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CROSS-BORDER SHOPPING TOURISM – CASE STUDY TO COMPARE TWO REGIONS OF THE NORTH-EASTERN SLOVAKIA

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Abstract
Shopping tourism is a rapidly developing form of tourism. Cross-border shopping tourism has a particular character since it is associated with crossing national borders. The inhabitants living in border regions in particular use this possibility to shop at favourable prices in the nearby foreign country. The aim of this paper is to assess the preferences and shopping behaviour within cross-border shopping tourism in the North-Eastern Slovakia on an example of the comparison of its two regions, more concretely the selected economically under-developed border region of the Prešov Region and the Prešov District that is economically more advanced and is not directly adjacent to the national border. The results contained in the paper are based on an online research (due to the Covid-19 pandemic) in the preferences and perception of the inhabitants of both selected regions. The results highlight cross-border shopping tourism practised mainly in the Polish border regions mostly with family members using a motor vehicle while the increased frequency of shopping is associated with some special calendar events. As for the range of goods, the respondents preferred shopping clothes, food and sweets due to lower prices or their unavailability in their place of residence. It was confirmed as statistically significant that one of the motives for cross-border shopping was a favourable EURO exchange rate. Apart from motivation, we also monitored satisfaction, safety and negative attitudes associated with cross-border shopping tourism.

Key words
cross-border shopping tourism, motivation for cross-border shopping, north-eastern border region, Prešov District, respondent, Slovakia

INTRODUCTION

Until recently, shopping was seen as a rather random activity. Its need was developed while travelling; it concerned spending free time and was linked with the products offered by the destination. However, today shopping became one of the main motivations when travelling for millions of tourists (López, 2016). Together

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with the growing interest in shopping among tourists from developed and developing economies, the development of shopping tourism is a phenomenon that attracts increased attention of the creators of tourism policies as well as managers and scientists in a number of countries. In this context, shopping as such became a central element of tourism with a similar level of importance as accommodation, food, transport and city sightseeing instead of its former position as an accompanying activity.

Cross-border shopping tourism has a particular character whose implementation is directly associated with crossing a national border and the possibility to use local offer of goods often at more favourable prices than in the shoppers' residence. Residents of border regions are the ones mostly using this advantage of good location and accessibility of the nearby border region of the neighbouring country.

This is also the case of researched economically under-developed border region of north-eastern part of the Prešov Region that is compared to the Prešov District being economically more advanced region and as well a region not directly neighbouring the national border.

THEORETICAL FRAMEWORK

The main aim of shopping tourism is, according to Timothy (2005), shopping that is primary motivation for a trip or an essential element for creating a touristic experience. This general definition of shopping tourism and other particularities are also used by the authors such as Tömöri (2010), Rabbiosi (2011) and Wong and Wan (2013). According to Matlovičová et al. (2015), shopping tourism can be characterised as tourist trips whose main goal is the shopping of selected products and services on the basis of their difference, whether in their lower price or as a form of free-time recreation in selected locations such as shopping-amusement centres, town markets and open-air markets.

Lehew and Wesley (2007), Michalkó and Varadi (2004) indicate that the model of shopping tourists differs from the model of tourists-shoppers, while the first model spends a significant amount of money for shopping and visits the shopping destination more often. Shopping tourism is always planned in advance, wheras, tourist shopping in free time happens spontaneously as a part of a tourist program (Hsieh and Chang, 2006).

A majority of goods bought within shopping tourism has a consumption character (e.g. food, clothes, medications, etc.) and it is mostly for every-day consumption or for resale (Michalkó et al., 2005; Bar-Kołelis and Wiskulski, 2012).

A specific type of shopping tourism is cross-border shopping tourism or cross-border shopping that relates to people travelling across the national border to do the shopping.

Leimgruber (1988) suggests four main conditions for successful cross-border shopping: *potential* consisting in sufficient differences so that shopping is a bargain; *perception* of the potential by people; *decision* to do cross-border shopping and the *ability* to do it. Timothy (2005) develops these four essential conditions so that cross-border shopping could be fully done: *contrast* between the local offer and the offer on the other side of the border (difference must be evident in the range of products, quality, good prices, etc.); *awareness* i.e. potential consumers must know the offer on the other side of the border; *willingness to travel* arising from curiosity, wish and willingness for mobility; the *process of crossing borders* must be relatively simple and the visited region or country must be politically stable.

The initiator of a journey to the neighbouring country can be shopping or other activities that may be motivated by the *pull factors* (e.g. lower prices, higher quality, wider range of products in the neighbouring country) or *push factors* (e.g. insufficient domestic offer). It is still inevitable that the difference is large enough to be perceived by the potential buyers (as emphasized by Leimgruber, 1988). Timothy (2005) declares that other factors impacting a cross-border shopping behaviour such as e.g. tax rates, opening hours, exchange rate, variability of goods and services, border distance and the ability to understand each other.

Powęska (2008) stresses that comparing price differences in selected goods in the border regions provide households with a possibility to save money in their family budget or to earn some money. For the reason, many people living nearby borders spend their time and money improving their standard of living by shopping cheaper goods behind the border. This way, individuals or households look for various strategies to "survive" and save by shopping abroad with the aim to avoid or soften the reduction of their consumption (Bronner and Hoog, 2012).

Cross-border shopping tourism is done in many border regions. Karlsson and Lindgren (2010) show on an example of shopping along Norwegian-Swedish border that cross-border shopping was associated with a strong economic increase in Norway, while the Swedish part of the border was peripheral in the national context. Hence, the Norwegians showed a great shopping power while the wages and the prices of real estate were relatively low in Sweden. The Norwegian consumers even bought the goods that were highly taxed in their country (alcohol and tobacco) (Beatty et al., 2007). Makkonen (2016) pointed out to the possibility to take advantage of lower VAT rate by the Danish when shopping in the German part of the German-Danish border as well as the positive impact of cross-border shopping from the point of attracting tourists to the region influencing the local economy on both sides of the border. In majority of cases there are rational reasons to shop goods in the neighbouring countries. However, Segerer et al. (2020) emphasize that consumers are motivated to do cross-border shopping not only by financial stimuluses, but also by a diverse selection of goods, differences in quality and the offer of typical regional products or more agreeable shopping atmosphere.

The Dutch are a good example, because they prefer shopping clothes in Germany due to bigger sizes that are easily available there, while young Germans search for Dutch boutiques offering clothes of the latest fashionable trends (Van der Velde and Spierings, 2010).

Cross-border shopping was also developed in the countries of the former eastern bloc. In Poland, Bar-Kołelis and Wiskulski (2012), Powęska (2014), Zielińska-Szczepkowska and Zabielska (2016) dealt with shopping tourism and analysed the character of a cross-border shopping behaviour mainly on the western Polish border. Komornicki (2010) states that Polish visitors in Ukraine usually bought fuels and goods subject to consumption tax (alcohol and cigarettes) for own their consumption and for resale, that became a sufficient source of their income. Stryjakiewicz (1998) pointed out to cross-border shopping in Western Poland where lower prices attracted Germans to buy fuels, consumer goods and food. Even Busch (2010) claimed that Germans bought presents in Poland as well as sweets, food and cheaper products, while Polish bought mainly clothes and quality goods in Germany.

The traditional shopping tourism destination in the Central Europe is Hungary (Sikos and Kovács, 2008). Austrians, Slovenians and Slovaks living nearby the border immediately considered the devaluated Hungarian forint compared to euro as a "discount" and started doing their weekly shopping in Hungarian supermarkets. In their analysis, Michalkó et al. (2014) pointed out to the fact that one-day shopping tourists are very sensitive to the ratio of price to the quality of goods and services and to conclude they confirmed that the main reason activating their shopping tourism was the economic benefit. Dmitrovic and Vida (2007) monitored cross-border shopping behaviour in Croatia, Serbia, Bosna and Hercegovina and Montenegro. The shopping list of the products bought abroad mostly contained food and the main reason for shopping were lower prices.

In this context, Spierings and Van der Velde (2008) bring attention to the question of border permeability and safety that may encourage, but also discourage from doing cross-border shopping. A good example is Ukraine that lost its attractiveness due to an unforeseeable time spent waiting to cross the border and safety caused by the complicated political situation.

Several authors such as Fertaľová (2005), Fertaľová and Klamár (2006), Mitríková (2011), Civáň and Krogmann (2012), Križan et al. (2017), Kita et al. (2020) etc. dealt with the topic of shopping tourism as well as shopping behavior and retail development in Slovakia. In their analysis of tourism from the point of cross-border shopping on the Slovak-Polish border, Więckowski et al. (2012) proved that for more than 20 % of Slovak respondents the main aim to go to Poland is doing cross-border shopping.

Civáň and Krogmann (2012) indicated that shopping tourism is a social phenomenon and they intensively looked into the shopping behaviour of

customers in the border locations between Slovakia and Austria. They monitored the shopping behaviour of Slovak customers in Austria as well as the interest of Austrian customers in shopping in Slovakia with the aim to point out to its mutual interconnection with the development of the area.

According to Križan et al. (2017) cross-border shopping is considered to be a unique type of shopping tourism. The cross-border shopping behaviour of customers from Slovakia was the topic of the case study held in Hainburg (the research was further worked up by Kita et al., 2020) in which they analysed the satisfaction of respondents with purchased products offered in a retail network in Slovakia and Austria. Based on the way of seeing the usefulness and advantages of shopping in Slovakia and Austria, they identified eight types of customers.

As well as in the majority of border regions abroad, also in Slovakia the fact was confirmed that there is a special group of people who do cross-border shopping tourism regularly by travelling to do the shopping in the neighbouring countries. Considering the costs of travel, it is mostly the shopping done nearby the national border.

OBJECTIVES AND METHODS

In the paper, the main attention is paid to the analysis of cross-border shopping tourism by the inhabitants of selected districts in the less developed border area in the north-eastern part of the Prešov Region compared to the cross-border shopping done from the Prešov district. This district was chosen because it is the centre of the Prešov Region, it belongs to economically most developed districts (with Prešov as its regional capital) and has no state border with any neighbouring country. The goal is to compare the shopping behaviour of respondents/customers (in the context of their social-demographic characteristics), purchase destinations, shopping frequency, the structure and amount of expenses associated with the shopping, the average value of a single shopping and to verity the presumption that cross-border shopping is one of the ways to save money in the family budget. Attention was also drawn to the level of dependence between the distance of a shopping centre abroad and the frequency and period of shopping and the value of the shopping.

In order to meet the set objectives, we used the methodological procedure of a questionnaire survey.

The statistical analysis of the first part of the questionnaire set three hypotheses, more concretely that the time spent shopping (hypothesis H1), the total value of shopping (H2) and the amount saved for such shopping (H3) will depend on the region and gender of respondents.

At the same time, a presumption that the distance of the shopping centre from the place of residence will be directly related to the time of shopping, price of shopping, saved amount and indirectly related to the shopping frequency (H4), was defined. To assess statistical dependency, we used the Spearman correlation coefficient. According to Bačíková and Janovská (2018), in social sciences, its values are interpreted as a trivial dependence (up to 0.1), small dependence (0.1 – 0.3), moderate dependence (0.3 – 0.5) and large dependence (0.5 and more).

In the next part of the questionnaire the respondents were requested to tick their approval or disapproval with individual statements in four categories concerning „motivation…", „satisfaction…", „safety…" and „negative approaches…" in respect of cross-border shopping. Respondents' approval/disapproval was quantified by a 5 points Likert scale (1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree). The statistical analysis of this part of the questionnaire contained a presumption that there are differences in perceiving motivation to do the cross-border shopping (H5), there are differences in perceiving satisfaction with a shopping centre/market (H6), there are differences in perceiving safety during cross-border shopping (H7) and there are differences in the perception of dissatisfaction with cross-border shopping (H8) depending on the region and gender of the respondents.

The hypotheses were verified by the methods of statistical induction aiming to reveal whether the found different averages of individual groups of the obtained sample of respondents are statistically important or only accidental. The degree of internal consistency of the group (reliability) was verified at the same time using the coefficient Cronbach alfa that can have values 0 to 1. The values above 0.6 are considered to be sufficiently reliable (Avcikurt et al., 2011). To analyse the normality of the obtained data, the Kolgomorov-Smirnov test and Shapiro-Wilk test were used. In the majority of cases, these tests have the highest power of all normality tests (Markechová et al., 2011). The analysis and the assessment of the obtained data were processed in the environment of statistical software STATISTICA.

ACHIEVED RESULTS

The assessment of cross-border shopping involves two regions that are compared, more concretely the under-developed area of north-eastern part of the Prešov Region (districts Bardejov, Svidník, Stropkov, Medzilaborce, Snina and Humenné) forming a whole border region, known as north-eastern border region (abbreviated to NEBR – North-Eastern Border Region) and the Prešov District (abbreviated to PODC – Prešov District) as one of economically most developed regions of the Prešov Region that shares no border with another country.

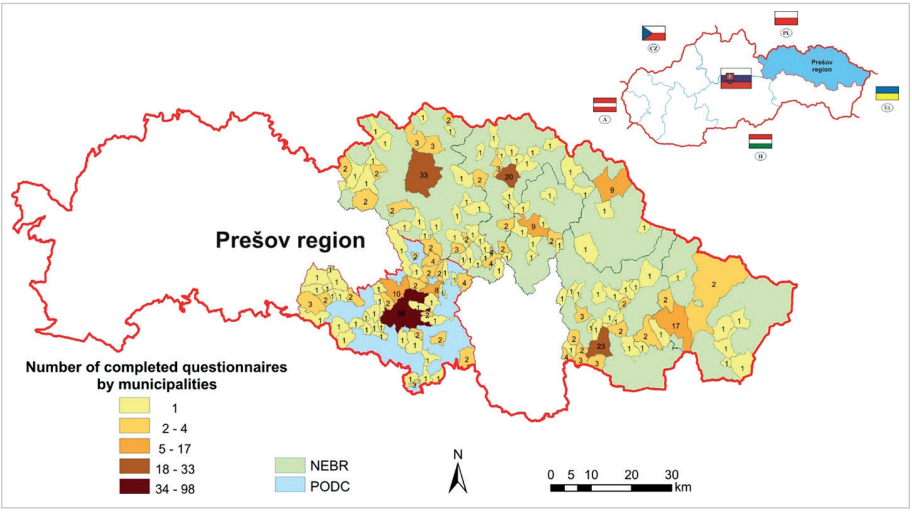

Figure 1 Distribution and number of completed questionnaires by municipalities in the researched region
Source: Author's calculations based on research results

Not more than 398 completed questionnaires of all satisfied the conditions (i.e. respondent had usual residence in one of the NEBR or PODC districts and has done the cross-border shopping). In NEBR it was 230 respondents and in PODC it was 168 (Figure 1). All in all, more than 4,500 potential respondents were contacted by the online questionnaire in the period from 09/2020 to 12/2020. The online survey was selected as an alternative to the questionnaire in the field due to the unfavourable Covid-19 epidemic situation.

As for the social, economic and demographic structure of the respondents, there were more women (66.4 %) than men (33.6 %) and the ratio was the same in both monitored regions (Table 1). As for age, the most of respondents in NEBR were 55-64 years old (27.7 %), followed by those aged 45-54 (25.7 %). A similar structure was in case of PODC except that a group of 45-54 years old ones (27.5 %) dominated and then there was a group of 55-64 years old ones (22.8 %). The structure as per family status in NEBR or in PODC shows that married men/women dominated among respondents reaching 71.1 % or 65.1 % and 21.3 % or 26.5 % of respondents were single. Since the category of married men/women is the economically strongest one, there is a presumption that the majority of the respondents actively participate in cross-border shopping. Regarding the online survey, as for education, the majority of respondents had 2nd degree university education (52.6 % or 47.1 %), followed by secondary school educated respondents (40.2 % or 38.6 %). In terms of economic activity, the highest share in the regions was represented by employees (65.9 % or 63.5 %), followed by business persons

(17.3 % or 14.8 %) and students (6.4 % or 12.7 %). The majority of respondents were the members of 4-members households (25.7 % or 25.4 %). In NEBR they were followed by the members of 3-members household (24.9 %) and 2-members household (20.9 %), in PODC in was the other way round. The vast part of respondents in NEBR had net monthly income from 1,301 – 1,600 € (21.7 %), in PODC it was 1,601 – 2,000 € (22.8 %).

Table 1 Social, economic and demographic structure of respondents (%)

	Age categories (A)						Number of household members (B)					
	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6
NEBR	6.4	12.9	22.5	25.7	27.7	4.8	7.6	20.9	24.9	25.7	11.6	9.3
PODC	12.7	13.8	19.0	27.5	22.8	4.2	7.9	23.3	19.6	25.4	13.8	10.0

	Economic activity (C)					Education (D)				Marital status (E)			
	C1	C2	C3	C4	C5	D1	D2	D3	D4	E1	E2	E3	E4
NEBR	6.4	65.9	17.3	5.6	4.8	40.2	6.0	52.6	1.2	1.2	6.4	21.3	71.1
PODC	12.7	63.5	14.8	4.8	4.2	38.6	10.6	47.1	3.7	2.6	5.8	26.5	65.1

	Income categories (F)								
	F1	F2	F3	F4	F5	F6	F7	F8	F9
NEBR	1.2	2.4	10.0	18.1	21.7	21.3	14.5	6.0	4.8
PODC	1.6	3.2	12.2	13.2	20.1	22.8	13.8	8.5	4.8

Note: A1 – 15-24 years, A2 – 25-34, A3 – 35-44, A4 – 45-54, A5 – 55-64, A6 – 65 and more; B1 – 1-member household, B2 – 2-members, B3 – 3-members, B4 – 4-members, B5 – 5-members, B6 – 6 and more; C1 – student, C2 – employed, C3 – business person, C4 – unemployed, C5 – retiree; D1 – secondary school, D2 – 1st degree university education, D3 – 2nd degree university education, D4 – 3th degree university education; E1 – widow/widower, E2 – divorced, E3 – single, E4 – married; F1 – 301-500 €, F2 – 501-700 €, F3 – 701-1000 €, F4 – 1001-1300 €, F5 – 1301-1600 €, F6 – 1601-2000 €, F7 – 2001-2500 €, F8 – 2501-3000 €, F9 – 3001 and more €

Source: Author's calculations based on research results

Cross-border shopping itself was assessed from several points of view. The first one consisted in the answers concerning cross-border shopping done repeatedly in the past from the point of place of shopping and the questions about who the shopping was done with, shopping frequency and the shopping done due to a special event. The second one concerned the last cross-border shopping that the respondents had freshly in mind and were able to recall the details. The questions related to the time of shopping, range of products, prices of purchased goods and the saved amount. The third one focused on the assessment of motivation, satisfaction, safety and negative attitudes to cross-border shopping.

The obtained questionnaire results were evaluated using mathematical and statistical methods. When choosing the appropriate statistical test it was

important to find the "normality" of division of obtained data. It was verified using the Kolgomorov-Smirnov test and the Shapiro-Wilk test. The value of statistical significance „p" was below 0.05 and it resulted in the statement that the selection comes out of a set with different division. Since the preconditions for normal distribution of data for NEBR and PODC were breached, non-parametric test were used in the analysis (Mann-Whitney U test and Kruskal-Wallis test).

The degree of internal consistency (reliability) was verified by the Cronbach alfa coefficient for variables *„C6-Shopping duration"*, *„C8-Value of purchase"*, *„C10-Saved amount"* and *„C12-Distance of the shopping centre "* (Table 2). The reached value of 0.6472 is considered to be sufficiently reliable (according to Avcikurt and Yagci, 2016; George and Mallery, 2003; the values below 0.5 are considered unacceptable).

Table 2 Calculation of Cronbach alfa coefficients

Variable	Summary for scale: Mean=18,3794 Std.Dv.=5,77925 Valid N:398 Cronbach alpha: 0,647186 Standardized alpha: 0,671990 Average inter-item corr.: 0,347360				
	Mean if deleted	Var. if deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
C6-Shopping duration	16,14824	24,56345	4,956153	0,494125	0,571293
C8-Value of purchase	12,68342	17,84450	4,224275	0,627617	0,426790
C10-Saved amount	14,21105	16,92530	4,114038	0,427577	0,605322
C12-Distance of the shopping centre	12,09548	24,44314	4,944001	0,264803	0,679924

Source: Author's calculations based on research results

The first part of the research was focused on the **location** of **cross-border shopping** (respondents could provide more shopping locations).

In this regard, the long Slovak-Polish border (360 km in NEBR) and 7 border crossings proved to be striking. As many as 228 respondents (99.1%) from NEBR declared shopping in Poland (Figure 2) in the past while 86.8 % of them said that they did the shopping in Krosno situated 35 km from the national border. As for respondents from PODC, 163 respondents (97.1%) did the shopping in Poland in the past while more than 68.1 % of them did the shopping in Nowy Targ located 125 km from Prešov. The third important cross-border shopping destination was Leluchów (27.6 %, or 51.5 %) situated nearby the national border. Therefore, it is possible to state that the most frequent selection of shopping locations was not random but related to the distance of selected shopping destinations. The other Polish towns as shopping destinations were Nowy Sącz, Kraków, Jaslo, Muszyna and Krynica.

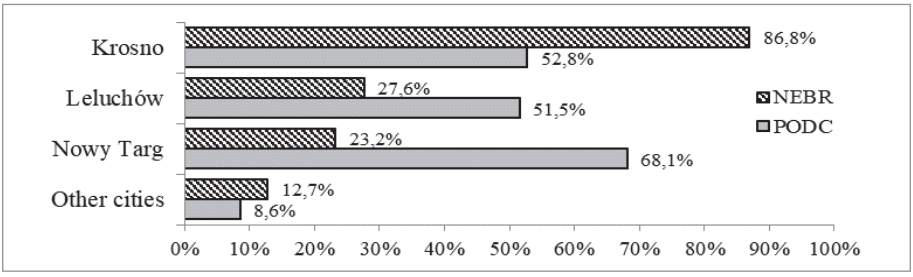

Figure 2 Share of cross-border shoppers in Polish towns
Source: Author's calculations based on research results

The research results showed that 51.7 % (119 respondents) from NEBR and 44.1 % (74) from PODC declared that they did the shopping in Ukraine in the past. Based on Figure 3 it is possible to state that the vast majority of respondents headed to Užhorod (78.2 % from NEBR, 86.5 % from PKPO), while also 34.5 % of respondents from NEBR defined their shopping destination to be Malé Berezné and approximately one fifth of them also Veľké Slemence.

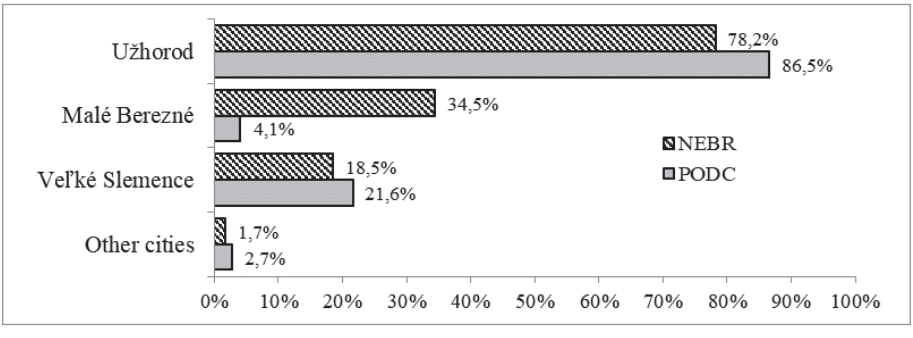

Figure 3 Share of cross-border shoppers in Ukrainian towns
Source: Author's calculations based on research results

The third country in which the respondents have done their cross-border shopping was Hungary. In case of NEBR, it was almost one third of the respondents (30.9 %) and from PODC it was as many as 65 respondents (38.6 %). The respondents declaring doing their shopping in Hungary (Figure 4) stated that their most frequent shopping destination was also Miškolc for more than 2/3 of respondents in both researched regions (67.8 % from NEBR, 70.8 % from PODC) and Budapest (23.9 % or 32.3 %). Other popular Hungarian towns and cities were Sárospatak and Nyíregyháza.

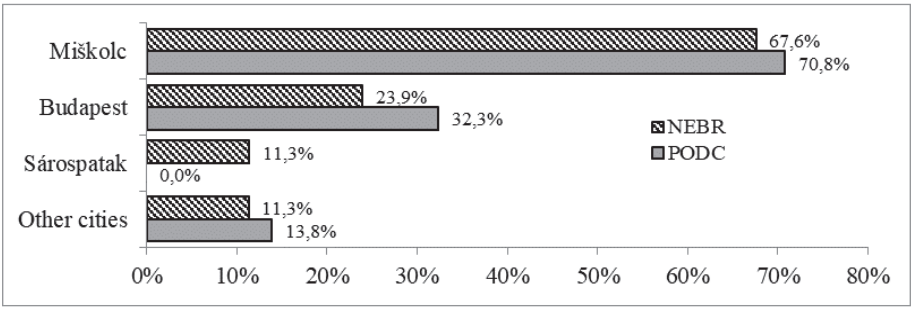

Figure 4 Share of cross-border shoppers in Hungarian towns
Source: Author's calculations based on research results

Even in case of the last cross-border shopping of the respondents from both regions the obvious dominance of Poland was proven by 89.6 % of shoppers from NEBR and 85.1 % from PODC. The most frequently visited towns were again Krosno (61.6 % of respondents from NEBR and 20.2 % from PODC), then it was Leluchów (13.9 % or 27.4 %) and Nowy Targ (5.7 % or 28.6 %). Towns in Ukraine were the destination for 7.4 % of shoppers from NEBR and 7.1 % from PODC. The most frequently visited Ukrainian towns were Užhorod (3.9 % respondents from NEBR and 4.8 % from PODC), followed by Malé Berezné (2.6 % or 0.0 %) and Veľké Slemence (0.9 % or 1.2 %). As for the last cross-border shopping, the Hungarian towns/cities (especially Miskolc, Budapest) were represented only by 1.7 % of shopping trips done by the respondents from NEBR and 6 % from PODC.

The cross-border shopping is closely linked with the **distance**, to which the respondents were willing to go from their place of residence to the shopping destination (Figure 5). Regarding the fact that it is cross-border shopping, there is a presumption that the respondents from NEBR will not be forced or in need to travel longer distances that the respondents from PODC.

The results showed that as much as one fifth of the respondents from NEBR and only 7 % from PODC travel for their shopping trips within max. 50 km. Almost a half of respondents from NEBR was willing to travel more, from 51 to 100 km, while as for the respondents from PODC it was ca. 40 %. At the same time it is possible to say that as much as 26.8 % shoppers from PODC had to cover the distance from 101 to 130 km due to cross-border shopping and only 18.7 % of those from NEBR; the distance over 130 km was accepted by more than one fourth of the respondents from PODC.

As for gender, men from NEBR (29.6 %) as well as from PODC (27.8 %) most frequently shopped within the distance from 71 to 100 km from their place of residence. The majority of women (28.9 %) from PODC was willing to travel as far as from 101 to 130 km and the most of women from NEBR (25.2 %) to the distance

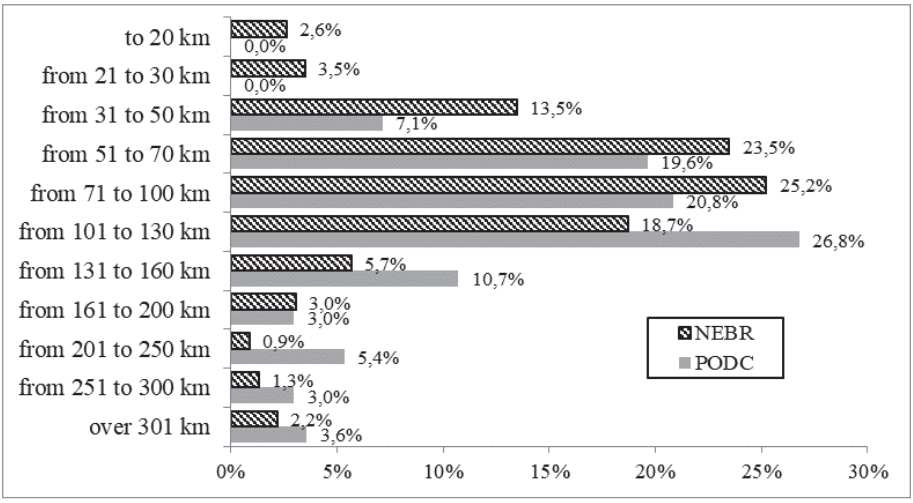

Figure 5 Share of respondents and estimated distance covered
Source: Author's calculations based on research results

from 51 to 70 km. The most consistent age category from NEBR were those aged 25 to 34, of which as much as 56.7 % travelled for cross-border shopping from 71 to 100 km. In PODC, a similar age group was made of those aged 15 to 24, of which as much as 40 % travelled to do the shopping from 101 to 130 km. The majority of respondents as for the net income of household was in the category from 1,601 to 2,000 EUR and these respondents from NEBR (34.2 %) as well as from PODC (31.3 %) travelled for shopping most often to the distance from 101 to 130 km.

When shopping abroad, the attention is also drawn to the **means of transport** used (similarly as Križan et al., 2017). When crossing borders in order to do their last shopping, the vast majority of respondents used a car (more than 90 % in both regions, Figure 6). Since both border regions on both sides are not well mutually linked by public transport, only 4 % to 6 % of respondents used a bus or a train. The others used other means of transport (walk, bike or van-truck).

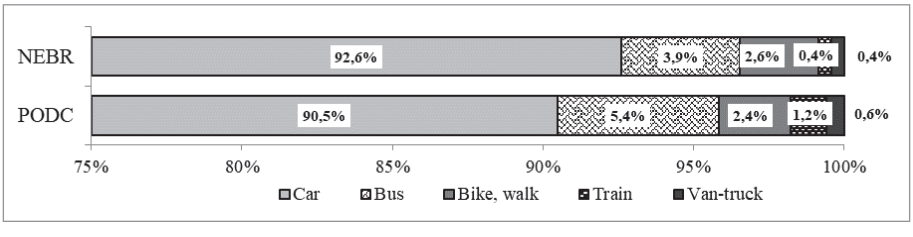

Figure 6 Means of transport
Source: Author's calculations based on research results

Based on the results of the share of respondents according to the number of **persons shopping jointly** (Figure 7), it is possible to state that more than a half of the respondents from NEBR during their last cross-border shopping did their shopping in pairs (50.4 %), or as a trio (26.1 %). The respondents from PODC preferred shopping also in larger groups, namely in fours (22.6 %) or in a group of five and more (almost 12 %), which is evidently due to a greater distance travelled from the place of their residence to the shopping distance, higher transport costs as well as logistics of the journey itself. In both regions it is evident that as much as 96.5 % or 88.1 % is the share of four jointly shopping persons, which may be due to travelling by a motor vehicle as the main mean of transport in cross-border shopping. The research also revealed that the respondents prefer shopping on their own as individuals (only 3.5 % or 3.0 %).

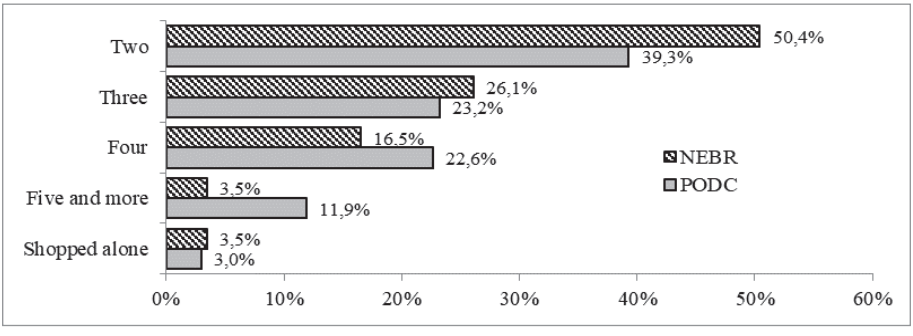

Figure 7 The share of respondents according to the number of jointly shopping persons
Source: Author's calculations based on research results

Apart from the number of people doing in cross-border shopping jointly, it is also interesting to study their **mutual relation**. The majority of respondents from NEBR as well as from PODC did their shopping together with their partner (57.4 %, or 50.6 %), with a household member (20.9 %, or 23.2 %), or with children (18.7 %, or 17.3 %) or with own parents (10.4 %, or 16.7 %). Based on the research results, it is possible to say that cross-border shopping is the most frequently a matter of close family or close relatives who plan the journey to do the shopping abroad together (Figure 8).

Another issue or question was the **shopping frequency** in the near foreign country. The answers offered to the respondents included also the option of shopping "daily" and "once to three times a week", but there was no respondent ticking the options in the questionnaire. One of the presumable reasons was the pandemic situation caused by the Covid-19 disease at the time of our research. In the questionnaire, the respondents most often declared that they did the shopping

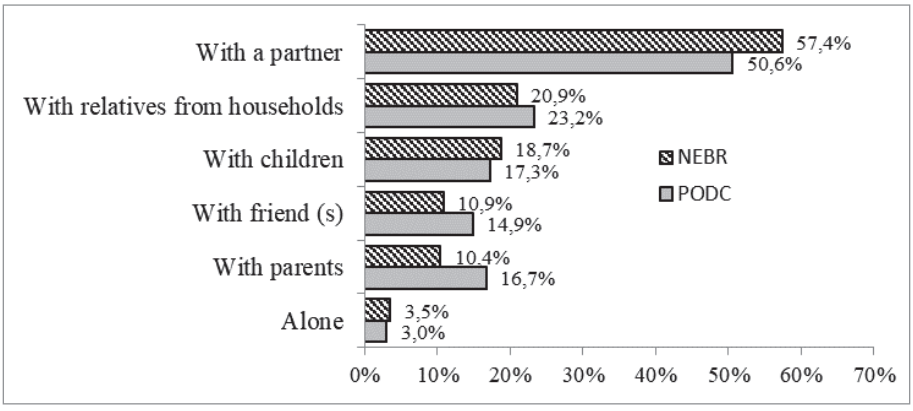

Figure 8 Mutual relationship of persons shopping jointly
Source: Author's calculations based on research results

in the nearby foreign country only occasionally (Figure 9). From PODC, the occasional shopping was made by 58.9 % (99 respondents), 28 % of respondents did the shopping once to three times a year and the shopping on the monthly basis was done only by 2.4 % of them. The shopping frequency in respondents from NEBR was more intensive. More than 36 % did shopping despite the situation caused by Covid-19 minimum once to three times a year and in the last quarter every eighth respondent went shopping to the nearby foreign country.

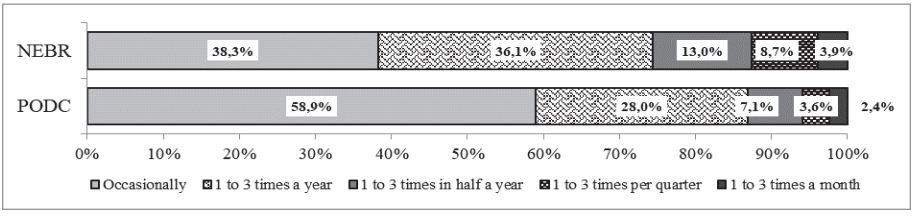

Figure 9 Frequency of cross-border shopping
Source: Author's calculations based on research results

When assessing cross-border shopping from the point of **special events** or the season, the respondents could tick more of the offered options. As much as 74.3 % of respondents from NEBR replied that they did shopping according to current needs (Figure 10). At the same time, 29.6 % of them ticked, that they do the cross-border shopping in case of special events such as a wedding (purchase of dress, suit, shoes), 14.8 % of them did shopping due to All Saints' Day (wreaths, candles) and 13.9 % of them shopped Christmas presents. As for the respondents from PODC, there also prevailed shopping according to current needs (72 %),

shopping before a wedding (25 %), due to All Saints' Day (14.9 %) and Christmas (10.1 %). As for the respondents from PODC, there are also other events prevailing, such as spring gardening – 7.7 % (shopping garden tools, trees, flowers, etc.).

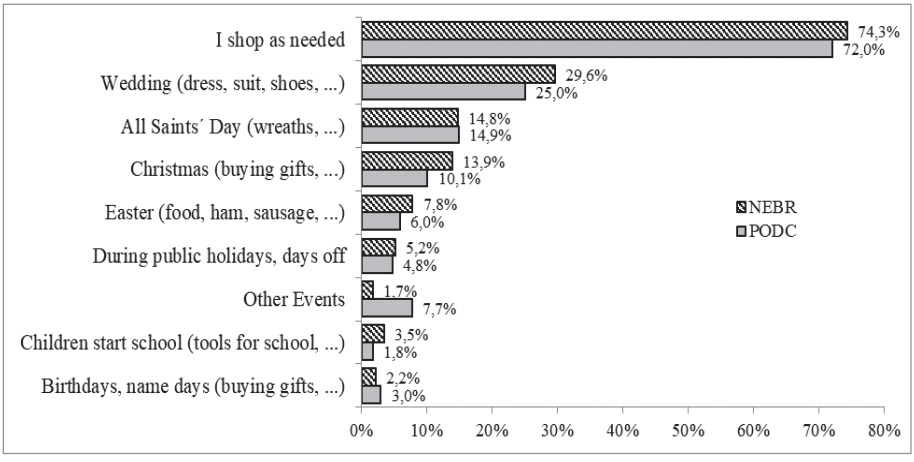

Figure 10 Cross-border shopping due to special events
Source: Author's calculations based on research results

Apart from shopping frequency and focus on special events, the attention was also drawn to the **timeframe** of the last cross-border shopping in one of the neighbouring countries. The respondents from NEBR (45.7 %) as well as from PODC (61.9 %) most frequently declared that their last shopping in the nearby foreign

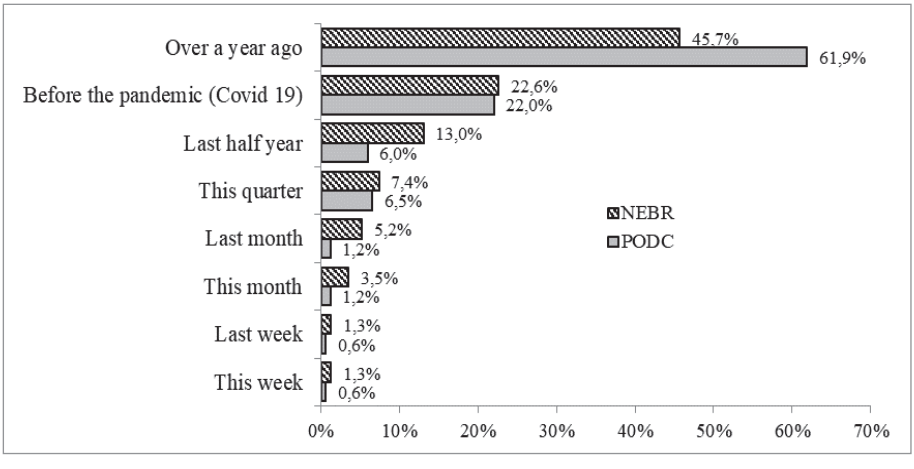

Figure 11 Other cross-border shopping
Source: Author's calculations based on research results

country was done more than one year ago (Figure 11). The frequency of shopping done by respondents less than one year ago from NEBR was more intensive (54.3 %) compared to the ones from PODC (38.1 %). Based on the results of the research, it is possible to state that almost one third of the respondents from NEBR did their shopping even during the Covid-19 pandemic (since March 2020, so in the last six months), while in case of those from PODC it was only 16.1 %. The ratio of the number of shoppers during the last two weeks was similar (2:1).

Another part of the research was focused on the questions related to shopping itself. It concerned the duration of shopping, the structure of the range of purchased products, as well as the financial aspect of the purchase in the form of its value and saved amount.

From the point of **shopping duration,** there were certain differences in both groups of cross-border shoppers (Figure 12). The majority of respondents was able to complete their shopping within 3 hours; in case of the respondents from NEBR it was 57.9 % and from PODC a much as 62.5 %. More than one fifth of the respondents from NEBR and 14.8 % of the ones from PODC did their shopping more than 4 hours. An interesting fact is that almost 15 % of the respondents from PODC did their shopping less than 1 hour and only 7 % from NEBR, even though considering the distance of SVRP from the border we would expect rather opposite.

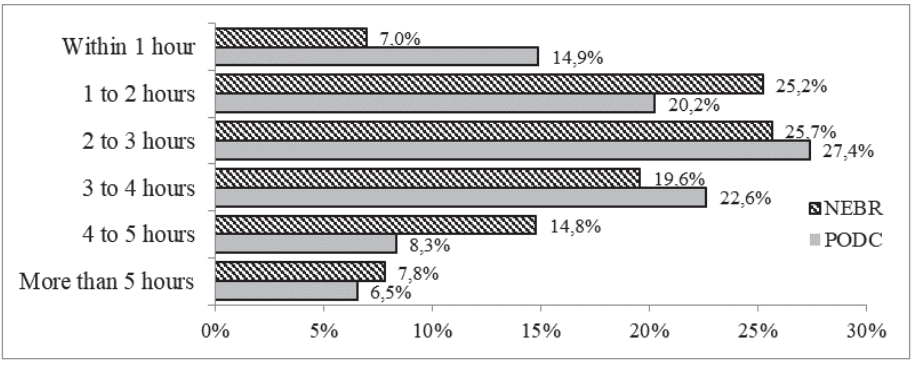

Figure 12 Estimated duration of cross-border shopping
Source: Author's calculations based on research results

In another analysis we verified the **H1** hypothesis whether the **shopping duration** is statistically significantly depending on the region and the gender of respondents as for their last cross-border shopping.

Table 3 Mann-Whitney U Test – shopping duration as per regions

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
C6-Shopping duration	31757,00	47644,00	17561,00	-1,55142	0,120803	-1,58590	0,112764	168	230

Source: Author's calculations based on research results

Mann-Whitney U test showed (Table 3) that on the level of significance α = 0.05 between shoppers from individual regions there was not a statistically significant difference from the point of duration of the last shopping (p=0.1128).

We further verified whether shopping duration was statistically significantly dependent on the gender of respondents. Kruskal-Wallis test (Figure 13) confirmed that there is a statistically significant difference between male and female shoppers from the point of time spent shopping (p=0.0017).

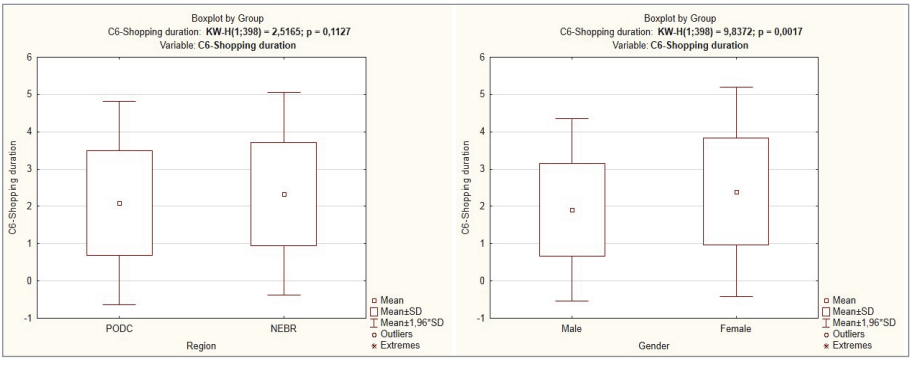

Figure 13 Boxplot – shopping duration as per region and gender
Source: Author's calculations based on research results

The division of answers in boxplot (Figure 13) at variable shopping duration as per regions the results in NEBR show a higher average shopping duration (2.4 hrs) compared to the respondents from PODC (2.1 hrs). It is also possible to state that also a longer shopping period in case of women was statistically significantly confirmed (2.4 hrs) compared to men (1.9 hrs).

As for the **range of purchased goods** (more answers could be ticked), the majority of shoppers spent most money on clothes and shoes (79.1 % from NEBR, 73.2 % from PODC) (Figure 14). The second most frequently sought commodity was food for 37.4 % of shoppers from NEBR and almost every second shopper from PODC (48.2 %). Besides food, 27.8 % of respondents from NEBR and even 52.4 % of shoppers from PODC ticked the third important commodity to be sweets.

10 % to 30 % of shopping respondents spend a part of their funds on flowers, bushes, trees, fruit and vegetables, household equipment, furniture and soft furnishings, cosmetics and toiletries. Other products were included in the shopping lists of less than 10 % of all shopping respondents. A more notable disproportion in shoppers from NEBR was in case of building material (7.8 %) and gas, spare parts (4.8 %) compared to the respondents from PODC (2.4 %, or 0.6 %). It is a smaller share and difference, but the shopping range is more expensive and also larger and heavier, which causes additional costs of its transport to the place of residence (e.g. requiring a use of a trailer or a van) which gives an advantage to the shoppers from closer NEBR.

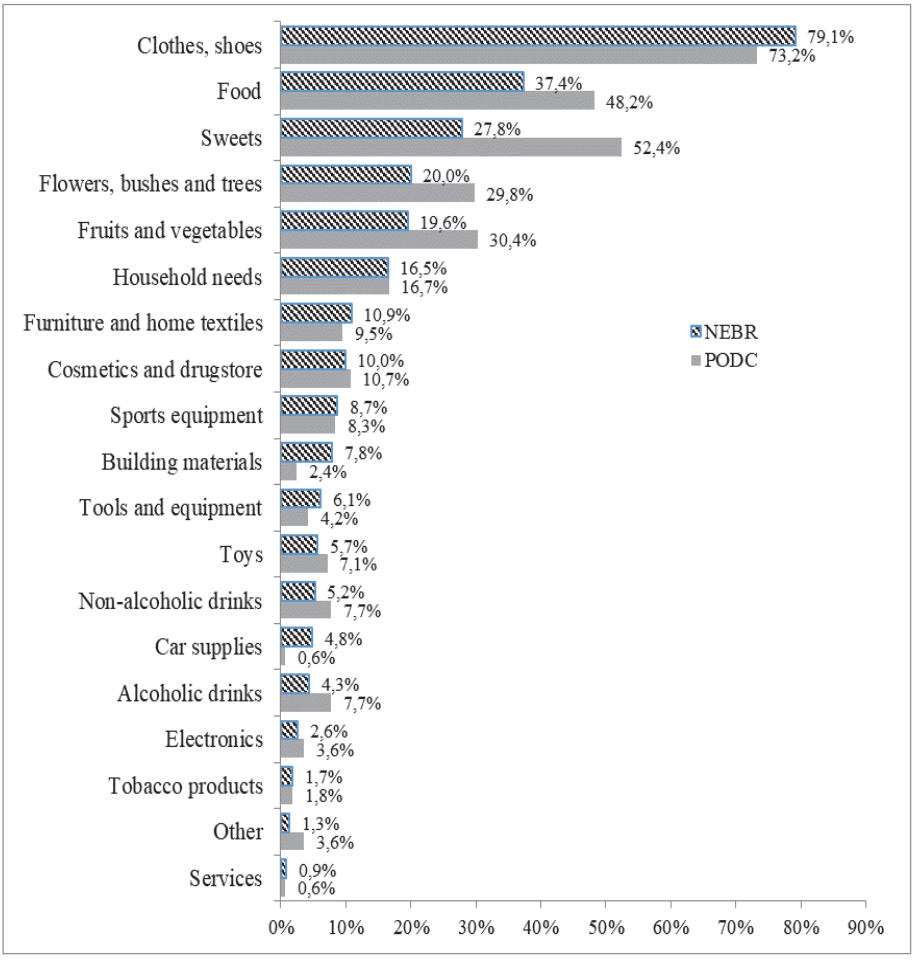

Figure 14 Range of purchased goods

Source: Author's calculations based on research results

The range of purchased goods was closely connected with the **value of shopping** that notably influences the overall shopping behaviour of respondents. The biggest group of respondents from NEBR, as for their last cross-border shopping, was in the category from 101 to 150 € (23.5 %), while for the respondents from PODC (16.1 %) it was the estimated value of their shopping in the category from 71 to 100 € (Figure 15). More than a half of shoppers that spent from 101 to 250 € were the respondents from NEBR (52.6 %), while the shoppers from PODC represented less than 39 %. A similar ratio of respondents who declared spending more than 251 € represented almost one fourth from NEBR (24.8 %), while those from PODC represented only one fifth (20.8 %). Just in indicated higher categories of purchase value we can observe the difference in the products purchased by those from NEBR, where not the ratio but the higher price of building material, spare parts etc. influence the total price paid for the purchase.

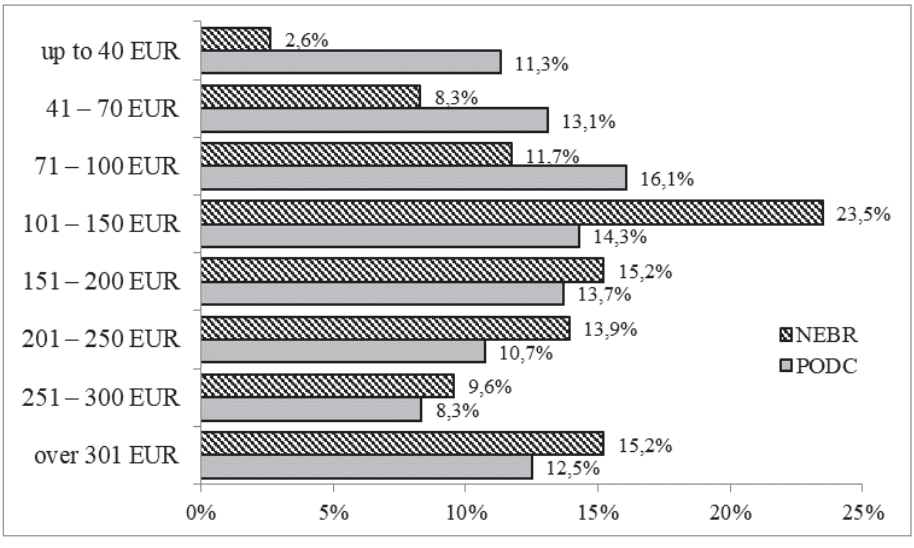

Figure 15 Estimation of average price for shopping
Source: Author's calculations based on research results

Depending on the **family status** of shoppers, the married ones from NEBR represented the biggest share in the category 101 – 150 € that was almost one fourth (24.6 %) of the total number 167 of married ones. It was followed by the category from 301 € with 18.6 %. Single respondents (46 respondents) dominated the category of purchase value from 41 to 70 € (28.3 %). Shopping respondents (married) from PODC were the biggest share in two categories (71 – 100 €, 151 – 200 €) and represented identically each 15.9 % of the total of 113 married ones.

Single respondents representing the total number of 41 most dominated the category of purchase value from 71 to 100 € (17.1 %).

From the point of the **shopper's age** it is possible to state that the biggest share of respondents, whose value of purchase was more than 301 €, was from NEBR (28.8 % of the total number of 59 respondents) aged from 45 to 54 years. As for the number of children up to age of 18, the highest share of shoppers were from NEBR (24.3 % of the total of 37 respondents), more concretely 2 children, whose value of purchase was from 101 to 150 €.

We also verified, whether the **value of the purchase in total (H2)** during the last cross-border shopping was notably statistically dependent on the region and the gender of the respondents.

Table 4 Mann-Whitney U Test – value of purchase in total as per region

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
C8-Value of purchase	30228,50	49172,50	16032,50	-2,89992	0,003733	-2,92922	0,003398	168	230

Source: Author's calculations based on research results

Based on the value of statistical significance p=0.0034 (Table 4) on the significance level α = 0.05 it is evident that the value of purchase was dependent on the region from which the cross-border shopper came. As for the respondents from NEBR, the results reveal a higher middle value of purchase compared to the respondents from PODC, so these shoppers spent statistically more money than the respondents from PODC.

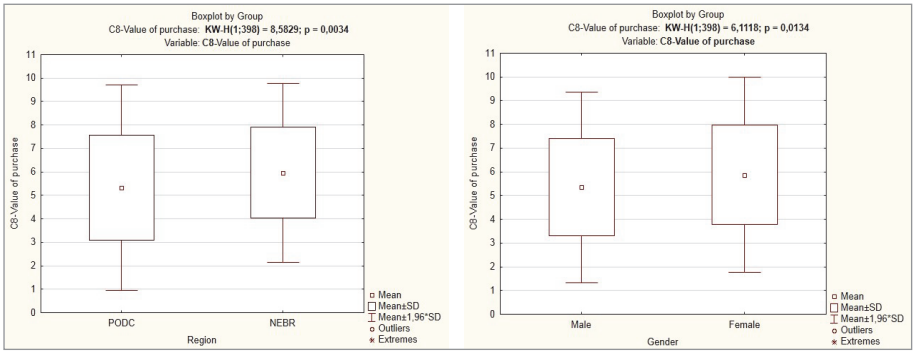

Figure 16 Boxplot – value of purchase as per region and gender
Source: Author's calculations based on research results

It was also confirmed by the Kruskal-Wallis test that the value of the purchase is statistically significantly dependent on the gender (p=0.0134). Women represent a higher middle level compared to men; therefore women spent significantly more money, as for statistics (Figure 16).

Within cross-border shopping, the majority of shoppers is motivated by financial profit, so by **saving money** compared to buying the same goods in their place of residence. Monitoring and comparing price differences of selected goods of similar character in cross-border areas provides the households with the possibility to save money in their family budget (Powęska, 2008). From the total of 230 respondents in NEBR, 73.5 % of them declared that by doing the cross-border shopping, they saved money (Figure 17). The remaining 26.5 % declared that they could not assess it or that they saved no money at all. More than 70 % of the respondents from PODC also said that doing shopping in the nearby foreign country saved money and only 8 % of shoppers declared that they saved no money at all. Also, some respondents from NEBR as well as from PODC stated that the purchased goods either was not available at all or, was not in a required quality in the place of their residence.

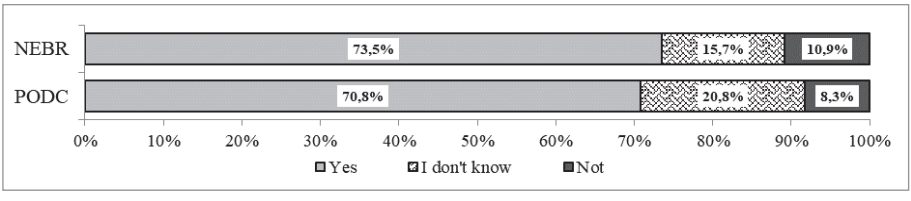

Figure 17 Share of respondents who saved money by shopping or saved no money at all
Source: Author's calculations based on research results

The most of the respondents from NEBR (19.6 %) as well as from PODC (17.3 %) declared that the estimated saved amount for the purchase during their last cross-border shopping was in average 31 – 50 € (Figure 18). In case of NEBR, the second most numerous group of respondents was in the category from 21 – 30 € (15.2 %) and in case of PODC it was in the category from 11 – 20 €, more concretely 13.1 %. More than one fifth of the shoppers from NEBR and almost 15 % from PODC stated that they saved nothing by shopping in the nearby foreign country, but the purchased goods were not available in Slovakia.

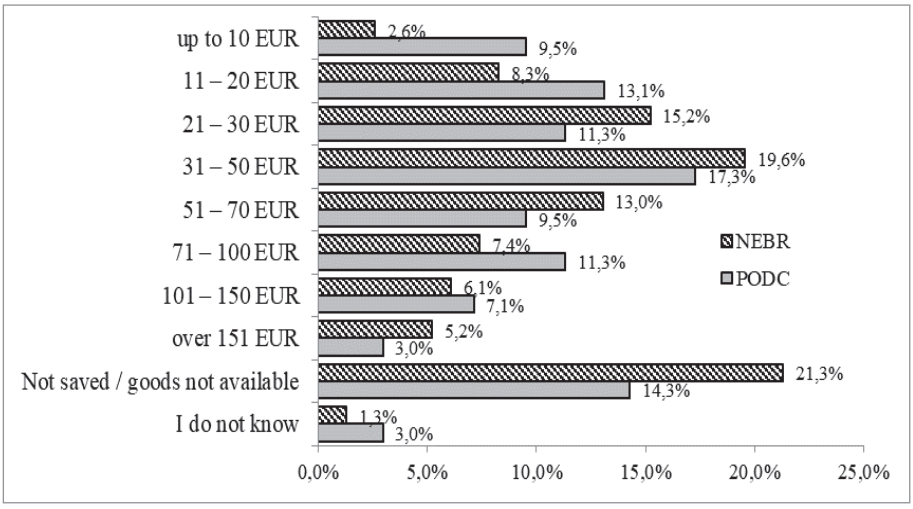

Figure 18 Estimate of average saved amount for the purchase
Source: Author's calculations based on research results

In the next step, we verified whether the **saved amount for the purchase (H3)** during the last cross-border shopping was, as for statistics, significantly dependent on the region and the gender of the respondent.

Table 5 Mann-Whitney U Test – saved amount for the purchase as per region

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
C10-Saved amount	33440,00	45961,00	19244,00	-0,066609	0,946893	-0,067251	0,946382	168	230

Source: Author's calculations based on research results

The employed Mann-Whitney U Test proved (Table 5) that on the level of significance α = 0.05 the saved amount for the purchased was not statistically significantly dependent (p=0.9464) on the respondent's region.

Also, based on the Kruskal-Wallis test (Figure 19) it is evident that the saved amount for the purchase was not statistically significantly dependent (p=0.4969) on the gender.

Within cross-border shopping tourism, some shoppers may be motivated also by a financial profit, hence by enhancing their family budget by **reselling the purchased goods** in the place of their residence. In both researched regions the group of shoppers was marginal and identically only 3 % of respondents admitted that they purchased goods in the nearby foreign country in order to resale them.

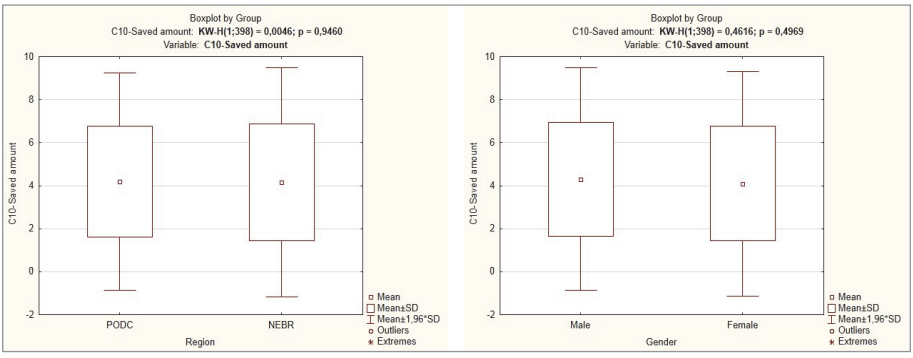

Figure 19 Boxplot – saved amount for the purchase as per region and gender
Source: Author's calculations based on research results

Regarding **planning** respondents' **travels** in the next 12 months to the nearby foreign country to do the cross-border shopping (Figure 20), their decision-making was notably influenced by the unfavourable Covid-19 pandemic situation and the related epidemiological measures and restrictions at the borders. More than three quarters of the respondents from NEBR and as much as 85 % of the shoppers from PODC plan no journey or plan fewer journeys in the next year of 2021. Only 8 % from NEBR and almost 5 % from PODC plan more journeys than in 2020 in the near future. At the same time, in NEBR rather men mainly aged 35 to 44 years plan more journeys in the 12 months to come and, as for their family status, they are married men with three members in the household. Women rather prefer the same number of journeys as until now and as for their age, they are 45 to 54 years old and married and their households have 4-members.

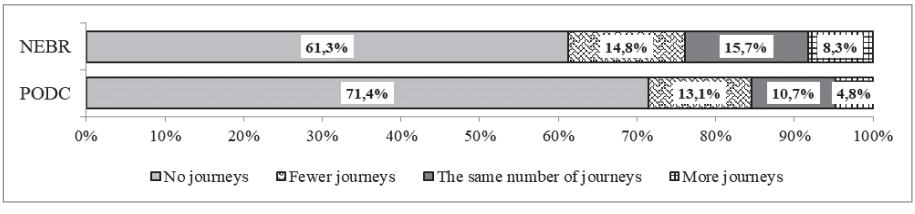

Figure 20 Planning journeys in the next 12 months
Source: Author's calculations based on research results

When assessing the questionnaire, we also observed the relation, correlation between the **shopping frequency, shopping duration, value of purchase, saved amount** and **distance of the shopping centre (H4)** during the last cross-border shopping depending on the respondent's region.

Table 6 Spearman correlation coefficient – relation between the purchase frequency, shopping duration, value of purchase, saved amount and the distance of the shopping centre (NEBR)

Variable	Region=NEBR Spearman Rank Order Correlations MD pairwise deleted Marked correlations are significant at p <,05000				
	Purchase frequency	Shopping duration	Value of purchase	Saved amount	Distance of the shopping centre
Purchase frequency	1,000000	-0,002495	0,050042	-0,017160	-0,086017
Shopping duration	-0,002495	1,000000	0,498184	0,262629	0,332322
Value of purchase	0,050042	0,498184	1,000000	0,529858	0,439587
Saved amount	-0,017160	0,262629	0,529858	1,000000	0,287199
Distance of the shopping centre	-0,086017	0,332322	0,439587	0,287199	1,000000

Source: Author's calculations based on research results

For values p < 0.05 the coefficients of correlation that are statistically notable are marked red in Table 6. Concurrently, the values of these statistically significant correlation coefficients are positive, and so for the **shoppers from NEBR** the distance of the shopping centre – market is directly related to the shopping duration (value of correlation coefficient was 0.3323), to the value of purchase (0.4396) and the saved amount for the whole shopping (0.2871) (Table 6). The values of the correlation coefficient evidently show that there is a middle coherence also between the value of respondents' purchase and the shopping duration (0.4981) and significant coherence as for the value of respondents' purchase compared to the saved amount for the whole purchase (0.5298). The values of the remaining correlation coefficient remained lower than 0. 3.

Table 7 Spearman correlation coefficient – relation between the purchase frequency, shopping duration, value of purchase, saved amount and distance of the shopping centre (PODC)

Variable	Region=PODC Spearman Rank Order Correlations MD pairwise deleted Marked correlations are significant at p <,05000				
	Purchase frequency	Shopping duration	Value of purchase	Saved amount	Distance of the shopping centre
Purchase frequency	1,000000	0,147002	0,193065	0,258568	-0,009332
Shopping duration	0,147002	1,000000	0,632277	0,468509	0,351328
Value of purchase	0,193065	0,632277	1,000000	0,582393	0,372499
Saved amount	0,258568	0,468509	0,582393	1,000000	0,147167
Distance of the shopping centre	-0,009332	0,351328	0,372499	0,147167	1,000000

Source: Author's calculations based on research results

Also for the **shoppers from PODC** the distance of the shopping centre-market was directly related to the shopping period (value of correlation coefficient 0.3513) and to the value of purchase (0.3725) (Table 7). There is also a middle coherence between the period of respondent's shopping and the amount saved for the purchase (0.4685). Notable coherence was confirmed between the value of purchase and the shopping duration (0.6323) and the amount saved for the purchase (0.5824). The values of the remaining correlation coefficients were lower than 0. 3.

In the next part of the questionnaire, the respondents were asked to tick the level of their consent or disaccord with individual statements in four categories related to „motivation…", „satisfaction…", „safety…" and „negative attitudes…" in respect of cross-border shopping. The respondents' consent was quantified in a 5-point Likert scale.

In the beginning of this part of our research, we verified whether there are statistically notable **differences in the perception of the motivation** to do the cross-border shopping depending on the region and gender **(H5)**. The coefficient Cronbach alfa for variables *„Motivation for cross-border shopping*" reached the value of 0.8177 that significantly exceeds the value over 0.7 and it is considered to be reliable (Avcikurt and Yagci, 2016; George and Mallery, 2003).

Table 8 Mann-Whitney U Test – motivation for cross-border shopping

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
Motivation1	33328,00	46073,00	19132,00	-0,16542	0,868614	-0,17934	0,857669	168	230
Motivation2	34147,50	45253,50	18688,50	0,55669	0,577738	0,61680	0,537365	168	230
Motivation3	33715,50	45685,50	19120,50	0,17557	0,860636	0,19250	0,847354	168	230
Motivation4	30790,00	48611,00	16594,00	-2,40454	0,016193	-2,54084	0,011059	168	230
Motivation5	33152,50	46248,50	18956,50	-0,32025	0,748777	-0,35082	0,725720	168	230
Motivation6	32501,00	46900,00	18305,00	-0,89503	0,370772	-0,97027	0,331913	168	230
Motivation7	30455,50	48945,50	16259,50	-2,69965	0,006942	-2,80351	0,005055	168	230
Motivation8	32815,00	46586,00	18619,00	-0,61801	0,536571	-0,63988	0,522253	168	230
Motivation9	28320,50	51080,50	14124,50	-4,58322	0,000005	-4,77752	0,000002	168	230
Motivation10	32019,50	47381,50	17823,50	-1,31983	0,186894	-1,37539	0,169012	168	230

Note: Motivation1 – prices of goods abroad are lower than in the place of residence; Motivation2 – price for the same product abroad is more favourable; Motivation3 – I can save money by shopping abroad; Motivation4 – range of goods abroad is better than in the place of residence; Motivation5 – quality of goods abroad is better than in the place of residence; Motivation6 – quality of services abroad is better than in the place of residence; Motivation7 – goods offered abroad are not available in the place of residence; Motivation8 –the possibility to bargain prices motivates me to shop; Motivation9 – advantageous euro exchange rate motivates me to shop abroad; Motivation10 – possibility to pay in euros motivates me to shop abroad.

Source: Author's calculations based on research results

The results of the Mann-Whitney U test in the respondents from NEBR and from PODC evidently show that statistically important difference in motivation for cross-border shopping can be found in three variables of motivation on the level of significance α = 0.05 (Table 8).

The motivation was statistically significantly higher (Figure 21) between the respondents-shoppers from NEBR compared from the ones from PODC in case of the following variables: *„Motivation4 – range of goods abroad is better than in the place of residence"* (p=0.011059), *„Motivation7 – goods offered abroad are not available in the place of residence"* (p=0.005055) and *„Motivation9 – advantageous euro exchange rate motivates me to shop abroad"* (p=0.000002).

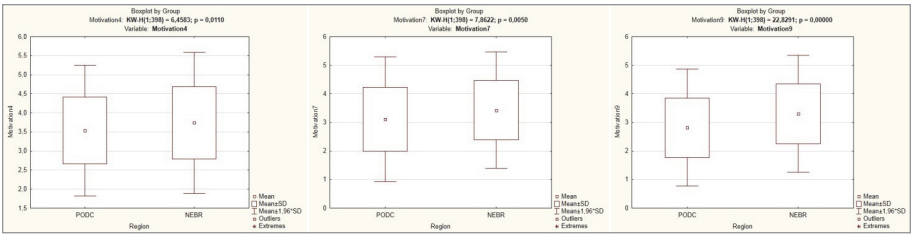

Figure 21 Boxplot – variables Motivation4, Motivation7, Motivation9 as per regions
Source: Author's calculations based on research results

From the point of **gender,** based on the Mann-Whitney U test it is possible to declare that in men from EBR compared to men from PODC the motivation was statistically significant only in case of advantageous euro exchange rate (*Motivation9*). Comparing the middle values, the result of motivation of men from NEBR is higher (3.38) than of men from PODC (2.91). In women, the motivation from the point of regions for cross-border shopping is significantly confirmed, as for statistics, in all three above mentioned variables of motivation (*Motivation4, Motivation7, Motivation9*), while the middle values of the results of motivation in women from NEBR (*Motivation4* – 3.77, *Motivation7* – 3.44, *Motivation9* – 3.26) were higher than in women from PODC (3.58; 3.11 and 2.77).

Consequently, we were looking into whether there are statistically important differences **in satisfaction with the shopping centre** or **market (H6)** in respondents from NEBR compared to the respondents from PODC.

The coefficient Cronbach alfa for 18 variables „*Satisfaction with the shopping centre or market*" reached the value of 0.925004, significantly exceeding the value above 0.7 and, therefore, it is considered very reliable.

Table 9 Mann-Whitney U Test – satisfaction with the shopping centre

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
Satisfaction-Shopping Cen1	34298,5	45102,5	18537,5	0,68991	0,49025	0,77609	0,43770	168	230
Satisfaction-Shopping Cen2	32932,0	46469,0	18736,0	-0,51479	0,60670	-0,54548	0,58542	168	230
Satisfaction-Shopping Cen3	33670,0	45731,0	19166,0	0,13542	0,89228	0,15437	0,87732	168	230
Satisfaction-Shopping Cen4	32922,5	46478,5	18726,5	-0,52317	0,60086	-0,57002	0,56866	168	230
Satisfaction-Shopping Cen5	31720,5	47680,5	17524,5	-1,58362	0,11328	-1,69181	0,09068	168	230
Satisfaction-Shopping Cen6	31876,5	47524,5	17680,5	-1,44599	0,14818	-1,54450	0,12247	168	230
Satisfaction-Shopping Cen7	33246,0	46155,0	19050,0	-0,23776	0,81207	-0,25385	0,79961	168	230
Satisfaction-Shopping Cen8	32316,5	47084,5	18120,5	-1,05780	0,29015	-1,13401	0,25679	168	230
Satisfaction-Shopping Cen9	33306,5	46094,5	19110,5	-0,18439	0,85371	-0,19861	0,84257	168	230
Satisfaction-Shopping1	33544,5	45856,5	19291,5	0,02470	0,98029	0,02920	0,97670	168	230
Satisfaction-Shopping2	32952,0	46449,0	18756,0	-0,49714	0,61909	-0,53961	0,58946	168	230
Satisfaction-Shopping3	32591,0	46810,0	18395,0	-0,81563	0,41471	-0,93480	0,34989	168	230
Satisfaction-Shopping4	30371,0	49030,0	16175,0	-2,77420	0,00553	-2,95930	0,00308	168	230
Satisfaction-Shopping5	31687,0	47714,0	17491,0	-1,61317	0,10671	-1,75721	0,07888	168	230
Satisfaction-Services1	34418,5	44982,5	18417,5	0,79578	0,42616	0,94045	0,34699	168	230
Satisfaction-Services2	32612,0	46789,0	18416,0	-0,79710	0,42539	-0,86580	0,38660	168	230
Satisfaction-Services3	33349,5	46051,5	19153,5	-0,14645	0,88357	-0,15433	0,87735	168	230
Satisfaction-Services4	32809,0	46592,0	18613,0	-0,62330	0,53309	-0,66741	0,50451	168	230

Note: Satisfaction-Shopping Cen1 – access to the shopping centre/market is easy; Satisfaction-Shopping Cen2 – shopping centre/market is a safe place; Satisfaction-Shopping Cen3 – Shopping centre/market offers a variety of shops; Satisfaction-Shopping Cen4 – Arrangement of shops, market stalls is suitable; Satisfaction-Shopping Cen5 – Shopping in the shopping centre/market is comfortable; Satisfaction-Shopping Cen6 – Shopping centre/market is clean; Satisfaction-Shopping Cen7 - Shopping centre/market has enough parking places; Satisfaction-Shopping Cen8 – Parking in the shopping centre/market is safe; Satisfaction-Shopping Cen9 – Parking charges are adequate; Satisfaction-Shopping1 – Offer of goods is varied, attractive and wide; Satisfaction-Shopping2 – Market stalls are clean; Satisfaction-Shopping3 – Communication with sellers when shopping is without problems; Satisfaction-Shopping4 – Sellers' attention to customers is better than in the home country; Satisfaction-Shopping5 – Possibility to bargain prices for goods is profitable; Satisfaction-Services1 – Available refreshment during shopping; Satisfaction-Services2 – Available toilets; Satisfaction-Services3 – Toilets are clean; Satisfaction-Services4 – Price for using the toilets is appropriate.

Source: Author's calculations based on research results

Based on the Mann-Whitney U Test (Table 9), a statistically significant difference in satisfaction with the shopping centre or the market was only in case of variable *„Satisfaction-Shopping4 – Sellers' attention to customers is better than in the home country"* (p=0.003084). Comparing the middle values, the variable is statistically significantly higher between the shoppers from NEBR (3.84) compared to shoppers from PODC (3.60).

Observing this indicator according to **gender** based on the results of the Mann-Whitney U Test we can state that it was statistically significantly confirmed (p=0.0190) only in women. Comparing the middle values, it is evident that higher satisfaction with the statement was in women from NEBR. In men (p=0.0843) the indicator was not confirmed as statistically significant.

Further, we verified whether the differences related to the **perception of safety during cross-border shopping (H7)** is statistically significant (on the level of significance α = 0.05) in the respondents from NEBR compared to the respondents from PODC.

The value of the Cronbach alfa for *„Safety during cross-border shopping"* was 0.844266 and it is deemed reliable. In Table 10, there are the results of non-parametric Mann-Whitney U Test of perceiving safety during cross-border shopping depending on the region.

Table 10 Mann-Whitney U Test – safety during cross-border shopping

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
Safety1	35978,50	43422,50	16857,50	2,172069	0,029851	2,266771	0,023405	168	230
Safety2	36257,00	43144,00	16579,00	2,417772	0,015616	2,580635	0,009862	168	230
Safety3	35473,50	43927,50	17362,50	1,726539	0,084251	1,867949	0,061770	168	230
Safety4	35190,00	44211,00	17646,00	1,476425	0,139831	1,547463	0,121753	168	230
Safety5	34469,00	44932,00	18367,00	0,840331	0,400723	0,884793	0,376269	168	230
Safety6	35164,00	44237,00	17672,00	1,453487	0,146090	1,506485	0,131944	168	230

Note: Safety1 – I am afraid of being robbed by pickpockets; Safety2 – I am afraid of being tricked by sellers of goods; Safety3 – I am afraid that the purchased goods will not be of good quality; Safety4 – I am afraid that I will not be able to claim the purchased goods; Safety5 – I am afraid that parking is not safe; Safety6 – I am afraid of getting Covid-19

Source: Author's calculations based on research results

The calculations made reveal that statistically significant differences in the assessment of safety during cross-border shopping were in variables *„Safety1 – I am afraid of being robbed by pickpockets"* (p=0.02340) and *„Safety2 – I am afraid of being tricked by sellers of goods"* (p=0.00986). The final values of these variables show (Figure 22) that higher fear was among shoppers from PODC (*Safety1* – 2.95, *Safety2* – 2.72) compared to the shoppers from NEBR (2.73; 2.52).

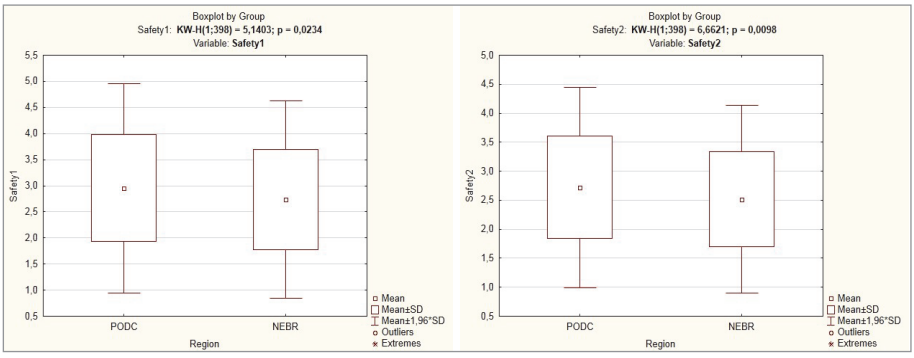

Figure 22 Boxplot – variables Safety1, Safety2 as per regions
Source: Author's calculations based on research results

When observing variables related to safety as per gender, the results indicate that the variables „*Safety1 – fear of being ROBBED by pickpockets*" (p=0.0077) and „*Safety2 – fear of being TRICKED by the sellers of goods*" (p=0.0397) was joined by „*Safety6 – fear of getting Covid-19"* (p=0,0020). The results were statistically significantly confirmed on the level of significance α = 0. 05.

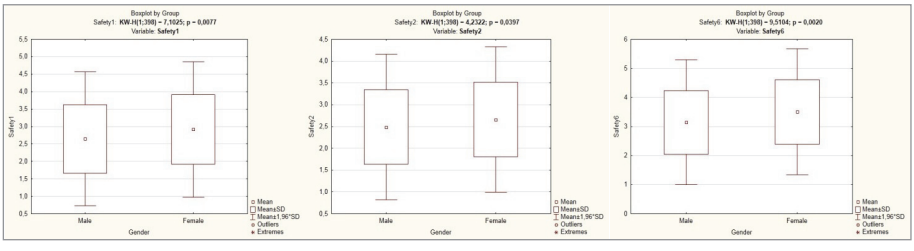

Figure 23 Boxplot – variables Safety1, Safety2, Safety6 as per regions and gender
Source: Author's calculations based on research results

The final values (Figure 23) in these variables declare that higher fear was among shopping women (*Safety1* – 2.9, *Safety2* – 2.7, *Safety6* – 3.5) compared to men (2.6; 2.5; 3.1) doing shopping.

To conclude, we verified whether the differences in perceiving the **negative attitude to cross-border shopping (H8)** are statistically significant in respondents from NEBR and PODC. The value of the Cronbach alfa for variables „*Negative attitude to cross-border shopping*" was 0.880723 and is deemed to be sufficiently reliable.

Table 11 Mann-Whitney U Test – negative attitude to cross-border shopping

Variable	Mann-Whitney U Test By variable Region Marked tests are significant at p <,05000								
	Rank Sum PODC	Rank Sum NEBR	U	Z	p-value	Z adjusted	p-value	Valid N PODC	Valid N NEBR
Negative1	35072,50	44328,50	17763,50	1,372762	0,169827	1,438847	0,150195	168	230
Negative2	36531,00	42870,00	16305,00	2,659506	0,007826	2,762359	0,005739	168	230
Negative3	34552,50	44848,50	18283,50	0,913998	0,360718	0,955531	0,339310	168	230
Negative4	37152,00	42249,00	15684,00	3,207375	0,001340	3,386494	0,000708	168	230
Negative5	34229,00	45172,00	18607,00	0,628594	0,529615	0,653235	0,513605	168	230
Negative6	34426,50	44974,50	18409,50	0,802836	0,422070	0,856258	0,391856	168	230
Negative7	35763,00	43638,00	17073,00	1,981947	0,047486	2,064802	0,038943	168	230
Negative8	34445,50	44955,50	18390,50	0,819599	0,412445	0,875870	0,381101	168	230

Note: Negative1 – I mind that the market is busy, stressing; Negative2 – I mind that I cannot try the purchased goods; Negative3 – I mind the insufficient hygiene of the offered goods; Negative4 – I mind that I have no guarantee of return of purchased goods; Negative5 – I mind disorderliness of shops; Negative6 – I mind the parking charge; Negative7 – I mind the distance from my place of residence to the shopping centre; Negative8 – I mind crossing borders.

Source: Author's calculations based on research results

By the Mann-Whitney U Test we confirmed (Table 11) a statistically significant difference in assessing dissatisfaction and negative attitudes to cross-border shopping in variables *„Negative2 – I mind that I cannot try purchased goods"* (p=0.00574), *„Negative4 – I mind that I have no guarantee of return of purchased goods"* (p=0.00071) and *„Negative7 – I mind the distance from my place of residence to the shopping centre"* (0.03894) with the level of significance α = 0. 05. In Graph 23 can be observed that the middle values of responses for the shoppers from PODC in all three variables (*Negative2* – 2.83, *Negative4* – 3.44, *Negative7* – 2.81) were higher than is respondents from NEBR (2.52; 3.10; 2.58). At the same time it is possible to state that the highest middle values in both regions were in case of variable *„Negative4 – I mind that have no guarantee of return of purchased goods"*.

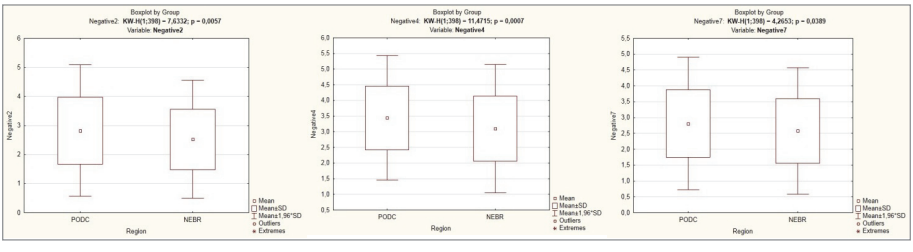

Figure 24 Boxplot – variables Negative2, Negative4, Negative7 as per regions

Source: Author's calculations based on research results

*T*he results of the Mann-Whitney U test as for gender evidently show that negative attitudes to cross-border shopping are statistically significantly confirmed in variables *„Negative1 – I mind that the market is busy, stressing"* (p=0.0176), *„Negative4 – I mind that I have no guarantee of return of purchased goods"* (p=0.0167) (Figure 25).

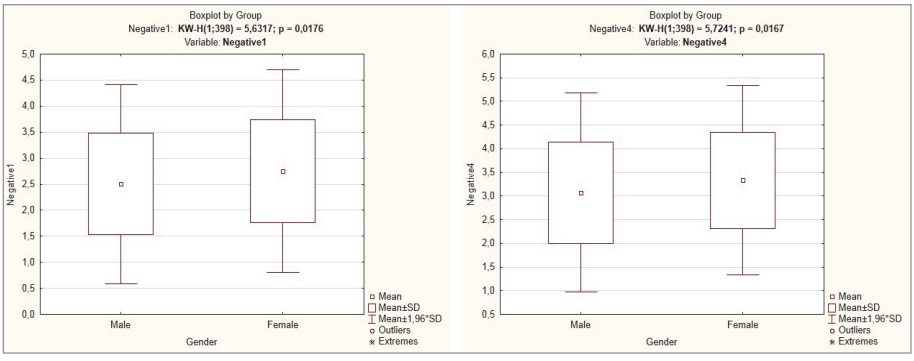

Figure 25 Boxplot – variables Negative1, Negative4 as per gender
Source: Author's calculations based on research results

In case of women, the results show higher middle value of negative attitude to cross-border shopping in terms of said two variables compared to men.

DISCUSSION

The issue of shopping tourism was evaluated in the selected regions of the Prešov Region by an online questionnaire due to the unfavourable epidemiologic situation caused by Covid-19. Bygvrå (2019) pointed out that an online questionnaire is one of the options to obtain data about cross-border shopping in a selected region, frequency of travels and respondents' motivation to go shopping. Van der Velde (2000) also took advantage of interviewing local people in order to study the shopping behaviour in cross-border towns and cities at the German-Dutch border. He emphasized that the respondents' ability to recall their detailed shopping behaviour in the course of the whole year is limited. In Slovakia, a similar research in the place of residence in the Austrian-Slovak border area was done by Križan et al. (2017).

The results reveal that the country most visited by the respondents doing cross-border shopping in the past was Poland. Of the total number of 230 respondents from NEBR as much as 86.8 % of them stated that they did their shopping in Krosno and 68.1 % of the respondents from PODC (168 in total) said that their shopping destination was Polish town Nowy Targ.

The found results referred to the fact that cross-border shopping is mostly a matter of the closest family. It coincides with the findings of authors Castaño et al. (2010) that say that cross-border shopping is mainly a family matter and, as an activity, it contributes to stronger family bonds. According to Mulvey and Lever (2017), shopping trips are made in groups and they concentrate on doing a common family activity. More than a half of respondents from NEBR prefer shopping in couples (50.4 %) or as a trio (26.1 %); the respondents from PODC prefer shopping even in larger groups (four people – 22.6 %, five and more – 12 %).

The shopping frequency of respondents from NEBR was more intensive compared to the respondents from PODC. More than 36 % of them did the shopping despite the Covid-19 situation at least once or 3-times a year and in the last three months every eighth respondent did the shopping in the nearby foreign country. To the contrary, only every fourth respondent from PODC did the shopping once maximum 3-times a year. According to the research implemented by Spierings and Van der Velde (2008), people on the Dutch side did 1 cross-border shopping per year while on the German side it was 1.3 times.

From the point of special events in both regions, shopping of consumer goods prevailed (more than 70 %), followed by shopping before a wedding (more than 25 %), shopping due to incoming All Saints Day (15 %) and Christmas shopping (10 %). This coincides with the research done by Swilley and Goldsmith (2013) who found out that cross-border shopping is associated with calendar events (e.g. Easter, Christmas or wedding).

Regarding crossing borders, more than 90 % of respondents use a passenger car. According to Van Leeuwen, Rietveld (2011), the ownership of a car influences the selection of shopping destinations for cross-border shopping. Even Piron (2001) confirmed that the primary transport mean used for shopping is a passenger car, similarly as Križan et al. (2017), according to who as much as 86.8 % of respondents use this mean of transport for their shopping abroad.

From the point of time needed for shopping, almost 2/3 of respondents were able to complete their shopping within 3 hours. Similarly, the results obtained by Križan et al. (2017) show that the majority of Slovaks do their shopping in Austria within 2 hours. Mann-Whitney U test confirmed that the *duration of the last shopping* (hypothesis H1) *is not statistically notably depending on the region* but *is statistically notable dependent on the gender* since women spent more time shopping than men.

Regarding the range of goods bought during the last cross-border shopping, the respondents spent most of their money on clothes and shoes (79.1 % from NEBR, 73.2 % from PODC). Food was the second most frequently purchased commodity (37.4 %) for shoppers from NEBR and for almost every second one from PODC. At the same time, 27.8 % of respondents from NEBR and as much as 52.4 % from PODC bought candies. These findings are similar to the ones of

authors Piron (2002), Bygvrå and Westlund (2004), Civáň and Krogmann (2012), Nivin (2013), Segerer et al. (2020), who confirmed that clothes were one of the most frequently shopped items alike food.

As for the value of shopping, 53.9 % of shoppers from NEBR spent 151 EUR for their last shopping and almost 60% of shoppers from PODC spend for their last shopping 101 EUR. Mann-Whitney U test confirmed hypothesis H2 that the *value of shopping is statistically significantly depending on the region* and *on the gender.* The respondents from NEBR spent more money than those from PODC and women spent more money than men. This fact was also indicated by Lehto et al. (2004) according to who gender may significantly influence the amount spent for shopping.

What mostly motivates cross-border shopping in general is saving money. The research results also confirm it since more than 73.5 % of respondents from NEBR and 70.8 % from PODC saved money doing the cross-border shopping. The majority of respondents from NEBR (19.6 %) and also from PODC (17.3 %) estimated that they saved from 31 to 50 EUR. This result corresponds to the statement of Powęska (2008), who declared that comparing price differences in selected goods in border areas enables household to save money in their family budget. Also according to Michalkó et al. (2014), the majority of tourists saves money by doing the cross-border shopping so the shopping is associated with a financial profit. Another reason is unavailability of requested goods in the place of residence confirmed by more than one fifth of shoppers from NEBR and almost 15 % from PODC. They stated that even though they saved no money by shopping in the nearby foreign country, the purchased goods were not available in Slovakia. The Kruskal-Wallis test also confirmed hypothesis H3 that *the saved amount for the purchase was not statistically significantly dependent on the region or the gender.*

As for hypothesis H4, in NEBR as well as in PODC, a positive medium statistically important connection was confirmed for the statements *Distance from the shopping centre is directly related to the time spent shopping* and *Distance from the shopping centre is directly related to the value of the whole shopping*. There is also a medium to a very strong statistical connection between the *Value of shopping* and *Time spent shopping* as well as the *Value of shopping* and the *Saved amount for the whole shopping*. The results of correlation coefficients evidently show that the *Distance of the shopping centre from the place of residence is indirectly related to the Shopping frequency.*

Regarding motivation for cross-border shopping in both observed regions, the highest average values of responses are at variables *Prices of goods abroad are lower than in the place of residence, Price for the same product abroad is lower than in Slovakia* and *I can save money by shopping abroad*. The results of our research correspond to the ones of Piron (2002), according to who the quality of goods and services and fashion trends have a positive impact on the motivation

and frequency of cross-border shopping. Another factor is a lower price level of products (Civáň and Krogmann, 2012) that may be a permanent phenomenon or a temporary advantage depending on fluctuation of exchange rates (Irimiás, 2009), better quality, attractive brands, the range of products offered that are not available in the place of customers' residence (Mulvey and Lever, 2017) and more pleasant environment (Snepenger et al., 2003).

The results of Mann-Whitney U test prove that there are statistically significant differences in seeing motivation for cross-border shopping (H5) depending on the region and gender at variables *Range of products abroad is better than in the place of residence, Goods offered abroad are better than in the place of residence, Goods offered abroad are not available in the place of residence, More favourable EUR exchange rate motivates to go shopping abroad.* Based on the medium values of results of motivation, the values were higher in respondents from NEBR compared to those from PODC. As for gender, in men from NEBR (3.38) compared to men from PODC (2.91) the motivation was statistically significant only in variable *More favourable EUR exchange rate for shopping abroad.* In women, motivation was statistically confirmed to be notable in all three variables of motivation (in SVRP higher than in PODC). Our findings are similar to those of Sullivan et al. (2012), according to which Mexicans travel hundreds of kilometres to the USA to shop products that are available only there. Significant motivation for shopping was also the movement of exchange rates. When the value of Mexican peso fell, the intensity of cross-border shopping by Mexicans in the USA slightly fell, too (Nivin, 2013). The change of EUR/HUF exchange rate, or the one of EUR/PLN and the admission of the Slovak Republic into the euro area in 2009 (increased domestic price level) motivated many Slovaks to do their shopping in the border areas, more concretely in Polish and Hungarian shops which was also confirmed by the research done by Michalkó et al. (2014) in Hungary. According to the research by Bygvrå and Westlund (2004), increased Danish shopping could have been caused by the decreased rate of Swedish currency by more than 9 %.

In variables related to satisfaction with the shopping centre/market, the highest average values of positive responses in both monitored regions were the same *Access to the shopping centre, market is easy, Shopping centre/market offers various shops* and *Offer of goods is varied, attractive and wide*. The selection of variables related to satisfaction of shoppers corresponded to the research done by Lehew and Wesley (2007), Suhartanto et al. (2016) monitoring satisfaction with the access to shops, their arrangement and number, comfort during shopping, size of the centre, variability of goods and availability of parking.

The Mann-Whitney U test shows statistically significant difference in satisfaction with the shopping centre/market (H6) only in variable *Seller's attention to customers is better than in the home country*. This variable was statistically notably higher among the shoppers from NEBR (3.84) compared to those from PODC (3.60). The

seller's attention was statistically significantly confirmed only in women from NEBR. Sullivan et al. (2012) found that Mexican shoppers travelled many kilometres to the USA, inter alia, also due to their satisfaction and joy caused by shopping. This satisfaction and joy may be, according to Spierings and Van der Velde (2008), the emotional reason for mobility and crossing borders. Shopper's satisfaction is hence considered to be one of the most important pillars of business competition (Fuchs and Weiermair, 2004).

From the point of security, the highest average values of consent in responses in both regions were the same in case of variables *I am afraid that I will not be able to return the purchased goods,* and *I am afraid that I will get Covid-19*. The Mann-Whitney U test reveals that statistically notable differences in assessing safety were in variables *I am afraid that I will be robbed by pickpockets* and *I am afraid that I will be tricked by sellers of goods*. The result values in these variables show that higher fear was among the shoppers from PODC (2.95; 2.75) than from NEBR (2.73; 2.52). As for security and gender, there is also *Fear that I will get Covid-19* while higher fear was in women from NEBR.

When assessing negative attitudes to cross-border shopping, it is evident that the highest average values of consent in responses were in both regions the same in variables *I mind insufficient hygiene of offered goods, I mind disorderliness of shops* and *I mind that I have no guarantee of return of purchased goods*. The Mann-Whitney U test reveal that the statistically significant difference in seeing the negative attitude to cross-border shopping depending on the region and gender were in variables *I mind that I cannot try the purchased goods, I mind that I have no guarantee of return of purchased goods, I mind the distance from the place of residence to the shopping centre*. The results show that higher medium values were in shoppers from PODC (2.83; 3.44; 2.81) compared to NEBR (2.52; 3.10; 2.58). The highest average values were in variable *I mind that I have no guarantee of return of purchased goods*. As for gender, the negative attitudes were statistically confirmed only in women and also in variable *I mind that the market is busy and stressful*. In women from PODC, the results show higher medium values compared to the female respondents from NEBR. According to Campo and Yagüe (2009), customers' dissatisfaction causes negative behaviour (e.g. customers' complaints) that eventually influences the customer retention rate.

CONCLUSION

Both, cross-border shopping tourism and our research, were noticeably influenced by the Covid-19 pandemic. It caused the adoption of inevitable anti-pandemic measures and restrictions at the borders that made cross-border shopping notably more difficult and transferred our questionnaire survey to the online form. On one hand, it obviously complicated our research but, on the other hand, we were able

to obtain information on cross-border shopping tourism in a specific situation. There have also been some other questions as to the further specialization of the research in the form of finding answers to when cross-border shopping tourism will renew after the pandemic, what the development trends in this sphere will be, whether the types of motivation to do cross-border shopping will change, what measures implemented after the end of the pandemic will become an ordinary part of shopping and, what the impact of eventual deficiencies in budgets and exchange rates will be. Just now, (first half of 2022) the increased prices of energies and fuels are followed by increased prices of food and other goods. Important will be their development and comparison with the neighbouring countries, which may result in more intensive cross-border shopping tourism by not only those living in the border areas, but even by people from more distant regions.

It is evident that the problems caused by the Covid-19 pandemic have to be solved by many border areas in Europe and it is the responsibility of the individual countries and their inhabitants whether the "return to normal life" as well as to cross-border shopping tourism will be real or the restrictions (in a certain form and on certain level) will remain an integral part of our everyday reality.

Acknowledgement

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