedland, & Mordasova, 2016).

2 METHODOLOGY

The competitiveness of a company is determined by a combination of external (socio-economic, political stability in the country, level of effective demand, taxes, interest rates, accounting system, investment policy, market situation of suppliers, industry characteristics, type of market) and internal factors (company size, level of control, the flexibility of the system, the level of conformity of products for consumer demands in quality and price, the material and technical base of the enterprise, technology, condition of property and financial resources, dependence on creditors and investors, the effectiveness of economic and financial operations, the level of management and the supply of highly qualified personnel, the corporate culture,

the business reputation of the company, the balance of internal capabilities with the influence of external threats) (Gapak, 2017).

A significant number of factors affecting the financial stability of the enterprise are caused by the lack of a unified approach to its definition and assessment in the economic literature. Traditional methods of assessing financial stability can be divided into three groups. The first group includes a qualitative assessment of financial stability, the second contains a quantitative assessment of financial stability, and the third group includes an assessment of the financial insolvency of enterprises.

Among the methods of the financial condition of an enterprise when analyzing its financial stability, the following methods can be distinguished: systemic and comparative approaches, content analysis of scientific literature, methods of statistical and economic analysis, financial analysis, expert assessment, correlation, coefficient analysis, horizontal, vertical analysis, liquidity analysis, diagnostics of bankruptcy, financial modeling.

Thus, the financial stability of the enterprise is a key basis for its stable financial condition and strategic development. Timely analysis of financial stability creates new opportunities for the enterprise to identify reserves in order to increase its competitive position, increase market share, and also fulfill other tactical and strategic goals. Summarizing, the competitiveness of the enterprise should be investigated in the system and in the relationship at the macro (at the country level), meso (at the industry level) and micro level (at the company level). The competitiveness of the enterprise, in our opinion, reflects the level of effectiveness of the financial, material, technological and human resources of the company compared to competitors.

For analyzing and evaluating the predictors of competitiveness, we used the EViews special program. This program offers academic researchers, corporations, government agencies, and students access to powerful statistical, forecasting, and modeling tools through an innovative, easy-to-use object-oriented interface. In our case we will use this program to make a regression analysis which will illustrate the relation of Net profit from predetermined factors.

3 RESULTS AND DISCUSSION

3.1 Economic environment of civil aviation industry in the Republic of Kazakhstan

Transportation always has been, is and will be an important branch of the country's economic and political life. The vast territory of Kazakhstan, low population density, remoteness of settlements from each other, the growing processes of integration and globalization in the world make it one of the priority areas of development in the country.

At the end of 2018, the transport industry provided the country 8.3% of the total gross domestic product. According to the operational data of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan, the republic's GDP by production method amounted to about 58.8 trillion KZT in that period. According to the results of 2018, the country as a whole, transported 4.1 billion tons of cargo, while according to the results of 2008, the volume of such transportations was almost half. The number of people who used the services of Kazakhstan carriers amounted to 23 billion people. But exactly 10 years ago, this figure was noticeably lower and reached only 11.3 billion people.

Another important indicator of this industry is cargo turnover and passenger turnover. So, freight turnover is understood as the volume of work of transport for transportation of goods, which is expressed in ton-kilometers (tkm) and is defined as the sum of the products of the

weight of each consignment of transported goods by the distance of its transportation. In turn, the passenger turnover of a transport is determined by summing the products of the number of passengers of each carriage by the carriage distance in kilometers. The unit of measure is passenger-kilometer (pkm). Next, we consider the volume of passenger and cargo transportation by major types of transportation ways.

Tab. 1 Transportation of goods by different types of transport in Kazakhstan, in mln. tons

Transport type	2008	2013	2018	Change 2013/2018	Change 2008/2018
Railway transport	271.5	289.3	397.7	1.37	1.46
Personal vehicles and public electric transport (Automobile and city electric transport)	1720.9	2982.7	3422.3	1.15	1.99
Air Transport	0.02	0.02	0.03	1.50	1.50
Total	1992.42	3272.02	3820.03	1.17	1.92

Source: processed by the authors according to the data from the World Bank, 2018

The number of people using personal vehicles and public electric transport has doubled over ten years - up to 22.9 billion people. Last year, freight turnover amounted to 172.7 billion tons-kilometers, an increase of 2.7 times compared with the results of a decade ago, 2008. Passenger turnover at the same time amounted to 246.8 billion pkm., respectively, and in 2008 - 107.3 billion pkm.

Tab. 2 Transportation of passengers by different types of transport in Kazakhstan, in mln. of people

| Transport type	2008	2013	2018	Change 2013/2018	Change 2008/2018
Railway transport	17.5	28.5	22.8	0.80	1.30
Personal vehicles and public electric transport	11297.8	19967.7	22990.8	1.15	2.03
Air Transport	2.8	5	7.9	1.58	2.82
Total	11318.1	20001.2	23021.5	1.15	2.03

Source: processed by the authors according to the data from the World Bank, 2018

The freight turnover of railway transport over the past ten years increased by 31.6% from 215.11 billion tkm. In turn, passenger turnover over the past ten years, respectively, increased by 31% from 14.13 billion pkm. to 18.51 billion pkm.

The smallest amount of cargo is transported by air transport in the country: for example, in the analyzed period only 29.14 thousand tons of cargo was transported, cargo turnover amounted to 55.67 million tkm. In total, about 7.9 million people used the services of airlines. But in this sector, we see a huge increase in comparing with other types of transport.

At present, there are 4 major airlines in Kazakhstan represented by Scat, Bek Air, Qazaq air and Air Astana, as well as one new low-cost airline Fly Arystan, which is gaining popularity will not be included in this list since appeared on the market relatively recently. We will analyze each airline separately and draw a small conclusion on the state of civil aviation.

Fig. 1 Revenues by the type of transportation in the Republic of Kazakhstan in 2018
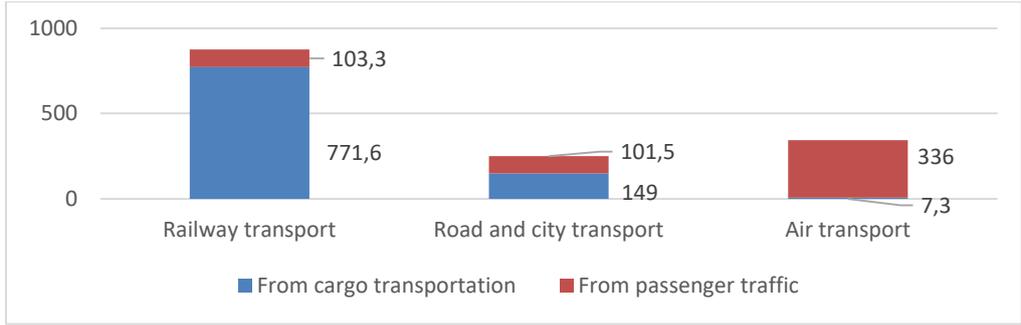
Source: processed by the authors according to the data from the World Bank, 2018

In 1997, there was a group of pilots, aircraft technicians and people devoted to aviation who love the sky and have strong believe gathered in the city of Shymkent. They created SCAT Airlines. Nowadays, the company's aircraft fleet represented by its own Western-made aircrafts; more than 80 domestic and international air are operated in post soviet countries.

The airline "BEK AIR" was created in 1999 with the aim of performing for "business jet" transportation. BEK AIR Airlines provides domestic scheduled flights between local cities and charter flights to many CIS countries. In connection with the plane crash in December 2019, the airline ceases all flights during the investigation of the plane crash.

Qazaq Air is a subsidiary of Samruk-Kazyna National Wealthfare Fund and, concurrently, the youngest among Kazakhstani air carriers. It entered the market only in 2015, but has already managed to fall in love with the people of Kazakhstan with their budget airfare. Qazaq Air carries out domestic transportation, and in July 2017 for the first time completed the international flight.

Air Astana Airlines was registered about 19 years ago in 2001. The extensive route network developed over many years includes about 70 domestic-republican and international flights. Air Astana placed an order for delivery and purchase of Boeing 787 aircraft as well as Airbus A320NEO and worldwide famous Embraers. This will undoubtedly allow updating and increasing the number of aircraft to 34 units by the beginning of 2018 and to 45 units by the beginning of 2020.

If we analyze the number of airlines, we can distinguish that Air Astana has the largest number of aircraft - 34 vessels, moreover, it exceeds Bek Air with 7 aircraft and Qazaq Air with 5 aircraft in this indicator more than 5-6 times. The closest competitor Scat has 21 aircraft.

Fig. 2 Quantity of planes of Scat, Bek Air, Qazaq Air and Air Astana in 2018
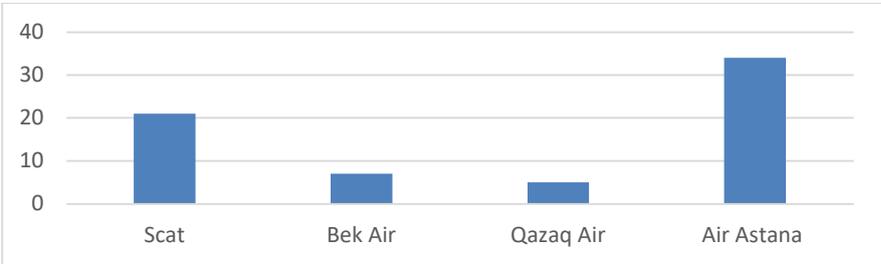
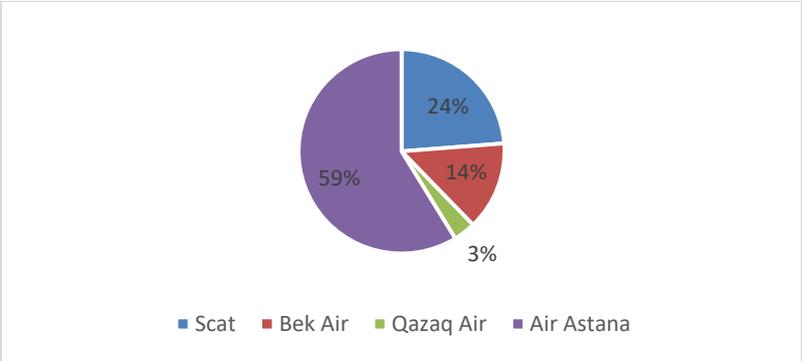Source: Authors' compilation based on the conducted surveys

The progressive market of aviation of the Kazakhstan Republic demonstrated fast growth for the few years until end of 2014, when new different economic conditions led to its decline.

Historically, from the beginning of intercountry flights started, the specific local market has always been dominated by local passengers, both in domestic and international destinations. In 2018, the Kazakhstani market would decline if it weren't for the fast growth of transit traffic, which was largely promoted by Air Astana. The inbound tourism market has grown in recent years from a very low initial cost, as Kazakhstan began to develop as a tourist destination.

For 2018, Air Astana is currently the leader, being the largest carrier in the RK with a total number of passengers of more than 4 million. SCAT Airlines during the 2018 carried about 1.7 million passengers. According to IATA, the third largest airline in Kazakhstan is the private company Bek Air, which in 2018 carried almost 1 million passengers. The fourth place is occupied by the state airline Qazaq Air, which operates turboprop aircraft with a passenger flow of just over 250 thousand passengers.

At the beginning of 2020, the share of passenger traffic for companies excluding Bek Air will continue to grow, as the market will be divided between the remaining members of the "big four". The total growth based on a statistical study will increase by more than 10-15 percent.

**Fig. 3   Share of air carriages of Kazakhstan in 2018**

Source: Authors' compilation based on the conducted surveys

From the analyzed information we can sum up that Air Astana takes leading position on local market of civil aviation and has no many strong opponents. Moreover, company can be competitive in the international air space.

3.2   Assessing the financial performance of the company "Air Astana" as leading and national air carrier in Kazakhstan

Fig. 4   Total revenue of Air Astana JSC from 2014 to 2018, MM'USD
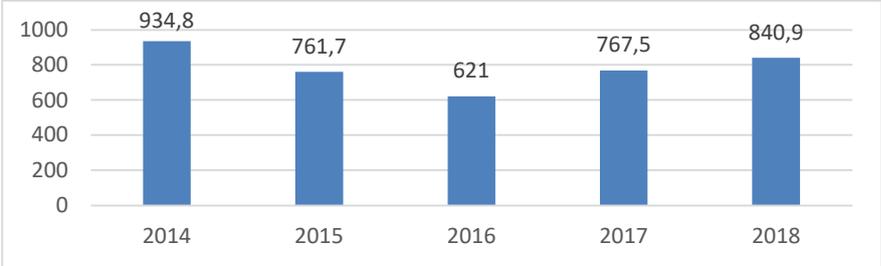
Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

Air Astana is a leading airline not only in Kazakhstan but also in Central Asia. The airline was able to earn such a high position thanks to a strong corporate culture and the right economic and financial policy. The following indicators can tell us in more details:

Revenue growth of 9.6% was facilitated by an increase in both domestic and international passenger traffic by 48%.

Fig. 5 EBITDAR of Air Astana JSC from 2014 to 2018, MM'USD

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

The total profitability of $ 130.9 million was maintained due to the high level of the Company's operational efficiency, despite the sharp increase in expenses by 26%.

Fig. 6 Operating income of Air Astana JSC from 2014 to 2018, MM'USD
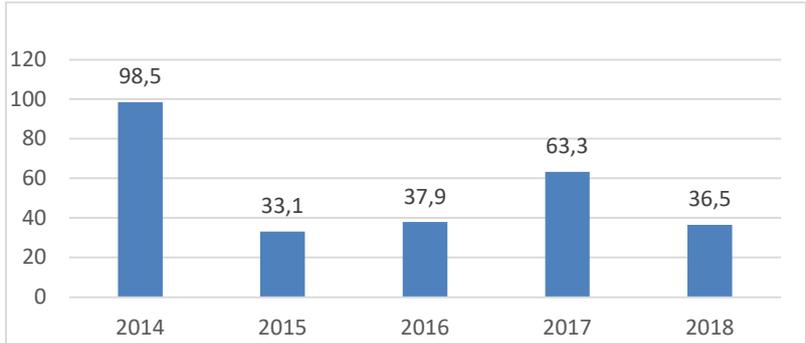
Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

Despite many macroeconomic difficulties, the reporting year remained profitable - $ 36.5 million thanks to the prudent management of financial and operational activities.
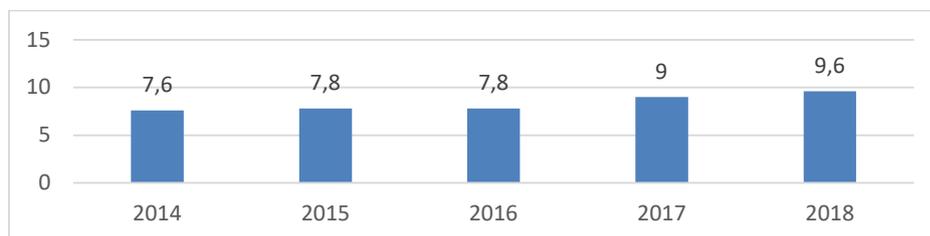
Fig. 7 Cost per Available Seat Kilometers (CASK) of Air Astana JSC from 2014 to 2018 in US cents

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

Such an indicator as the unit cost per airline CASK of 5.63 cents remains one of the lowest in the industry not only with Kazakhstani companies, but also with various large and low-cost airlines in Europe.
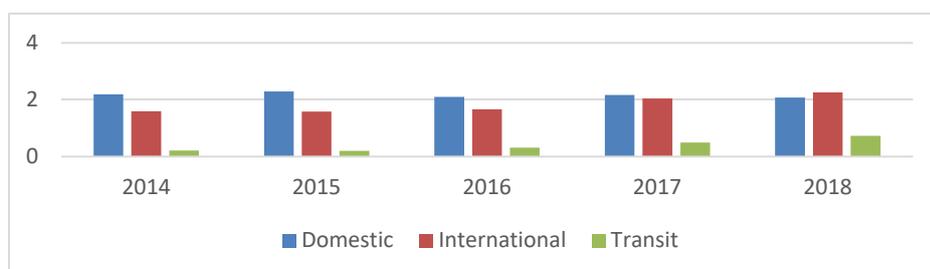
Fig. 8 Revenue Passenger Kilometres (RPK) of Air Astana JSC from 2014 to 2018 in blns

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

An increase in such an indicator as RPK by 6% from 9 billion to 9.6 billion reflects the positive demand for air transportation and the ability of Air Astana to use this growth is beneficial.

Fig. 9 Number of passengers of Air Astana JSC from 2014 to 2018, millions of people

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

The total number of passengers increased by 3%, in particular, the flow of passengers on international flights increased by 11%, despite the late deliveries of aircraft and increasing fuel prices.

According to our methodology of analysis and evaluating, financial stability of an enterprise largely depends on the appropriateness and accuracy of the investment of financial resources in assets. In the process of functioning of the organization, both the size of assets and their structure undergo constant changes.

Tab. 3 Structure of assets of Air Astana JSC

Description	31-Dec-18		31-Dec-17		The change (deviation)	
	Amount, K'USD	Share, %	Amount, K'USD	Share, %	Absolute, K'USD	Relative, %
Current assets	285,548	49.18	295,404	49.92	(9,856.00)	-3.34
Non-current assets	295,022	50.82	296,339	50.08	(1,317.00)	-0.44
Total assets	580,570	100	591,743	100	(11,173)	-1.89

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

The most general idea of the qualitative changes that have taken place in the structure of funds and their sources, as well as the dynamics of these changes can be obtained using vertical and horizontal analysis of reporting. Firstly, we should overview the structure changes of assets. The total amount of assets decreased during the accounting year from 591,743 K'USD in 2018 to 580,570 K'USD in 2019 by 11,173 K'USD. From the other side the structure of assets has stood the same where current assets in 2018 had a lower position. Despite of negative growth the asset's structure did not change, because current and long-term assets decreased with a same dynamic 3% and 0,4% accordingly.

Additionally, we built a three-dimensional model to determine the type and characteristics of financial stability.

Tab. 4 Three-dimensional model of financial stability for Air Astana JSC

Description	2016 Amount, K'USD	2017 Amount, K'USD	2018 Amount, K'USD
Equity	39,077	86,763	88,652
Non-current assets	305,055	296,339	295,022
Non-current liabilities	392,737	362,847	303,862
Current liabilities	140,749	142,133	188,056
Inventories	41,288	38,613	44,965
Own working capital (OWC)	(265,978)	(209,576)	(206,370)
Own and long-term sources of financing reserves (OLS)	126,759	153,271	97,492
The total amount of the main sources of formation of stocks (OSS)	267,508	295,404	285,548
			m(x,y,z)
Δ OWC	(307,266)	(248,189)	(251,335)
Δ OLS	85,471	114,658	52,527
Δ OSS	226,220	256,791	240,583
Financial stability model (M)	**(0,1,1)**	**(0,1,1)**	**(0,1,1)**

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

The obtained results show us that our company has normal financial stability (M = (0, 1, 1)) Own working capital plus long-term loans and borrowings are the main sources of financing reserves. The solvency of the company is at a good level, which is a consequence of the rational use of borrowed funds. We can also conclude that operating activity is highly profitable. Despite the fact, that the three-factor model showed a good level of liquidity and financial independence, it is worth noting that there is a large increase in long-term financial liabilities in the balance sheet. This fact significantly affects the various financial indicators presented in the Table 5.

The company had an acceptable solvency ratio. However, the coefficient gradually fell from 0.63 in 2011 until 0.07 in 2016. It indicates a decrease in financial stability and an increase in the share of assets purchased on credit. In 2017 and 2018 coefficient increased to 0.15.

Tab. 5 Relative indicators of financial stability of Air Astana JSC

Ratio	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Capitalization rate (leverage)	0.69	0.62	0.63	0.59	1.08	1.90	2.32	6.71	13.65	5.82	5.55
Own sources in financing	0.43	0.29	0.13	(0.03)	(0.26)	(1.05)	(0.91)	(0.70)	(0.99)	(0.71)	(0.72)
Coefficient of financial independence (autonomy)	0.59	0.62	0.61	0.63	0.48	0.35	0.30	0.13	0.07	0.15	0.15
Ratio of financing	1.45	1.60	1.58	1.71	0.93	0.53	0.43	0.15	0.07	0.17	0.18
Financial stability ratio	0.64	0.64	0.65	0.66	0.73	0.80	0.81	0.79	0.75	0.76	0.68

Source: Authors' elaboration based on the Annual report of Air Astana JSC for 2014-2018
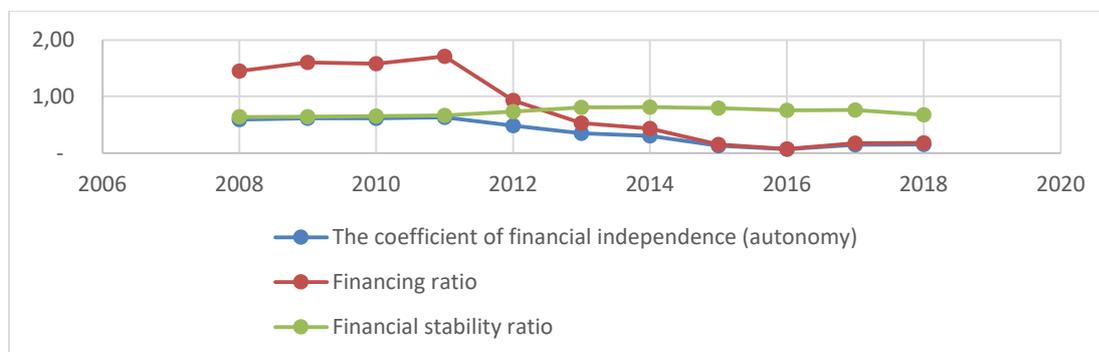
Fig. 10 Dynamics of changes of capitalization ratio and ratio of own sources of financing of Air Astana JSC from 2008 to 2018
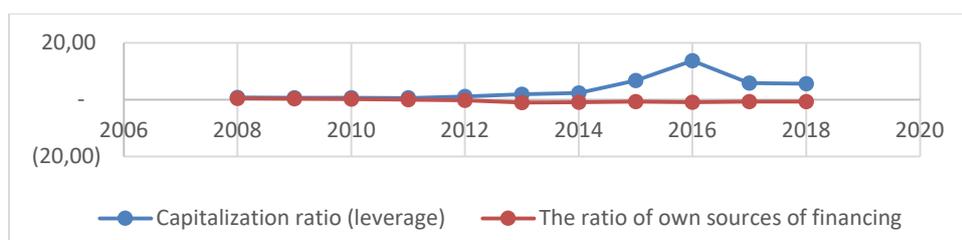
Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

The ratio of invested and equity capital over the past 6 years has been above unity, which indicates the excess of borrowed funds over equity and at the same time growing dependence of the company on external sources of financing. To date, this dependence is due to a significant part of long-term financing in the form of financial leasing of air assets, as the company plans to expand its aircraft fleet. However, the growth trend of this indicator should be under the control of the company's management.

Fig. 11 Dynamics of changes of coefficient of financial independency, financing ratio and financial stability ratio of Air Astana JSC from 2018 to 2018

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

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The coefficient of own source of financing as well as the autonomy coefficient tended to decrease from -0.03 in 2011 to -0.99 in 2016 and remained stable in 2017-2018. The dynamics of changes in coefficient of concentration of attracted capital (liabilities) changed identically to the coefficient of autonomy. The normative value of this coefficient is 0.7, but since the Company recognizes income only after a flight, the account of deferred income reduces the value of the coefficient. This suggests that the assets of the Company are financed and due to sustainable sources that can be used for a long time.

Then we will analyze the absolute indicators of liquidity of the balance.

Tab. 6 Analysis of the absolute indicators of liquidity balance of Air Astana JSC

Assets	2017	2018	Liabilities	2017	2018
	Amount, k'USD	Amount, k'USD		Amount, k'USD	Amount, k'USD
A1	148,181	132,826	L1	38,883	44,813
A2	108,610	107,757	L2	103,250	143,243
A3	322,942	321,306	L3	362,847	303,862
A4	12,010	18,681	L4	86,763	88,652
Total	591,743	580,570	Total	591,743	580,570

Source: Authors' compilation based on the Annual report of Air Astana JSC for 2014-2018

To assess the balance sheet liquidity taking into account the time factor, it is necessary to compare each asset group with the corresponding liability group. Further we see that the conditions of absolute liquidity are not fulfilled. This is mainly related to the specific structure of the airline's balance sheet. As we see in 2018, the group of quick-selling assets did not exceed the group of short-term liabilities, due to the fact that during 2018 the number of aircraft and provision for aircraft maintenance increased. In general, the absolute performance of Air Astana is close to the allotted standards.

Along with absolute indicators for assessing the solvency of an enterprise, relative liquidity indicators are calculated: absolute liquidity ratio, intermediate (critical) liquidity ratio and current liquidity ratio.

Tab. 7 Analysis of relative indicators of liquidity of Air Astana JSC

Liquidity ratios	2017	2018	Change
Coefficient of absolute liquidity	1.04	0.71	-0.34
Intermediate coverage ratio	1.81	1.28	-0.53
Current liquidity ratio	4.08	2.99	-1.09
Relative liquidity ratio	1.06	0.96	-0.10

Source: processed by the authors according to the Annual report of Air Astana JSC for 2014-2018

In our case the absolute liquidity ratio is equal 1.04 in 2017 and 0.71 in 2018 and shows that 70% of account payables the company can pay off immediately. In compare with 2017, this ratio decreased, but still stays at the optimal level. Most often, a value of >0.2 or more is used as a guideline for a normal indicator value. However, too high coefficient indicates an unreasonably high amount of free cash that could be used for business development.

Current Liquidity Ratio is equal 4.08 in 2017 and 2.99 in 2018. Ratio reflects the company's ability to repay short-term liabilities at the expense of current assets only. The value of this coefficient should be in the range of 1-2. Naturally, there are circumstances, in which the value of this indicator may be more, however, if the current liquidity ratio is more than 2-3 this, as a rule, speaks of the irrational use of the funds of the enterprise. As we see this ratio decreased in 2018 to 2.99 and it is a good illustration of that the situation changed in positive way. Furthermore, the relative liquidity ratio is equal 1.5 in 2017 and 1.36 in 2018. Ratio is higher than 1 and shows the proportion of all liquid assets of an enterprise to all payment obligations. Intermediate coverage ratio is equal 1.28 in 2018 and 1.81 in 2017. This indicator determines that in 2018 the entire share of accounts payable can be repaid at the expense of the most liquid assets. Compared to the previous year, this indicator decreased due to an increase in short-term debt under financial leasing, but is still at an optimal level.

Air Astana does not lack cash and cash equivalents and has sufficient liquidity to cover current liabilities. The increase in liquidity helps the company increase its own solvency. Results of the financial analysis let us to establish that the decisive predictors of financial stability and competitiveness are: the cost of aviation fuel, the cost of engineering and technical services, the national currency and passenger traffic.

3.3 Predictors of competitiveness of Kazakhstan's airlines

To evaluate magnitude of correlation between net profit and factors that can have direct impact we make a regression analysis. We chose two groups of factors. The first group consist of different financial aspects like non-current liabilities, equity and operating expenses. The second group stands from external factors like inflation rate, exchange rate and average wage rate of the Republic of Kazakhstan.

As mentioned before, we applied the EViews program to analyze and estimate the influence of main factors on the key parameter. We performed regression analysis which demonstrates the dependence of Net profit from previously detected factors.

Analysis number 1

First of all, we should familiarize with some terms like: NP is net profit, generated by the air company during the accounting year; LGL is long-term liabilities; CAP is equity and TOT – total operating expenses. Major indicators of model extracted from financial statements of "Air Astana" JSC starting from 2008 and ending 2018.

STEP 1. We searching and collecting data form the financial statements, that is the introduction of analysis.

STEP 2. When the correction in Excel is done there is a time for Eviews where we create a new file with designation with time – from 2008 to 2018. The first command is "data NP LGL CAP TOT"). In the appeared table we paste all necessary data from Excel. For getting required results next action is:

1. Quick
2. Estimate equation

After, the program produces results that we utilize for regression analysis. To use given date we should remind our theoretical part and follow to the step 3 and step 4.

STEP 3. Empirical analysis

$NP = \beta_0 + \beta_1(LGL) + \beta_2(CAP) + \beta_3(TOP)$

Fig. 12 Summary of Eviews's program analysis

Source: authors' processing

1.   NP= 11.126+0.044(LGL)+0.042(CAP)-0.031(TOP)

Assuming that there is no change in other variables NP will decrease by 11.126.

With increase 1% of long-term liabilities, assuming that there is no change in other variables, NP will increase by 0.044.

With increase 1% of equity, assuming that there is no change in other variables, NP will increase by 0.042.

With increase 1% of operating expenses, assuming that there is no change in other variables, NP will decrease by 0,031.

2.   H0: $\beta_0 = 0$

H1: $\beta_0 \neq 0$

$P_{value} = 0.066$

0.066 > 0,01 (1% level of significance)
0.066 > 0,05 (5% level of significance)
0.066 < 0,1 (10% level of significance)

We reject the null hypothesis at 10% level of significance because P_{value} is less than 10%. We can conclude that β_0 is statistically significant.

3.   H0: $\beta_1 = 0$

H1: $\beta_1 \neq 0$
$P_{value} = 0,08$

0.08 > 0.01 (1% level of significance)
0.08 > 0.05 (5% level of significance)
0.08 < 0.1 (10% level of significance)

We reject the null hypothesis at 10% level of significance because P_{value} is less than 10%. We can conclude that β_1 is statistically significant.

4.   H0: $\beta_2 = 0$

H1: $\beta_2 \neq 0$

$P_{value} = 0{,}028$

0.028 > 0.01 (1% level of significance)
0.028 < 0.05 (5% level of significance)

We reject the null hypothesis at 5% level of significance because P_{value} is less than 5%. We can conclude that β_2 is statistically significant.

5.   H0: $\beta_3 = 0$

H1: $\beta_3 \neq 0$

$P_{value} = 0{,}07$

0,07 > 0,01 (1% level of significance)
0,07 > 0,05 (5% level of significance)
0,07 < 0,1 (10% level of significance)

We reject the null hypothesis at 10% level of significance because P_{value} is less than 10%. We can conclude that β_3 is statistically significant.

6.   H0: $\beta_0 = \beta_1 = \beta_2 = \beta_3 = 0$

H1: $\beta_0 \neq 0$; $\beta_1 \neq 0$; $\beta_2 \neq 0$; $\beta_3 \neq 0$

$F_{stat} = 0{,}06$

0,06 > 0,01 (1% level of significance)
0,06 > 0,05 (5% level of significance)
0,06 < 0,1 (10% level of significance)

We reject the null hypothesis at 10% levels of significance because P_{value} is less than 10%. We can conclude that the whole model is statistically significant and best fitted.

7.   14,14% variation in NP can be explained by variation or changes in variables.

Assuming the assumption we can see that analysis can be used to make some suggestion about how to increase the net profit of the company, which is direct indicator of financial stability of any organization.

Analysis number 2

First of all, we should familiarize with some terms like: NP is net profit, generated by the air company during the accounting year; IR is inflation rate; ER is exchange rate and AS – average wage rate in Kazakhstan. Major indicators of model extracted from World data bank starting from 2008 and ending 2018.

STEP 1. We searching and collecting data form World data bank, that is the introduction of analysis.

STEP 2. When the correction in Excel is done there is a time for Eviews where we create a new file with designation with time – from 2008 to 2018. The first command is "data NP IR ER AS"). In the appeared table we paste all necessary data from Excel. For getting required results next action is:

1. Quick

2. Estimate equation

After, the program produces results that we utilize for regression analysis. To use given date we should remind our theoretical part and follow to the step 3 and step 4.

STEP 3. Empirical analysis

NP= β_0 + β_1(IR) + β_2(ER) + β_3(AS)

Fig. 13 Summary of Eviews's program analysis

Source: authors' processing

1. NP= 11.126+0.044(IR)+0.042(ER)-0.031(AS)

Assuming that there is no change in other variables NP will decrease by 10.440.

With increase 1% of inflation rate, assuming that there is no change in other variables, NP will decrease by 0.133.

With increase 1% of exchange rate, assuming that there is no change in other variables, NP will decrease by 0.217.

With increase 1% of average wage rate, assuming that there is no change in other variables, NP will increase by 0,022.

2. H0: $\beta_0 = 0$

H1: $\beta_0 \neq 0$

$P_{value} = 0.03$

0.03 > 0,01 (1% level of significance)
0.03 < 0,05 (5% level of significance)

We reject the null hypothesis at 5% level of significance because P_{value} is less than 5%. We can conclude that β_0 is statistically significant.

3. H0: $\beta_1 = 0$

H1: $\beta_1 \neq 0$

$P_{value} = 0,066$

0.066 > 0.01 (1% level of significance)

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0.066 > 0.05 (5% level of significance)
0.066 < 0.1 (10% level of significance)

We reject the null hypothesis at 10% level of significance because P_{value} is less than 10%. We can conclude that β_1 is statistically significant.

4. H0: $\beta_2 = 0$

H1: $\beta_2 \neq 0$

$P_{value} = 0{,}051$

0.051 > 0.01 (1% level of significance)
0.051 > 0.05 (5% level of significance)
0.051 < 0.1 (10% level of significance)

We reject the null hypothesis at 10% level of significance because P_{value} is less than 10%. We can conclude that β_2 is statistically significant.

5. H0: $\beta_3 = 0$

H1: $\beta_3 \neq 0$

$P_{value} = 0{,}038$

0,038 > 0,01 (1% level of significance)
0,038 < 0,05 (5% level of significance)

We reject the null hypothesis at 5% level of significance because P_{value} is less than 5%. We can conclude that β_3 is statistically significant.

6. H0: $\beta_0 = \beta_1 = \beta_2 = \beta_3 = 0$

H1: $\beta_0 \neq 0$; $\beta_1 \neq 0$; $\beta_2 \neq 0$; $\beta_3 \neq 0$

$F_{stat} = 0{,}052$

0,052 > 0,01 (1% level of significance)
0,052 > 0,05 (5% level of significance)
0,052 < 0,1 (10% level of significance)

We reject the null hypothesis at 10% levels of significance because P_{value} is less than 10%.

We can conclude that the whole model is statistically significant and best fitted.

7. 10.01% variation in NP can be explained by variation or changes in variables.

Assuming the assumption we can see that analysis can be used to make some suggestion about how to increase the net profit of the company, which is direct indicator of financial stability of any organization.

CONCLUSION

Now, we have result of our observation and we can compare and relate factors for further summary. Long-term liabilities and operating expenses are directly dependent on the exchange rate since, for example, leasing assets, like airplanes, are acquired from foreign lessors. This means that the transaction currency is a foreign currency, and in our case, it is the US dollar. Consequently, the weakening of the local currency negatively affects the size of long-term liabilities. Also, a considerable share of long-term obligations is reserves for aircraft maintenance. Since Kazakhstan does not produce spare parts for aircraft, Air Astana also expects to purchase the necessary spare parts from foreign producers, which will also happen

in foreign currency. Consequently, the annual increase in the air fleet, as well as the strengthening of the dollar will greatly affect the value of these reserves.

Inflation depreciates all the income and income of the enterprise. The slightest delay in payments leads to the fact that the company receives only part of the due income. Inflation leads to an unjustified increase in the company's need for working capital, because the company's costs for raw materials, wages, depreciation and amortization do not compensate for the actual expenses of the enterprise in the current period. Inflation distorts the real value of the capital of an enterprise, its assets and liabilities.

In conditions of inflation, the financial reports of enterprises on the results of economic activity, financial condition and use of profit may turn out to be a source of biased information, as various elements of the balance lose their value at different speeds. For example, cash and receivables, which represent a requirement to pay a fixed amount in the future, lose their value due to inflation and lead to losses for the enterprise by the amount of decrease in the purchasing power of debt money. And, conversely, enterprises that increase their accounts payable, i.e. holding the payment of suppliers' bills and other obligations, benefit from this, because they can pay off their obligations with money with reduced purchasing power. Thus, inflation, that is, the process of depreciating a currency unit, can have a significant impact on the financial activities and financial condition of enterprises.

Also based on conducted analysis, we determined that an increase in long-term liabilities and equity, as well as a decrease in operating expenses, directly lead to an increase in the company's net profit.

Firstly, it is important to note that the largest airlines in terms of revenue have a sufficient amount of retained earnings, which allows them to accumulate their own funds, while enterprises with lower revenue have an uncovered loss, which prevents their own sources of financing. Thus, in the situation of the air transport industry as a whole, there is a shortage of own sources of financing. In this regard, an important place in ensuring sufficient funding is borrowed capital. Long-term borrowed funds make up most of it.

In practice, an increase in long-term liabilities is a negative indicator. But in our case, this increase is an integral part of financial stability. Most of these are financial leasing obligations, through which the airline systematically acquires aircraft. Due to an increase in the number of aircraft, the company's ability to increase the quantity and quality of its service also increases, in other words, financing of the airline's core business takes place. Air Astana should continue to gradually increase the air fleet through financial leasing. The attractiveness of leasing lies in the following significant advantages over other financial instruments: 1) attribution of leasing expenses to the prime cost in full with significant reduction in income tax; 2) full depreciation of property and savings on property tax; 3) long term use of borrowed funds; 4) payment of lease payments from proceeds from the use of property; 5) ability to accelerate equipment upgrades with profit. Using leasing an enterprise can update its fixed assets faster, since significant financial resources are not diverted for their purchase, but a gradual payment is made for equipment that is already operating with a significant economic effect.

Secondly, to improve the efficiency of financial activities it is necessary to reduce the item of operating expenses. Significant part of the costs is the cost of fuel and aircraft maintenance. Over the past two years, there has been a sharp increase in fuel prices, as well as an increase in provisions for aircraft maintaining. Fuel costs range from 20% to 30% of operating expenses. You can implement and use programs to hedge fuel costs. The company will buy futures contracts to fix its costs over a period of time, turning them into fixed costs. When fuel prices rise, this tactic is rewarded.

In total, operating expenses account for 75% of all non-fixed expenses. During recessions, management looks to reduce labour costs, lay off workers or reduce their wages or benefits.

This is a consequence of the fact that you are in a competitive business where customers have little brand loyalty; airlines must compete in price, not quality. As rising profits are hindered, companies are forced to cut costs in order to be more profitable.

Air Astana is considered far from a cheap airline with a high level of service. In the domestic market, it occupies a leading position. But segmentation and concentration on cheap air transportation would help to strengthen the position completely. In order not to lose the brand, the company can form a subsidiary low-cost airline that can significantly gain a new share in the air travel market. For a subsidiary, it will be possible to purchase supported aircraft on lease and fly throughout the Republic of Kazakhstan, in order to increase turnover. Due to the relatively low cost of tickets and the cost of maintenance and upkeep, as well as due to the large number of flights, it will be possible to significantly increase net profit and take a step towards financial independence.

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Comparison of Selected Attributes in Cultural Dimensions as Defined by Hofstede and the GLOBE Project

Jan Sochor

socj02@vse.cz

Prague University of Economics and Business, Faculty of International Relations, Department of International Business

Prague, Czech Republic

Abstract: This paper focuses on comparison of certain aspects of cultural dimensions as presented by Hofstede and GLOBE Project. Term culture is defined and summary of both studies and their understanding of their cultural dimensions is described. While in Hofstede's study, the latest model of 6 cultural dimensions is considered, the GLOBE Project is represented by its 9-dimensional model, which was formed by House and his colleagues. Based on the introduction and description of models, basic comparison analysis is performed based on three selected criteria- approach/methodology, originality of findings and criticism that each research received. These selected attributes are reviewed for both studies, discussed and commented with specific examples. In conclusion, the author evaluates usefulness of both studies with focus on potential use of GLOBE Project study and its use in the future

INTRODUCTION

The field of research in the area of international business has quickly started to attract attention of scholars in the 1950s with first scholars focusing on culture and its role that it plays when dealing with people from different cultural settings. The first cross cultural studies originated in this time period and were published by individuals such as Parsons and Schills (1951) as well as by Hall (1959) who published his major work later in the decade. The topics of research in international business and its cross-cultural impacts have quickly became one of the most researched topics in management and were further explored in following decades in works by Kluckhohn & Strodtbeck (1961), Rokeach (1968), Schwartz (1992), Inglehart et al. (2004) and others. Perhaps two of the most dominant and widely used works on cultural dimensions were published by Trompenaars (1997) and Hofstede, who formulated his first framework in 1980 and later updated and enlarged his findings in 2001 and then again in 2010 together with his son Gert Jan and Michael Minkov. All of the above-mentioned research was even more important in the last thirty years or so as ongoing globalization increased the need for understanding different cultures as well as created a necessity for having a guide which could be used both in theoretical research as well as in business practice in this field of international business management. Being able to understand very diverse cultural environment has thus become critical for international corporations not only for recruiting and retention purposes, but also for maximizing the employee's output and increased change of the employee for identification with the organization.

From all of the above-mentioned models, Hofstede has become one of the most widely cited social scientists of all time (Bond 2002; Hofstede 1997) and his work on culture is both used and valued by scholars and practitioners alike. As with any major and popular research, there

is also number of academics who criticize or even discredit his work in part or as whole. On the other hand, there is also number of researchers who decided to follow in his footsteps and contribute to his research of cultural dimensions. One of the biggest advocates of his work is Michael Minkov who cooperates with Hofstede on long term basis and his research led to definition of additional cultural dimension. He published this result with Hofstede and his son in the last addition of Hofstede's groundbreaking book Cultures and organizations: Software of the mind (Hofstede, Hofstede, Minkov, 2010). One of the people who also took at least some references and motivation from Hofstede and decided to built on his as well as other's work (Trompennars & Hampden-Turner, 1997; Kluckhorn & Strodtbeck, 1961) for his further research was Robert House who founded the GLOBE (Global Leadership and Organizational Behavior Effectiveness) research program in 1991. As my paper topic is a study of cross-cultural research including several countries (India, South Africa, Russia, Czech Republic), I have decided to compare the GLOBE research with Hofstede's work to conclude which model would be more sufficient for concluding my research. Therefore, in the next sections, I will offer short summary of both models as well as their comparison. I will further look into the methodology and also answer question if time element for these models plays a role in overall usefulness of each. As a last step in my comparison study, I will share some previously published criticism for both and will conclude this paper with supportive reasons for choosing one of these models.

1 LITERATURE REVIEW

Before deep diving into realm of national and organizational culture and looking at the two chosen researches in a greater detail, it is necessary to establish the basic definition of culture. While there is not one definition of culture on which most of the researchers would agree, most people understand culture as set of shared values, beliefs and customs within a given community. When we look at some of the major researchers in the field of national and organizational culture, their views on the definition is slightly different. According to Trompenaars, culture is a "way a group of people act to solve problems" (Trompenaars, 1998). Hofstede views the culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede, 2001. P.9)1. Schein on the other hand, defines culture as "the sum total of everything an organization has learned in its history in dealing with the external problems – which would be goals, strategy, how we do things – and how it organizes itself internally." (Schein, 1992). For the GLOBE Project, culture was defined as follows: "shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations" (GLOBE Project, 2019). Before getting to comparison of both researches, let's introduce at least briefly the basic pillars of each.

1.1 Cultural dimensions of Geert Hofstede

Hofstede is certainly one of the earliest researchers of culture and people, who explained its potential application and effect on how to manage business. His work represents one of the most widely used models for national cultures. According to Google Scholar, his work was cited on more than 63 thousand occasions just in the time period from 2014 until now (Google Scholar 1, 2019). His initial research was concluded between 1967 and 1973 when he surveyed a large number of employees of IBM across more than 70 countries. As a result of this research, the original theory identified four cultural dimensions: individualism vs. collectivism, uncertainty avoidance, power distance and masculinity vs. femininity. In his research in later years, he also identified long-term orientation as fifth dimension (Hofstede, 2001). Finally, in

2010 Hofstede together with Minkov and his son added sixth dimension of indulgence vs. self-restraint (Hofstede, 2010). Overview of these dimensions can be seen in the bellow table.

Tab. 1 Six Cultural Dimensions by Hofstede, Hofstede & Minkov
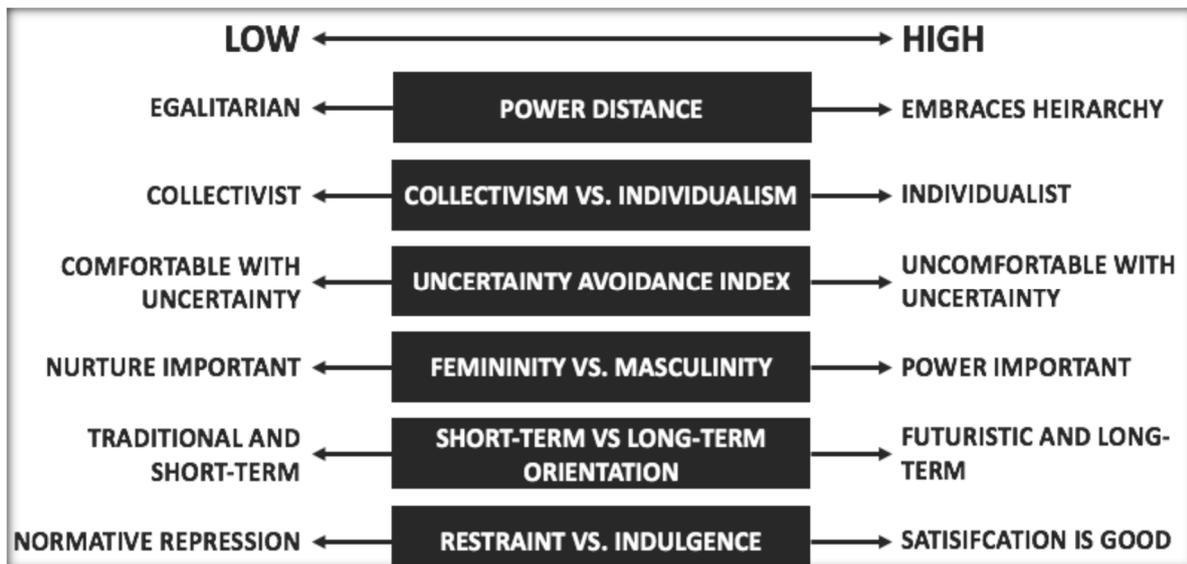
Source: Adapted from Hofstede, Hofstede & Minkov (2010)

1.2 Cultural dimensions of the GLOBE Project

The idea for GLOBE research program was conceived by Robert House in 1991, when he found this program with clear objective to conduct further research in the area of national and organization culture, respectively what he defines as societal culture which has the following definition as established by the GLOBE Project: shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations (GLOBE Project, 2019). The first phase of the Project was finalized in 2004 and the results were published by House et. Al. 2004. The research analyzed results on societal culture based on answers from over 17 thousand middle managers in 62 cultures/countries that participated in the study. Overall, more than 170 scholars from around the world have created in-country teams and worked together to survey the sample. The research focused on three industries: financial services, food processing and telecommunications and covered every major geographic region of the world. As a result of the research, the team identified nine cultural dimensions which are bellow with short description for each.

While this was the main result of the research, the team around House has conducted further analysis on the gathered data and also came up with 21 primary dimension of leadership which were later refined to 6 global dimensions based on second-order factor analysis (GLOBE Project, 2019). The results for defined cultural dimensions as well as global leadership dimensions were later refined in the Phase II study in 2007 and the GLOBE is conducting further research in this area.

The presented results, especially the nine cultural dimensions that GLOBE defined, quickly became one of the most challenged findings especially by the followers of Hofstede as well as by Hofstede himself (Hofstede, 2006). In addition, there has also been a plethora of others who disapprove of both studies and consider them to be flawed (Brewer and Vanaik, 2012). On the other hand, many academics have focused on trying to find and point similarities and

common ground between the studies and further analyze the relationships as well as differences between these two studies.

Tab. 2 Cultural Dimensions by GLOBE Project

Cultural dimensions	Definitions
Performance orientation	The degree to which a collective encourages and rewards (and should encourage and reward) group members for performance improvement and excellence.
Assertiveness	The degree to which individuals are (and should be) assertive, confrontational, and aggressive in their relationship with others.
Future Orientation	The extent to which individuals engage (and should engage) in future-oriented behaviors such as planning, investing in the future, and delaying gratification.
Humane Orientation	The degree to which a collective encourages and rewards (and should encourage and reward) individuals for being fair, altruistic, generous, caring, and kind to others.
Institutional Collectivism	The degree to which organizational and societal institutional practices encourage and reward (and should encourage and reward) collective distribution of resources and collective action.
In-Group Collectivism	The degree to which individuals express (and should express) pride, loyalty, and cohesiveness in their organizations or families.
Gender Egalitarianism	The degree to which a collective minimizes (and should minimize) gender inequality.
Power Distance	The extent to which the community accepts and endorses authority, power differences, and status privileges.
Uncertainty Avoidance	The extent to which a society, organization, or group relies (and should rely) on social norms, rules, and procedures to alleviate unpredictability of future events. The greater the desire to avoid uncertainty, the more people seek orderliness, consistency, structure, formal procedures, and laws to cover situations in their daily lives.

Source: GLOBE Project; https://GLOBEProject.com/study_2004_2007#data
Graphical format: author

2 METHODOLOGY

Comparison of the both studies can be approached from several angles. Due to limited scope and length of this research paper, I chose to specifically focus on three topics and compare both researches on the selected criteria- methodology and overall approach of each research, originality of findings/results and criticism for given research, which is reviewed for both studies, cited and commented with specific examples. These comparisons are only some of many approaches that could be taken into consideration. Additional approaches can be based for example on detailed methodology or actual comparison of each cultural dimension, which would present in itself significant opportunity for research. Qualitative literature review method was used as the methodology for this research paper.

3 RESULTS AND DISCUSSION

3.1 Research organization comparison

When scrutinizing both researches, Hofstede and the GLOBE Project, we can see some major difference already at the first sight. Hofstede conducted his research in 1960s in one organization, IBM, and his methodology was based on collecting opinion surveys from over 70 national subsidies around the world. He also then followed up on this and travelled to several countries to conduct in-depth interviews regarding people's behavior and how they collaborated. His initial definition of 4 dimensional values was therefore based on research within one organization where he gathered data. In his initial research, he used the Questionnaire called VSM (Value Survey Module) which has been since then twice updated with VSM 08 and the most recent VSM 2013 (Hofstede, 2019). While he encourages others to use the VSM2013 and send the findings and survey results, his web site mentions that the national values are updated only rarely. His research is widely used to support other wide variety of researches. For example, his model was used to explain differences in international new product take-off (Tellis, Stremerchs and Yin, 2003), differences in buying life insurance (Chui and Kwok, 2008) or even at comparing the use of appeals in advertising (Albers-Miller and Gelb, 1996, Chan and Moon, 2005) or the use of celebrities in advertising (Praet, 2009). From the above we can see that the values as well as the model have withstood the test of time. Even so, it is subject to further research and refinement as it has been already twice updated with the new dimensions, serving as a fact that the work on the model is not finished and its verification is ongoing.

The GLOBE Projects started its research efforts in 1991 and conducted the surveys as described in the previous sections. When compared to Hofstede, we can see several differences in approach as well as in methodology. First of all, the research was conducted by body of 170 "country co-investigators" which allowed for the study to be more country focused. The overall research efforts were then coordinated by 14-member group coordinators and research associates (GLOBE Project, 2019). So instead of Hofstede's one-man research, GLOBE Project depended on large amount of people and their coordinated efforts. In addition, and this is the biggest difference between Hofstede and the GLOBE Project, the surveys covered not one but 951 organizations across different organizational structures and industries. In his publication about the initial research, House specifically mentions that "...sampling strategy required that data from each society met the following criteria: (a) respondents had to be middle managers, (b) multiple respondents had to be obtained from organizations, (c) two or more organizations had to be obtained from two of three types of industries (financial, food processing, and telecommunication), and (d) at least two industries had to be obtained for each society. Half of the respondents from a given organization completed one version of the GLOBE culture and leadership questionnaire. The other half completed a second version of the [same] questionnaire. By administering these questionnaires to separate samples of middle managers from the same organization or society, we minimized or even eliminated common source response bias.... " (House et al.,2004). From the above, we can conclude that the approach of GLOBE Project to the sample pool is much wider and inclusive compared to Hofstede's initial research. It is also important to say that the GLOBE Project should be always seen as having 3 important phases. Phase 1 involved the development of research instruments while Phase 2 defined nine cultural dimensions in both societal and organizational cultures and also further explored the impact which they have in the 62 countries which were subject to this research. Phase 3 was then performed to study what impact and with what effectiveness can a specific leader behavior have on subordinate's attitudes and performance. The second pilot of this study focused on CEOs is currently under way.

Both of these studies have clear differences- Hofstede's cultural dimensions were originally based on study of one organization and for many it represents dogma used in number of other researches when it comes to national culture. On the other hand, the GLOBE Project has from its beginnings looked at different sample consisting of hundreds of organizations across 62 cultures. In this sense, we can conclude that although there is a relatively short period of time since the initial research, the GLOBE Project offers more complete survey which takes into considerations mix of organizational and societal cultures although it has been less cited and less used for additional research partially due to the time factor. Further valuation of the GLOBE Project and its usefulness for other research will be in the following years and will depend on how many researches chose to accept it and use this model over Hofstede's or other models.

3.2 Originality

Tab. 3 GLOBE 9 Cultural Dimensions Origins Chart

GLOBE 9 Cultural Dimensions Origins Chart		
Research Literature Comparison	Comparison Dimension	GLOBE 9 Cultural Dimensions
Hofstede 1980: cultural Cyert and March 1963: organizational	Uncertainty Avoidance	1 Uncertainty Avoidance
Mulder 1971: personal Hofstede 1980: societal	Power Distance	2 Power Distance
Triandis 1995	Individualism	3 In-Group Collectivism
No Designated Prior Research Studies		4 Institutional Collectivism
Hofstede 1980	Masculinity	5 Gender Equalitarianism
		6 Assertiveness
Kluckhohn and Stodtbeck 1961 Hofstede and Bond 1988 Hofstede 2001	Past, Present, Future Orientation Confucian Work Dynamism Long-Term Orientation	7 Future Orientation
McClelland 1961	Achievement	8 Performance Orientation
Kluckhohn and Strodtbeck 1961 Putman 1993 McClelland 1985	Human Nature as Good vs Human Nature as Bad Civic Society Affiliative Motive	9 Human Orientation

Source: Thom Wolf, GLOBE *9 Cultural Dimensions Origins Chart*. New Delhi: University Institute. From House, Hanges, Javidan Dorfman, and Gupta (2004), 9-90.

As was already mentioned above, we can consider Hofstede's research to be more exploratory and original at first sight as it originated in the 1960's when the field of national and organizational culture was not as covered by genuine research as today. Therefore, he had

higher chance to establish very original and groundbreaking research simply due to the fact that the field was not as explored as it is today. Hofstede himself has admitted this on one occasion when he was asked how he was able to make such a large difference in the field of cultural research. His answer confirms what was written above as he answered: "… what you could say is I had the good fortune to be on the right subject at the right moment. I started my work in this are in the 60's, and I published my first book in 1980" (Carraher, 2003).

On the other hand, House does not hide the fact, that some of his motivation for the GLOBE Project came from other studies. Bellow is shown how Thom Wolfe tracked the 9 GLOBE dimensions to their origins within other research.

As we can see, most of the dimensions that GLOBE Project has defined, have, according to Wolf, origins within cultural dimensions already defined by Hofstede or by others, while only Institutional collectivism is truly new and original dimension. However, we can also consider this research not only as an extension of these studies but also as original research as he not only developed nine cultural dimensions but his GLOBE Project also continues to research other related topics such as dimensions of leadership. Based on all of the above, we can conclude that Hofstede's research is more original, albeit this is partially unfair comparison as his research has been one of the first one conducted and GLOBE Project is fairly recent and continues to advance its research. The GLOBE Project also offers more expansive view of cultural dimensions than Hofstede's commonly used classification system.

3.3 Criticism of both cultural dimensions and researches

Hofstede

As with almost every research, both Hofstede and the GLOBE Project have been subject to severe criticism. The review of criticism for Hofstede's model would be enough for a stand-alone dissertation and the author of this paper does not make a claim to account for all of the criticism by far but instead show some examples to complete the overview of Hofstede's study. One of the most prominent and cited critics of his work is Brendan McSweeney from University of London, whose article has almost three thousand citations to this date (Google Scholar 2, 2019). McSweeney's critique maintains that the methodology of the model is fundamentally flawed. He questions whether culture can systematically cause differences in behavior between people from different countries (McSweeney, 2002). In his article, he also questions the territorial uniqueness of his research and shows this on the example of Great Britain, claiming that while there is only one score for each of Hofstede's cultural dimensions, Great Britain essentially consists of at least 3 different national cultures: English, Welsh and Scottish. He further attacks the system of survey claiming that is flawed because the sample sizes for some countries were very small and some of them even bellow threshold which Hofstede himself recommends (McSweeney, 2002). Lastly, McSweeney as well as others question the cultural homogeneity of Hofstede's study in which he assumes that the domestic population is a homogenous whole. However, other research shows, (Nasif et al. 1991, Redpath, 1997) that most nations are groups of ethnic units. In addition, some research claims that Hofstede tends to ignore the importance of community and the variations of the community influences (Dorfman and Howell, 1998; Lindell and Arvonen, 1996).

The GLOBE Project

The GLOBE Project has also received some severe criticism shortly after it was published. Some of this critique, not surprisingly, came from Hofstede himself. He suggested, among

other things, that while his work is decentered, the GLOBE is US centered (Hofstede, 2006). In the same paper, he intensified his critique and states that: "many of the GLOBE items at the country level may convey hidden meanings not intended and understood by their designers". He also criticizes the number of identified dimensions, stating that as: "our minds have a limited capacity for professing the information, the dimensional models are too complex and will not be experienced as useful" (Hofstede, 2006).

Perhaps the critiques coming from Hofstede would not be so fierce, if the GLOBE authors have not presented their dimensions as a certain improvement of those from Hofstede. However, Hofstede was not the only critic of the Global Project. Other, such as McCrae et. Al (2008) looked at the scores presented in the study and based their criticism on the finding that when respondents are asked to characterize the average personality traits of their fellow citizens, the generalization which results from the answers does not correlate with self-description and therefore, McCrae et. Al. (2008) claims that these responses include national character stereotypes, rather than true view.

As can be seen from the above stated information, both studies are criticized by number of academics. It is only natural that Hofstede's study has more critics as it has been published almost 40 years ago. On the other hand, one of the contributing factors, aside from the time factor, for less criticism for the GLOBE Project study can also be a fact, that large group of potential critics are actually part of the Project which relies on local "investigators" to manage the research on a country level. Therefore, the wide inclusion of national research as can also act as natural partial disincentive to wider criticism.

CONCLUSION

While the above text includes only short summary of both studies, it is clear, in my opinion, that both of them can be considered truly groundbreaking. Hofstede and his six dimensions represent one of the most widely used and cited research on national cultures and for many has shaped understanding of cultural dimensions. His theory has been proven again and again and withstood the test of time, although not everyone in academic as well as professional world would agree with this statement. The ongoing data gathering as well as the addition of two new dimensions on top of the original four also represent clear motivation and will from Hofstede and his closest colleagues (for example Minkov) to continue refining the results and taking on board suggestions and in some cases also criticism. The GLOBE Project on the other hand, represents a group of highly motivated and qualified researchers whose approach is truly global and already brought new findings and different viewpoints.

Although the author of this paper understands the current rivalry described above, it is clear that both theories represent different yet very qualified views on a similar topic. While Hofstede's research can be historically considered to be more original (as GLOBE Project followed in certain ways previous researches as mentioned above), it does not mean that it has more added value as the GLOBE Project and its cultural dimensions, which represent large-scale cross – cultural research Project of multiple phases including both quantitative and qualitative methodologies and is one of the most current large-scale researches today.

The author of the paper, based on the detailed study of both sets of cultural dimensions, comes to a conclusion that the GLOBE Project represents a viable alternative approach to Hofstede's study and is worth further consideration for research that prefers to use new and fresh approach to cultural dimensions. The ongoing nature of the GLOBE Project research, large scope of countries that it covers and introduction of new topics for research, also gives additional opportunities for local researchers to be part of large international research Project thus directly contribute to further refinement of the understanding of cultural dimensions. While only next years will show how strong of a foothold can GLOBE Project and its research

establish in the academic as well as professional world, it certainly represents dynamic and innovative trend in research of cultural dimensions and offers viable, if not better, alternative for understanding of cultural dimensions and related topics within the constellation of today's world.

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Impact of the US Trade Policy on Trade Flows Distortion of Selected Commodity Groups

Dušan Steinhauser – Stanislav Zábojník – Zuzana Borovská
dusan.steinhauser@euba.sk, stanislav.zabojnik@euba.sk, zuzana.borovska@euba.sk
University of Economics in Bratislava, Slovakia, Faculty of Commerce, Department of International Trade
Bratislava, Slovakia

Abstract: The current foreign trade policy of the United States is characterized by the distinctive features of protectionism that interfere with the global functioning of world trade and ultimately condition the European Union's foreign trade interests. The aim of the paper is to examine the effect of the US protectionism on the territorial structure dynamics of the steel exporters to US. Through multiple regression analysis, the authors examined the dependence of increasing customs tariffs and bilateral trade with selected product groups to US market.

Keywords: foreign trade policy; steel industry exports; industrial policy; tariffs

JEL Classification codes: E690, F010, F130

INTRODUCTION

US foreign trade policy was typical for its liberal character and globalisation driver of the world economy. A tenet of the free trade had been a key pillar of the world trade development after the WW2. However, the EU is worldwide recognized as a powerful regional trading block (Kittová, 2020) and is also one of the major players in the global trade in goods. Its share of imports/exports on world total imports/exports (after elimination of the intra-EU trade) is the second largest in the world, lagging behind the China — the largest global exporter — and the United States — the largest global importer (Kašťáková et al., 2019). Nevertheless, key changes in the world economy (increasing role of China in the world economy as well as its geopolitical impact) determined one of the most influential change for the recent years – restrictive measures in the world trade implemented by D. Trump´s office. As for metals and metal products imported by the US, D. Trump initiated investigation into whether steel and aluminium imports from the EU, China, and elsewhere compromise national security. On May 1st, 2018, 25% tariff on steel imports and a 10% tariff on aluminium have gone into force, with some exemptions. The exemptions on EU export to USA were cancelled in June 2018. Effects of the tariffs are ambiguous and seem to be not effective in the long run. Nevertheless, as a strategic tool to achieve trade and political goals are partially acceptable. The effects on US steel products import seem also to be ambiguous and the principal focus of the article is to investigate to what extent it has affected the distribution of US steel importation in specific commodity groups among supplying countries.

1 LITERATURE REVIEW

Economic expansion after the WW2 was primarily associated with the flourishing international trade based on liberal foreign trade policy of the triad. Stemming from the findings of A. Smith, D. Ricardo, H-O-S theory results and most recent theories, tariffs are limiting potential economic output and hampering international division of labour positive consequences.

Nevertheless, even according to most distinguished economists, an imposing of tariffs could have neutral or even positive results and their implementation might be valid and rational. J. D. Daniels et al. (2016) state that there could be economic (prevent unemployment, protect infant industries, promote industrialisation, improve international positions) and non-economic (maintain essential industries, deal with unfriendly countries, maintain or extend spheres of influence, preserve national identity) rationales for government interventions in the form of tariffs. The effects of the imposed tariffs are differentiated though. Most authors emphasize that mainly smaller, more opened economies are negatively determined when imposing tariffs on imported goods. The logic stands on the principle of dead-weight loss (WTR, 2011) cutting down the positive effects of trade and being negatively associated with higher prices and effectivity "crowding-out" effect among domestic producers. Using Anderson-Neary trade restrictiveness index, according to D. A. Irwin (2007), dead-weight loss is harmful not only for the smaller opened economies but based on historical data also for the US economy itself.

From the game theory point of view, imposed new tariffs are harmful for the U.S. economy itself as well as for the major economic partners (Demertzis and Frederiksson, 2018). According to D. Rodrik, the EU cannot prevent an escalation of the trade war, but it can contain it. He argued that for the costs of a global trade war to materialise following US tariffs, others need to retaliate (D. Rodrik, 2018). In case of aggressive retaliatory measure of the EU, it would legitimise the violation of global rules – a fact that will seriously jeopardise the EU's position as defender of the global multilateral system (Demertzis and Frederiksson, 2018).

As for particular effects of the US steel and aluminium tariffs, many authors consider them as negatively affecting the US economy. The sweeping tariffs that the United States have adopted, the retaliatory measures that several WTO Members have implemented, and the bilateral quota agreements were labelled as "three wrongs" and they rather endanger the stability of the international trading system under WTO legal disciplines (Y. S. Lee, 2019). Other economists stressed and proved rather populist foreign policy themes to articulate their policy positions on social media instead of rational and systematic foreign trade policy of the USA (J. C. Boucher – C. G. Thies, 2019). Several findings were observed concerning lowering competitiveness of the U. S. manufacturing sector linked to imposed tariffs. L. G. Sheng et al. (2019) pointed out that it is mainly driven by its internal structural factors, such as low saving rates, high labour costs, and rising service sector, rather than by the import competition from China. Moreover, the trade war further deteriorates the US current account deficits and erode its comparative advantage. Thus, the US will not be able to achieve its strategical goals and eventually lose the trade war. More authors also declared that Trump´s steel and aluminium tariffs hurt both sides. Moreover, it has not reduced the trade deficit itself, even has not created new jobs in the USA (A. Sukar – S. Ahmed, 2019).

The domestic authors whose results we were inspired by, operate in one department and their research and publication cooperation is based on that. Zubaľová (2012) in her research used a time series analysis that proves the impact of sanctions on Iran, whose methodology we followed in our paper. In connection with the study of international trade, the authors Kašťáková & Ružeková (2019) in their publication deal with international trade operations by their type and classification of individual types of trade, including export and import. Kašťáková et al. (2019) examine the impact of geopolitical changes on the EU and its foreign trade, as well as the definition of its current characteristics. In our research, we also rely on the publication of Kittová (2020), which critically evaluates the position of the EU within the global trade and developments of its position from a long-term perspective and identifies the main factors behind these developments.

2 METHODOLOGY

The aim of the paper is to examine the effect of the US protectionism on the dynamics of the territorial structure of the steel exporters to US. We have set this goal due to methodological limitations. We wanted to prove the effect of recently implemented phenomena in which causality usually occurs with longer time delay. For this reason, we had to proceed to an effectively chosen methodology, to draw conclusions that we might consider to be preliminary and to entrust further research with the follow-up of foreign policy development.

The authors set out the following hypothesis: „The level of tariffs affects bilateral trade of selected iron commodities between USA and China and between USA and EU", which they tried to confirm through their research.

We used multiple regression analysis in tabular form and graphical regression analysis of the dependent variable development over time (import USA from Germany and China). In case of time-series analysis, we were inspired by Ľ. Zubaľová (2012), which proved the impact of sanctions on Iran with help of simple time series observation in tabular form. We applied the multiple regression analysis on cross-sectional dataset, which contained following dependent and independent variables:

- Import_2018 – US-import from partners in selected commodity group (HS 732010 and HS 7326906000) (in thousands of USD), dependent variable, ITC database 2020;

- Tariffs_2018 – USA tariffs in selected commodity group in 2018 (%), independent variable, USITC database 2020;

- Share – Share of US importing partner on world's export in selected commodity group in 2018 (%), independent variable, ITC database 2020;

- GDP_pc_2018 – Gross domestic product per capita in 2018 (USD), independent variable, UNCTADstat database 2020.

Tab. 1 Descriptive statistics of dataset HS 732010

HS 732010	Import_2018	Tariffs_2018	Share	GDP_pc_2018
Mean	18433.49	2.59	2.42	33523.80
Median	111.00	3.20	0.70	34169.70
Standard Dev.	80811.31	1.27	4.48	24095.44
Kurtosis	33.43	0.78	17.08	-0.93
Skewness	5.69	-1.66	3.81	0.33
Range	485644.00	3.20	24.60	80874.00
Minimum	3.00	0.00	0.00	2029.57
Maximum	485647.00	3.20	24.60	82903.57
Count	37	37	37	37

Source: Authors' own calculations

We compiled econometric equation and we interpreted results using recommended research methods of OLS and related econometric tools using linear regression models (Lukáčik, Lukáčiková, & Szomolányi, 2011; Pacáková, Labudová, Sipková, Šoltés, & Vojtková, 2009). We used Microsoft EXCEL and GRETL for data processing and analysis calculations. The authors decided to examine the impact of the level of customs tariffs on selected commodity groups. First commodity group is HS 732010 (Leaf-springs and leaves therefor, of iron or steel) and the second is HS 7326906000 (Other articles of iron or steel, coated or plated with precious metal). Authors chose the commodity groups due to their volumes and strategic position in the US as well as EU manufacturing production and foreign trade.

Tab. 2 Descriptive statistics of dataset HS 7326906000

HS 7326906000	Import_218	Tariff_2018	Share	GDP_pc_2018
Mean	127.18	7.06	2.47	35055.11
Median	49.00	8.60	1.40	36674.01
Standard Dev.	237.02	3.35	3.46	24291.23
Kurtosis	11.11	1.23	7.55	-0.78
Skewness	3.19	-1.78	2.68	0.40
Range	1103.00	8.60	15.20	80874.00
Minimum	3.00	0.00	0.00	2029.57
Maximum	1106.00	8.60	15.20	82903.57
Count	28	28	28	28

Source: Authors' own calculations

In Tab. 1 is displayed descriptive statistics of HS 732010 and Tab. 2 represents descriptive statistics of HS 7326906000. Looking at the table we can draw attention especially to the heterogeneity of the dataset, which also represents a significant limitation of our research. For this reason, in addition to multiple regression analysis, we decided to proceed with time series analysis. Another important information is that in the commodity group HS 7326906000, which we used to compile multiple regression analysis, of all used variables, had only variable GDP_pc_2018 a normal distribution.

The regression equation was determined as following:

$$\text{Import}_{2018} = \beta_0 - \beta_1 \text{Tariffs\_2018} + \beta_2 \text{Share} + \beta_3 \text{GDP\_pc\_2018} + u$$

Authors stated following hypothesis:

H: Level of US tariffs negatively affects bilateral trade.

However, we express our conclusions with certain limitations. The impact of tariffs implementation by the US government has been in effect only for a short time period. This work may also be seen as a suggestion for other studies for which we would recommend continually collecting data on US restrictive foreign trade policy and re-analysing it in similar research. Another limitation of our research may be the absence of consideration of exchange rate developments or possibly real exchange effective rate (REER). It might also be appropriate to improve the model specification itself. Furthermore, it would be correct to incorporate an economic scale factor into further research. This means to operate with variables per capita or per gross domestic product. We reduced this limitation by adding the GDP per capita as control independent variable, but the estimation of its parameter was statistically insignificant.

In this contribution, we partially refer to experts from the Department of International Trade, who devoted their research and publishing activities to the issue of international trade and the position of the EU in the world economy. These authors are mainly Zubaľová (2012), Kašťáková & Ružeková, (2019), Kašťáková et al. (2019) and Kittová (2020).

3 RESULTS AND DISCUSSION

The authors present their results in four subchapters. The first part provides an overview of the largest import and export markets of selected commodity groups (HS 732010 and HS 7326906000). In the second part, the authors consider the position of the US as an importer of selected commodity groups. The third part presents an overview of the quarterly

development of US import markets in selected commodity groups. In the fourth subchapter, the authors focus on measuring the impact of the level of US tariffs and US import markets in chosen commodity groups.

3.1 Overview of the largest import and export markets of selected commodity groups

In the contribution, the authors analyse the largest import markets of the US in two selected commodity groups. The first is the commodity group HS 732010 - Leaf-springs and leaves therefor, of iron or steel and the second analysed is the group HS 7326906000 - Other articles of iron or steel, coated or plated with precious metal. To bring the markets of selected commodity groups closer, we decided to identify the world's largest traders in the relevant nomenclatures. In the commodity group HS 732010, the US are the world's largest importer of this commodity, the value of their imports increased year-on-year (17/18) by 70 589 thousand USD (ITC, 2020). The trend of growing imports is the most significant in this period. The total import value of this commodity is in absolute numbers in 2018, in the amount of 682 042 thousand USD. The second largest importer of this commodity group is China, which in 2018 imported this commodity worth 164 504 thousand USD. The biggest European importers are Germany, Italy, Netherlands, Poland, France, Belgium, Hungary, United Kingdom, Austria, and others.

The world's largest exporter of the HS 732010 commodity group is Mexico, which in 2018 exported the above-mentioned goods worth 509,767 thousand USD with year-on-year increase (17/18) 56,397 thousand USD (ITC, 2020). Mexico is followed by Germany, which is the largest EU exporter of this commodity group and the world's second largest, worth 234,996 thousand USD. The difference in export levels between Mexico and Germany is therefore considerable. The third largest exporter worth 179,431 thousand USD is China. Among the European countries, the list also includes Spain, Belgium, France, Netherlands, Italy, Austria, and others.

In the case of commodity group HS 7326906000, the analysis of the largest exporters and importers is quite demanding, as the nomenclature is at a very specific level, the ITC database, does not provide the data we require. However, as this commodity group is part of the more general category HS 732690, we have decided to identify the largest traders in this category. The largest world importer of this group is the United States, which in 2018 imported goods worth 4,714,627 thousand USD (ITC, 2020). The year-on-year increase (17/18) thus represents 684,879 thousand USD. The second largest importer is Germany, with the amount of imports in 2018, 4,355,826 thousand USD. Germany is followed by Thailand, the United Kingdom, Mexico and China. From European countries we can also acknowledge France, Poland, Austria, Czech Republic, Netherlands, Italy, Hungary and others.
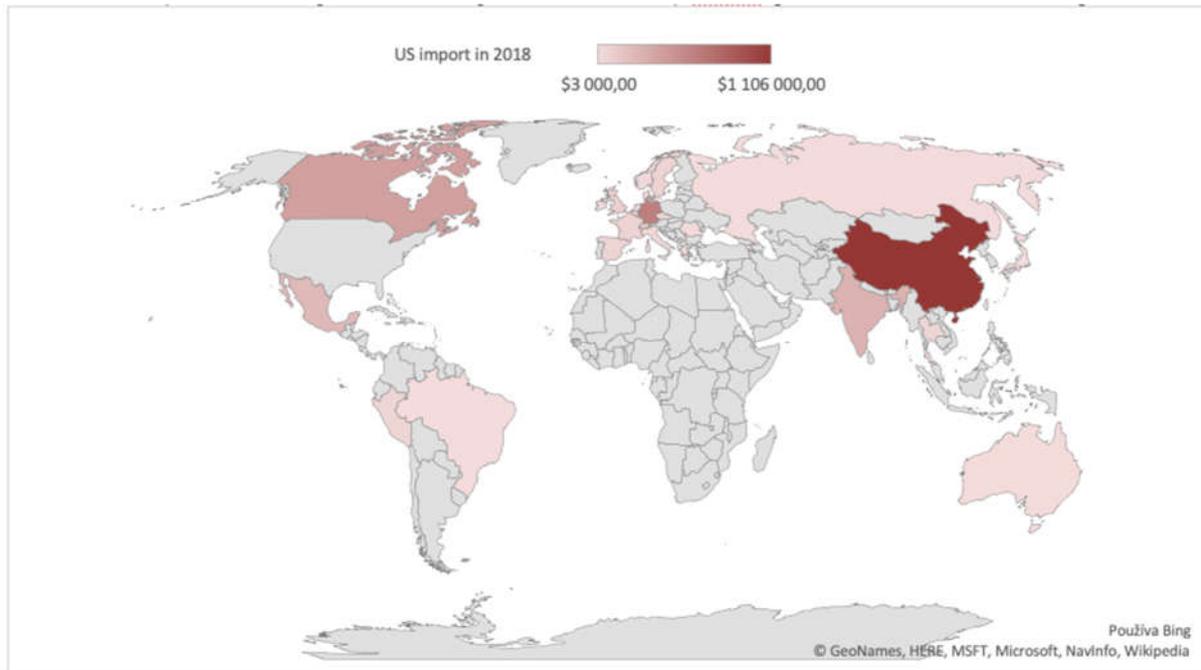
The world's largest exporter of the commodity group HS 732690 is China, which in 2018 exported goods amounting to 6,748,713 thousand USD, with a year-on-year increase of 1,032,406 thousand USD. The second largest exporter is Germany, amounting to 5,179,785 thousand USD. This is followed by the United States, Italy, France, South Korea, and others. The biggest European exporters are Germany, Italy, France, Poland, Czech Republic, Austria, Netherlands, Spain and others.

3.2 Overview of the largest US import markets in selected commodity groups

As mentioned above, the US is a very important trading partner for countries exporting our selected commodities. In both cases, the US acts as the largest importer. Thus, we decided to identify the markets from which the US imported these commodities in 2018. Fig. 1 graphically

illustrates the largest US import markets. The darkest colour is represented by the countries that exported the highest value of commodities to the US and by far the palest colour of the country from which the US import is the lowest.

Fig. 1 US importing markets in commodity group HS 732010 (Leaf-springs and leaves therefor, of iron or steel (excluding clock and watch springs and shock absorbers and torque rod or torsion bar springs of Section 17))

Source: Authors' own calculation according to ITC, 2020

The largest US importer of the commodity group HS 732010 is Mexico, which imported goods in the value of 485,547 thousand USD, making up 71% of total US imports. The second largest import market is Canada, with US imports amounting to 89,846 thousand. USD. It is clear from the above that the United States is focusing mainly on imports from the North American Free Trade Agreement (NAFTA) countries, following the administration of US President D. Trump, now known as the USMCA (United States-Mexico-Canada Agreement) countries. China is the third largest importer of HS 732010 commodity group products. The value of US imports from China reached in 2018, 56,497 thousand USD. China is then followed by Japan (20,278 thousand USD), Thailand (7,313 thousand USD), Germany (6,133 thousand USD), India (5,604 thousand USD), Malaysia (3,346 thousand USD), Indonesia (1,738 thousand USD), Netherlands (1,293 thousand USD) and Austria (1,130 thousand USD). In addition to the abovementioned European countries, the US imported goods of a selected commodity group from Sweden (672 thousand USD), France (462 thousand USD), Great Britain (320 thousand USD), Italy (319 thousand USD), Switzerland (88 thousand USD), Spain (62 thousand USD) and the Czech Republic (46 thousand USD).

Fig. 2 provides a graphical representation of the largest US import markets in commodity group HS 7326906000. Again, the darkest colour shows the countries, of which the US imports commodities in the largest quantity, and the palest colour of the country with the lowest value of US import.

Based on Fig. 2, we observe that the largest import market of the selected commodity group for the US is China, which in 2018 imported into the US goods worth 1,106 thousand. USD. The second largest importer is Germany with an import value of 623 thousand USD. Followed

by Canada (404 thousand USD), India (276 thousand USD), Mexico (232 thousand USD), Taiwan (130 thousand USD) and Switzerland (113 thousand USD). Among the European importers, we can point out the United Kingdom (83 thousand USD), Sweden (72 thousand USD), France (70 thousand USD), Spain (66 thousand USD) and the Czech Republic (54 thousand USD). It is clear from the above that in the commodity group HS 7326906000, US imports are not only oriented towards the USMCA countries, but also geographically more distant markets such as China or Germany. Quarterly development of US imports in selected commodity groups (Q1 2015 – Q3 2019).

In this part of the contribution, the authors tried to approach the development of US imports from selected economies through time series analysis (Q1 2015 - Q4 2019). In the research, the authors again focused on the commodity groups HS 732010 (Leaf-springs and leaves therefor, of iron or steel (excluding clock and watch springs and shock absorbers and torque rod or torsion bar springs of Section 17)) and HS 7326906000 ((Other articles of iron or steel, coated or plated with precious metal, nesoi (not household articles)).

Fig. 2 US importing markets in commodity group HS 7326906000 (Other articles of iron or steel, coated or plated with precious metal, nesoi (not household articles)
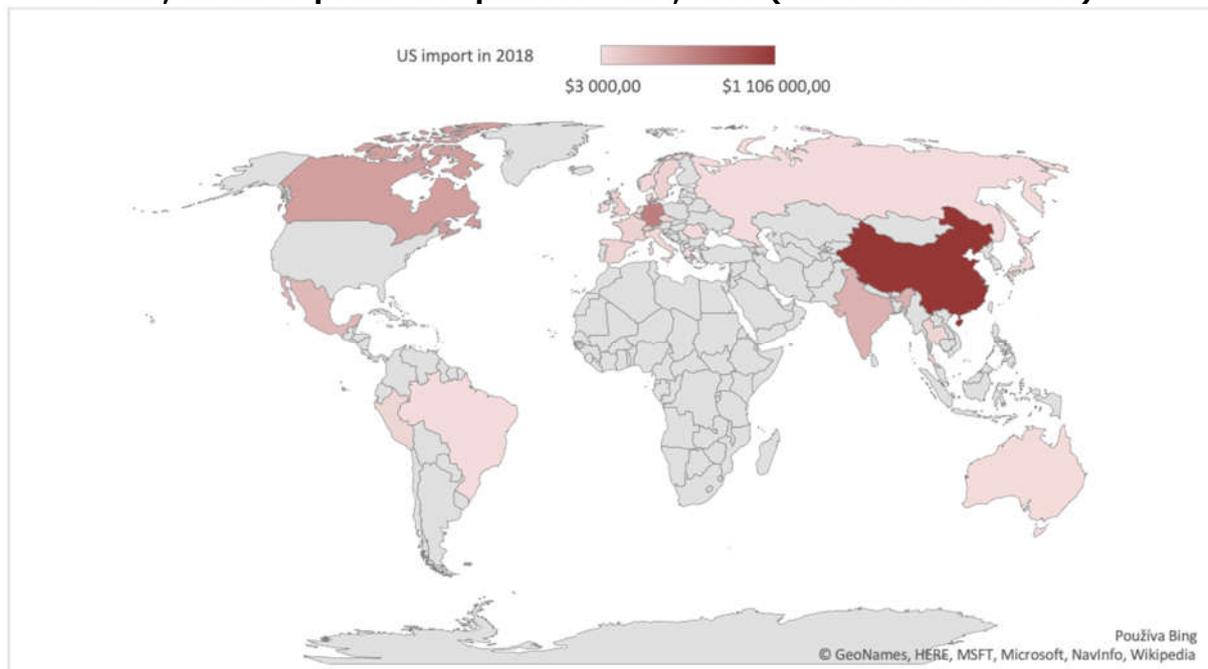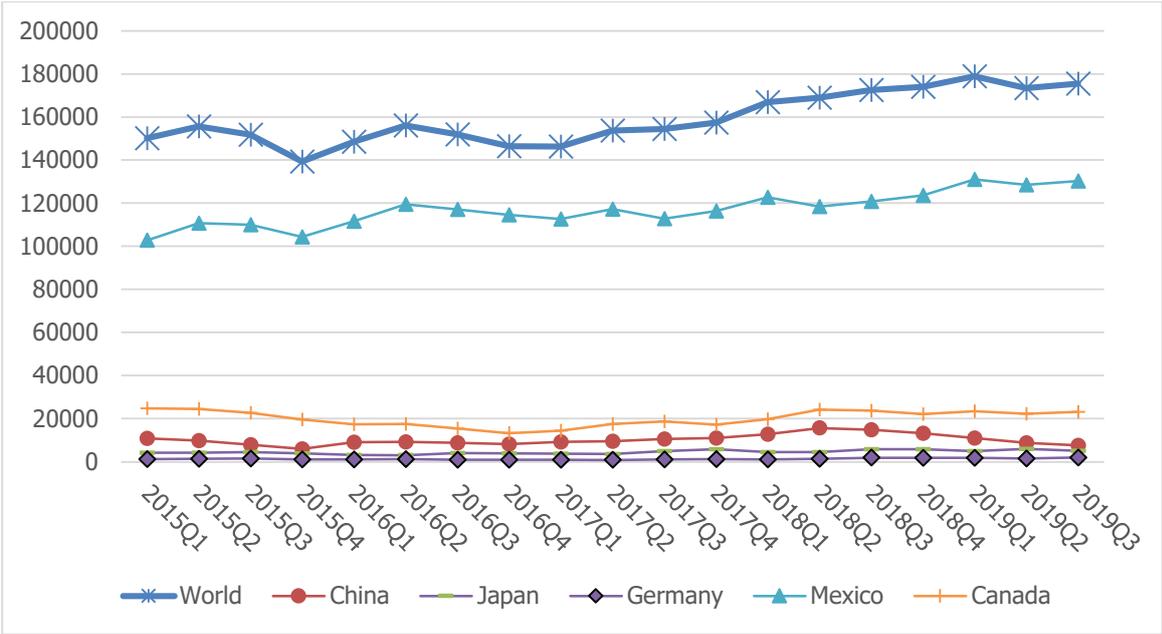

Source: Authors' own calculation according to ITC, 2020

From Fig. 3 is clear that Mexico is the US's largest trading partner in import of the HS 732010 commodity group. From the point of analysis of its development, we note that the amount of US imports from Mexico, in the long term, prevails imports of all other observed countries, which also assigns Mexico in our observations as an extreme observation. The remaining countries, completing the US import profile, such as China, Japan, Germany and Canada, are lagging far behind in terms of value for their exports to the US.

In the case of the analysis of the development of US import partners in the commodity group HS 7326906000 (Fig. 4), it is notable that until the Q4 of 2018, China was the largest import partner of the USA. By analysing data on a quarterly basis, the authors conclude that China was strikingly replaced by Mexico in the Q1 of 2019. The latest available data for the Q3 of 2019 indicate that Mexico is still in a leading position in the US import of the selected commodity group. Once again, we can label Mexico as an extreme observation in our assessment.

Fig. 3 Selected US importing markets in commodity group HS 732010 (thousand USD)

Fig. 4 Selected US importing markets in commodity group HS 7326906000 (thousand USD)
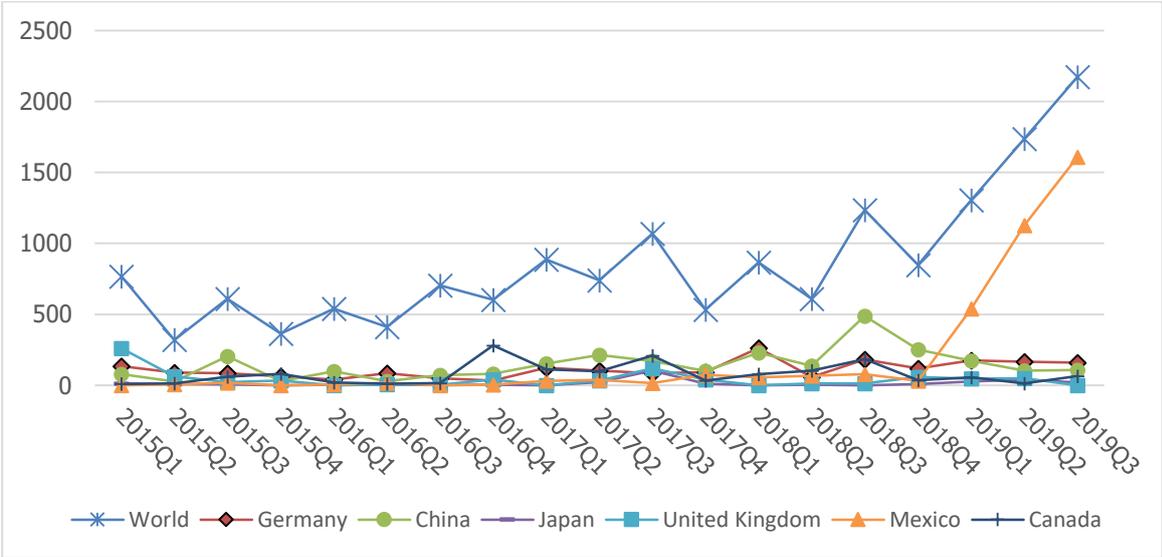
3.3 Measuring the impact of tariff levels and importing countries into the US

In the first step, we approached a significant model specification within the commodity group HS 732010. We examined relationship between exports in absolute values, then exports as share of gross domestic product and variables expressing the intensity of US partner countries in import and lastly, we estimated impact of tariffs in this commodity group. Unfortunately, due to high heterogeneity of the observed dataset we did not find a significant specification of model. This means that we cannot draw conclusions from this commodity group. In this product group, European exports are charged with 3.2% tariffs of the goods value. Countries

with preferential treatment benefit from a 0% rate. For this reason, we were looking for links in a narrower group to which was applied a higher duty rate.

Tab. 3 shows our results of a cross-sectional analysis in HS 7326906000. This commodity group is taxed with 8.6% tariffs on goods originating in countries such as European Union, Japan and others. With considering all limitations of our solution (short time period of restrictive US foreign policy implementation), it is confirmed that with 95% probability, tariffs have expected negative impact on partner country imports. In other words, countries with lower tariffs import more into the US. In our opinion, it is necessary to take into account the determinant of the common border of Canada and Mexico, which in addition create the United States-Mexico-Canada Agreement (USMCA) with the USA. However, this dummy variable was insignificant. On the other hand, it is confirmed that the US imports products of a given commodity group from partners who are also major world exporters of that commodities. Unfortunately, the control variable, taking into account the extent of partner economies, is insignificant. The model was calculating on the basis of 28 cross-sectional units, neither heteroscedasticity nor multicollinearity was present. But residues with a significance level of 0.05 have not normally distribution according to the Doornik-Hansen test (p-value 0.038). However, based on the Shapiro-Wilk test (p-value 0.096), the Lilliefors test (p-value 0.38) and the Jarque-Bera test (p-value 0.417) residues are normal distributed. Italy (-321.1065), Canada (220.7447), China (218.3904), India (212.2696) France (-123.0402), Switzerland (115.5871) and Czech Republic (-113.8756) have the highest residuals in absolute value. The location of the residues can also be observed in Tab. 1. Adjusted R-squared with 74% is satisfactory.

Tab. 3 Multiple regression model – cross sectional data, HS 7326906000

Model HS 7326906000: OLS, using observations 1-28

Dependent variable: Import_2018

	Coefficient	Std. Error	t-ratio	p-value	
const	104.852	63.5405	1.650	0.1119	
Tariff_2018	−16.8087	7.12789	−2.358	0.0269	**
Share	61.1894	6.97871	8.768	<0.0001	***
GDP_pc_2018	−0,000290389	0.000969848	−0.2994	0.7672	

Mean dependent var	127.1786	S.D. dependent var	237.0151
Sum squared resid	350444.1	S.E. of regression	120.8381
R-squared	0.768952	Adjusted R-squared	0.740071
F(3, 24)	26.62478	P-value(F)	8.27e-08

White's test for heteroskedasticity - Test statistic: LM = 11.1788
 with p-value = P(Chi-square(8) > 11.1788) = 0.191773
Test for normality of residual - Test statistic: Chi-square(2) = 6.56058
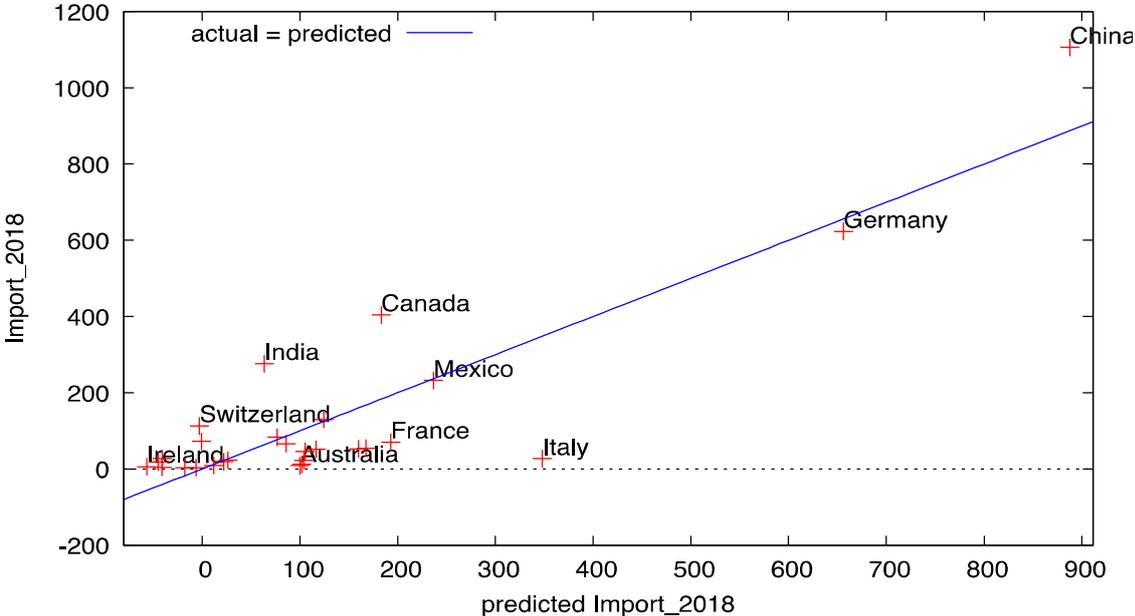 with p-value = 0.0376174

Source: Authors' own calculation according to ITC, 2020, USITC database 2020, UNCTADstat database 2020

The most important conclusion of the regression analysis is that we can consider the level of tariffs as a significant determinant of the intensity of bilateral trade.

In order to determine the impact of tariffs on the selected commodity group, we have compiled Fig. 6, which shows the development of Germany's imports in the product group HS 7326906000 for the quarters since 2015. The graph has an increasing trend. However, we can observe a seasonal progress. If we notice the import of Germany in 3rd quarters from Fig. 6,

we find that they have following values: Q3 2015 - 84 thousand USD, Q3 2016 - 50 thousand USD, Q3 2017 - 86 thousand USD, Q3 2018 - 183 thousand USD and Q3 2019 - 159 thousand USD. Although value in Q3 2019 is lower than in the previous year, we cannot conclude from the time series about the negative effect of restrictive foreign trade policy.

Fig. 5   US importing markets in commodity group HS 7326906000 (Other articles of iron or steel, coated or plated with precious metal, nesoi (not household articles)

Source: Authors' own calculation according to ITC, 2020, USITC database 2020, UNCTADstat database 2020

Fig. 6   US importing from Germany in commodity group HS 7326906000
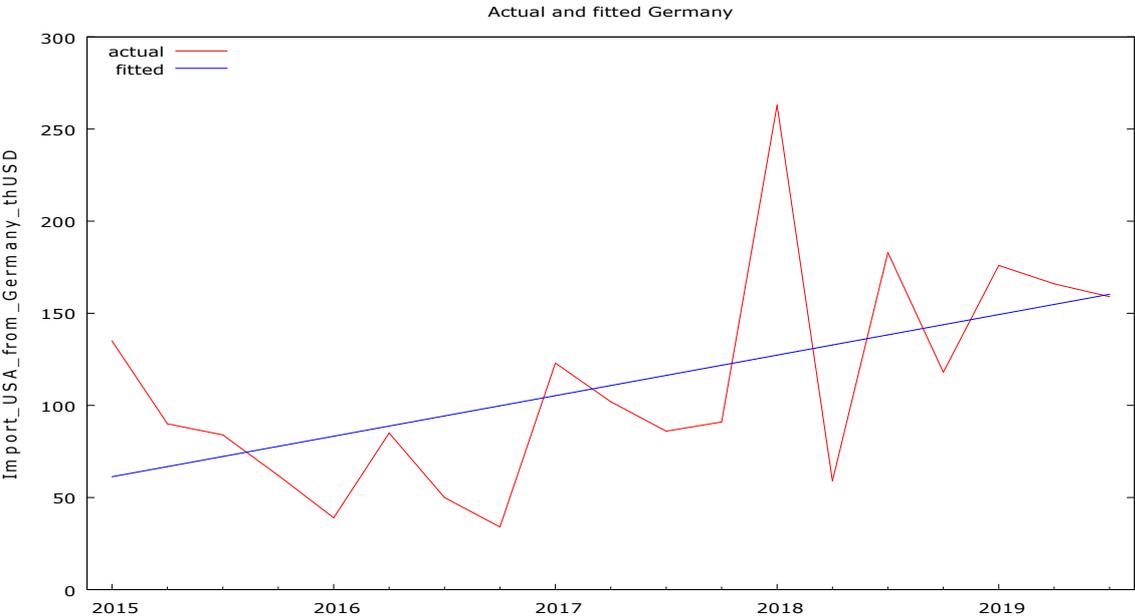
Source: Authors' own calculation according to ITC, 2020

In the case of China (Fig. 7), it is clear that US imports from this country fall in the commodity group HS 7326906000 in the third quarter of 2019, which can be seen as an indicator of the restrictive US trade policy.

Fig. 7 US importing from China in commodity group HS 7326906000
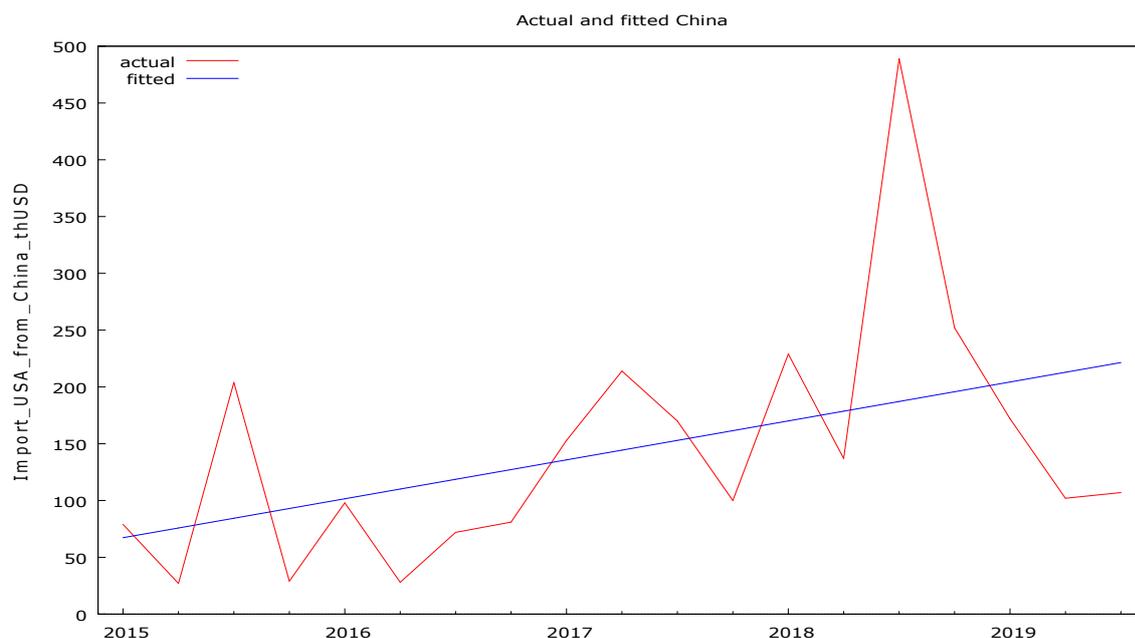
Source: Authors' own calculation according to ITC, 2020

If we look closely at the residuals, the difference between the actual and estimated level of US imports from Germany and China (Tab. 4), in the case of Germany in the third quarter of 2019, is observed only slightly lower residual value than trend, but China shows residuals in amount -114 thousand USD.

Tab. 4 Overview of residuals in cases of Germany and China (1Q 2005 - 3Q 2019)

Time	Residuals Germany	Residuals China
1Q 2015	73.7263	11.7316
2Q 2015	23.2246	-48.8351
3Q 2015	11.7228	119.5982
4Q 2015	-15.7789	-63.9684
1Q 2016	-44.2807	-3.5351
2Q 2016	-3.7825	-82.1018
3Q 2016	-44.2842	-46.6684
4Q 2016	-65.7860	-46.2351
1Q 2017	17.7123	17.1982
2Q 2017	-8.7895	69.6316
3Q 2017	-30.2912	17.0649
4Q 2017	-30.7930	-61.5018
1Q 2018	135.7053	58.9316
2Q 2018	-73.7965	-41.6351
3Q 2018	44.7018	301.7982
4Q 2018	-25.8000	56.2316
1Q 2019	26.6982	-32.3351
2Q 2019	11.1965	-110.9018
3Q 2019	-1.3053	-114.4684

Source: Authors' own calculation

CONCLUSION

Based on a multiple regression analysis of cross-sectional data, we can confirm the hypothesis that the level of tariffs affects bilateral trade, though with rather minor effect. It is also important to follow the country's position in the export of the commodity group on a global scale. For this purpose, we used control variable denoted as "Share" and it was statistically significant with 99% probability. Using graphical analyses of quarterly time series, we found that the restrictive U.S. foreign trade policy had an impact – we researched statistically significant impact on selected countries (Germany and China), but the impact is differentiated. Taking into account observations of the analyses of residuals, we can say that restrictive foreign policy of the US has influence on China. However, we have not yet proved the impact of US foreign policy on Germany, but this relationship should be tested with greater delays and lagged observations. It is important to add that, despite the rise in steel prices, we have noticed a decline in its US imports while in stable period, we can see an import peak (World Bank, 2020), which confirms our conclusions. Commodity groups were selected in view of the very material of which they are produced. These commodities are burdened with a higher duty by the US administration and, last but not least, have been selected due to a sufficient number of observations.

Further research could be realized using longer time series (number or frequency with seasonal adjustment), lagged variables and assessing other variables such as price competitiveness, REER or added value parameters. Possible methodological approach could also cover a method of gravitation models within the industry.

ACKNOWLEDGEMENT

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Perception of Different Forms of Signalling as Source of Consumer Behaviour Classification

Rastislav Strhan

rastislav.strhan@euba.sk

University of Economics in Bratislava, Faculty of Commerce, Department of
Commodity Science and Product Quality
Bratislava, Slovakia

Abstract: Paper develops the idea of classification based on different perceptions of product relevant information. Information asymmetry belongs to the most important sources of market failure. Despite that, only a few pieces of research are looking at the impact of information asymmetry inside marketing activities. Although signaling is considered as the way how to overcome information asymmetry, scientific support about the impact of different signals on consumer behavior is rather rare. We developed a classification of consumers according to a perception of product quality relevant information, in which we expect, that different group of consumers accepts different forms of Product presentation, ranging from acceptance of famous products to search for own rational decision. The contribution shows the results of the first attempt made to prove and support that idea. Different approaches were used to identify potential similarities and differences by the perception of different product-related expressions.

Keywords: information asymmetry; signalling; consumer behaviour; consumer classification

JEL Classification codes: M31, M37, Z13

INTRODUCTION

Economic science from the beginning felt that the market doesn't always behave efficiently. It was considered as the impact of government or corporate intervention and considered as a not natural situation of the economic system. Since 1958 is a situation where the allocation of goods and services is not Pareto efficient, as it is expected in free-market conditions, characterized as a market failure (Bator, 1958).

Research of roots of market failure discovered information asymmetry as one of the possible explanations of rising and influence of information asymmetry theory. With works of Akerlof, Spence and Stiglitz, for which they received the Nobel Memorial Prize in Economic Sciences in 2001, asymmetric information started to be considered as a key issue in many real markets, being one of the main paradigms underlying what is nowadays known as the economics of information The theory of asymmetric information has proven to be a very fruitful framework for the analysis of many types of market (Izquierdo- Izquierdo, 2007).

Bergh at al. analysis of leading management journals shows the increasing importance of research based on information asymmetry. They found two articles dealing with information asymmetry during the 1980s. The number progressed rapidly to 40 during the 1990s and again to 96 during 2000s. In recent decade although it was not finished yet they found 85 already published contribution (Bergh et al., 2019, p. 124).

Information asymmetry as a process is relatively often analyzed and described in economics, insurance and financial economics.

On the other hand, impacts of information asymmetry impact on marketing activity and especially promotion is a relatively untouched topic. But if we look at forms in which information asymmetry occurs and adapt it for real conditions of the market, we would see that the marketing process is by information asymmetry touched on a very high level.

Reason of such interest is that marketing relationships between buyers and sellers often are characterized by information asymmetry, in the sense that the supplier possesses more information about the object of an exchange (e.g., a product or service) than the buyer (Mishra, Heide, Cort, 1998, p. 277).

1 LITERATURE REVIEW

Although asymmetry of information can be considered as a typical market situation it is not automatically. As Izquierdos state, some key assumptions are not always necessarily hold (Izquierdo – Izquierdo, 2007):

- There are reliable quality indicators which, before the commercial transaction takes place, are visible to only one of the potential trading partners, but not to the other (i.e. asymmetric information). For the sake of clarity, and without loss of generality, let us assume that the sellers are the possessors of privileged information.
- If sold at the same price, producing and selling low-quality items is more profitable than producing and selling high-quality items.
- Informed sellers present low-quality items as high-quality ones and buyers have little or no information about the sellers' trustworthiness.
- The quality expected by every potential buyer is the market's average real quality of the product (i.e., perfect average information).

Of course, information asymmetry occurs in different forms. Although there is no unified classification, we can meet three forms of information asymmetry hidden characteristics, hidden action and information and hidden intention (Babayan, Kadlečíková 2016).

Hidden characteristics situation is the case where demand-side (in the market condition represented by customers) does not know certain, unchangeable (or no longer freely changeable) properties of the goods and services offered by supply-side before purchase process conclusion (Babayan, Kadlečíková 2016). In the same way, he can´t judge and determine the quality of the service offered before the contract is fulfilled. Since the seller can move to the buyer the wrong facts, there is the danger that it comes to an adverse selection (disadvantageous selection).

With the Hidden action and hidden information, the information asymmetries only occur ex-post, after the purchase has been concluded and during the fulfilment of the contract (Ceric, 2012).

Hidden action means that the supply-side can´t (completely) observe actions of purchase side during the realization of the contract. (Babayan D., Kadlečíková M. 2016). Hidden information occurs when the demand-side can observe the actions, but the quality and relevance of them cannot be assessed (eg due to a lack of specialist knowledge).

In both cases, the problem is that the demand-side, even after contract fulfilment (ex-post), can´t judge whether the result was achieved through skilled efforts of the agent, or whether (or how much) the environmental conditions affected the outcome (Ceric, 2012).

Even if the demand-side has opportunities to observe the action of the seller and there are no hidden action and hidden information problems, then in certain cases problems may still arise. It is because of hidden intention, where demand-side ex-ante does not know the supply-side intentions. If the principal makes investments that he can´t reverse (irreversible specific

investments, English sunk costs), he comes into a dependency relationship with the supplier. After the conclusion of the contract, he no longer has the opportunity to induce the supply-side to act in a desired manner (no credible threat potential). In this context, one speaks of the "hold up" threat when the supply can exploit this to give himself an advantage at the demand's expense (Strhan, 2018).

Understanding of different forms of information asymmetry can be important by avoidance of its misuse. Different forms can be effectively solved through different tools, which again cause different cost and funds. Therefore, is important to understand the instrument, which can impact of information asymmetry on market effectiveness decrease or avoid.

On the other side, we can see that a producer can select from a wide range of signals. Without recommendation and criteria choice of used signals is rather result of empirical knowledge as a content of professional decision process. Number of existing signals raises the related issue of signal consistency, which is defined as the agreement between multiple signals from one source (Connolly et al. 2011, p.53).

The seller must look at credibility by every individually used signal. Use of low credibility signal can harm the perception of product quality and is, at least less efficient. If the signal used in communication can´t separate the offer of different producer among high and low-quality sellers, the efficiency of use of such signal is again very small. Signal suitable for high-quality products should be available for producer of low quality only with such attempt and financial instrument, which created effective barriers for misuse of signals.

In previous papers, we tried to create a classification of signals in matrix form. As the first criteria, we selected persons involved in the signalling process. In theory of conformity assessment, we divide self-declaration of conformity, customer conformity and third-party assessment – certification (Strhan, 2007). The same axiom can be used for signalling instruments. As second criteria we selected the credibility of signals, which we classified through the differentiation of inspection and control system (Strhan, 2018). Result is matrix as it can be seen in Table 1.

Tab. 1 Signalling instrument matrix

		HOW?		
		Without Feedback	Informal feedback system	Formal feedback system
WHO?	Declaration	Persuasive Promotion	Informative promotion	Liability system
	Customer assessment	References systems	Review systems	Award systems
	Third party assessment	Comparative Testing	Labelling systems	Certification

Source: Strhan, R. 2018, p. 19

Another approach we used was the adaption of Holbrook – Corfman matrix of Quality aspects in economic research (Strhan, 1999, p.50). In analogy to the axes of the original matrix, we selected four categories of quality perception. Parametric quality is based on objective parameters and their measurements not looking at the market situation. Awarded quality presents the quality of goods on the base of comparison with other market products in the form of award, prize, label achieved for best results. Sensory quality concentrates on the presentation of quality through extraordinary experiences for human senses. Marketing

quality as the last category supports the marketing presentation as sufficient proof of declared quality parameters. Further, we developed this marketing aspect according to the form of proving through conformity assessment (Strhan, 2018).

2 METHODOLOGY

We mentioned above different form of presentation of quality attributes. Information about the quality we can assume as signalling instruments which should decrease the information asymmetry of demand-side by purchasing process.

As is clear from table 1 companies have available various forms and types of signalling with various credibility and various process complexity. Use signals effective and efficient require to understand how different categories of customer perceive different signals and which they take in higher amount in their decision process.

We adapted the matrix of Holbrook- Corfman for creation of customer classification based on the perception of different quality information and signals. We used two axes and created so four basic types of customers. One axe was built on the base what types of attributes are for customers more important. The first row represents a customer who prefers objective attributes, comparison of products and ability of evaluation. Such consumers are looking for signals confirming their expectation on the cognitive level. The second row includes customers who tend to evaluate product subjectively, emotionally and on the base of senses. They positively respond to signals having emotional content and build social relation.

The second axe is representing extrinsic and intrinsic approach of the customer, its preference to make binary of multi-criterial decision. Intrinsic perception of quality is based on the individual view, where customers can decide without having other products or conditions of the market in mind. Such customer rejects to compare products available on the market. Their intuitive made the first selection of product is evaluated through acceptance of product characteristics and acceptation of quality signals. It does not influence if the first choice is based on recommendation or marketing activity, the final decision is made without having it in mind. The final decision, in that case, is made on dual base "accept – not accept". By extrinsic approach customers compare conditions of a product purchase, i.e. competitive products, available substitutes and place where products are purchased. Product and signal perception is then partly influenced by factors, where the producer has limited control.

We decided to test the classification using the sample of 100 students of Faculty of Commerce. As our goal was not to test the classification, we did not differ among sex and income inside the tested group (Kováčová, 2017).

The biggest task was to find an appropriate methodology to discover the differences by consumer behaviour. The traditional form of questionnaire tends to get no real answer as respondents consider some answers as correct and preferred without taking them into the real decision process. For more accurate experimental prove we are missing sources and technology capacity.

Finally, we choose as appropriate form pairwise comparison. Every class of assumed customer groups was represented through statements which characterise his/her basic behaviour and selection by decision process. They were compared with other statements representing other categories of consumers in the form of 30 pairs. By pairwise comparison was for respondents difficult to select an answer to consider as society preferred.

To verify the results, we added a traditional selection of consumer preferences. For every category of customer, we used two statements and added additional statement representing

the alternative "I cannot judge". The task of the respondent was to select three answers which represent their perception of quality and acceptance of signals.

3 RESULTS AND DISCUSSION

We expect that identification of different perception of signalling can companies save money in communication and promotion as they will have a recommendation which form of a signal are by their consumer groups appropriate.

The task we made we must consider as the first attempt to recognize consumer behaviour from this side. Improvement in methodology and a wider group of respondents should allow adapt the methodology further and make it helpful for a business organization.

3.1 Selection of statements for pair-wise comparison

Crucial point of questionnaire was to find appropriate statements, which can represent each category of customers. We required to find really exact statement, but such, which can be applied by every type of products, which can come in consumer mind. At the end we selected 16 statements as they are described in Tab 3.

Tab. 2 Expression for pairwise comparison

Evaluator – Parametric quality	Contestant – Awarded quality
Our product contains a high content of nutritional substances Long shelf life is the result of top hygienic conditions Read the composition and understand why our product is the best! The extended warranty is evidence of the product's reliability	The origin label confirms the origin of the quality The results of consumer testing show the quality of the product Quality is proven by the organic label Signs of foreign systems confirm the high quality of the product
Hedonist – sensory quality	**Fashionist – Marketing quality**
With the touch you get the product into the body Uniqueness of experience for all senses! Attractive look is a pleasure for the eyes! A unique taste experience is waiting for you!	Market leaders must offer a premium product Famous celebrities cannot afford a connection with poor quality products Producer of a well-known brand cannot risk a scandal Good you heard about the product gives you a reasonable guarantee

Source: translated form own methodology

### 3.2 Results of pair-wise comparison

Having the approved form of statements, we created pairs for comparison. So, we have achieved 30 pairs. Each category of customers was represented by the same number of statements.

By pair-wise comparison, we risk, that respondents will respond randomly, instead of personal preference. As the random answer, we selected answers ranging between 6-9 preferences. In our sample, only two respondents achieved range between 7 to 8 preferences. Seven respondents had answered in range 6-9 preferences.

Rest of respondents achieved in one category of statements at least 10 preferences from 15 appearances, that means it was preferred in 66% of pairs. Such answers we considered as showing a strong preference for some form of presentation of attributes and quality requirements.

In figure 1 you can find summarized results. The highest level achieved the category of Evaluator representing the quality based of parameters and objective attributes. It was preferred in 29% of pairs. The second strongest category were the category of Hedonist, which was preferred by 26% of respondents. The statements representing the category of Contestant were dominant by 23% of respondents. And finally, statements representing category of Fashionist was preferred by 21% of respondents.

Fig. 1 Selection of pairwise comparison
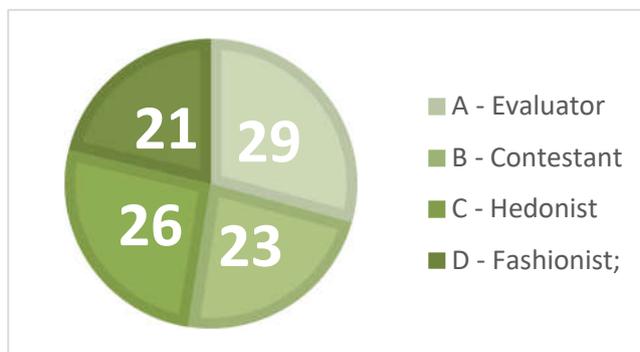
Source: own results

Although there are relatively small differences among different categories of customers, through the selection we were able to eliminate random answers. Of course, results could be influenced by different perception of statements. Although we tried to find clearly differentiating statements, it can happen that the were perceived in different form. Therefore, we made check using traditional form of questionnaire questions.

3.3 Perception through questionnaire

To control the result obtained through pair-wise comparison we selected traditional form of asking question. For each category we chose two statements, which are mentioned in Table 2. We assumed by subjective preference of quality meaning respondents will prefer some type of statements having similar content.

Of course, mentioned statements are subjective and must not for all customers connected with a specific type of quality perception as we identified. Another problem we faced is the truth of respondent answers. Because in society relatively huge discussion about quality is taking place, we expected respondent will subconsciously prefer rational ways of behaviour.

Especially by Fashionist is problematic find expression which will be clear and will not be related to marketing, communication and persuasion. As we know from previous research people in Slovakia are don´t like to be described as manipulatable. By questionnaires are their answers

much more rationale than we can see from practical observation. They shame to show, marketing activities, have an impact on their product choice.

Tab. 3 Product quality statements for survey

A. Evaluator Before choosing the product, carefully examine its composition and parameters. It is important to know what products have properties and impacts on the environment.
B. Contestant I like when the manufacturer can show that the product's properties are actually fulfilling. I have a problem assessing which products are the best choice in terms of my requirement.
C. Hedonist I buy more on feelings and ideas than on unclear, complex and misleading information. I do not really care about quality; it is important for me to be comfortable with the product.
D. Fashionist I think there is only a small difference between the quality of the products on the market, so I decide by price. I prefer world-class products because their global presence guarantees their brand quality.
E. Other In many cases, I regard product quality as a marketing manipulation.

Source: Own results

Fig 2   Respondents view on quality
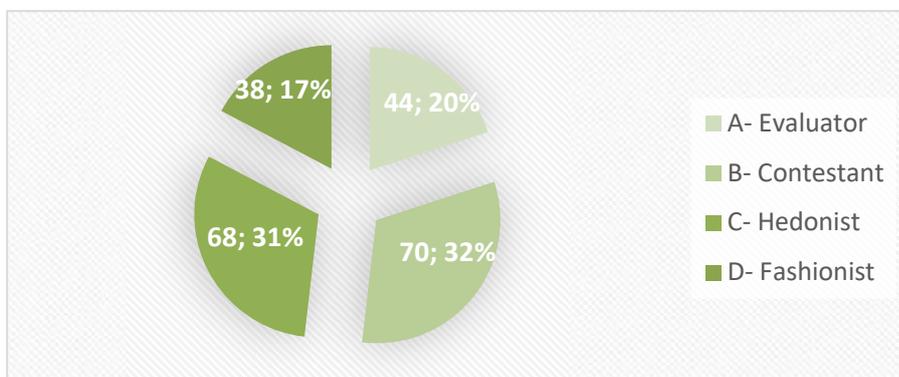
Source: own results

We gave one question to the group of Fashionist, which was oriented on price sensitiveness. Although it looks like Fashionist don´t look at price we wanted catch by this statement group of customers who are price sensitive and follow marketing attempt. We cannot forget the category of customer who follow not marketing steps because of presented product quality, but marketing presenting extra value of purchased product.

Last statement „In many cases, I regard product quality as a marketing manipulation" covered preferences of respondents who cannot evaluate the quality differences and perceive presented quality as a marketing term. They could be considered according to the Garvin classification as a supporter of transcendent quality definition (Garvin, 1984).

Respondents could give three responses to this question. Therefore, all responses are up to 233, which means that they have an average of 2.33 responses per 100 respondents. The option E was 13, out of a total of 233 responses, only 5.58%. As this alternative is not part of our consumer typology, we selected this group from the final results.

Results in Figure 2 were calculated only from answers representing four different types of customers. The highest number from the four categories we counted, achieved answers connected with consumer type of Contestant (70 answers or 32%). A similar percentage had the category of Hedonist (68, resp. 31%). Responses representing the category of Evaluator was mentioned by 20% of respondents (44 answers). The lowest number achieved the Fashionist, where answer connected with that category was chosen by 17% of respondents (38 answers).

CONCLUSION

Last step of our survey was comparison of both forms we used to classify customers. Close results will prove the correctness of classification. Unfortunately, as we can see in Figure 3 results are not close. The category of **Evaluator** was much less preferred by statements as by pairwise comparison. Vice versa, the category of **Contestant**, which appeared as the highest by selection of statements, was relatively low preferred using the pairwise comparison. By other two categories, we can find some similarities in different forms of evaluation. Category of **Hedonist** appears in all forms among the higher preferred alternatives and the category of **Fashionist** belongs always to the less preferred perception of quality.

Fig. 3 Comparison of results using different methodology
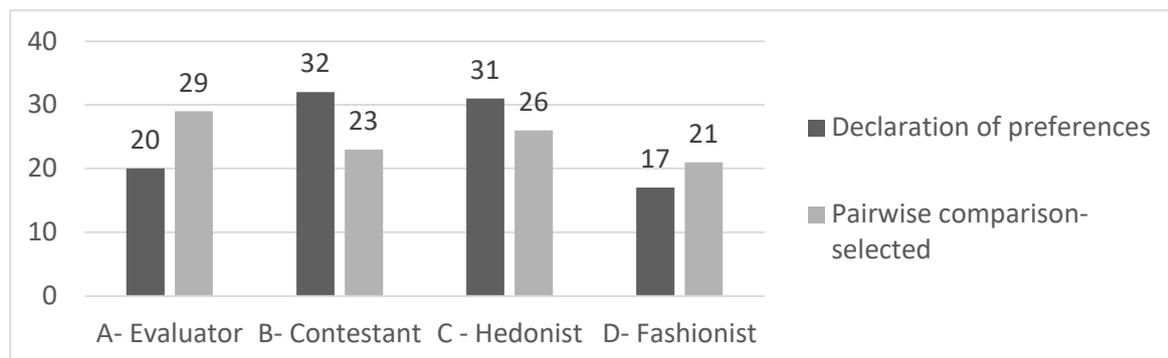
Source: own results

Reason for such differences can be different. We can expect, that customers are evaluating randomly and by the choice of product they use different criteria according to the type of product and purchase. In that case, a more precise set of product category for classification should be used. Another explanation is connected with the semiotic character of the questionnaire. It is difficult to find expressions and statements which can be connected with an existing group of customers. In that case, we can consider our methodology as the first step by testing the appropriate form of class identification.

Goal of this paper was to combine our classification of customers with different types of signalling as they were mentioned above. Although confirmation of consumer classification was not sufficient, we can, based on description of different categories of customer, set principles of acceptance of different signalling forms. In table 4 we made attempt input into original matrix of signals types of customer we exact to have positive connotation.

Tab. 4 Perception of signalling instrument

	Without Feedback	Informal feedback system	Formal feedback system
Declaration	Persuasive Promotion FASHIONIST HEDONIST	Informative promotion EVALUATOR	Liability system EVALUATOR
Customer assessment	References systems FASHIONIST	Review systems EVALUATOR HEDONIST	Award systems CONTESTANT
Third party assessment	Comparative Testing CONTESTANT	Labelling systems CONTESTANT	Certification CONTESTANT

Source: own results

As we can see category of contestant requires more formal systems with higher credibility. This category does not accept company declaration of signals without involvement of other body (customer, third party). On the other hand, Fashionist accept positively signals without feedback and involvement of third party is for this category of customers not necessary. As Evaluators believe in their own competence to make own decision. By signals they do not require impact of third party and concentrate to gain enough information about the product and conditions of it use (customer experience). Experience of customers as signal is good accepted by Hedonist because it is base on emotional perception of use, not on formal forms. Hedonist accept marketing presentation of sensitive attributes as they are searching for unique experience.

Theoretical prove of the model needs further research. In the next step, we think to check again the model through an improved and better-adapted questionnaire. As a further step, we think to connect such theoretical survey with a survey about preferences for real existing signalling forms. Although we can easily identify a product which concentrates on one category of signalling, it will be difficult to find such representative systems of signalling. Besides that, of course, different marketing aspects can overcome the original preference of customers and their perception of asymmetry.

Although we face several problems looking and strong market competition, an increasing number of misleading communication activities, increasing mistrust into marketing campaigns, which changes in confidence into insane and dangerous practices of human manipulation, we consider that part of marketing and commodity science knowledge as insufficient and further work in that way as very important.

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Young People and Influencers

Dana Vokounová

dana.vokounova@euba.sk

University of Economics in Bratislava, Faculty of Commerce,
Department of Marketing
Bratislava, Slovakia

Abstract: The influencers spread information, pictures and stories or they express different opinions about products or services via various social media channels, such as blogs and social networks. They are often considered experts in their field and their opinions have a powerful impact on people, especially on young generation. They can influence what become a trend and a "must have" fashion as followers tend to copy their style, so the influencers have the ability to affect purchasing decision. The aim of this paper is to present the results of individual interviews among young people that focused on opinions and attitudes towards social media and influencers. The study revealed that the most popular social media platforms are Instagram, Facebook and YouTube. The main reasons for visiting social networks are communication, entertainment, inspiration and leisure. Most young people follow influencers but accept critically their opinions and recommendations. Some of them bought the product as recommended by the influencers and were satisfied with the purchase.

INTRODUCTION

The internet has become an essential component of communication across the globe. Reality is now experienced through a hyper-connected world with an enormous abundance of data spanning news, advertisements and opinions. The digital environment poses new set of opportunities where consumers are co-creating the opinion, attitudes or norms of behavior. The internet opened up a new stream for people to become thought leaders and influencers within their niche in virtual online space. Social media has become a tool to access information, meet new people, create links and relationships between many users possessing the same objectives or motivations.

1 LITERATURE REVIEW

Social media refers to the means of interactions among people in which they create, share, and/or exchange information and ideas in virtual communities and networks (Tufts University). Social media platforms allow users to have conversations, share information and create web content. There are many forms of social media, including blogs, micro-blogs, wikis, social networking sites, photo-sharing sites, instant messaging, video-sharing sites, podcasts, widgets, virtual worlds, and more (University of South Florida).

Online social media providers are online platforms that host, enable and encourage the exchange of user-generated and other content between individuals through social interaction. In exchange for these mostly free services they gain access to, collect and process information about users' socio-demographic profiles, interests and preferences. Online social media

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providers use this data to create and offer paying advertising and other services that rely on highly granular and customizable user targeting options (European Commission, 2018).

In the EU, 56% of people aged 16-74 participated in social networks in 2018 (Eurostat, 2019). Social network participation includes activities such as creating a user profile, posting messages or other contributions to social networks. The social network participation rate was highest in Denmark (79%), Belgium (73%), Sweden and the United Kingdom (70%). Share below 50% was in three member states: France (42%), Italy (46%) and Slovenia (49%). In Slovakia, 60% of people are part of social networks, which is more than the European average (Fig. 1). Among younger people aged 16 to 24 years, 88% participated in social networks. Among older people aged 65 to 74 years, almost one fifth (19%) participated in social networks.

Fig. 1 Participation in social networks in the EU

79	73	70 69	67 66 65 64	62 61 60 59 58	56	54 53	51 50 49	46	42
DK	BE	SE CY UK MT	FI NL HU LU	EE LV IE PT ES RO SK LT	EU CZ	HR DE EL AT	BG PL SI	IT	FR

Source: Eurostat, 2019

The most popular networks worldwide, as of October 2019 ranked by number of active accounts are Facebook, YouTube, WhatsApp, Facebook Messenger, WeChat and Instagram (Statista, 2019). Facebook and YouTube are clearly two leading international platforms worldwide (Statista 2019) and also in European Union (Eurostat, 2019) and Slovakia (Tab. 1).

Tab. 1 Most popular social networks in Slovakia

Social network	Daily active users (%)	Monthly active users (%)
Facebook	45	68
YouTube	21	63
Pokec	9	29
Instagram	6	16
Twitter	3	12
Snapchat	2	6

Source: GfK Slovakia, 2017

According to GfK Slovakia (2017), in Slovakia, Facebook is more popular among young people and with increasing age its usage gradually decreases. On the other hand, we can clearly state that Facebook is a very universal social network. It is used by different social groups very similarly. YouTube loves "everyone" and "everyone" uses it (like everything connected to the Internet, younger people use YouTube more intensively - but YouTube is penetrated very deeply into every demographic target group). Twitter is an interesting case. Its influence in Slovakia is rather marginal, but its users are an interesting target group, they are rather better-off people in the younger middle age with higher incomes and higher social status. We can define them as opinion leaders. The once popular social network in Slovakia is gradually losing its share. Twitter is most often used by people aged 20-30. Instagram is the domain of young

people (up to about 30 years old), people over 40 years are a rarity on Instagram. Social network Snapchat is designed for young people. Snapchat was very popular among them, but when Instagram strengthened the position, Snapchat slowed its growth. Snapchat users are practically exclusively people under 25 years.

Social media evolution has led to the emergence of influencers. Influencer is an individual who has built a digital audience through sharing editorialized content about their life (McCorquodale, 2020). Influencers are known for something among a target community and can influence the actions of target-community members (Backaler, 2018). Social media and influencers offer the ability for instant feedback which correlates perfectly with emotional marketing; individuals can immediately sense the change in someone´s demeanor through the emotional tone in a voice or facial expression. The power of emotional marketing is in the way it can overcome logical arguments. When people are emotionally invested in a brand because of the positive sentiment invoked within them, this can result in them choosing to continue their relationship with that brand despite controversy around some brand´s activities (Brown & Fiorella, 2013).

Influencers are famous people who give views on many subjects. They are individuals who have impact and credibility in a specific industry, and are considered extremely popular multimedia microcelebrities operating on social media, sometimes simultaneously on several platforms (Lindh & Lisichkova, 2017). They are speaking as an authority on the subject area, and hence are demonstrating their influence. They can influence what becomes a trend and a "must have" fashion as followers tend to copy their style, so the influencers have the ability to affect purchasing decision. Influencers are shapers of public opinion who persuade their audience.

Some influencers produce advertorials on blogs and social media platforms in exchange for payment or sponsored products and services. There is a difference between paying for the time of an influencer to speak their views and paying to have an influencer speak firm/brand´s views. Advocacy is legitimate exercise as long as it is genuine and credible. Paying an influencer risks undermining their independence and credibility, and hence their influence (Brown & Fiorella, 2013). Paid influencers have to calibrate their internal tensions between producing quality advertorials for monetary earnings and maintaining their credibility with readers (Abidin & Ots). According to European Commission (2018) paid influencer´s content bears few of the characteristics that make it possible for consumers to identify an advertisement. First, the content is published by an individual person – not a business. Second, it is typically presented as a personal endorsement rather than the direct and clearly identifiable promotion of a product. As such, influencer marketing often appears to consumers as a spontaneous, non-commercial post.

Research of Audrezet and Charry (2019) showed that 28% of influencers were requested by their sponsoring brands not to disclose the partnership. Reason is that companies fear that the credibility associated with electronic word-of-mouth will be compromised by disclosure. But their research based on surveys taken between 2015 and 2018 revealed the likelihood of viewing a brand positively following an influencer's recommendation was roughly the same whether or not a relationship between the brand and the influencer had been disclosed.

2 METHODOLOGY

The aim of this paper is to present opinions and attitudes of young people towards social media and influencers. As a research method was selected qualitative research, because it allows to obtain an insightful opinion and understanding of examined subject. There were 31 individual interviews with university students aged 21 to 25 years. The interview scenario was divided into two basic areas. The first part of the interview was about social media - which

and why do young people use them. The second part was focused on influencers - how young people perceive them, how they trust them and accept the presented opinions and recommendations. The sample of respondents consisted of 11 men and 20 women.

3 RESULTS AND DISCUSSION

3.1 Social networks

Social networks have become a daily part of the lives of most young people. The main reasons for visiting social networks are communication, entertainment, inspiration and leisure. Young people love to share their experiences (especially in the form of photos and videos) and opinions with others. They are looking for tips for spending leisure time (such as cultural events), traveling or a healthy lifestyle. Young women are interested in make-up, dressing, cooking or household and young men especially body building and sports.

"I can say that social networks are a part of my life and have a great influence on it."

"Of course, I use social networks every day and spend an hour on average every day. I usually scroll the Instagram all day, for example in the morning/evening in bed, while waiting for someone/something, or when I eat."

"I really use social networks only when I have nothing to do, such as commuting by train to school or in the waiting room at a doctor."

(communication) *"I only use social networks to communicate with classmates or friends."*

(communication) *"I follow my friends' posts there."*

(entertainment) *"I mostly use them for music and basketball."*

(entertainment) *"I am on them for fun and relaxation."*

(inspiration) *"It is great that in this way, in the comfort of home or through a mobile phone, we can get into another world - a world full of inspiration and "beauty"."*

(inspiration) *"Before buying cosmetics I like to watch various videos that inspire me."*

(leisure) *"During the year I visit at least 5 countries and record all my experiences on social networks."*

(leisure) *"I am looking for inspiration and motivation for the activities I do."*

Young people are also aware of the negative aspects of social networks. The main thing is that they spend too much time online and often prefer online communication over personal. Another disadvantage is that it is an artificial environment that does not correspond to reality, but can still create certain standards for young people, e.g. how to look, how to spend free time etc.

"There were times when I spent more time chatting on social networks than spending time with people in person."

"I do not use Instagram anymore as I have spent too much time on it in the past."

"As far as social networks are concerned, I am not one of their supporters and enthusiasts. I am satisfied with the fact that I do not know any information about anyone and also that no one knows any information about me."

"Some people even lose real life because of them (social networks). Social media shows us everything in an idealized embellished form."

"Social media ruins relationships because people emphasize on how best to look in a photo and spend time on networks rather than with people in person. They think the internet is their best friend instead they should spend their free time with their family and real friends, not the imaginary friends on the networks."

Participation in individual social networks is mainly influenced by the participation of the environment (friends, colleagues and influencers) and the focus of the network. The most widely used networks are Instagram, Facebook, and YouTube.

"I have had this social network since I was a kid, I got it thanks to my friends who signed up for it."

"I registered 4 years ago. I was influenced by friends, most of whom already had their instaprofiles."

"The reason for the registration was to stay in touch with friends from childhood, school, hometown."

"I use it mainly for the possibility of fast browsing of the content of interest, I follow explicitly friends, close people, a few influencers (athletes, musicians, etc.) or specific content (sports clubs or car factories)."

Instagram is used by 29 out of 31 respondents to share photos and videos from travels, school, friends, food or pets and follow influencers. Some young people move their activities from Facebook to Instagram because it is more suitable for their needs

"Instagram has become a kind of gallery of our lives."

"On Instagram I like to watch short videos of famous people from their real life that will allow us to look into their privacy. I am also interested in videos of various stylists about hair, nails and make-up, or quick recipes for cooking delicious dinner or sweet treats."

"The advantage of Instagram was and still is that you follow only the content you want to see in your news."

"Over the past 2-3 years, most people around me created Instagram profiles, and I began to notice that the content they used to post on Facebook in the form of photos has moved here."

"Instagram is about photos and photos are always more interesting than a status on FB. I use Instagram to avoid getting bored in my free time."

Facebook has been used by 27 out of 31 respondents since their childhood. It is primarily used to communicate with friends and colleagues, but also to find information about events. Some respondents use Messenger or WhatsApp to communicate. Many people decreased their activity on Facebook and moved to other social networks, especially Instagram.

"I use Facebook every day and the reason is that almost everyone I know uses it."

"I follow various events taking place in the neighborhood and various special-purpose groups, whether related to work, housing, education or leisure."

"These days I use it mainly because of school and communication with people. From school to job offers to communicating with friends. When I didn't have it for a while, it was more complicated for me, especially at school."

"On Facebook I am a member of several travel groups in which administrators give tips on cheap flights, hotels, destinations."

"I'm a Facebook member, but my interest in this site decreases year after year. There are too many ads and videos. Sometimes it's annoying. My friends just barely add something. The reason for my registration was that my classmates had it."

*"I barely use Facebook, I personally perceive it as a waste of time, and as a function I use the **Messenger** application to chat, make plans, learn about or deal with matters of study."*

*"Approximately one year ago I downloaded the **Messenger** app because my classmates recommended it to me."*

*"I mainly use **WhatsUp** to communicate with my family and close friends. I write several messages a day."*

YouTube is used by 25 respondents mainly because of music, but also to watch funny videos. Only this social network showed gender differences between men and women. Men use it to a greater extent (except for the already mentioned reasons) to replace TV or to watch sports matches and the world of technology. Women rather follow topics like beauty, travel or cooking.

(male) *"I watch sports, car and technology news on YouTube. I spend about 30 to 60 minutes a day watching it as I use it instead of the television."*

(male) *"I started using YouTube mainly for fun. I use it on average for about 3 hours a day, in general I watch funny videos, video reviews when buying electronics, or look for tutorials here."*

(male) *"I like to watch videos and football edits."*

(female) *"I use YouTube for either music, cooking or travel videos."*

(female) *"I love the beauty and lifestyle vlogs, also adventure-travelers or those which make me laugh. From all social networks I use YouTube the most. During the whole day I listen to music. I watch vloggers in the morning (while putting make up on), or at lunch and dinner when I'm home alone."*

(female) *"I mainly use Youtube to listen to music and watch video clips. But more and more I follow the Vlog."*

(female) *"Before buying cosmetics I like to watch various videos on Youtube."*

Pinterest is used by 14 respondents, exclusively women. This network can be characterized as a creative network, which serves mainly for inspiration regarding beauty or "do it yourself".

"I always find visual inspiration on any topic that comes to my mind. Whether it's fashion, living, cooking/baking or exercise, I think I'll find anything on this app."

"I use Pinterest mainly for inspiration in regards of clothing or creating little things for pleasure."

"The reason for registration was to gather inspiration for tattoos."

Snapchat is used by 6 respondents and the use of this network is gradually decreasing. In the past, it was perceived as a trendsetting network that served to communicate, and the advantage was that the photos could be edited in a funny way and not archived. Today they consider it outdated.

"I have Snapchat installed on my phone but I don't use it. There was a time when it was a big boom, but not anymore."

"4 years ago, I spent on it around 30 minutes a day, now only 5 minutes a day. At that time, me and my classmates, we used it as a trend of communication with each other."

"In the past, I also had a social network Snapchat, mainly because of my friends, with whom we went out often. Everyone used Snapchat to send pictures or to chat. What we liked most was that you could choose a photo effect feature that added adjusted your face (dog's ears, big eyes, etc.)."

3.2 Influencers

The family, friends and acquaintances have the greatest **influence** on young people's behavior and decision-making. Young people **follow** influencers as a source of information and inspiration. However, some of them do not accept influencers.

"When shopping I usually try to follow my own opinion, but when I really can not decide between 2 things, I ask my friends for opinion."

"If any influencer suggested anything to me, I would hesitate to buy it. I would rather ask my friends for opinion."

"If I am interested in a product promoted by an influencer, reviews of other people or friends are also important to me."

"However, I generally perceive influencers rather cautiously, as they are also only people who are paid for advertising, so their opinion on a given product/service is not always sincere."

"I personally do not watch or seek influencers."

Most followed are influencers from the **areas** of beauty, fashion, travel, fitness, sports or entertainment. Women are also interested in more serious issues such as politics, the environment or sustainable behavior. Men's domain is sport, and humor is an important factor in attracting their interest.

"They inspire in different domains: what good to cook, how to combine a piece of clothing into an outfit, where to travel next or what makeup is really good."

(female) *"I am especially fascinated by those whose job is travelling and earn money through social networks. I like their tips and tricks when traveling in different countries like airfare, accommodation, food, security and so on."*

(female) *"Regarding the motivational content, I prefer following someone who has actually went through/experienced something, rather than motivational accounts that only translate well known quotes."*

(male) *"These people (Herium, Gaba Saturnp, Patryka Kmeť) are motivate me because they are very determined and fully engaged in what they enjoy, generally doing videos about exercise."*

(female) *"I have been following this influencer (Samantha Marie) for a long time. She focuses on topics such as abused women, eating disorders."*

(female) *"This is a beneficial influencer for me (Natália Pažická) because she is trying to spread how we really should behave, which organic products we shoul use, what clothes to buy."*

(female) *"I follow the interviewer and journalist of the daily press SME. She adds political content on a daily basis; behind the scenes of political debates. As she adds top news every day, I can keep track of what is happening in the world."*

(male) *"I respect his (Sajfa) opinions very much because I feel that this is not a childish youtuber. He is intelligent, not boring and can be funny."*

(male) *"I have a favorite streamer in Slovakia whose channel is focused on playing games and stand up comedy shows."*

Trust is an important factor in accepting someone's opinions or recommendations. Young people are aware that many influencers are (openly or not) paid by brands, which can negatively affect their credibility. Respondents are cautious in accepting posts and take the opinion of the influencers only as one source of information.

"Whether or not to trust them, I can not say."

"I must trust the influencer about what he does. He can convince by the way he presents himself."

"I often took her advice because I think she understand cosmetics better than I do."

"If the influencer promotes a product, I like when he puts the #AD in his post and I immediately understand that it is advertising."

"Since the vast majority of these people receive "some" profit for promotion, it makes me feel distrustful."

"Social networks are full of influencers so I really only watch a few that I know they wouldn't promote a product they wouldn't be 100 percent satisfied with and wouldn´t tested it."

"I do not like when Slovak influencers promote something only because they benefit from it. However, sometimes, thanks to their videos, I am happy to discover products that I would never find on the Slovak market."

"Regarding the paid influencers, you don't know if it's really a good user experience or just another paid collaboration. However, the benefits of such collaborations are discounts or contests for the promoted products."

Influencers can influence **intention to buy** in some young people. However, the credibility and authenticity of the influencer and the experience of the follower are important. Others, however, have great doubts about the motivation of influncers and therefore their opinion does not have much weight in making purchasing decisions.

"Based on these influencers I made many purchases of flight tickets, accommodation, transfers. So far I have always been satisfied and I will definitely continue shopping."

"She seems very professional and sincere and I have already bought several cosmetic products on her recommendations and I was satisfied with them."

"If I see a product being promoted by influencers, then I will remember it and will treat it as one of the options next time."

"I have tried a lot of the things they promoted or have learned a lot about new things."

"I do not like that sometimes influencers "push" forward cosmetics that are more expensive and do not give the possibility of cheaper ones."

"I follow him because of his attitude to life, work and his decent and positive behavior. This also inspires me. However, I have never bought anything that he promotes."

"I have never bought anything based on the influencer's recommendation."

CONCLUSION

Social networks have become a daily part of young people's lives. Through them they communicate with friends, family or colleagues. The most popular networks are Instagram, Facebook and YouTube. The main reasons for choosing a specific social network are the membership of other people and the focus of the network. Young people realize that they spend too much time on social networks and they are well aware that what happens there may not always reflect reality. Most of them follow the influencers, but trust only some of them because they know that some brands may be behind the influencer's advice. Those who bought a product on the recommendation of an influencer are satisfied with the purchase and do not regret it. It would be advisable for the whole community, including experts, to reflect on the possible effects of spending leisure time in an artificial online space with online people we have never met and talked to in person. Ethics is another problem. Manipulative techniques

can create sympathies that facilitate subsequent influencing of opinions, attitudes or behavior. It is true that the online environment can make life more fun, simpler, or rewarding, but you need to stay critical and find a balance between viral and real life.

"I regret that it often happens with youtubers and influencers that they are not aware of the impact they have on the younger generation and often do not show them the best example."

ACKNOWLEDGEMENT

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Mirror Comparison of Czech Export and Russian Import Statistics: Tips for Business and Trade Policy

Sergey Yurik – Nikolay Pushkin – Jaroslav Halík – Valentina Yurik
yurik@pef.czu.cz, nikolai_pushkin@mail.ru, halik@vse.cz, spm99@mail.ru
Czech University of Life Sciences, Faculty of Economics and Management
Prague, Czech Republic
Belarusian State University, Faculty of Economics
Minsk, Republic of Belarus
Prague University of Economics and Business, Faculty of International Relations
Prague, Czech Republic
Belarusian State University, Faculty of Economics
Minsk, Republic of Belarus

Abstract: Traditionally, a country's export analysis is based on national statistics. However, analysis of the same flow based on mirror statistics of the import of the host country is no less interesting. Theoretically in mirror statistics export of goods from the origin country to a destination one should be equal to the import to destination country from the origin one. In practice the mentioned trade volumes differ due to the difference in prices and errors in determining customs value. The article proves the acceptability of using mirror statistics and presents an analysis of Czech agricultural products and foodstuffs (APF) exports to Russia based on statistics of Russian imports at the level of main goods, including beer - the leader in trade. Comparison of mirror data in liters for beer showed that Czech statistics underestimated beer exports to Russia by at least 2 million liters due to neglect of re-export. Recommendations are formulated to expand the trade of Czech APF in the Russia.

INTRODUCTION

The Russian market is the largest market for sales of goods for all European 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.

As is 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. 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 of undoubted practical interest.

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 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.

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. Such a difference in data of mirror statistics is usually called asymmetry.

What is considered normal asymmetry of mirror flows? First of all, the asymmetry of the data is associated with the difference in the prices of the recorded flows. As is known, according to customs statistics methodology (IEMD, 2018; IMTS, 2010), the value of exporting goods of country A to the market of country B is represented by statistics of a 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 (DOTS, 2018, p. xii; Bogdanova & Chuplanov, 2010, p. 47), although the earlier studies used a coefficient of 1.10 (EIFRF, 2003; DOTS, 2018). Currently, the Central Bank of Russia applies coefficient 1.0588 at the mirror comparing statistics for non-CIS countries (BOPR-C, 2018, p. 1).

We also note that the permissible differences in the estimates depend on the specifics of the goods and are determined by the amount of expenses not only for transportation and insurance, but also during transportation losses, as well as calendar differences in sending and receiving goods. In general, the allowable discrepancy in estimates is usually taken equal to 6–10%, and in the future we will focus on this interval of values.

What is registered more precisely - export or import? To this question, the UN statistic experts answer that for a given country, imports are usually recorded with more accuracy than exports because imports are the main revenue base of the state budget, but exports are not (IEMD, 2018). The general view of experts 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 budget revenue from collection of customs duties, taxes (VAT, excises, etc.) and other regulatory control measures (Hamanaka, 2011, p.1; EIFRF, 2003).

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 within the limits of methodologically permissible norms.

1 LITERATURE REVIEW

Studies on the problems of mirror statistics are few in number, which is explained by the problems of the formation of the initial data and the difficulties in the subsequent interpretation of the results of mirror comparison of information. The main volume of publications is focused on the topic of increasing the reliability of statistics. Macroeconomic comparisons of data of the total value of trade results with the recording of the largest deviations, including between countries, prevail here (see, for example, publications of the Central Bank of Russia (BOPR-CMD, 2019; Javorsek, 2016; Valiev, 2016; SFTG, 2008; etc.)). In addition, we also note publications in which a wide mirror comparison of the value results of trade at the level of countries – trade partners of the country is carried out, including mirror comparison by product groups and rarely by selected goods (CCSKR, 2014; Troshina & Kislitsyna, 2008; EIFRF, 2007). Separately, we indicate publications related to the subject of the shadow economy, in which mirror statistics are compared at the level of specific goods to assess the volume of shadow operations (Belov & Soboleva, 2018; Soboleva, 2017, etc.).

From our point of view, the common drawback of mirror statistics research is the wide focus of research, when asymmetry studies are conducted on the almost complete composition of product groups with a comparison of values of trade, which, due to large amounts of information, makes it difficult to interpret the results, leaving comments at the level of fixing the fact of asymmetry and determining its size. In addition, data on natural supplies of goods and prices in these publications remain practically unused with the exception of single publications with an estimate of the volume of shadow trade of a particular product (see, for example, (Belov & Soboleva, 2018; Soboleva, 2017), volumes of shadow trade of Russian crab with Japan are estimated where based on mirror natural supplies).

This publication, based on data from mirror statistics of Russian imports, examines the export of Czech APF products to the Russian market. To solve this problem, the publication analyzes the acceptability of using mirror statistics for APF products from the point of view of existing methodological standards for the interval 2015-2018. The comparison of the value data of mirror statistics is at the level of all APF product groups (HS 01-24), according to the list of main products and the top three products - beer, bird eggs and animal feed. Then, the asymmetry of natural supplies is examined for the leading goods, and possible trade problems and ways to solve them are commented.

2 METHODOLOGY

The research within the designated topic included the following steps.

The APF group (HS 01-24) was at the center of the study. In order to assess the practical use of mirror statistics in analyzing of the competitive positions of Czech APF goods in the Russian market, we compared the statistics of Czech exports to the Russian Federation and statistics of Russian imports from the Czech Republic. Next, a list of imports of Czech APF goods to Russia was compiled on the basis of the Federal customs service of the Russian Federation database (FCSR, 2019), and the asymmetry of mirror statistics on the value of goods within a group of 12 basic goods with a trade volume of more than 90% was investigated. In conclusion, we compared the asymmetry of mirror statistics of natural supplies for the three leading products of Czech APF imports to Russia (more than 60% of trade) and commented on possible causes of deviations, including recommendations on the use of the intellectual property factor. The calculation interval for all indicators is 2015-2018.

The study used two databases at the same time - UN COMTRADE (general asymmetry) and FCSR (main goods). Note that the data from the two indicated databases are identical and possible minor deviations of a temporary nature are associated with technical adjustments at the level of national statistical services, which are not always promptly reflected in the UN COMTRADE database.

3 RESULTS AND DISCUSSION

3.1 Total estimate of the asymmetry of mirror statistics of the Czech Republic and Russia for APF

Mirror comparison of the data of export and import of Czech goods to the Russian market showed the following (Tab. 1). A comparison of the overall results shows that the total Czech exports to Russia (FOB prices - Czech statistics) were higher than the volumes of Russian imports from the Czech Republic (CIF prices - FCSR) by an average of 11% from 2015 to 2018.

This unnatural asymmetry of data indicates problems with errors in reporting and / or determining the customs value of goods, that may mask shadow operations, minimize taxes and capital flight, which requires additional analysis by both statisticians and customs officers when critical volumes are reached. We will narrow the focus of research and consider the supply of APF to the Russian market.

Tab. 1 Mirror comparison of APF trade data

HS	CIF: Russian import from the Czech Republic			FOB: Czech export to Russia			CIF/ FOB		
	2015	2017	2018	2015	2017	2018	2015	2017	2018
	$			$					
Total	2,679,134,129	3,216,554,357	3,775,323,696	3,199,489,631	3,539,595,373	4,116,618,162	84%	91%	92%
01-24	100,323,730	125,876,176	156,775,528	95,555,906	115,660,558	143,593,202	105%	109%	109%

Source: own calculations on the basis of data of UN COMTRADE (2019)

In contrast to the overall results, a mirror comparison of APF trade data (Tab. 1) shows a generally normal situation with an average valuation excess of CIF prices over FOB by 6-7%, which is comparable to the ratio of 1.0588 of the Central Bank of Russia for calculating the balance of payments (BOPR-C, 2018).

Thus, it can be concluded that, in general, the use of import statistics of the UN COMTRADE / the Federal Customs Service of the Russian Federation for the analysis of mirror data on the Czech APF trade in the Russian market is possible in view of methodologically permissible differences in data.

3.2 Main APF goods and mirror statistics asymmetry

Tab. 2 Russian APF import from the CR: set of main goods with the largest share of value

HS		Unit	2015			2018			2018-2015, thou $	2018/ 2015, %
			quantity	Value, thou $	Share	quantity	Value, thou $	Share		
01-24	Agricultural products and foodstuffs			100,532	100.0%		157,069	100.0%	56,537	156.2%
29 main goods				96,794	96.3%		154,930	98.6%	58,136	160.1%
- 12 main goods with the largest share of value				85,760	85.3%		147,868	94.1%	62,108	172.4%
2203	Beer made from malt	l	15,437,391	14,570	14.5%	39,750,351	36,629	23.3%	22,059	251.4%
2309	Preparations of a kind used in animal feeding	t	10,701	17,056	17.0%	19,853	34,769	22.1%	17,714	203.9%
0407	Birds' eggs	t	5,032	21,308	21.2%	6,386	26,204	16.7%	4,896	123.0%
1207	Oil seeds and oleaginous fruits	t	6,160	11,618	11.6%	5,673	18,193	11.6%	6,574	156.6%
2208	Spirits, liqueurs and other spirituous beverages	l	325,546	3,596	3.6%	470,140	5,708	3.6%	2,112	158.7%
1905	Bread, pastry, cakes, biscuits	t	670	2,016	2.0%	1,454	5,330	3.4%	3,313	264.3%
2106	Food preparations	t	630	3,723	3.7%	601	5,088	3.2%	1,365	136.7%
1704	Sugar confectionery not containing cocoa	t	1,500	3,684	3.7%	1,245	3,847	2.4%	163	104.4%
1210	Hop cones	t	276	2,778	2.8%	280	3,832	2.4%	1,054	137.9%
1302	Vegetable saps and extracts	t	160	1,564	1.6%	247	3,689	2.3%	2,125	235.9%
1107	Malt	t	6,375	3,525	3.5%	5,498	2,925	1.9%	-600	83.0%
2202	Waters mineral and aerated waters	l	469,206	323	0.3%	2,040,205	1,656	1.1%	1,333	512.9%
- Other (17 goods)				11,034	11.0%		7,062	4.5%	-3,972	64.0%

Source: own calculations based on the data of the FCSR (2019) using the algorithm (Pushkin & Yurik, 2018)

In order to study the product structure of Czech APF exports to the Russian market, we have compiled a list of Czech APF goods imported into Russia on the basis of data from FCS of Russia. In total, the list included 29 products with a sampling depth of 98.6% (2018). Table 2

shows the main 12 APF products (with the highest share of value) with a sampling depth of 94.1%.

As follows from Tab. 2, the center of trade interests of Czech APF exports to Russia is undoubtedly concentrated in the group of main goods, where all 12 goods had significant trade volumes, and 11 goods (except 1107 - Malt) were able to expand their presence in 2015-2018 in the Russian market. At the same time, the first three products accounted for more than 60% of the value of APF goods and had excellent growth characteristics, which allowed increasing prices and enlarging trade volumes by $ 45 million in 2015-2018, thereby providing more than 75% of the increase in value for all APF products. As for the topic of our study directly - the asymmetry of mirror statistics, the following results were recorded on the values of goods from the first three (Tab. 3).

Tab. 3 Mirror data comparison for the APF top three

HS		CIF / FOB				Share			
		2015	*2016*	*2017*	*2018*	*2015*	*2016*	*2017*	*2018*
01-24	APF	1,05	1,04	1,09	1,05	100%	100%	100%	100%
	12 Main goods	1,08	1,07	1,10	1,11	85%	89%	92%	94%
	- Top 3	1,00	1,01	1,04	1,04	53%	57%	62%	62%
2203	Beer	1,10	1,06	1,17	1,13	14%	15%	19%	23%
2309	Animal feed	0,90	0,94	0,98	0,97	17%	23%	25%	22%
0407	Birds' eggs	1,04	1,06	1,01	1,02	21%	20%	18%	17%

Source: own calculations on the basis of data of UN COMTRADE (2019)

First of all, the CIF / FOB coefficient is less than one in group 2309 (Animal feed), i.e., the value of Czech goods exported to Russia (Czech statistics) was higher than that recorded by Russian customs at the border. This asymmetry has decreased by 2018. One of the reasons may be an underestimation of the customs value of goods to reduce tax and customs payments. Only customs inspection with the help of information from suppliers of these goods to the Russian market can clarify the situation.

For group 0407 (bird eggs), the average deviations in the value of goods in CIF prices from FOB remained on average within acceptable values, that is, the prices of goods in CIF prices were higher for transportation costs and insurance within average norms.

However, the deviation coefficient was slightly higher than the permissible values (1.17 and 1.13, respectively) for group 2203 (beer) in 2017-2018. Since beer is the leader in the list of basic goods, we tried to deal with the causes of asymmetry and continued the analysis.

3.3 Additional possibilities of mirror statistics in analysis of APF products (on the example of beer)

As we know, statistics records not only the customs value of goods for a particular product, but also their quantity. The standard unit of measurement of physical volumes of goods at customs is a kilogram. At the same time, physical volumes are also recorded in additional units of measurement (liters, units, etc.) for the convenience of calculating customs payments for certain goods. Thus, the statistics allows carrying out a mirror comparison of data not only by value, but also by the number of traded goods. These quantitative data can be found in the additional tables of the statistical database of the Federal Customs Service of the Russian Federation.

Russian market of natural imports supplies of beer. The data on price conditions and market share of natural supply of beer and eggs are presented in Tab. 4.

As follows from this table, the position of Czech beer in the Russian market can be called stable, since Czech beer occupied 14% of the market among non-CIS countries in 2018, and this is the second place after Germany (41%) with a small interval from the third place for Belgium (11% of the market of non-CIS countries). In 2018, the average beer price per liter for Germany, the Czech Republic and Belgium was 0.97; 0.92 and 1.30 dollars / l respectively (1,03; 0,88 and 1,39 dollars / l – in 2017). We note that in 2018 prices for German and Belgian beer decreased by 6 and 9 cents per liter, respectively, while the price for Czech beer increased by 5 cents.

Tab. 4 Data on price and market share of Russian import from non-CIS countries in 2018

	quantity, l	thou $	share	price, $/l
2203	Beer			
non-CIS	254,529,618	267,572.7	100.0%	1.05
Germany	112,264,727	108,639.3	40.6%	0.97
Czech Republic	39,750,351	36,629.1	13.7%	0.92
Belgium	23,505,992	30,479.1	11.4%	1.30
Ireland	10,195,063	20,894.1	7.8%	2.05
United Kingdom	10,804,606	15,202.0	5.7%	1.41
Lithuania	15,338,508	10,787.1	4.0%	0.70
Mexico	9,266,565	10,347.7	3.9%	1.12
China	5,233,986	5,226.1	2.0%	1.00
Korea, Repub.Of	6,874,054	4,771.7	1.8%	0.69
Netherlands	2,798,783	4,212.1	1.6%	1.50
Finland	2,903,956	3,791.8	1.4%	1.31
France	3,236,330	3,276.6	1.2%	1.01
Other	12,356,697	13,316.0	5.0%	1.08

Source: own calculations on the basis of data of the Federal Customs Service of Russia (2019)

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 still have a price gap 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.

Problem quantitative data asymmetry. We will consider the possibility of identifying problematic mirror asymmetries of natural supplies using Czech beer as an example.

As you know, the Czech Republic is proud of its national drink, and Czech beer is world famous. In addition, "Czech beer" has been a protected designation of the European Union (PGI - protected geographical indication) since January 2008. This mark is considered intellectual property and is protected by EU law in order to preserve the good name and quality of beer produced in the Czech Republic. In addition, the entry of the designation "Czech beer" in the EU registry provides an opportunity to protect the traditions of Czech brewing and production technology, as well as to prevent the emergence of fakes that breweries can give out for Czech beer and thereby abuse its unique qualities (LB-PGICB, 2019). According to the EU protected designation, "Czech beer cannot be considered a product made in the Czech Republic in an unconventional way or produced in the traditional way, but abroad" (Czech beer, 2008).

In further analysis, we will focus not on the volume of beer, but on its quantity. When comparing mirror flows, the norm is considered to be almost complete coincidence of the physical volumes of the flows. Otherwise, an additional analysis of the causes of data asymmetry is required.

A comparison of Czech beer exports to the Russian Federation and Russian imports from the Czech Republic in quantitative terms yielded the following results.

Tab. 5 Mirror comparison of Czech beer data (in liters)

	2015	*2017*	*2018*
Russian import from the Czech Republic	15,437,391	27,061,624	39,750,351
Czech export to Russia	15,226,590	24,216,116	37,434,856
Import / Export	101%	112%	106%
Import - Export	210,801	2,845,508	2,315,495

Source: own calculations on the basis of data of UN COMTRADE (2019)

As follows from Tab. 5, the import of Czech beer to Russia from the Czech Republic was higher than the Czech export of these volumes to the Russian market: by 1%, 12% and 6% in 2015, 2017 and 2018 respectively. This unnatural asymmetry of the data indicates that along with the original Czech beer from the Czech Republic, "Czech beer" was also imported to the Russian market from other countries, and the amount of this beer is growing from year to year. As a result, according to mirror statistics, 12 bottles of Czech beer out of 100 were delivered to the Russian market from outside the Czech Republic in 2017, 6 out of 100 - in 2018 (this year's statistics will be specified). According to the calculations, the price per liter of the original Czech export beer was $ 0.87 in 2018. Czech beer imported to Russia from outside the Czech Republic in 2018 had a price almost two times higher than that of the original Czech export beer (in 2017, the price was 1,5 times higher). In general, the volume of supplies of "Czech beer" not from the Czech Republic exceeded the mark of 2 million liters per year and fixed at this level over the past two years.

Deliveries of goods from one country to another through other countries, including for sale, are not prohibited and are called re-exports. In the final country, according to the methodology of customs statistics and the rule of the country of origin, these goods are attributed to imports of the first country (in our case, Russian customs refers the volumes of beer re-export to imports from the Czech Republic to the Russian Federation). We would not question the figures of Russian statistics on beer, since these figures are repeatedly checked by the customs and tax authorities of the Russian Federation in the process of calculating customs duties, excise tax and VAT.

Czech statistics do not see these volumes, therefore, the volume of Czech beer exports to Russia is underestimated by at least 2 million liters in the Czech statistics due to the neglect of re-exports. But are Czech beer producers aware of these volumes of non-Czech imports and do they control the activities of the re-export seller of their goods? For now, we will refrain from answering this question.

Re-export very often arises as a consequence of the implementation of a regional marketing strategy with a special reduction in prices to expand sales and consolidate the market (in our case, it is possible that this is one of the EU countries). A future re-exporter buys this product and exports it abroad (in our case, to Russia). At the same time, the manufacturer-supplier of goods at a special price may not even know about the existence of a re-exporter. He will report on the successful implementation of the strategy and expand sales in the regional market (EU country), and the re-exporter will also expand his business and be proud of his personal sales

success (in our case, in the Russian market). As a result, it is precisely on the Russian market that two sellers of the same product compete, while a re-exporter has more opportunities to lower prices on this market than the original manufacturer. It is practically impossible to counteract such unfair competition, since the re-exporter acquired the goods and supplied them for export legally.

There is only one exception and that is beer is marked with a trademark (for example, the PGI designation protected in the EU - it is legally equivalent to a trademark). In this case, in the absence of permission from the copyright holder, re-export turns into parallel imports, the counteractions of which are quite well known, including in judicial practice. In this case, the copyright holder can hold the seller liable for the sale of goods through the court without his consent, followed by a ban on sales and significant fines (Losev, 2019).

The marketing services of Czech beer producers in the Czech Republic should take these trade features into account when building plans for expanding regional sales with a special product price, when lower prices for beer without PGI markings can provoke the re-export of goods (including unfair competition on the foreign market of the same the same product), and for beer with PGI marking - the organization of unauthorized parallel import by copyright holders and the distribution of counterfeit (albeit original) products.

In addition, in this particular case, we would like to know how the EU customs controls the PGI designation "Czech beer" protected in the EU when exporting across the EU border, including to Russia. Here the question arises: is the PGI mark "Czech beer" included in the register of protected goods when imported into the Russian Federation? All these issues relate to the economy of intellectual property and the solutions of them require collaboration with professional specialists in order to turn the PGI decorative trademark "Czech beer" into an active factor in international competitive advantage with a significant increase in the revenue of producers and owners of the PGI trademark "Czech beer", that already have products of high world quality and should benefit from this. The state should not stand aside either. At the state level, it is necessary to carry out work to activate the intellectual property factor in the production and export of Czech beer, so that the Czech national world-class product can earn more revenue for both the state and the copyright holders of the PGI brand, through which the traditions and secrets of the unique Czech are protected and maintained brewing.

CONCLUSION

1. The Russian market is the largest market for sales of goods from all European countries, including for the Czech Republic. Therefore, a practical analysis of the state, conditions of sales and prices of goods exported to the Russian market is demanded and relevant. 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 arrival of goods for sale in the domestic market of the importing country.

2. Theoretically, 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 and vice versa in mirror statistics. In practice, however, the mentioned trade volumes usually differ. The asymmetry of the data is due to the difference in prices of the recorded flows. As is known, according to customs statistics methodology, the value of exporting goods of country A is represented in FOB prices, while imports of goods at CIF prices, which additionally include the costs of insurance and transportation of goods. According to various estimates, the ratio of the value of CIF / FOB is from 4 to 10 percent. In addition, the asymmetry of the mirror data can also be associated with various errors in determining the customs value, masking shadow operations and capital flight.

3. Currently the general view of expert statisticians 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. This conclusion was confirmed by us on the example of the import of Czech APF goods to the Russian market. Here, a mirror comparison of APF trade data showed a generally normal situation with an average valuation excess of CIF prices over FOB by an average of 6%, which is comparable to the ratio of 1.0588 of the Central Bank of Russia for calculating the balance of payments for non-CIS countries. In addition, this conclusion was also confirmed at the level of comparison of data on trade of goods leading (animal feed; beer; eggs of birds), which accounted more than 60% of the value of supplies. However, certain questions arose regarding beer, since the asymmetry slightly exceeded the permissible norms (in 2017 by 17% instead of 5-10%)

4. A mirror comparison of data on the natural supply of Czech beer to the Russian market was conducted in conclusion of the study. The comparison of mirror data showed that beer exports from the Czech Republic were lower than imports from the Czech Republic registered by Russian customs. This "Czech" beer occupied 6-10% of the Russian market of imported Czech beer in 2017-2018. First of all, this difference in the mirror data allows us to state that the volume of Czech beer exports to Russia in the Czech statistics is underestimated by at least 2 million liters due to the neglect of re-export. In addition, the problematic asymmetry of the data indicates possible problems of re-export and parallel imports of Czech beer on the Russian market, depending on whether beer is labeled with the PGI designation protected in the EU or not.

With this in mind, in the absence of PGI marking, it is recommended that the marketing services of Czech beer producers take into account the possibility of unfair competition (based on the re-export of cheaper beer) when building strategies for expanding regional sales with a special price. In the presence of PGI marking, the possibility of legislative restriction and prohibition of beer supplies from the regional market abroad at a special price due to the lack of permission of the manufacturer and at the same time copyright holder of the PGI trademark is indicated.

In general, it was noted that at the state level, it is necessary to work on enhancing the intellectual property factor in the production and export of Czech beer, so that the Czech national world-class product could earn more revenue for both the state and the PGI mark copyright producers, through which they are legally protected and the traditions and secrets of unique Czech brewing are maintained.

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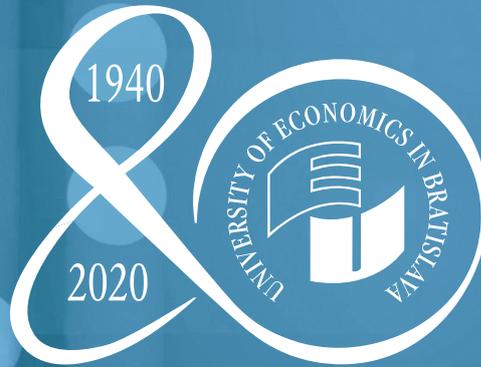
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