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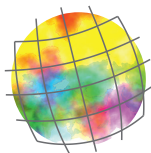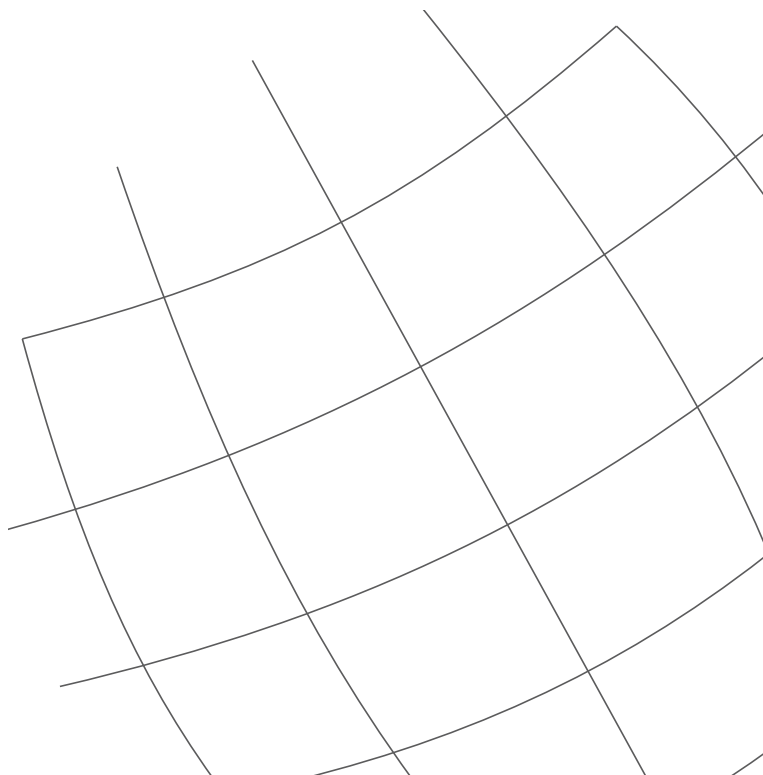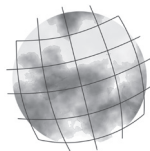
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CONTENT

ARE YOU LOOKING FOR BETTER QUALITY, CHEAPER, LOCAL FOOD DIRECTLY FROM THE PRODUCERS? VISIT THE FARMERS' MARKET.
The perception of visitors to the farmers' market in Bratislava

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Abstract
Alternative food networks continue to get more and more attention from consumers who have been traditionally oriented on conventional retail environments. The aim of this paper is to evaluate the perceptions of consumers shopping at the Piac Markt farmers' market in Bratislava (Slovakia). Data was collected through a questionnaire (n=268) and perceptions were analysed using the Mann-Whitney U test in association with their classification by attendance (regular vs occasional) and by their attitudes towards shopping (hedonists vs utilitarians). The results show that there are statistically significant differences between the perceptions of regular and only occasional farmers' market visitors, while no statistically significant differences were found in the perceptions between hedonists and utilitarians. It seems that the different perceptions of farmers' market visitors depend more on the frequency of their visits rather than on their attitudes towards shopping. These findings provide a new perspective on research into consumer shopping behaviour in alternative food networks.

Key words
Alternative food networks, attendance, Bratislava, farmers' markets, hedonism and utilitarianism, perception

INTRODUCTION

Three decades ago, an international retail chains began operating in Slovakia, and with their concept of large-scale supermarket and hypermarket stores they significantly altered consumption and consumer shopping behaviour patterns (Pawlusiński 2015, Križan et al. 2016, Trembošová et al. 2020, Mitríková et al. 2021,

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Ďurček et al. 2022). Conventional retail stores in the form of supermarkets and hypermarkets became the most common type of stores for the purchase of food, drugstore items and daily consumer goods (Najdený et al. 2019, Križan et al. 2020). However, the trend in Slovakia can be seen not only in consumer society patterns, but also in the search for alternatives in the form of alternative food networks (AFN) in recent years.

The AFNs are focused on the support for local food systems in an effort to minimise the number of subsystems between producers and consumers, i.e. to decrease distances between producers and consumers (Papaoikonomou and Ginieis 2017, Némethová 2020, Tolmáči and Tolmáči 2020). The local concept, placing emphasis on the consumption of food as close as possible to its place of production, is an important starting point for AFN and a significant geographical characteristic of them (Syrovátková 2016). In this way, a local approach is necessary in the local food system – ensuring the largest possible share of food consumption from local sources at the local level. Therefore, the demand for fresh and high quality products (Buman et al. 2015) has conditioned the development of AFN. Alternative food networks continue to get more and more attention among consumers, who have traditionally been oriented on the conventional retail environment. Their productive function in the food system is often complemented by a no less important social function in the consumer community (Sage 2012, Spilková 2016). AFN include a wide range of initiatives, such as farmers' markets, community gardens, box systems, yard sales, food cooperatives that sell products and community-supported agriculture (Dansero and Puttilli 2014, Tregear 2011, Spilková 2016, Michel-Villarreal et al. 2019). The development of different forms of AFN reflects the demand for unconventional retail and various policies of local significance (Spilková 2016).

Farmers' markets can be characterised as modern consumption sites that offer fresh and local products, often through direct interaction between consumers and producers (Benedek et al. 2018, Crawford et al. 2018, Fendrychová and Jehlička 2018, Spilková 2018). Farmers' markets in general support local food production, the sustainability of local agriculture and a healthy lifestyle and nutrition for consumers (Byker et al. 2012). They are an important part of the food system; they enable the sharing of knowledge and the raising of awareness of (seasonal) foods and, last but not least, they bring together different actors to discuss the challenges of reducing distances and distribution (Albrecht and Smithers 2018). Curtis and Cowee (2011) report that increased consumer demand for foods of local origin is a result of consumer concerns about food safety and health. Spilková et al. (2013) state that consumer confidence in local products is being restored thanks to farmers' markets. The socially empowering topic of farmers' markets has been a component of European geographical contributions with regard to quality turnover and care economics, where trust, social interaction and responsibility are key elements of

the local system (Kirwan 2006, Moore 2006). Typical consumers at farmers' markets are most often characterised as highly educated, higher-income women who have more free time (Byker et al. 2012, Garner and Ayala 2018). Research has shown that consumers taking part in AFN have higher income levels (Thøgersen 2014). The research of Zepeda and Carroll (2018) confirms the notion of farmers' markets not only as places of purchase but also as places of social gatherings, where most study participants shop in groups of two or three people. The social contact of farmers' markets, for example, producer-consumer conversations about seasonal products or a family trip to farmers' market, is a motivation to take part in the market (Alonso and O'Neill 2011; Hunt 2007). Marino et al. (2013) point out that consumer motivation is associated with meeting one's own needs or those of the family.

The authors focused on selected consumer segments. Conmsumers may be categorized on the frequency of their visits to farmers' markets and also their attitudes towards shopping. The first is the identification of regular and occasional visitors to farmers' markets. The frequency of visits to the AFN may affect people's quality of life or community relationships, though this is not a given (Hencelová et al. 2021b). Therefore, the authors' intention is to study the perception of consumers in relation to their (ir)regular visits to the farmers' market. Consumers at farmers' markets can typically be described as regular customers (Spilková et al. 2013). The geodemographic characteristics of consumers in farmers' markets, however, are different from other consumers in the sense of "tell me where you shop, I'll tell you who you are" (Spilková 2018). At the same time, however, growth in the popularity of farmers' markets among consumers can be observed, as can their general acceptance for the purchase of food across all consumers (Hencelová et al. 2021a).

Consumers can be also characterized by their attitude to shopping. Such segmentation is preferred particularly in marketing research (Kita et al. 2017) and distinguishes two groups of consumers, the first represented by so-called hedonists, who are characterised by the attitude of "shopping for pleasure", and the second represented by so-called utilitarians, with the view of "shopping as an inconvenient obligation" (Babin et al. 1994). Hedonists seek gratification and enjoyment when shopping; shopping is a pleasant way to spend leisure time for them (they shop because they want to). Utilitarian consumers obtain information about products out of necessity, not for fun and enjoyment (they therefore shop because they have to). The contrast between these two approaches points to the heterogenity of consumers and the importance of studying their behaviour (Westad et al. 2004). Shopping has long been considered a utilitarian activity, a rational and functional activity necessary for life (Batra and Ahtola 1991). Such a statement is linked more with purchases in large (international) food stores (Križan et al. 2020), which consumers in Slovakia prefer as their most frequent location for food purchases. However, a certain group of consumers is gradually

building a (consumer) relationship with local foods linked to alternative food networks, especially in the form of farmers' markets (Spilková 2018), and their attitude towards shopping is characterised more as hedonistic.

The aim of this paper is to evaluate the perceptions of consumers shopping at the Piac Markt farmers' market in Bratislava (Slovakia), to identify the consumers categorized on the basis of the frequency of their visits to farmers' markets and what are the perceptions of hedonistic and utilitarian consumers shopping at farmers' market. The paper seeks to answer the following research questions:

- RQ1: Farmers' markets offer better quality products compared with other grocery retailers.
- RQ2: Farmers' markets offer better priced products compared with other grocery retailers.
- RQ3: Is distance (accessibility) the most important factor in choosing the place where you most often buy food?
- RQ4: Are you interested in where the food you buy comes from?
- RQ5: Direct contact with farmers (producers) is the main factor for shopping at a farmers' market.
- RQ6: Farmers' markets strengthen the local economy.

DATA AND METHODS

To answer the research questions we employed a survey research design (fig. 1) that provided quantitative and qualitative approaches.
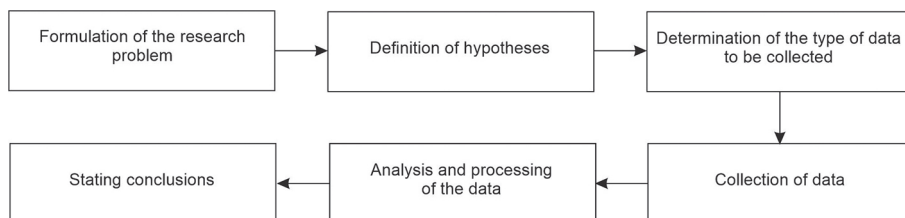
Fig. 1. Research design
Source: according to Clifford et al. (2016)

The primary data collection methods were a questionnaire survey, non-probability selection of respondents (Wolf et al. 2016) and occurred in two phases (March 2020 and October 2021). Both questionnaire surveys were conducted with consumers older than 18 years at the local food (farmers') market – Piac Markt in Bratislava. A total of 268 respondents took part in the research (n_{2020}=150, n_{2021}=118), and all the respondents were also consumers shopping at the market (Table 1). Therefore, in the article (unless stated otherwise) the terms respondent/

visitor/consumer are understood as synonyms. Both questionnaire surveys offered the same questions and had the same structure.

Women predominate (55%) among the visitors to the Piac Markt farmers' market. Even though the average age of visitors is 38.5 years, visitors over the age of 60 years old have more than 10% representation. The educational structure of Piac Markt visitors is dominated by those with a university education (71.6%), while visitors with only a primary education (2.3%) comprised the smallest share. More than half of visitors (60%) come from one- or two-member households, while larger families more than three members represent less than 5% of the visitors. The specific composition of farmers' market visitors was also reflected in the structure according to marital status. As many as 56% of visitors are single, and a third are in marriages. Students made up a relatively large proportion (14%) of visitors, while employed (or self-employed) visitors predominate. Pensioners comprised about one-tenth of visitors, and about 5% of visitors are on parental leave. Nearly half of the visitors (48%) to Piac Markt come from households with an approximate net monthly income of more than 2,000 euros. A net monthly household income up to 500 euros was recorded in 5% of visitors, cumulatively up to 1,500 euros for 16% of visitors.

Tab. 1. Basic characteristics of respondents (n=268)

Characteristics of respondents	Share of respondents (%)
Gender	
Woman	54.9
Man	45.1
Average age	38.5 year
Range of age	18–90
Education	
University	71.6
Secondary	26.1
Primary	2.3
Status	
Employed	54.2
Self-employed	14.9
Student	13.8
Pensioner	10.8
Parental leave	5.2
Unemployed	1.1

Source: own research

Methods of data analysis and interpretation are based on the testing of statistical hypotheses based on consumer segmentation, with the intention of identifying a statistically significant dependence (α=0.05). Differences between selected consumer groups (regular vs occasional, hedonists vs utilitarians) were tested using the Mann-Whitney U test in the SPSS program (Gaur and Gaur 2006). Respondents expressed their perception using Likert scale (1 = strongly agree to 5 = strongly disagree) to answer the research questions.

The perceptions were confronted by testing hypotheses on the basis of the above-discussed consumer segmentation with the intention of identifying a statistically significant dependence (α=0.05). Two hypotheses were tested for each research question, and the null hypothesis had a general basis: H0: There is no difference between the answer/perception of respondents to the research question/statement (RQ1-RQ6) and consumer's segmentation according to the periodicity of the market visit (H01) and according to their attitude towards shopping (H02).

STUDY AREA

Bratislava is situated in the south-western part of Slovakia adjacent to the state border with Hungary and Austria, on both sides of the Danube river. Bratislava (430,000 inhabitants) has become the major centre for employment and economic activity in the most dynamically developing region in Slovakia (Šveda & Barlík 2018).

Farmers' markets are one of the newest elements of urban Bratislava. There were 11 farmers' markets in the city in 2021 (Fig. 2). The Piac Markt is one of the oldest and one of the most popular because of location in the city centre. It is located in the Old Market Square in the city of Bratislava and is a continuation of building's tradition of being a market space. There are two floors where local farmers and producers sell their products, complemented by foreign specialties and natural cosmetics. About 40 of them are regulars. A food court and a rest area are located in front of the market. The atmosphere of the Saturday's market is complemented by various accompanying activities for children and adults, such as a children's theatre, a children's corner, a book exchange or a community kitchen, in which representatives of foreign communities living in Bratislava cook.
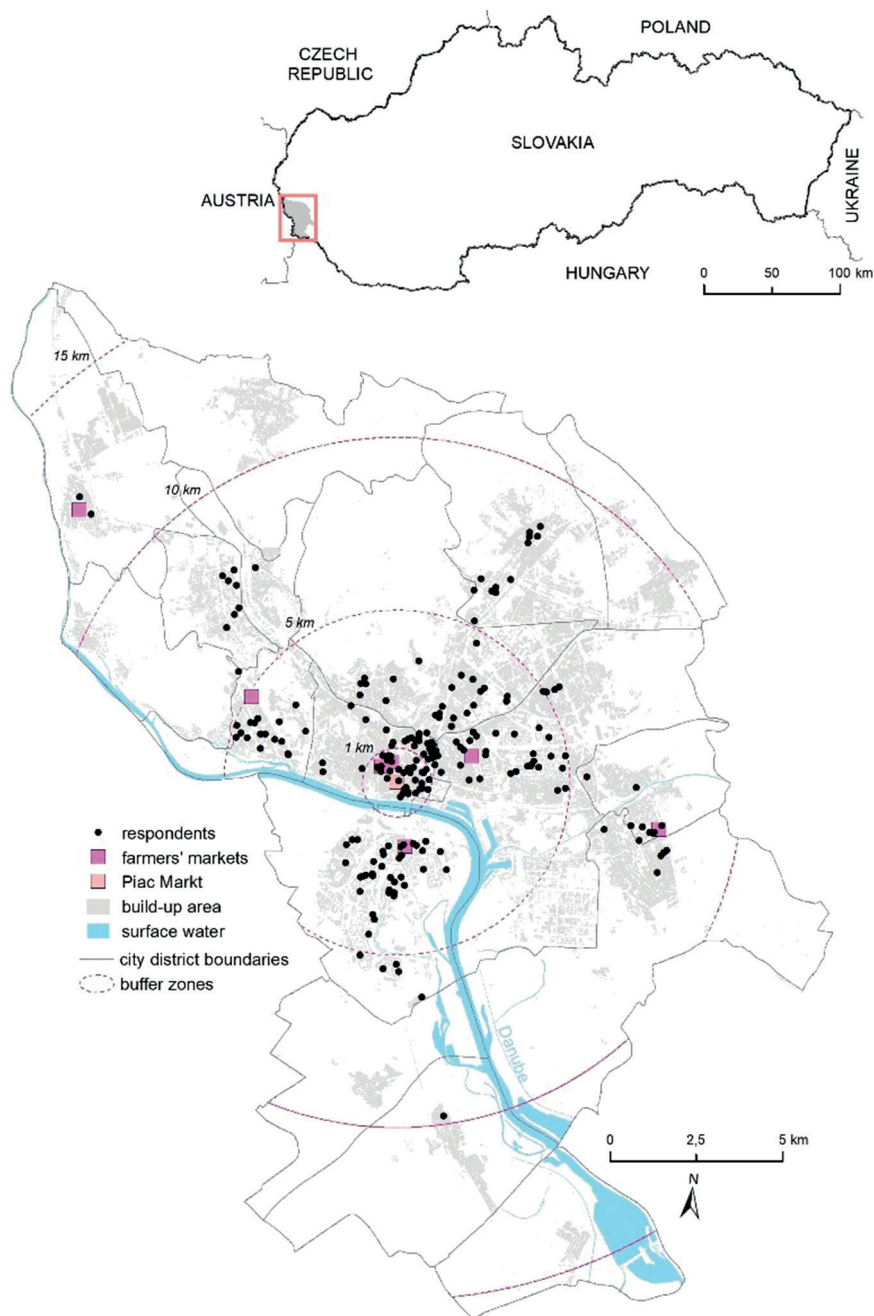
Fig. 2. Study area
Source: own processing

The Piac Markt market organisers follow the so-called Food Markets Code. When selecting the marketers, the organisers consider the following (staratrznica.sk):

- we prioritize small farmers, family farms and small local manufacturers active in our region;
- when it comes to food re-sellers, we consider whether their products are grow-able or manufacture-able in the local environment – in Slovakia. This type of assortment is only sold by its farmers or producers;
- when it comes to gastronomy, we consider the origin and quality of the input goods and favor those, who at least partially use products from local farmers and manufacturers;
- when it comes to re-sellers, who offer foreign products, we consider the origins of the goods and favor those, that are exceptional due to their quality, as well as traditional specialties, handmade goods or products in bio quality or fair trade. At the same time, we prioritize small importers, who only specialize in one specific product/selection of products or country/region;
- the majority of the sellers on our markets are farmers or small local food manufacturers (at least 70%) against (max. 30%) grocery re-sellers;
- cosmetic products must not create more than 5% of the absolute number of marketers and we favor Slovak manufacturers of quality natural cosmetics.

The organisers give priority to, consider, verify and select foods and products of local origin of exceptional quality, producible in the conditions of Slovakia, handcrafted in organic quality and fair trade (Fig. 3). For traders offering foreign products, organisers prefer small importers who specialise in a particular region and a specific product.

Fig. 3. The Piac Markt farmers' market in Bratislava
Source: Petra Hencelová

In Slovakia, the number of farmers' markets continue to grow (Hencelová et al. 2021c). Furthermore, local residents have made efforts to improve neighbourhood life and environment through community projects. These efforts seem to be the 'manifesto' of the residents' individualism through the transformation of public space and social inclusion (Blazek & Šuška 2017).

RESULTS OF HYPOTHESIS TESTING

A majority of consumers at the Piac Markt market are regular visitors (56.7%). For all visitors, the perception of full or partial agreement with the answer to RQ1 dominates: Farmers' markets offer better quality products compared to grocery stores (an average response score of 1.59). Testing the hypothesis (Table 2) showed that similarly to Hypothesis 1, we reject the hypothesis at the significance level of 0.05% (p=0.011), but we do not reject Hypothesis 2 (p=0.264). This means that with more than 95% probability the perceptions of consumers regarding the quality of products offered at farmers' markets depends on the segmentation of consumers into regular and occasional visitors. Nevertheless, the perceptions of occasional visitors achieve higher average scores on the responses (fewer positive responses), though with a smaller standard deviation. At the same time, we see that there is no statistically significant relationship between consumer perceptions of the quality of products offered at farmers' markets and the segmentation of shoppers into utilitarians and hedonists.

Products are sold at higher prices at farmers' markets (Carpio and Isengildina-Massa 2009, Louriero and Hine 2002, Varner and Otto 2008, Weatherell et al. 2003), evidence of which is consumer perceptions in the Piac Markt market (the average RQ2 response score is 3.45). Testing the hypothesis showed that there is no statistical dependence between regular and occasional market visitors and their perception of food from the market at better prices (p=0.649); however, there is a statistically significant relationship between the given perception and consumer segmentation by attitude towards shopping (p=0.020). Hedonists increasingly agreed with this statement (average score 3.36) and their real evaluation was more positive (more consenting) in the context of the expected values.

Consumers typically shop at the closest stores (Abelló et al. 2014, Bond et al. 2009, Brown 2002, Lehman et al. 1998), but differences were identified between the consumer segments analysed (average score 2.53). Statistically significant differences in the perceptions for RQ3 were confirmed in the case of regular and occasional market visitors (p=0.008). Regular visitors had to an increasing measure a more dissenting perception than occasional visitors. A similar statement cannot be made, however, for the hedonists and utilitarians segments, in whom there is no statistically significant relationship between the perceptions of RQ3 (p=0.931).

Consumers declare food origin to be one of their main reasons for visiting farmers' markets (Curtis and Cowee 2011, Gumirakiza et al. 2017, Hu et al. 2012,

Li et al. 2007). The research at the Piac Markt in Bratislava shows that the perception of food origin (RQ4) is different in the case of regular and occasional market visitors (p=0.016), but a statistically significant difference was confirmed between hedonists and utilitarians (the average score for both was 1.58).

Direct contact with farmers (producers) is also considered one of the primary factors that bring consumers to farmers' markets (Govindasamy et al. 2002, Hunt 2007). The shortening the supply chain in the food system is the advantage and the goal of AFN (Renting et al. 2003, Spilková et al. 2013; Tolmáči and Tolmáči 2020), which brings consumers closer to producers. We also focused our attention on the perception of consumers to RQ5. Testing the hypotheses showed that both Hypothesis 1 (p=0.001) and Hypothesis 2 (p=0.012) are rejected at the given level of significance. This means that the answer to the statement "Direct contact with farmers (producers) is the main factor for shopping at a farmers' market" depends on whether the respondent is a regular or occasional market visitor. Regular visitors and hedonists achieve lower average scores than occasional visitors and utilitarians.

AFN in general have a positive impact on the local economy (Borowiak et al. 2018, Larsen and Gilliland 2009, Nigh and González Cabañas 2015, Pettygrove and Ghose 2018, Tregear 2011). However, as follows from testing the hypotheses, there are statistically significant differences in the perceptions of such claims (RQ6) between farmers' market visitors. A dependence of different perceptions for RQ6 was identified between regular and occasional market visitors (p=0.009). Regular

Tab. 2. Results of testing the hypotheses*

Research question/statement	H01	H02
RQ1: Farmers' markets offer better quality products compared with other grocery retailers:	**0.011**	0.264
RQ2: Farmers' markets offer better priced products compared with other grocery retailers:	0.649	**0.020**
RQ3: Is distance (accessibility) the most important factor in choosing the place where you most often buy food?	**0.008**	0.931
RQ4: Are you interested in where the food you buy comes from?	**0.016**	0.282
RQ5: Direct contact with farmers (producers) is the main factor for shopping at a farmers' market:	**0.001**	**0.012**
RQ6: Farmers' markets strengthen the local economy:	**0.009**	0.886

Source: own processing
*H01: There is no difference between the answer/perception of respondents to the question/ statement (RQ1-RQ6) and their segmentation to regular and occasional market visitors. H02: There is no difference between the answer/perception of respondents to the question/statement (RQ1-RQ6) and their segmentation into hedonists and utilitarians.

visitors usually scaled their responses more positively (average score 1.47) than occasional visitors (average score 1.72). In the case of the perception of hedonists and utilitarians, no statistically significant dependence for the RQ6 statement was confirmed.

CONCLUSIONS

The concept of AFN is also something new in a country where over more than three decades retail has been transformed, and the concept of farmers' markets is still seeking its place in a wide spectrum of consumers. The example of the Piac Markt farmers' market in Bratislava also leads to this evidence, whose visitors are not a general sample of consumers (e.g. Aprile et al. 2016, Govindasamy et al. 2002, Wolf et al. 2005).

The paper assessed and statistically evaluated two segments of consumers in connection with their perceptions of visitors to farmers' markets. The results from Bratislava indicate that in the case of segmentation based on the frequency of visits (regular vs occasional visitors) there are significant differences in most perceptions. In contrast, in the case of segmentation according to attitude towards shopping in general (hedonist vs utilitarian), a dependence was expressed only exceptionally. These findings also point to the importance of building loyalty in the seller-customer or producer-consumer relationship (Carey et al. 2011, Gao et al. 2012). The experience of shopping at farmers' markets is unique, as the atmosphere is friendlier and more personal, which is particularly in line with the hedonistic consumers. Nevertheless, utilitarians represent more than one-third of the visitors to the farmers' market in Bratislava. The important finding is that their perception of farmers' markets is not significantly different than those of hedonist shoppers. The perception of farmers' markets in Bratislava thus depends only exceptionally on the attitude towards shopping, which makes them a universally acceptable place for purchases.

Statistically significant differences between the two consumer segments were identified in the analysed questions/statements only in the case of the statement that direct contact with farmers (producers) is the primary factor for shopping at a farmers' market. Furthermore, consumers at this Slovak farmers' market did not show clear agreement with this statement, with an average score of 2. 55. Thus, consumers shopping at the Piac Markt differ from foreign shoppers, in whom direct contact with producers is associated with a sense of local identity. This offers the potential to a better understanding of social interactions, which can support the economic and environmental sustainability of local agriculture (Hunt 2007).

Our study provides an interesting insight for the academic community in researching consumer behaviour at farmers' markets. We provide useful information for market organizers as well. Organizers can make the farmers' market

more than just a place to shop, but also a place to interactions through cultural and entertainment activities, workshops, etc., not only concentrating on the choice of food retailers. Organizers can choose the right marketing for potential visitors to get higher market attendance. Piac Markt farmers' market seems to be an appropriate object for research on consumer behaviour, and the results of the research can be applied to organizing similar events aimed at supporting and developing the local food system. By analysing the behaviour of visitors on the market, the missing general code for Slovakian farmers' markets can be formulated.

The conclusions of this study also have some limitations. This is a sample of respondents (visitors) from a single farmers' market. Further, the period of data collection coincided with the COVID-19 pandemic. Even though no significant restrictions (other than wearing respirator masks) were in place at the time of the survey, consumers' concerns about the possibility of infectious disease could have affected the resulting sample of respondents.

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A TOURIST FLOW STUDY OF THE RURAL METROPOLITAN AREA OF ORADEA COMPARED TO BIHOR COUNTY

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Abstract

The current tourist flow study is part of a series of several tourist-related research on the rural region of the Oradea Metropolitan Area. The research analyzes the tourist flow in the rural OMA compared to Bihor County. Thus, the annual tourist flow quantitative and qualitative indicators in the area of the rural OMA and Bihor County for the period 2001-2020 were analyzed referring to tourist arrivals, overnight stays, average length of stay, tourist flow density and seasonality. The

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secondary data were collected from annual statistic registries of the Romanian National Institute of Stastistics, stored, processed and analyzed under the form of maps, graphs and tables as well as adjoining interpretations through the GIS mapping program and statistical analysis programs.The analysis revealed that the hotspot of tourist consumption in the rural Metropolitan Area of Oradea (i.e. OMA) and Bihor County is represented by Băile Felix and 1 Mai spas which draw the largest share of all OMA tourists of 93.2% and 48.3% of Bihor County for the analyzed period 2001-2020 for its thermal cure factors. It reveals an overtourism consumption in a single commune vresus its other counterparts. The length of stay in the rural OMA amounts to six days, the high season being from May to October with a peak in August.

Key words
Oradea Metropolitan Area, Bihor County, tourist flow analysis, tourist flow weighted difference, overtourism consumption, GIS.

INTRODUCTION

Tourism is a complex phenomenon, which raises a few issues related to the satisfaction of human needs in terms of tourist travel. Carrying out statistical studies on tourist flow can provide useful information for leisure and entertainment forecasts. In this sense, the knowledge of the structural tourist flow indicators can determine a certain direction for the development of services offered by the tourist providers. The objective of measuring the size of the tourist flow is to understand the socio-economic phenomenon. Lately, tourism has become a fundamental component of economy and stood as an opportunity to develop regions with tourism potential. Many tourist destinations are confrunted with unbalances referring to the tourist demand, some featuring overtourism while others complete lack of tourists on the same relatively restraint territory. The territorial focus of this paper triggered a small administrative unit such in the shape of a metropolitan area (i.e. rural part of the Oradea Metropolian Area) engulfed in a lerger administrative unit such as that of a county (i.e. Bihor County). Overtourism generates negative outcomes on the territory such as pressure on the territory's resource thus triggering environmental, social and cultural impacts and an unsustainable consumption.

The current study's main objective is to find out where the tourist demand is concentrated at the level of rural Oradea Metropolitan Area (OMA) compared to Bihor County and in this purpose more statistical indicators from the period 2001-2020 were analyzed such as tourist arrivals, overnight stays, average length of stay, tourist flow density and seasonality. The tourist flows were identified through statistical analysis and the cartographic approach. Its results can be used further on as a landmark for the weak and strong points of Bihor county. A weakpoint reference is made to the overtourism consumption occuring in a single commune through pressure on resources such as thermal waters, converted arable lands

(Linc et al., 2017) as well as on the local population. The strong points are given by the advantages of rural area and its ecotourism valences (Acharya et al.,2021; Linc et al., 2019; Nurkovic, 2017).

From the two territorial entities comparison, rural OMA and Bihor County certain clear-cut differences emerge namely in the case of rural OMA tourist arrivals' and overnights' indicators analysis which exceeds by far the Bihor county counterpart. This overturn is mainly due the two hotspots (i.e. two old international spas) in terms of tourist consumption located in the southern metropolitan part which mange to capture most tourist flows, so that one out of two arrivals from Bihor county was made in the rural OMA during 2001-2020. At the other end, in the case of the average length of stay, Bihor County overpasses by far rural OMA which emerges as a natural fact given that Bihor County spreads over a wider surface (i.e. 7544 km²) and therefore a more varied tourist supply whereas the rural OMA barely spreads over 634.34 km².

The same holds true for the analysis of the tourist flow density where Bihor County obviously overtops rural OMA, a predictable situation given the population of the two territorial entities, the former registering 611,017 inhabitants whereas the later registers 245,537 inhabitants. The need to carry out these analyses is primordial because of the lack of literature in this field for the analysed territory, being meant to fill a gap from this perspective. This economic indicators' analysis has led to the elaboration of a holistic tourist consumption view at a very local scale as that of a metropolitan area as well as a regional one as that of a county and of the different consumption patterns between the two. In the antithesis it is also a comparison between a relatively new local territorial entity versus an old regional territorial entity tourist consumption trends.

The study results can assist potential tourist entrepreneurs and investors to develop innovative tourist products within the newly rural OMA region as well as seeing where most tourist consumption occurs at the level of the rural OMA and Bihor County so as to avoid overtourism and spread flows sustainably throughout the entire rural OMA in the future.

Oradea Metropolitan Area Setting
The OMA is located in the north-western part of Romania and lays over a lowland plain and low hills area. The relief is set in light steps and consists of the low plain of Crişuri, the Depressionary Corridor of Crişul Repede river, Oradea Hills in the north-east and Tăşad Hills in the south-east area.

The OMA is an association of territorial administrative units found in the proximity of the municipality of Oradea, where the latter is the core and the surrounding communes are its satellites. It has been created with the purpose of enhancing the area's prosperity and its residents' quality of life. The association

was set up in on the 9th of May 2005 and currently counts 12 members. Among them 11 are communes (i.e. Biharia, Borş, Cetariu, Ineu, Nojorid, Oșorhei, Paleu, Sînmartin, Sîntandrei, Girisu de Cris, Toboliu) and a municipality. (i.e. Oradea city). The rural communes, submitted for the tourist flow analysis herewith cover 634.34 sqkm (figure 1).

Figure 1. Administrative map of Romania and Oradea Metropolitan Area

LITERATURE REVIEW

Tourism grasped great attention due to this sectors's unprecedented growth already since its 1950s. The dynamics of tourism offers both challenges and opportunities with new and innovative emerging products which manage to increase tourists flows. Lately the focus and challenge it to watch over this extension so that it is sustainable both at global, regional and local level (Fletcher et al., 2018). Despite climate change concerns, most likely tourism will continue to grow exponentially in the future, despite shock years faced by the Sars-Cov pandemic situation, most destinations are very resilient and witness a fast-paced come-back to pre-pandemic tourist flows. Europe will remain the largest receiving region, but tourism will face new constraints which will alter the way it operates also in terms of policy-making and planning. Due to its social nature tourism is influenced by economic development, politics, environment, technology, etc. Tourism in the third millennium will not be done randomly, but in the lens of trying to correct excesses of the past, therefore the concept of resident-responsive tourism will apply in which tourism development will have to seek the support of the communities it affects directly. Despite many doubts, the 27 member states

European Union has continued to grow its number of tourists and in the prospect of a further enlarged EU with other eastern countries applying for membership it will be one of the largest economic bloc and tourism region in the world (Stupariu, 2017). Certain countries tend to opt for a market economy model others have witnessed movements toward deregulation, privatization, regional economic integration or for the global, transnational corporation model (Goeldner and Ritchie, 2012). The internationalization of markets and well as the rise in technology will yield a more knowledge-based society with more experienced, discerning, demanding and sophisticated tourists seeking individualized experiences.

The numbers of tourists worldwide continue to increase, apart from some cataclysmic events among which a recent one was the Covid-2019 outspread which made worldwide demand drop to the level of the 1990s (UNWTO, 2020), therefore demand is a primary focus for tourism entrepreneurs. The success or failure to attract markets to own tourism business be they hotels, airline companies or tour operators depend on the businessmen's skills and know-how, therefore demand is a key determinant for tourism profitability and efficiency. The demand for a tourism product in a destination relies on the price of tourism in the destination, the price of competing alternative destinations, potential consumers' incomes, consumer tastes, and the promotional efforts of the destination as well as other social, cultural, geographic and political factors (Song et al., 2009).

Tourism managers will attempt to keep a close match between the supply and demand of a product. The ability to maintain a high occupancy rate is critical for an accommodation unit, which involves a good balance between the fixed and variable costs. The variations in demand range from daily, weekly, seasonal to the long- term (Weaver and Lawton, 2014). The ability to match the gap between the two depends on the marketing strategies and decision-making of tourism entrepreneurs, a step worth taken forth when the anticipated demand materializes.

Ryan (2000) dwells on the issue of determinants of demand, such as the economic and social triggers, the former relating to higher levels of income, level of prices, exchange rates and the latter to paid leisure time and free weekends.

Demand refers to tourists, quantified in tourist arrivals and overnights in statistical surveys. An overnight stay represents every night for which one person is registered into an accommodation unit (Cheran, 2016) and arrivals refer to an individual who makes multiple trips to a country being counted each time as a new arrival (Das, 2017).

The tourist flow is approached in various specialized works related to their purpose (Sigala et al., 2019; Stupariu, 2017), methods of analyzing the tourist flow (Rasouli and Timmermans, 2014; Pendyala and Bhat, 2012; Schiffer, 2012) forecast determined by tourist traffic indicators (Song and Witt, 2012; Wong and Song, 2012; Frechtling, 2012), the importance of analyzing the tourist traffic using specialized software (Lellinger, 2010), measures to increase the quality of

tourist services determined by the evolution of tourist traffic (Tribe, 2011), tourist potential (Tatar et al., 2018; Linc et al., 2019; Francesconi, 2014) or the motivation of the tourist traffic (Mwikali, 2014; Pearce, 2011). The current study aligns to a series of themed tourism-based studies carried out in the Oradea Metropolitan Area of Stasac et al. (2020), Linc et al. (2019), Tatar et al. 2018; 2021), Carriere et al. (2018); Bucur (2012) and Dincă et al. (2012), meant to create a holistic approach of the tourism phenomenon in the OMA on the background of its development into an area with all premises for a fully-fledged integrated inter-communally linked tourist destination. Bihor County as a tourist destination has been studied in the literature by Herman et al. (2019; 2020; 2021) as well as Romanian tourism by Light and Dumbraveanu (1999), Postelnicu and Dabija (2018), Bujdoso et al. (2015).

The OMA tourist flow relies, in terms of motivation on capitalization of the thermo-mineral waters which is noticeable from afar, the existence of multifunctional lacustrine accumulations, protected areas (nature reserve and Natura 2000 site), natural resources which are complemented harmoniously by a wide range of man-made resources.

METHODOLOGY

The research questions addressed by the study refer to finding out if there is a polarizing area of tourism demand/flow within the rural OMA and Bihor County and if the smaller territorial unit such as OMA is attracting more tourists versus its bigger counterpart such as Bihor County. Thus the main objective is to find out where is concentrated the tourist demand at both the level of rural OMA and in this purpose more statistical indicators from the period 2001-2020 were analyzed such as tourist arrivals, overnight stays, average length of stay, tourist flow density and seasonality.

All secondary quantitative data were collected from annual statistic registries of the Romanian National Institute of Stastistics and processed under the form of GIS maps, graphs and tables as well as adjoining interpretations.

The number of tourists staying in the tourist accommodation units in the rural region of the Oradea Metropolitan Area included all persons, regardless of citizenship (i.e. both Romanians and foreigners) who travelled outside their permanent residence localities for a period of less than 12 months and stayed at least one night in a tourist accommodation unit in the studied area (i.e. the rural metropolitan area of Oradea), having as main reason for the trip other than to carry out a paid activity.

The indicators analysed in the current study refer to the rural OMA overnights analysis, where an overnight stay is defined as a 24-hour interval, starting with the hotel time (12:00), for which a person is registered and receives accommodation on account of the rate for the space occupied. Further on the rural OMA length of stay is calculated, where the length of stay is obtained from the ratio between the

number of overnight stays and the number of arrivals and the rural OMA tourist flow density is also calculated being defined as the ratio between the number of arrivals and the number of residents. Seasonality trends were also highlighted, where seasonality represents a predictable fluctuation or pattern that recurs or repeats over a one-year period.

The statistical data used in the current study come from the National Institute of Statistics in Romania database (https://insse.ro/cms/), the reference period for all the tourist flow indicators was the interval 2001-2020.

RESULTS AND DISCUSSIONS

Arrivals of tourists staying within tourist accommodation facilities

In the period 2001-2020 in the rural OMA region a total number of 2,875,633 tourist arrivals were registered. Their share in the flow determined by the tourist traffic in Bihor County (administrative unit in which OMA is located), was 52.8%, or in other words, one of two arrivals of tourists in Bihor County during the studied period was made in rural OMA (figure 2).

Versus the average annual value of arrivals in the rural OMA during 2001-2020 (149,775 arrivals), it is only during 2015-2019 that the registered values were higher, indicating an increase in the tourist flow, the annual exceedances being included between 4.5 and 69.5%. Prior to this period, respectively between the years 2001-2014, the values recorded annually were lower than the average value with weights between 0.5 and 29.3%. Therefore, in the second part of the studied period a tourist flow increase can be noticed (figure 2 and 3).

The share of arrivals in the rural OMA within the total number of arrivals in Bihor County has a decreasing trend over the entire period between 2001-2020. From an average value of over 60% recorded in the first part of the studied period (2003-2009), an average value of less than 50% was reached in the last part of the studied period (2012-2019), even if numerically this last part has seen significant increases. This can be accounted for, on the one hand by the new opportunities offered by Bihor County for practicing other types of tourism besides spa, and on the other hand by the increase in the number of participants in the tourist flow (figure 2 and 3).

Inevitably, the tourist arrivals share in the rural Oradea Metropolitan Area was dominated by the recorded values in the spas Băile Felix and Băile 1 Mai which attract 93.2% of the total number of tourists arriving in the OMA rural during 2001-2020 (respectively 2,791,492 arrivals or 48.3% of the total number of tourists arriving in Bihor County in the same period). The possibilities of practicing spa tourism in the two locations account for these higher values.

Borș is located on the second place, where due to transit tourism, the tourist flow accounted for 5.1% of the total number of tourists arriving in the rural OMA
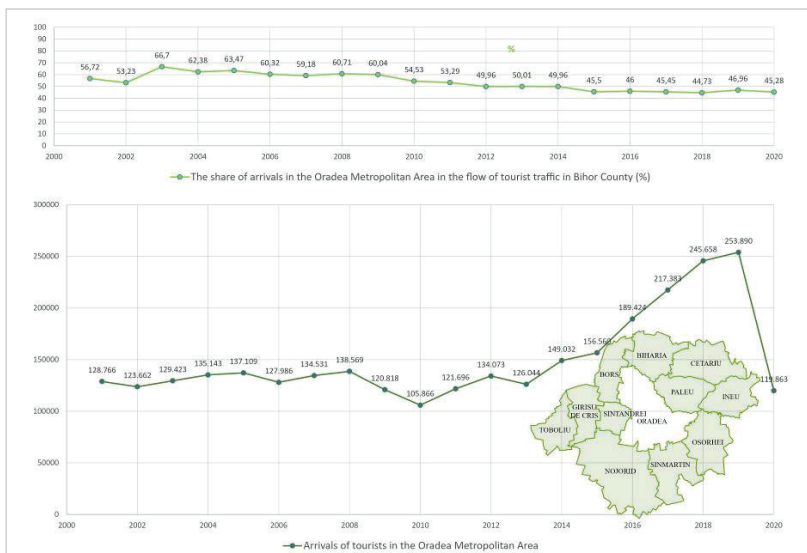
Figure 2. Arrivals of tourists in the rural region of the Oradea Metropolitan Area
and their share in the of tourist flow of Bihor County during 2001-2020
*Source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*
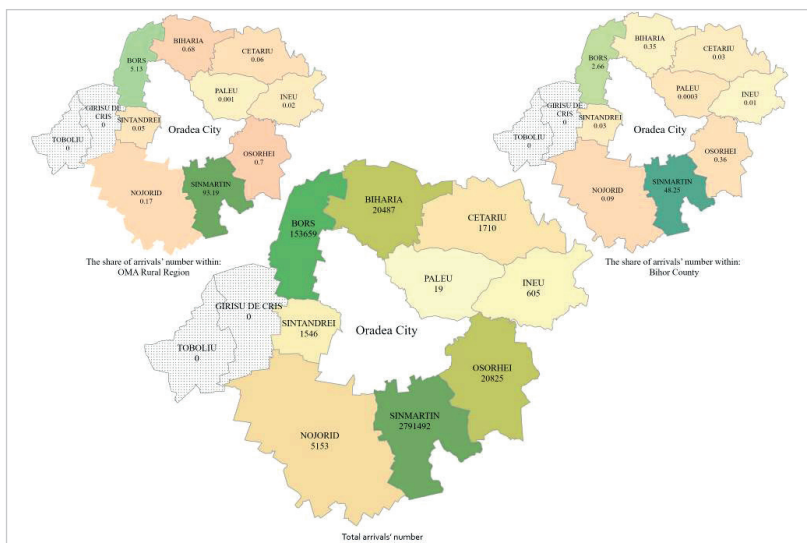
Figure 3. Arrivals of tourists in the localities of the rural region of the Oradea Metropolitan
Area and their share in tourist flow in the rural OMA region and Bihor County
(total values for the period 2001-2020)
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

region during 2001-2020 (respectively 153,659 arrivals or 2.7% of the total number of tourists arriving in Bihor County during the same period).

The rest of the rural OMA localities registered low weights in terms of arrivals from 2001-2020, the values being below 1%: the number of arrivals registered during 2001-2020 was between 19-20,825 with a share of the tourist flow arrivals number between 0.001 and 0.7% and a share of the number of arrivals in the tourist flow in Bihor County between 0.0003 and 0.36% (figure 2 and 3).

Approximately four-fifths (80.3%) of tourists arriving in the rural OMA region during 2001-2020 preferred the hotel accommodation (the share registered in Bihor County for the same type of facility was 77.7%), 11.8% preferred the tourist and agrotourism pensions (the share registered at the level of Bihor county for the same type of facility was 3.8%), and 4.8% preferred the tourist villas and chalets (the share registered at the level of Bihor county for the same type of facility was 11.0 %). As it can be noticed in figure 4, the weights recorded in the OMA rural area are similar to the situation encountered in Bihor County (figure 4, 5).
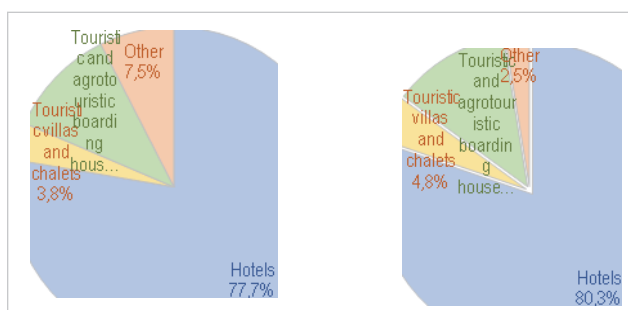
Figure 4. The share of tourist arrivals by accommodation facilities Bihor County (left)
rural OMA region (right) by weighted means for 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

Regarding the annual tourist flow values, in the rural OMA the share of hotel arrivals decreased during 2001-2020 from weights that exceeded 85% in the first part of the studied period (2001-2008), to weights below 75% during 2015-2020. This is accounted for by the reduction of the share of tourist accommodation capacity in hotels due to the emergence of other types of tourist accommodation structures.

In the case of tourist villas and chalets, until 2009, the share of arrivals in these types of facilities was on average of 7.5%, during 2010 and 2014, the share of arrivals in these facilities was on average of 1.9%, and after 2015, the share of arrivals in these facilities was on average of 3.7%.

A special case, responsible for reducing the share of tourist accommodation capacity in hotels is due to the emergence of tourist and agritourist pensions. If until 2009 the share of arrivals in these types of facilities was on average of 1.8%, after 2010, the share of arrivals in these types of structures was on average of 18.1%. In fact, if in 2001 the share of arrivals in these types of facilities was of 0.4%, in 2020 the share of arrivals in these facilities was of 25.8%.

In other types of facilities (hostels, apartment hotels, motels and bungalows), the average share of arrivals during 2001-2020 was on average of 2.5% (Figure 5).
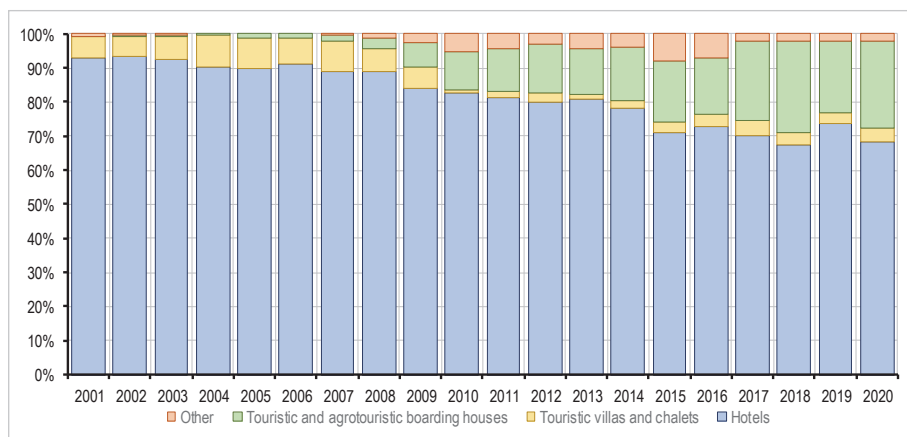
Figure 5. Arrivals of tourists in Bihor County and the rural OMA region
by accommodation types during 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

Overnight stays of tourists within tourist accommodation facilities
During 2001-2020 in the rural OMA region a total number of 17,129,189 overnight stays of tourists were registered. This results in an average annual value of 856,459 overnight stays in the rural OMA area. The share of overnight stays in the rural OMA region in the flow determined by the tourist traffic in Bihor County in the period 2001-2020 was 74.9%, or in other words, 3 out of 4 overnight stays in Bihor county during the studied period were made in the rural region of the OMA (Figure 6, 7).

Regarding the number of overnight stays in the rural OMA area during 2001-2020, we can identify three distinct periods: the first period, between 2001-2008 is characterized by a large number of overnight stays, the annual average being exceeded by values comprised between 8.7 and 18.9%; the second period, which begins in 2009 and lasts until 2015, is characterized by a lower number of overnight stays, probably due to the economic crisis of 2008 and its aftermath, when the number of overnight stays was less with values between 3.8 and 17.3 %

compared to the annual average recorded in the period 2001-2020; the third period, between the years 2016-2019 where the number of overnight stays in the OMA rural successively increases and decreases, successive attempts to return after a negative tourist flow period (Figure 6, 7).

Regarding the share of overnight stays in the rural OMA area among the total number of overnight stays in Bihor County, according to the recorded data, two distinctive periods stand out: the first period, during 2001 and 2013, is characterized by a high share of overnight stays in the tourist flow from Bihor county, the average annual overnight stays registered in this period in the rural OMA region is of 81.6% of the total number of overnight stays in Bihor county; the second period, between 2014 and 2020 is characterized by a lower share of overnight stays. The average annual overnight stays recorded in this period in the rural OMA region being of only 63.5% from the total number of overnight stays in Bihor County (Figure 6, 7).
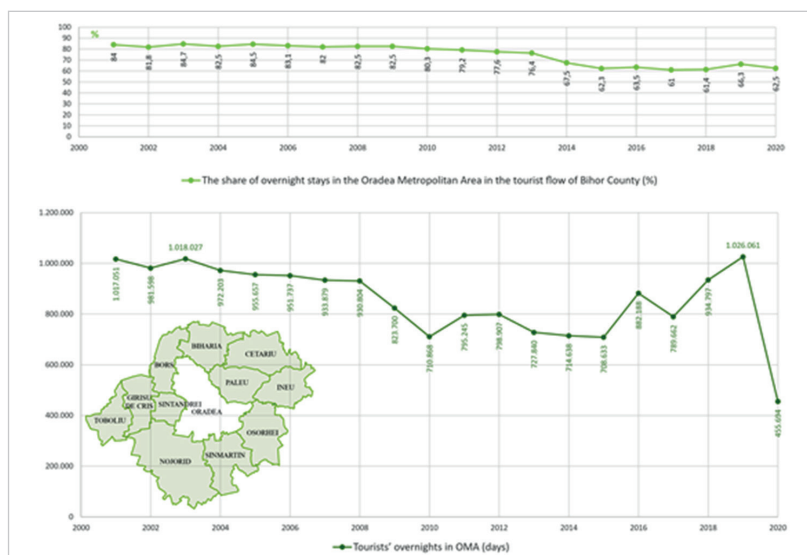
Figure 6. The overnight stays in the Oradea Metropolitan Area and their weight within the tourist flow of Bihor County during 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

As in the case of arrivals, the share of overnight stays in the rural OMA area was dominated by the values recorded in the spas Băile Felix and Băile 1 Mai accounting for 98.4% of the total number of overnight stays of tourists in the rural OMA during 2001- 2020 (or 73.6% of the total number of overnight stays in Bihor County in the same period). The need for a longer period to perform certain procedures and treatments in the spas Băile Felix and Băile 1 Mai led to a higher

number of overnight stays, hence their significant share in the tourist flow. Due to the practice of transit tourism, the tourist flow in Borş accounted for 1.2% of the total number of overnight stays in the rural OMA area during 2001-2020, respectively a total number of 205,669 overnight stays. As in the case of arrivals, the rest of the localities in the rural region of the Oradea Metropolitan Area had low shares in terms of overnight stays during 2001-2020, the values being below 1%: the number of overnight stays recorded during 2001-2020 was between 30 and 23,899, with a share of the number of overnight stays in the tourist flow in the rural OMA between 0.0002 and 0.1% and a share of the number of overnight stays in the tourist flow in Bihor county between 0.0001 and 0.1% (Figure 6).
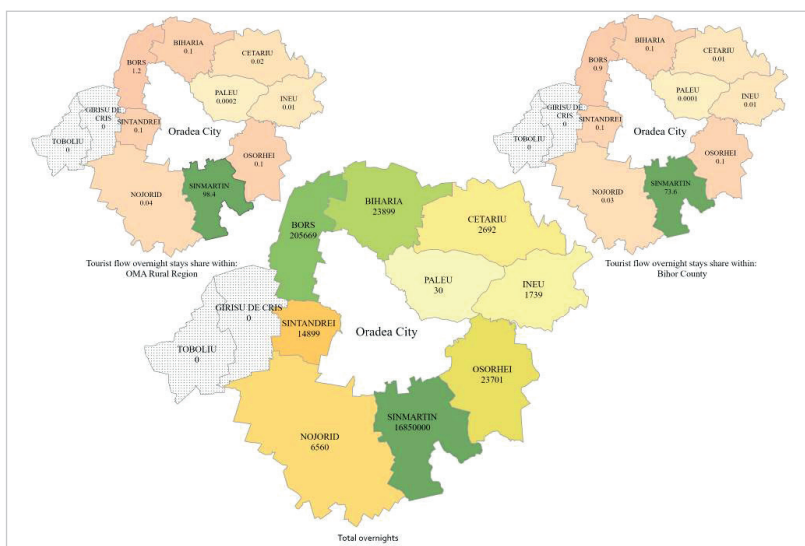
Figure 7. Overnight stays of tourists in the Oradea Metropolitan Area rural localities and their tourist flow share within Bihor County and rural OMA during 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

More than nine out of ten (92.5%) of the overnight stays carried out during 2001-2020 in the rural OMA region were registered within hotels (the share of overnight stays registered in Bihor county for the same facility was 88.0%), 4.4% of overnight stays were spent in tourist and agritourism pensions (the share of overnight stays recorded in Bihor County for the same facility was of 5.7%), and 2.0% of overnight stays were in villas and chalets (the share of overnight stays registered in Bihor County for the same type of facility was of 2.6%). As it can be seen in Figure 8, the overnight stays share by type of accommodation facilities in the rural OMA area are similar to overnight stays recorded in Bihor County (Figure 8, 9).
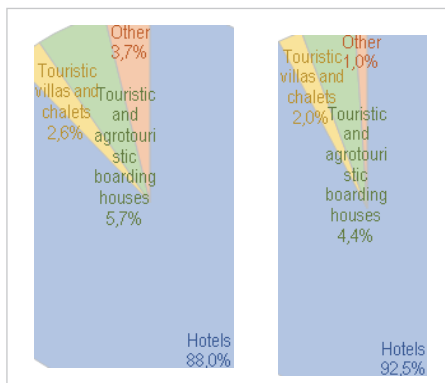
Figure 8. The overnight stays share by types of accommodation facilities
in Bihor County (left) and the rural region of the Oradea Metropolitan Area (right)
by average weights for 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

Regarding the annual tourist flow values of the rural OMA, the share of overnight stays in hotels decreased during 2001-2020 from shares that exceeded the value of 92% in the first part of the studied period 2001-2014 to shares below the value of 87% in the last part of the studied period 2015-2020. Almost identical to the situation found out in the case of arrivals, is situation is attributable to the reduction of the share of tourist accommodation capacity in hotels due to the emergence of other types of tourist reception structures.

In the case of tourist villas and chalets, the overnight stays' share recorded until 2009 was on average of 2.7%, between 2010-2014, the share of overnight stays recorded in these types of facilities was on average of 0.6%, and after 2015, the share of overnight stays registered in these types of facilities was on average of 2.1%.

The decrement of tourist accommodation capacity share in hotels is due to tourist and agritourism pensions. If until 2009 the share of overnight stays recorded in these types of facilities was on average of 0.6%, after 2010, the share of overnight stays recorded in these types of facilities was on average of 8.3% (an increase of over 1400%). In fact, if in 2001 the overnight stays share registered in these types of structures was 0.05%, in 2020 the share of overnight stays recorded in these types of facilities was of 14.4% (an increase of almost 30,000%). In other types of facilities (hostels, apartment hotels, motels and bungalows), the average share of overnight stays recorded during 2001-2020 was on average of only 1.1% (Figure 9).
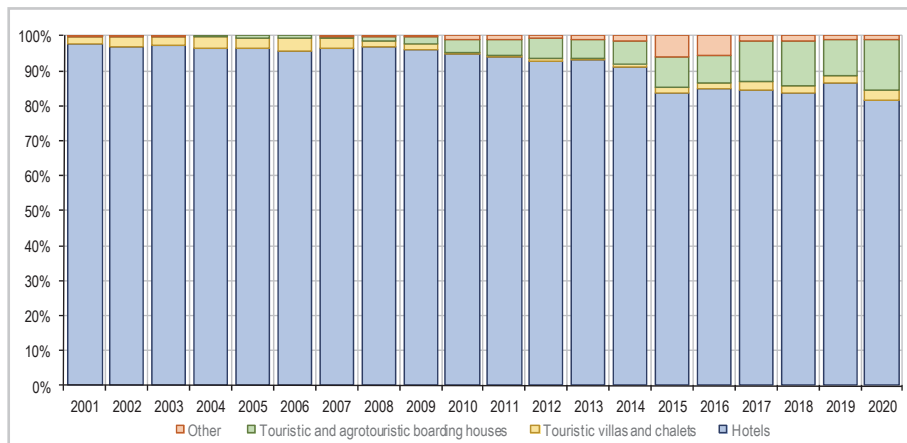
Figure 9. Overnight stays of tourists in the Oradea Metropolitan Area by types
of tourist accommodation facilities during 2001-2020
*Source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations02*

Average length of stay

Obtained from the ratio between the number of overnight stays and the number
of arrivals, the average length of stay in the rural OMA area during 2001-2020 was
6.0 days, compared to 4.3 days referring to the average length of stay registered
in Bihor County in the same period. Per whole, the average length of stay shows
a decreasing trend throughout the analyzed period (i.e. 2001-2020), identifying
three distinct stages: the first stage, between 2001-2003, with high values of the
average length of stay of 7.9, the second stage between 2004-2013 with average
values of the average length of stay of 6.7 and the third stage between 2014-2020
with low values of the average length of stay of 4. 2. Compared to the values of the
average length of stay registered in Bihor County, the values of the average length
of stay in the rural OMA area during 2001-2020 were higher with shares between
127.0 and 155.4% (Figure 10).

Regarding the average length of stay by types of tourist accommodation
facilities in Bihor County and the rural Oradea Metropolitan Area, according to
the data analyzed for the period 2001-2020, in the rural Oradea Metropolitan Area
the longest average stay was recorded in hotels, here registering a value of 6.6
(compared to an average length of stay of 4.5 registered in hotels in Bihor county).
In the other types of accommodation facilities, the average length of stay in the
rural region of the Oradea Metropolitan Area has values between 2 and 2.5 (close
to the values of average lengths of stays registered in the same accommodation
facility in Bihor county) (Figure 11).

Figure 10. Average length of stay (days) in the rural OMA and weight difference
compared to the average length of stay in Bihor County during 2001-2020
Source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations

Figure 11. Average length of stay by types of tourist accommodation facilities
in Bihor County (left) and the rural Oradea Metropolitan Area (right) by weighted
average values for the period 2001-2020
Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations

Compared to the types of tourist accommodation facilities, the average length
of stay in the rural OMA has high values in the case of hotels; in the first part of the
studied period of 2001-2013, the average length of stay in hotels exceeded 6.7,
with an average value for this period of 7. 6. After 2014, the average length of stay

in hotels decreased below 5.7, registering an average value for this period of 5. 0. In the rural OMA, the average length of stay in hotels in the period 2001-2020 was between 4.4 and 8. 3. Compared to the average length of stay in hotels registered in Bihor County, the average length of stay in hotels in the rural OMA is higher with shares between 126.4% and 158.6% (Figure 12).

The average length of stay in tourist villas and chalets in the rural OMA during 2001-2020 was between 1.7 and 4. 2. Compared to the average length of stay in tourist villas and cottages registered in Bihor County, the average length of stay in tourist villas and chalets in the rural OMA is higher with shares between 54.8% and 106.4% (Figure 9, Table 8). The average length of stay in tourist and agritourist pensions in the rural OMA during 2001-2020 was between 1.0 and 2. 9. Compared to the average length of stay in tourist and agritourism pensions registered in Bihor County, the average length of stay in tourist and agritourism pensions in the rural OMA is higher with shares between 72.1% and 130.6% (Figure 12).

The average length of stay in other tourist accommodation facilities in the rural OMA during 2001-2020 was between 0 and 3. 8. Compared to the average length of stay in other tourist accommodation recorded in Bihor County, the average length of stay in other tourist accommodation in the rural OMA is higher with shares between 0% and 154.3% (Figure 12).
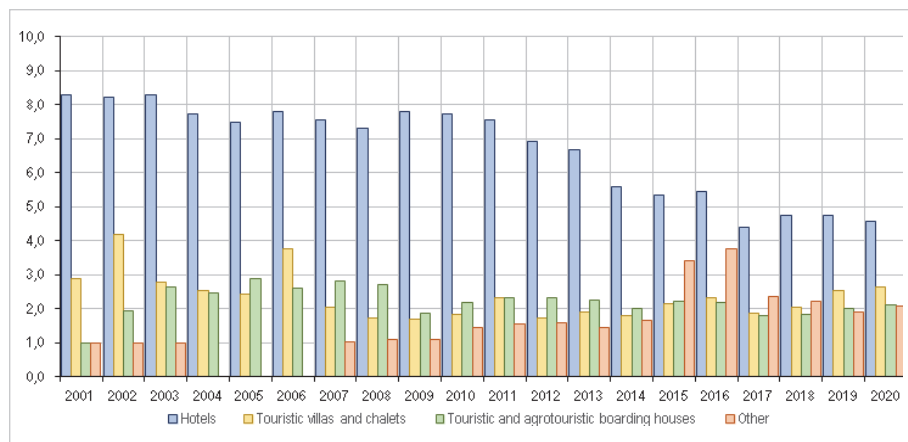
Figure 12. Average length of stay by types of tourist accommodation facilities
in the rural OMA during 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

The relatively high value of the stay registered in the rural OMA is due to the tourist flow from the spas of Băile Felix and Băile 1 Mai where spa tourism generates long periods of accommodation for the practitioners of this type of tourism. Thus, during 2001-2020 in Sântmartin there was an average length of stay of 6. 3. A close value of the average length of stay, respectively 5.9 (representing 98.5% of the average length of stay registered in the rural OMA during 2001-2020), was registered in Sântandrei, but the value is generated by a relatively small tourist flow given that Sântandrei has a share of only 0.05% of the total number of arrivals in the rural OMA during 2001-2020 and only 0.09% of the total number of overnight stays in the rural OMA during 2001-2020.

Approximately the same situation is found in the case of Ineu, where the average length of stay is relatively long, respectively 3.6 (representing 60.0% of the average length of stay registered in the rural OMA during 2001-2020), and the share of arrivals and overnight stays in the tourist flow registered during 2001-2020 in the rural region of OMA was 0.02% and 0.01% respectively.

The other localities registered an average length of stay between 1.1 and 1.6, but among them only Borş locality had a share of arrivals and overnight stays in the tourist flow registered during 2001-2020 of over 5% and 1% respectively (Figure 13).
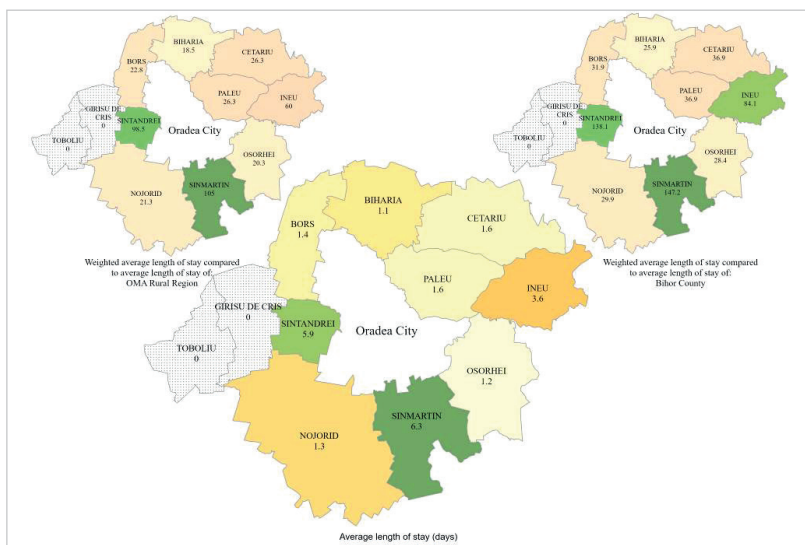
Figure 13. Average length of stay in the rural OMA and their weighted difference in the tourist flow in the rural OMA and Bihor County during 2001-2020
Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations

Tourist flow density

Defined as the ratio between the total number of arrivals and the resident population, the tourist flow density in the rural OMA had an average value of 3.46 for the period 2001-2020.

Taken as a whole, the tourist flow density in the rural OMA during 2001-2020 features three stages. The first stage, between 2001-2008, is characterized by a relatively high average tourist flow density, respectively with values between 3.28 and 3. 66. The period 2009-2013 follows and is characterized by a relatively low average tourist flow density, respectively with values between 2.55 and 3. 05. The last period of 2014-2019, is characterized by an increase in the tourist flow density, from 3.27 to 4. 91. Comparing the average density of tourist flow in the rural OMA area to the average density of tourist traffic in Bihor County from 2001-2020, it results in weights between 527.0% and 1,157.5%, hence resulting the size of the tourist flow density in the rural OMA compared to Bihor County (Figure 14).
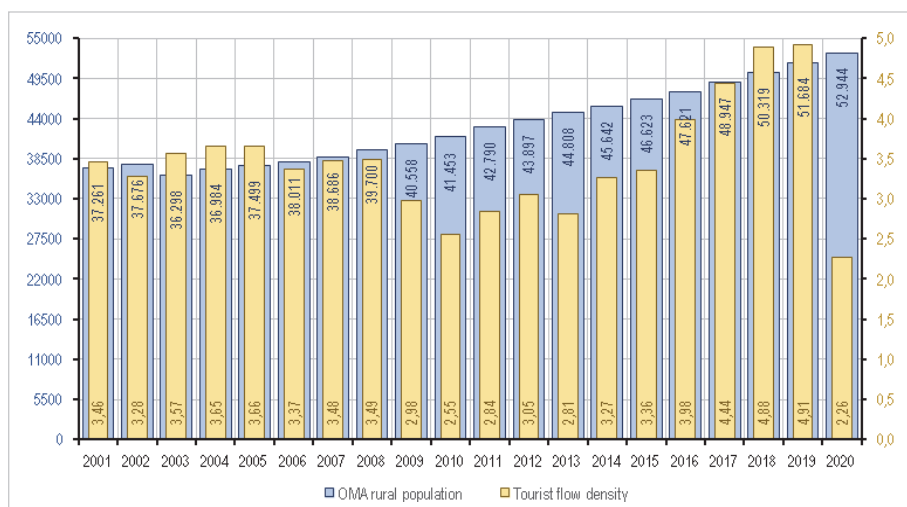
Figure 14. Tourist flow density and population in the rural OMA during 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations2002*

The relatively high value of the average tourist flow density in the rural OMA during 2001-2020 is given by the high average tourist flow value in Sânmartin commune, respectively 14.47, i.e. 417.6% compared to the average density of tourist flow in the rural OMA during 2001-2020 and 3113.1% compared to the average tourist flow density in Bihor county during 2001-2020. With the exception

of Borș locality, where the average tourist flow density value during 2001-2020 was 1.94, in all the other localities, the average tourist flow density value during 2001-2020 was sub unitary (Figure 15).
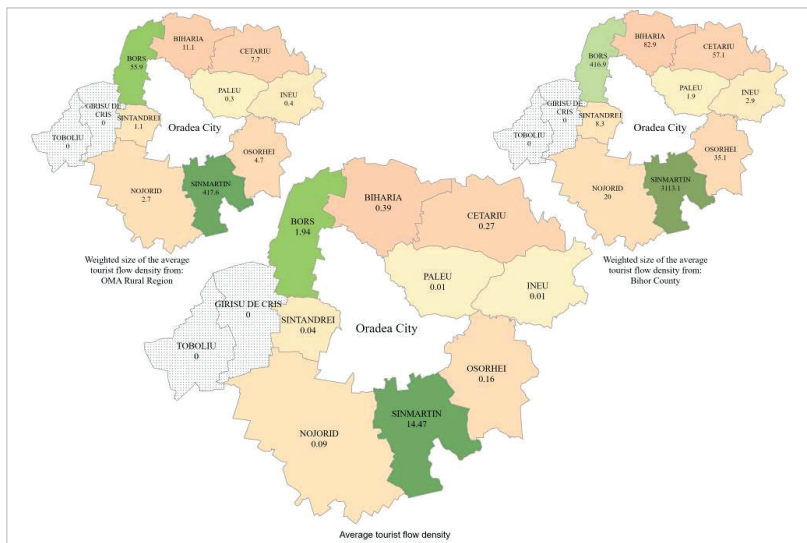
Figure 15. Average tourist flow density in the rural OMA and its tourist flow weighted size of the rural OMA and Bihor County during 2001-2020
*Source of data: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations2002*

Seasonality
To determine the tourist flow in the rural OMA, we used the method of monthly weights of tourist arrivals. Thus, the months in which the monthly weights of tourist arrivals exceeded 8.33% (100% / 12) were considered as months that are part of the tourist season. Conversely, the months in which the monthly weights of tourist arrivals did not exceed 8.33%, were considered as months that are not part of the tourist season.

For the period 2010-2019, according to the data on arrivals in the OMA, the tourist season has six months, from May to October. During this period, on average, almost two thirds of the total number of annual arrivals in the rural OMA are carried out.

According to the statistical data, during 2010-2019 there were short seasons of four months (in 2017, when in the tourist season only 47.5% of the total number of tourists were registered) or five months (in 2011 when in the tourist season 51.5% of the total number of tourists were registered and in 2016 when 56.5% of the total number of tourists were registered in the tourist season), but also long

seven-month seasons (in 2015, when in the tourist season there were registered 74.1% of the total number of tourists). During the period 2010-2019, the average value of monthly arrivals over which the calendar month was considered part of the tourist season almost always increased, from 8,788 arrivals in 2010 to 21,158 arrivals in 2019, with weights from 3.4% to 20.9%. The latter statement refers to the only decrease recorded in 2013 when compared to the previous year, the average value of monthly arrivals over which the calendar month was considered part of the tourist season decreased by 6.1% from 11,137 to 10,463 arrivals (Figure 16).

In the analyzed period of 2010-2019, the months with the highest average share of arrivals were: August, with 15.2% (i.e. with a total of 257,662 arrivals), July, with 12.3% (and with a total of 208,587 arrivals) and September with 10.7% (and a total of 181,063 arrivals). On the other hand, the months with the lowest average share of arrivals were February, with 4.6% (and a total of 78,355 arrivals), January, with 4.9% (and a total of 83,154 arrivals) and March, with 5.0% (and a total of 83,917 arrivals) (Figure 16).
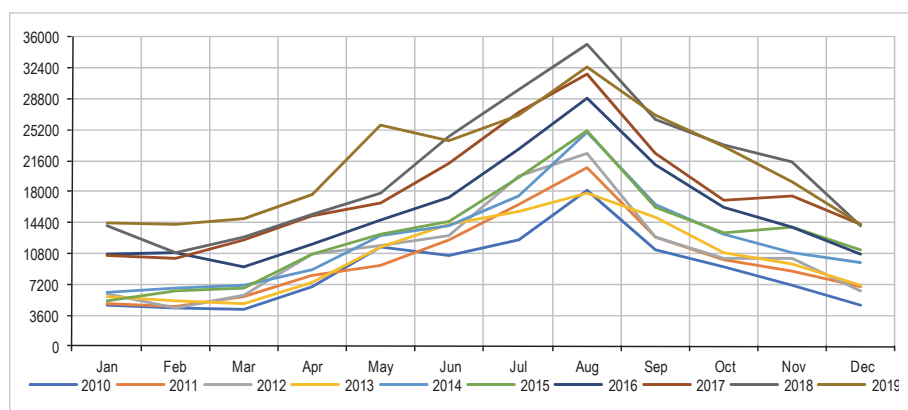
Figure 16. Monthly tourist arrivals in the rural OMA during 2010-2019
*Source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations*

The year 2020 within the rural OMA tourist flow
The restrictions imposed by the Sars-Cov2 virus in 2020 had an impact on the rural OMA tourist flow.

Thus, the share of monthly rural OMA tourist arrivals in 2020 was lower in March, April, May and June, approximately similar to July, October, November and December and higher in January, February, August and September than the average values recorded in the period 2010-2019, the average differences being ± 798.9% (with a minimum of 7.7% and a maximum of 8094.1%).

In 2021, the monthly tourist arrivals weights in the rural OMA have similar values to the average values recorded during 2010-2019, the average differences being ± 15.4% (with a minimum of 3.2% and a maximum of 50.2%). Regarding the numerical and weighted data in Table 13 and the graphical representation in Figure 12, we can say that, despite the fact that in 2020 the tourist flow in the rural OMA was disturbed, in 2021 it returns approximately to the previous values (those recorded in period 2010-2019) (Figure 17).
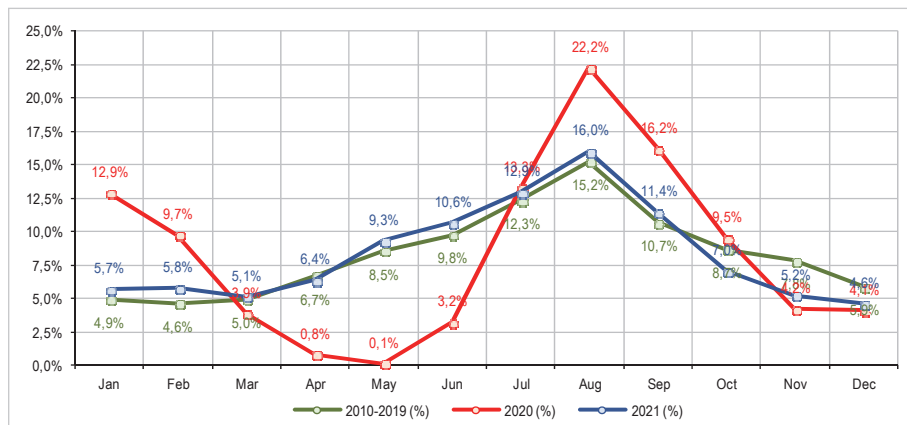
Figure 17. Monthly tourist arrivals weights in the rural OMA over the years 2010-2019, 2020 and 2021
Source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/
insse-table and own calculations

The results of the analysed indicators can lead to a new vision of the territory by highlighting its unsustainable demand concentration and the need to split the flows towards other areas of Bihor county where the natural environment is less damaged and is endowed with tourist attractions (Tatar et al., 2017; Dinca et al. 2018; Tatar et al, 2018; 2021).

Overall, for the analysed period of 1990-2020, the rural OMA and Bihor County showed some revealing trends. Namely in the early 1990s the tourist flow witnessed a lower frequency versus its subsequent years since Romania was just coming out of a totalitarian system and some important changes took place in its economic, cultural and political fields. All the services sector among which tourism mainly were impacted with passing from a socialist centralized economic system to a free market economy. This triggered a lower income for the population which involved less time and money allocated for holidays for the average traveller. This situation deterioration and stagnation occurred over a decade until 2010. Henceforward, the situation started to improve, being accountable to the fact that

Romania became a full EU member in 2007 and thus allowed European funding accession for different tourist projects which subsequently increased the tourism demand after 2010 till 2019. As shown in figure 2 the tourist arrivals trend was increasing gradually only to drop significantly and suddenly to almost the levels of the year 2010 during the year 2020 due to the Coronavirus pandemic.

CONCLUSIONS

The study revealed that a smaller territorial unit such as Sanmartin commune with an on old tourist spa consumption like Băile Felix since 1500 and 1 Mai since 1200 manages to constantly polarize most tourist flows from a larger territorial unit (metropolis or county) even to the present day.

The statistical results indicated that the number of tourists arriving in accommodation facilities in the rural OMA during 2000-2019 increased significantly, especially in the last part of the studied period. By comparison, in 2019 an almost double number of tourists arrived in the rural OMA compared to 2000 (i.e. an increment of 97.2% was registered).

The average stay of tourists coming to the rural OMA decreased to almost half during 2000-2019, from 7.9 to 4.0 days. By comparison, in 2019 the average stay in the rural area of OMA decreased by 48.8% compared to 2000.

The tourist flow density in the rural OMA during 2000-2019 has increased alongside the number of rural OMA inhabitants which has also increased. By comparison, in 2019 the tourist flow density in the rural OMA increased by 42.1% compared to 2000.

The tourist season in the rural OMA according to the data from 2000-2019 extends over a six-month period, between May and October, but the trend is to decrease to five months, from June to October.

Even if the year 2020 presents an atypical evolution of the tourist circulation in the rural OMA region, the data registered in 2021 are according to the averages registered in the period 2000-2019.

The current statistical analysis indicates that all tourist arrivals from the rural OMA are concentrated in the two internationally rated spas, which can be considered a tourist hot spot both for OMA and Bihor County. This in its turn generates unsustainable consumption in the sense that negative environmental outcomes are already spotted such as the hot thermal water aquifer drying out (Cohut, 2017), therefore the study shows that for a sustainable consumption, flows need to be spread towards other metropolitan communes. This raises questions for tourist territorial logistic and equipment such as the existence of accommodation, food and beverage, entertainment etc facilities so that tourist demand is lured to other metropolitan communes too and tourist consumption occurs in a sustainable manner. Some of the short-term mitigation strategies also include the dispersing of

visitors and referring specifically to the rural OMA flows overconcentrated in Felix and 1 Mai spas of Sanmartin commune, they could be redirected towards another thermal water pool park, nonetheless of smaller dimensions as that located in Livada de Bihor locality of the Nojorid commune, both communes relying on the same resources of thermal waters.

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

Radoslav KLAMÁR [A*], Ján KOZOŇ [B]

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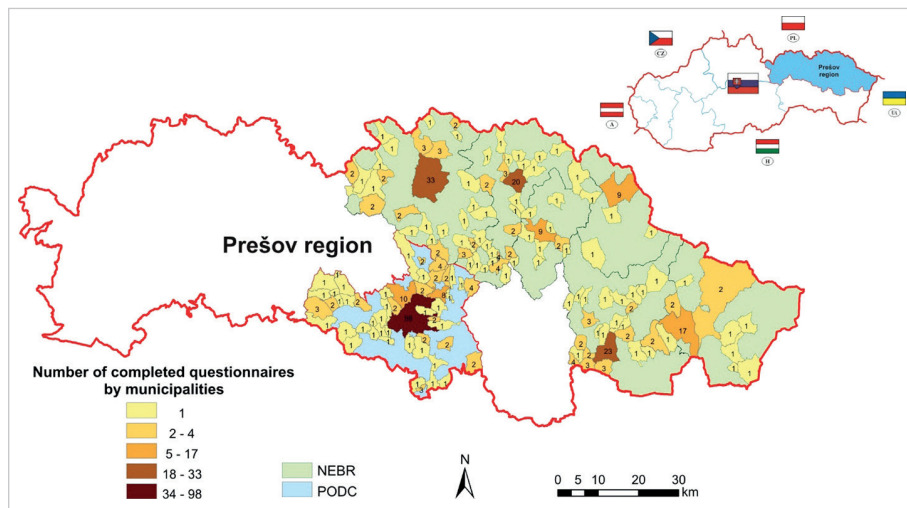
Figure 1 Distribution and number of completed questionnaires by municipalities
in the researched region
Source: Author's calculations based on research results

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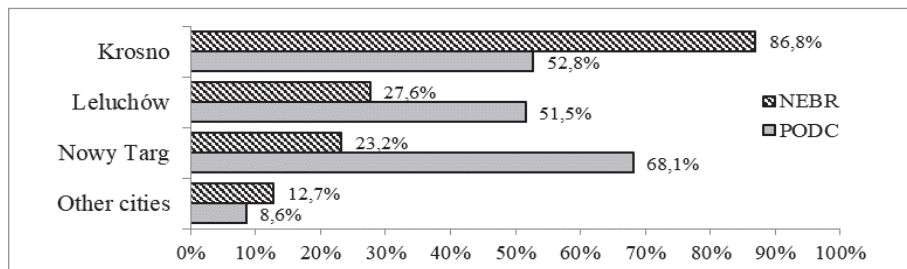
Figure 2 Share of cross-border shoppers in Polish towns
Source: Author's calculations based on research results

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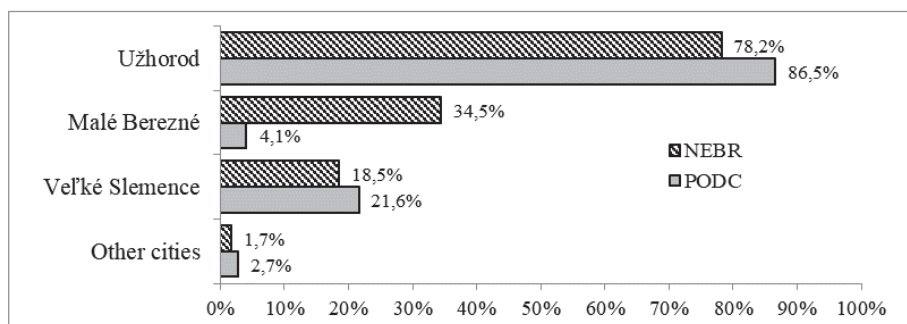
Figure 3 Share of cross-border shoppers in Ukrainian towns
Source: Author's calculations based on research results

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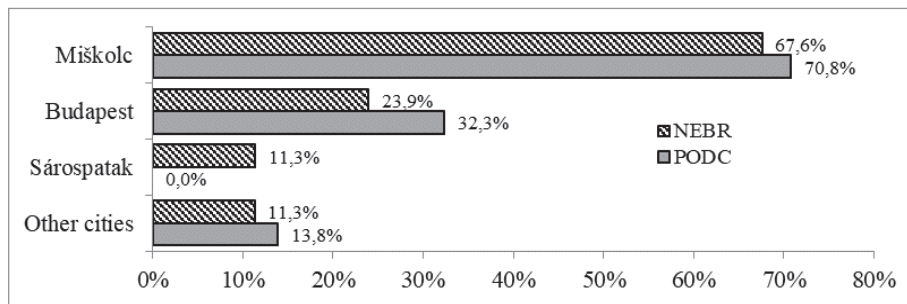
Figure 4 Share of cross-border shoppers in Hungarian towns
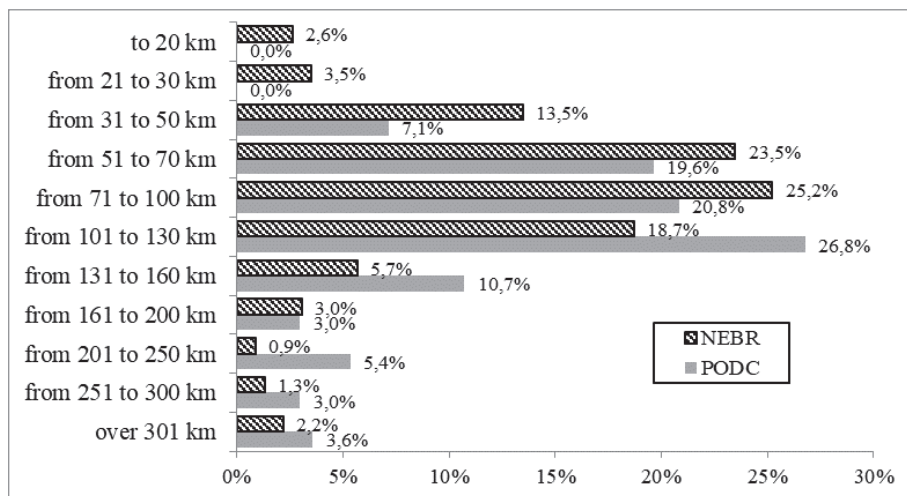*Source: Author's calculations based on research results*

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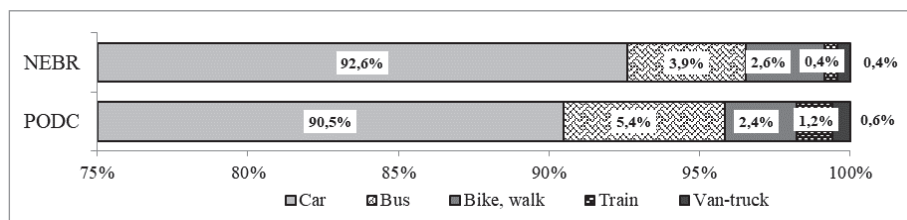
Figure 6 Means of transport
Source: Author's calculations based on research results

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 %).
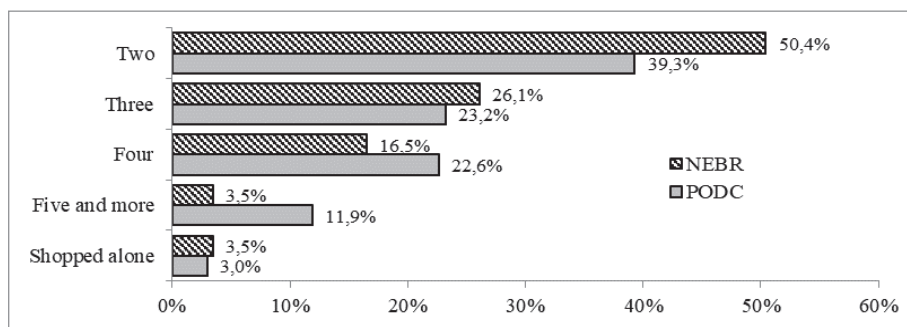

Figure 7 The share of respondents according to the number of jointly shopping persons
Source: Author's calculations based on research results

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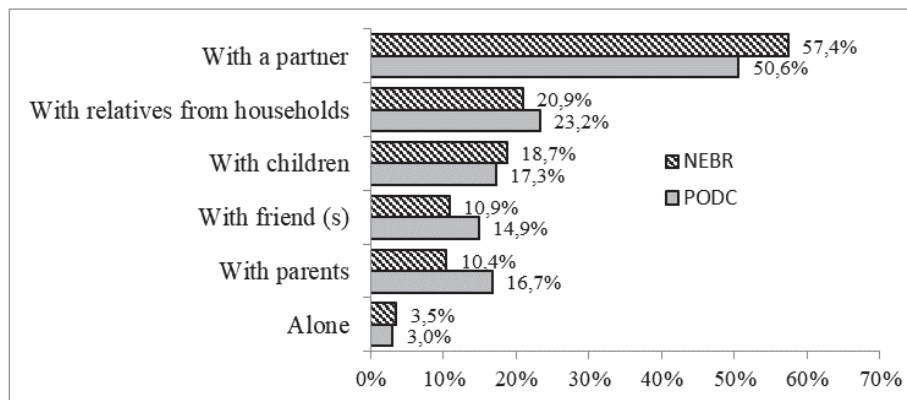
Figure 8 Mutual relationship of persons shopping jointly
Source: Author's calculations based on research results

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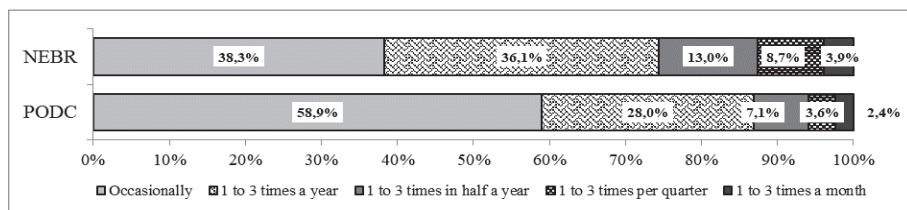
Figure 9 Frequency of cross-border shopping
Source: Author's calculations based on research results

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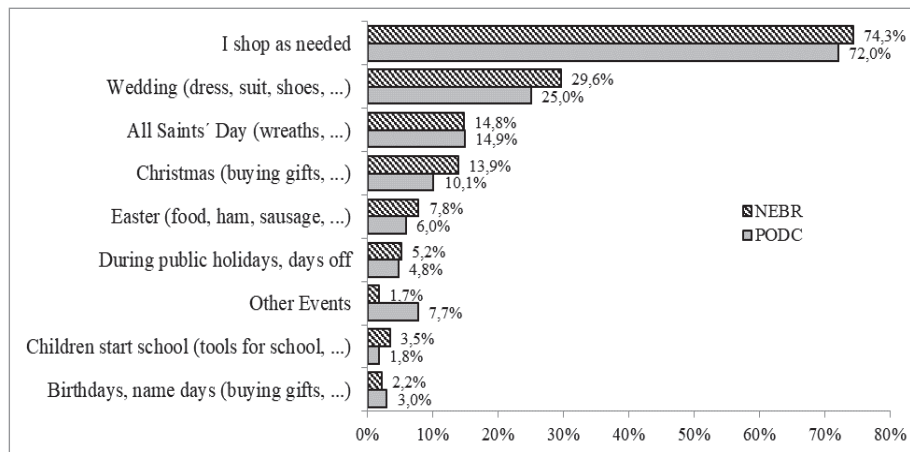
Figure 10 Cross-border shopping due to special events
Source: Author's calculations based on research results

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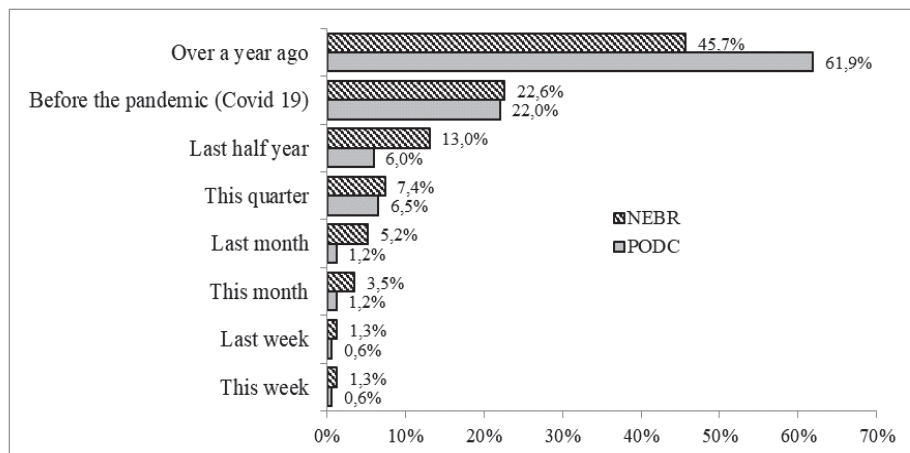
Figure 11 Other cross-border shopping
Source: Author's calculations based on research results

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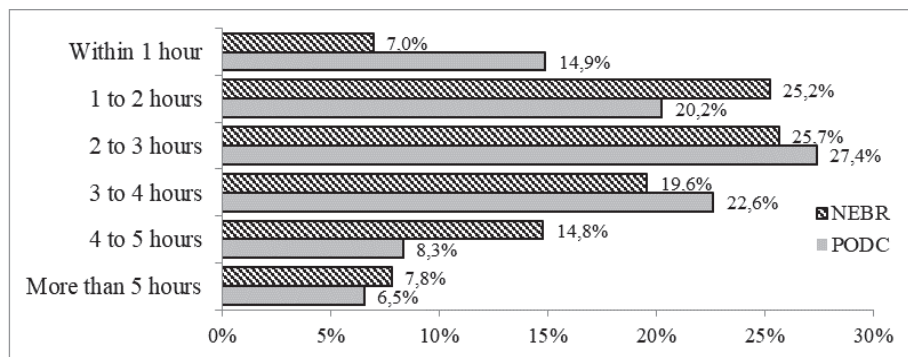
Figure 12 Estimated duration of cross-border shopping
Source: Author's calculations based on research results

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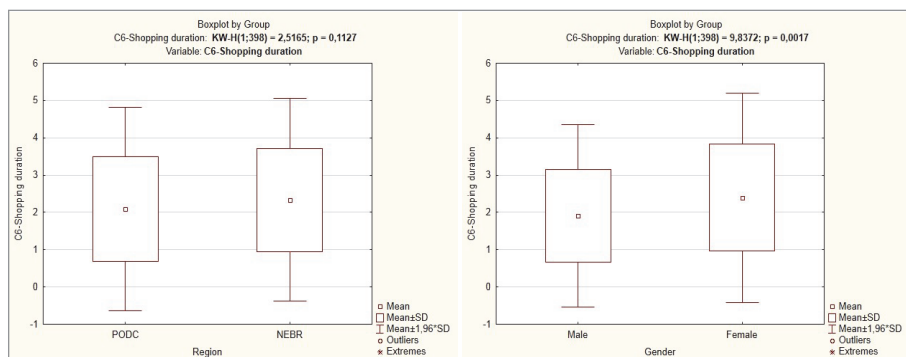
Figure 13 Boxplot – shopping duration as per region and gender
Source: Author's calculations based on research results

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.
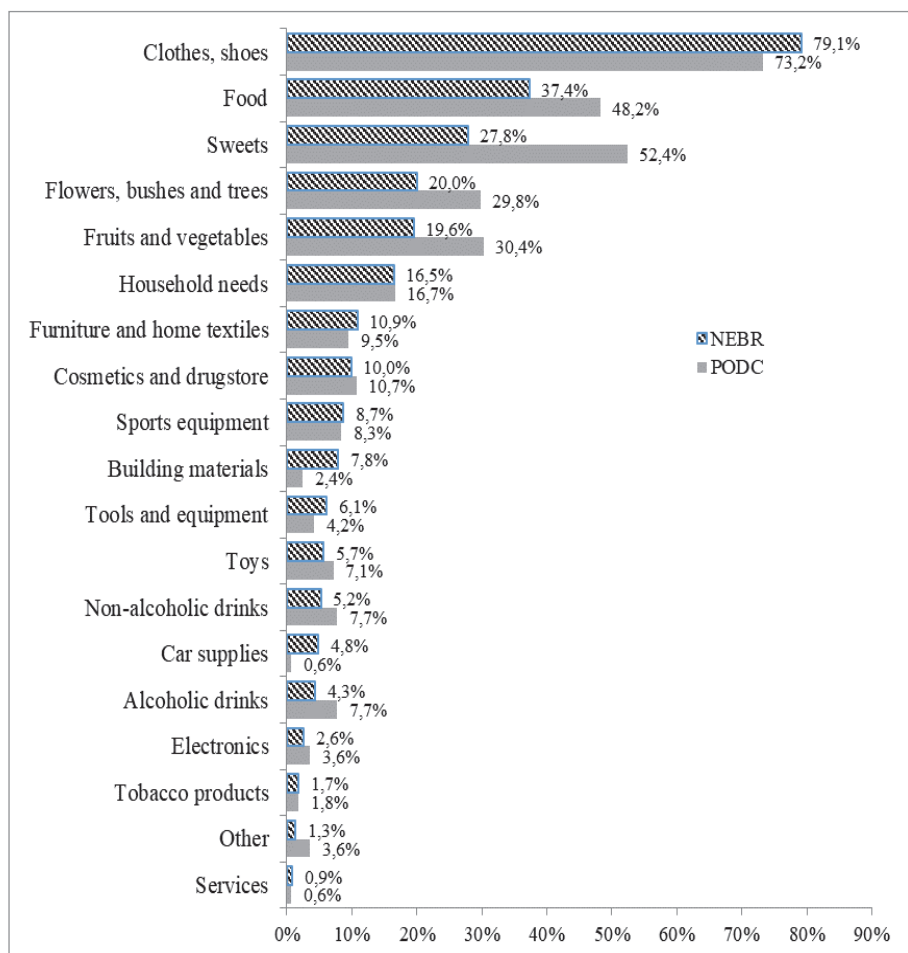
Figure 14 Range of purchased goods
Source: Author's calculations based on research results

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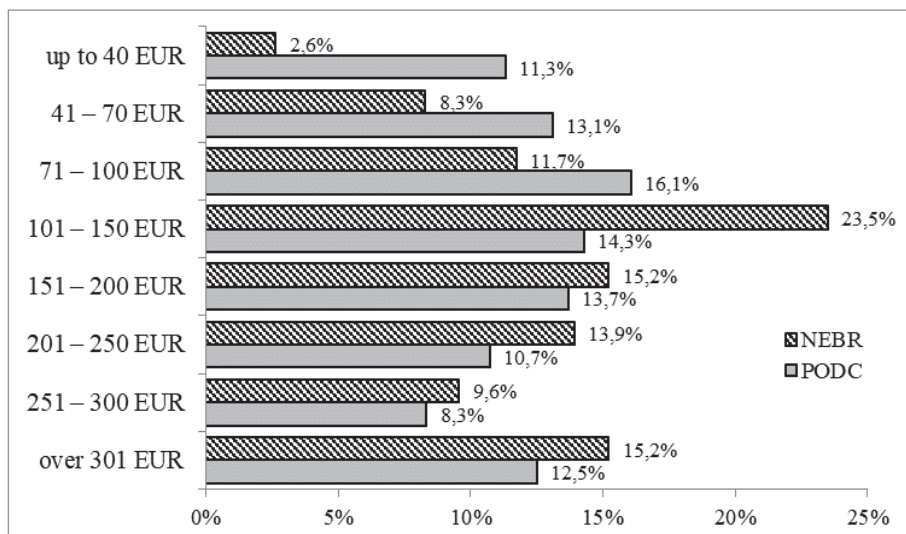
Figure 15 Estimation of average price for shopping
Source: Author's calculations based on research results

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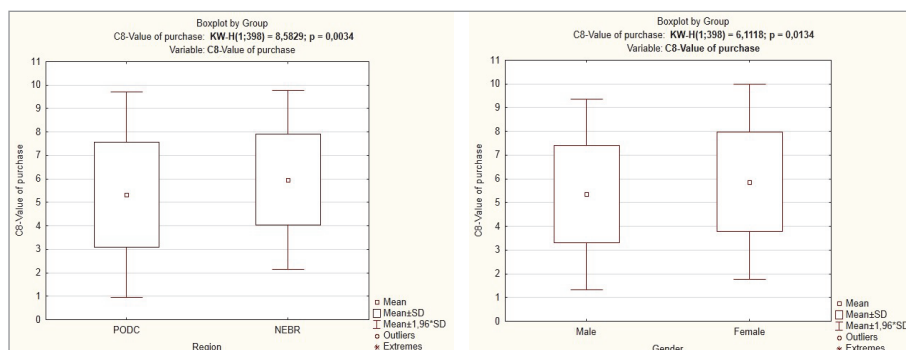
Figure 16 Boxplot – value of purchase as per region and gender
Source: Author's calculations based on research results

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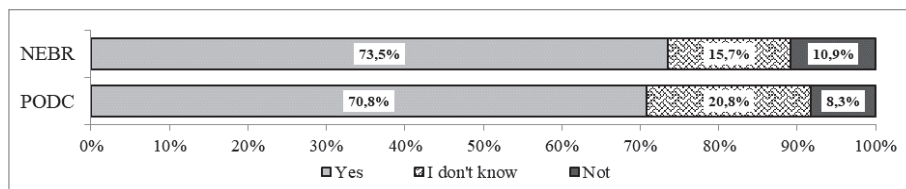
Figure 17 Share of respondents who saved money by shopping
or saved no money at all
Source: Author's calculations based on research results

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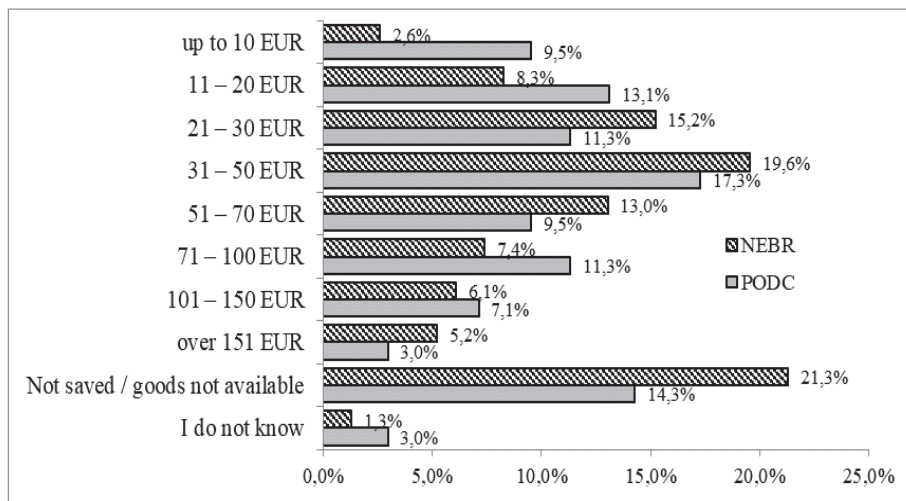
Figure 18 Estimate of average saved amount for the purchase
Source: Author's calculations based on research results

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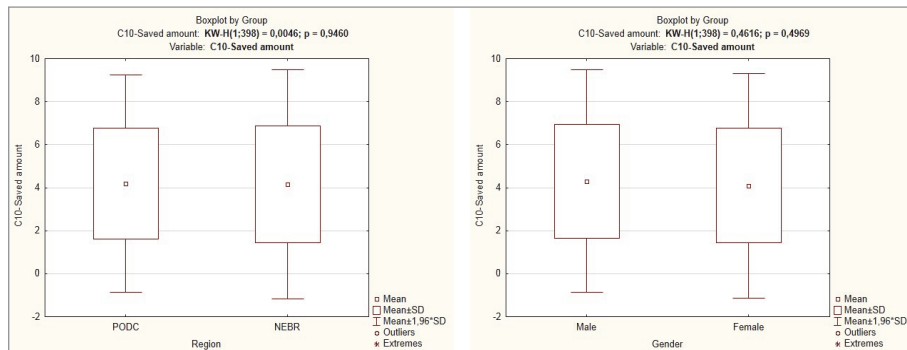
Figure 19 Boxplot – saved amount for the purchase as per region and gender
Source: Author's calculations based on research results

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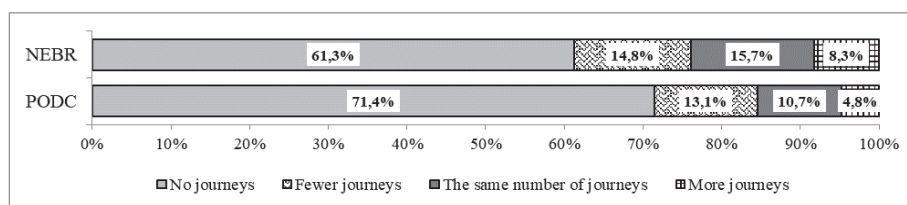
Figure 20 Planning journeys in the next 12 months
Source: Author's calculations based on research results

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.
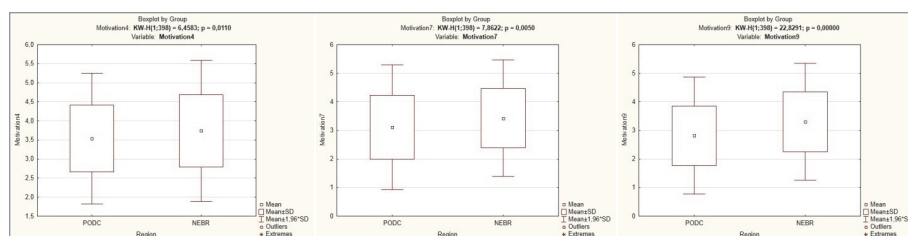*Source: Author's calculations based on research results*

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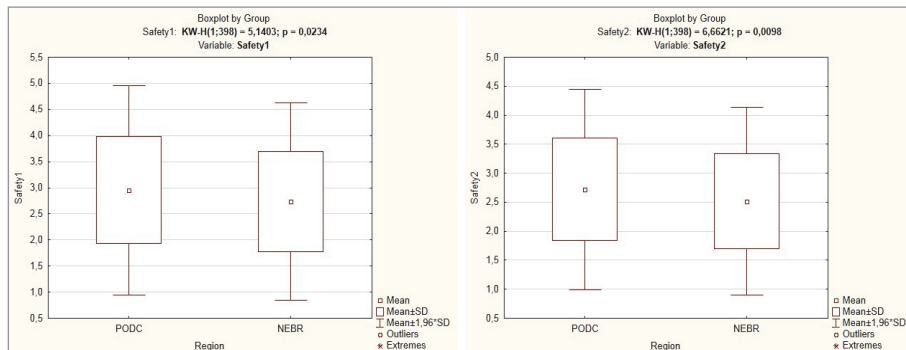
Figure 22 Boxplot – variables Safety1, Safety2 as per regions
Source: Author's calculations based on research results

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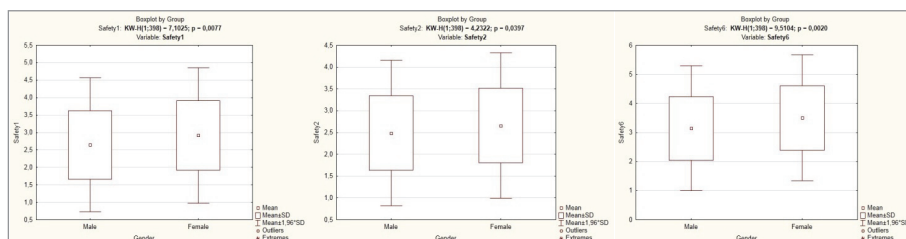
Figure 23 Boxplot – variables Safety1, Safety2, Safety6 as per regions and gender
Source: Author's calculations based on research results

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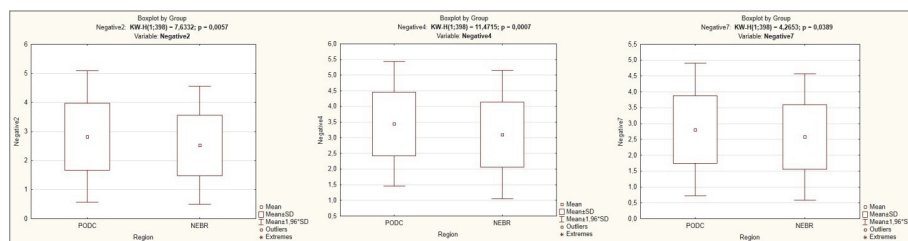
Table 11 Mann-Whitney U Test – negative attitude to cross-border shopping

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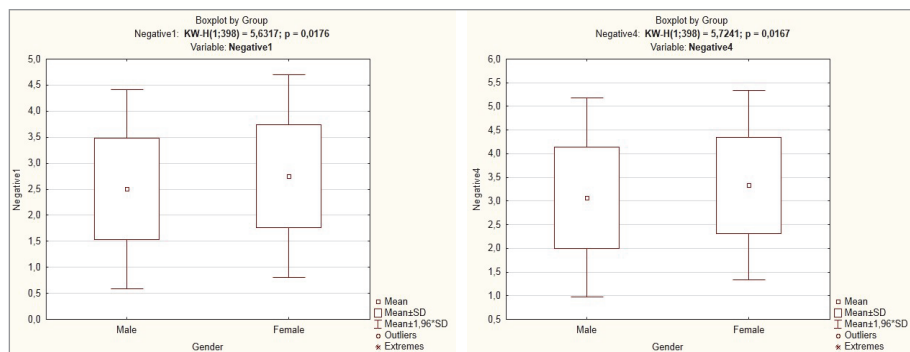
Figure 25 Boxplot – variables Negative1, Negative4 as per gender
Source: Author's calculations based on research results

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), Giváň 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.

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PERCEPTION, REALITY AND INTENT IN BIHOREAN TOURISM, ROMANIA

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Abstract

Tourism is one of the branches of the economy with a high growth rate, globally, having beneficial effects of a social, economic and ecological nature in the insertion environment, being at the same time a serious alternative in the development of local communities. In this context, the purpose of this study is to assess the perceptions and intentions of local public authorities regarding tourism, in parallel with quantifying the defining reality for tourism in Bihor County, Romania. The necessary information was obtained after consulting the representatives of 100 territorial administrative units, using a thematic questionnaire, consisting of 14 items. The results obtained aimed at identifying and quantifying the perceptions and intentions of the decision-makers of the territorial administrative units regarding tourism, against the background of the tourist situation, starting from the factual reality on the ground. Thus, following the quantification of the indicators studied, at the level of the Bihor Tourist Destination, the touristic perception (with a value of 75%, good) stood out, followed by the touristic intention (with a value of 44%, poor) and the touristic reality (with a value of 30.66%, weak). The results obtained at the level of UATs highlighted the existence of some major differences regarding the existing

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situation at the level of the Bihor Tourist Destination. In conclusion, this study can be a framework support for establishing strategic directions for the development of the tourist destination Bihor.

Key words
tourist perception, tourist services, tourist intention, tourist development.

INTRODUCTION

The way in which local public authorities perceive the importance of tourism in the development of the local economy is an important coordinate in outlining future strategies for the development of local and county tourism (Brokaj, 2014; Matlovič, Matlovičová, 2016). The importance of tourism in the sustainable development of the local economy stems from its ability to create jobs, to diversify the economic structure of a given area and to increase living standards (Ashiralievich, 2022; Khabibulloyevna & Ergashovna, 2022; Klamár et al., 2017; León-Gómez et al., 2021; Matlovič, Matlovičová 2021; Ociepa-Kubicka, 2015; Tokhirovich, 2021).

This was well highlighted in the studied area, in two studies that aimed to establish the relationship between tourism and local development in Băile Felix resort (Herman et al., 2018), respectively in Bihor county (Herman et al., 2017), using a series of indicators (number of companies, number of employees, turnover and profit recorded in the period 2000 - 2014, by activity sectors) and correlations of indices related to tourism, services and total value. In both cases, the conclusions highlighted the existence of an upward trend in the importance of tourism in this area.

Over time, the area of Bihor County has been analyzed in the scientific literature regarding tourism from various points of view, including the role and importance of tourist information and promotion centers (Herman et al., 2019); tourism brand (Wendt et al., 2019; Matlovičová 2015), air quality in various tourist attractions (Ilieş et al., 2021; 2022; Matlovičová, Husárová, 2017); conservation of tourist objectives (Demenchuk et al., 2020; Herman et al., 2020a), the tourism perception (Herman et al., 2020b; Herman et al., 2021).

However, the perception of the decision-makers is not always connected to the territorial realities, it contains in some places, in some cases, a high dose of subjectivism, which derives from a series of defining factors, among which are: socio-economic status, level of education, with implications in knowing the positive or negative aspects regarding tourism and its relation to other fields of activity with which tourism coexists at local level; the experiences and aspirations of the decision-makers, against the background of the aggressive promotion on all media channels of tourism; tourism fashion; and so on (Petrosillo et al., 2007). It should be noted that the way people think is important (Duman & Mattila, 2005; Gao et al., 2022; Ko & Stewart, 2002; Weaver & Lawton, 2001; Suh & McAvoy, 2005), especially since in this case, it is about people making decisions about tourism by

directing the evolution of this economic branch according to their perceptions about tourism.

Against this background of the uncertainty that the perception of the decision-makers can incorporate, and not only, it must be doubled by a careful analysis of the tourist reality viewed through the prism of the competences and capacities of institutional intervention that they have at hand. Thus, the tourist reality is also a relatively relative notion, being the result of a quantum of realities between which the physical and the virtual stand out. The physical, factual reality is defined by all the structural elements (laws, government decisions; local decisions; strategic documents, tourist equipment and endowments, specific arrangements, etc.) from a certain area (territorial administrative unit), while the reality virtual construction involves building in order to duplicate the factual reality and transmitting information about it in the online environment, thus facilitating access to information for potential tourists (Caciora et al., 2021; Desai et al., 2014; Herman et al., 2020b; Loureiro et al., 2020; Zeng et al., 2022).

In this context, the knowledge of the tourist reality generated by the decision-makers was a sine-qua-non premise for the present study. Furthermore, the knowledge of the tourist reality automatically claimed the need to know the tourist intentions to substantiate the tourist perception regarding the role and importance of tourism in the development of the local economy.

Representatives of local public authorities in Bihor County, Romania, due to the richness and variety of tourist resources, doubled geostrategic location, in the immediate vicinity of the Romanian-Hungarian state border, are put in position to decide whether tourism is one of the most viable alternatives in development local economy. Therefore, the aim of the present study was to establish the relationships between the perceptions and intentions of local public authorities and the knowledge of the tourist reality in Bihor County, Romania. This was possible by evaluating the perceptions and intentions of the decision-making factors involved in the development of tourism at the level of territorial administrative units, in Bihor County, Romania, in parallel with the evaluation and quantification of the local tourism reality, a reality that is closely conditioned by the perceptions of the decision-making factors, seen as representatives of the local population.

The working hypothesis from which this study was conducted aims at the fact that the perception regarding tourism of the decision-makers, at the level of the territorial administrative units, is reflected in the factual reality and in the intentions of tourism development. The following research questions arise: are there areas where the tourist perception is deficient compared to the tourist reality and vice versa? Does tourist intention complement tourist perception? Can we establish the existence of relationships between perception, reality and intention? This work aims to outline the answers to these questions, by using the applied evaluation methodology. The need for this study stems from the need to

know the tourist perception of local decision makers.The perception of tourism in specialized literature has been a widely debated topic over time, from various perspectives including: that of residents (Brougham & Butler, 1981; García-Buades et al., 2022; González-García et al., 2022; Moreira Gregori et al., 2022; Wall & Ali, 1977); of tourism and non-tourism employees (Brougham & Butler, 1981; Im & Kim, 2022; Prima, 2022); the ability to generate jobs (Liu & Var, 1986; Murphy, 1981; Pizam, 1978), the destination image (Chakrabarty & Sadhukhan, 2020; Herman et al., 2020b; Matlovičová et al., 2019; Tse & Tung, 2022); tourism risk (Cui et al., 2016; Sharpley, 2014) etc. The way people perceive tourism reality is a major coordinate with a decisive impact on the formation of intentions (Lee et al., 2017; Zhu & Deng, 2020) and decision-making (Barros & Assaf, 2012; Kim et al., 2022).

In this context, the approach proposed in the present study complements both the research methodologies applied in the previously mentioned studies and others regarding tourism (Drăghici et al., 2015; Ferreira & Sánchez-Martín, 2022; Gelter & Fuchs, 2022; Grecu et al., 2019; Peptenatu et al., 2015; Pintilii et al., 2016, 2017; Wang et al., 2022; Zekan et al., 2022) bringing as an element of novelty the proposed methodology (the indicators studied, the persons consulted who were the representatives of the local public authorities responsible for the

Tab. 1 Quantification of tourist perception, intention and reality in Bihor, Romania

Cod		Criteria used Wery week 0% - 25%	The value				The value
			Very Week 0% - 25%	Week 26% - 50%	Good 51% - 75%	Very good 76% - 100%	
P1	Perception	The importance of tourism in the development of the local economy	0	0	75	0	Good 75%
P2		The tourist potential			75		
P		Total			150		
R1	Reality	150 / 2 = 75		30			Week 30.66%
R2		Accessing non- reimbursable financing	18				
R3		Tourist services		44			
R		Existence of picnic areas and those declared as areas for tourism development in urban planning documents	18	74			
I1	Intention	Total		48			Week 44%
I2		92 / 3 = 30.66		38			
I3		Accessing non- reimbursable financing		46			
I		Total 132 / 3 = 44		132			

implementation and development of tourism at the local level, the evaluation method) and unexplored research area from this point of view.

To support the perception, intention and reality of tourism at the spatial level, using ArcGis 10.3 software, the specific indicators, provided in table 2, were analyzed at the level of territorial administrative units, thus highlighting typological categories of territorial administrative units. The methodology for quantifying and representing the information obtained by the spatial survey method was as set out in Table 2.

Tab. 2 Quantification of the perception, intention and reality of tourism at the level of territorial administrative units, from the destination Bihor, Romania

Cod	Criteria used		Nominal value / territorial administrative unit
P1	Perception	The importance of tourism in the development of the local economy	1
P2		The tourist potential	1
P		Perception	2
R1	Reality	ccessing non- reimbursable financing	1
R2		Tourist services	1
R3		Existence of picnic areas and those declared as areas for tourism development in urban planning documents	1
R		Reality	3
I1	Intention	Accessing non- reimbursable financing	1
I2		Tourist services	1
I3		Existence of picnic areas and those declared as areas for tourism development in urban planning documents	1
I		Intention	3

DATA AND METHODS

Study Area

Bihor County, located in northwestern Romania, in the river basin of the Crisul Repede River, at the contact between the Carpathian Mountains and the Pannonian Plain, this area is characterized by a series of specific features of geological, orographic, climatological, hydrographic and biogeographical, which led to the emergence and affirmation of the tourist destination Bihor (figure 1). From an administrative point of view, Bihor County is structured from 101 territorial administrative units, of which four municipalities (Oradea, Beiuş, Marghita and Salonta), six cities (Aleşd, Nucet, Săcueni, Ştei, Valea lui Mihai and Vaşcău) and 91 communes (figure 1).
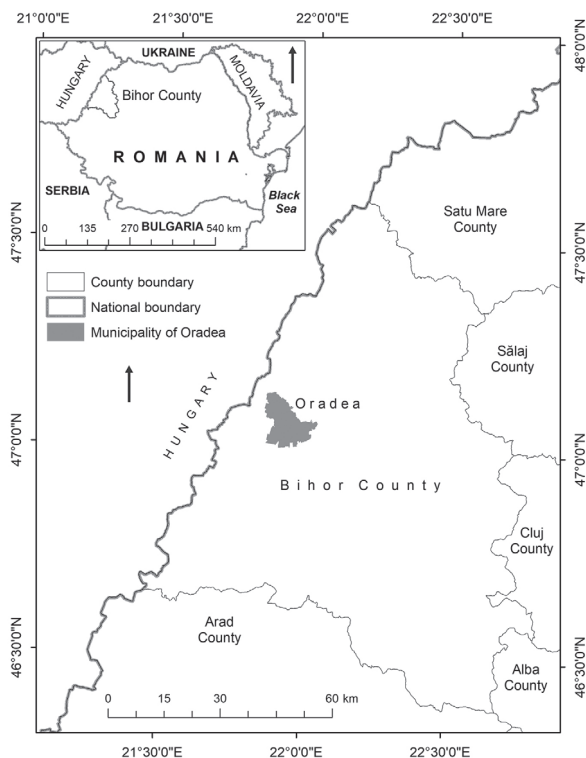
Fig. 1 Study area

Data analysis

The data needed to conduct this study were collected using the questionnaire based sociological survey (Bryman, 2012; Chelcea, 2007). Applied between April and November 2018, to a number of 100 representatives of the territorial administrative units from Bihor County, Romania, the questionnaire used to gather the necessary information was structured in 14 thematic questions on the perception of the importance of tourism in the development of the local economy and tourism potential, the reality and intentions regarding access to grants, tourism services, human resources, the existence of picnic areas and those declared as areas of tourism development in within the urban planning documents. The survey was developed by the research team of the Bihor Destination Management Agency, which operates under the auspices of the Bihor County Council. The information was officially submitted, under signature and registration number. Based on the information thus obtained, a grid was drawn up to evaluate the perception, intention, and reality of the tourist reality at the level of the Bihor tourist destination (Table 1). It is necessary to specify the territorial administrative unit related to the municipality of Oradea, it was not taken into the study, because

the realities of this territorial administrative unit were well known, thus being the main convergence center for tourist flows from the destination of Bihor. Another weakness of the present study was the small number of analyzed indicators, an aspect that was supplemented by the research team's experience in knowing the local and regional tourism reality.

RESULTS AND DISCUSSION

Tourist perception

The tourist perception is a subjective image that is formed at the level of individuals and local communities, in our case, at the level of the representatives of the territorial administrative units as a result of deep experiences and understandings regarding tourism. Perception is the result of the interactions that man as a rational being has with the structural elements of the environment, through the means of sense, on the one hand and reason on the other (Bittarello, 2008; Matlovičová et al., 2019; Mura et al., 2016).

To identify and quantify the institutional perception of tourism in Bihor County, two defining indicators were used: the importance of tourism in the development of the local economyand the tourist potential.

The importance of tourism in the development of the local economy is a particularly debated issue, both in profile studies (Boulhila et al., 2022; Moghal et al., 2022; Pérez-Calderón et al., 2022; Suhel & Bashir, 2018) and in the socio-economic environment. Against this background, the local decision-makers were asked to rate this on a scale from 1 to 10, where 1 = Not at all and 10 = to a very large extent. The averages of the values obtained indicate high values, so 75% consider tourism as important in the development of the local economy, while the value of the share of those who do not consider it important is only 25% (Figure 2).
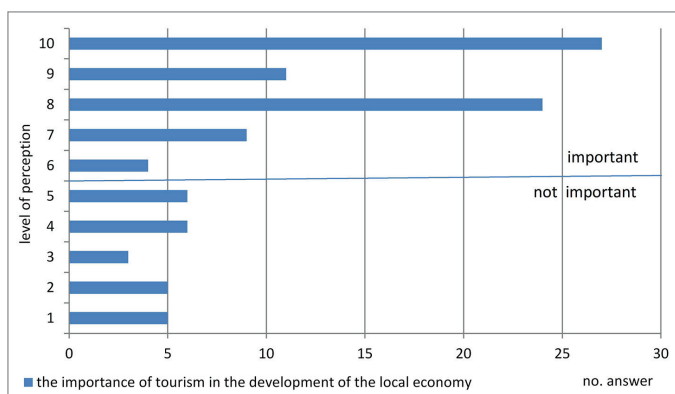

Fig. 2 Perception of the importance of tourism in the development of the local economy

A similar situation emerged from the responses of local public authorities regarding the existence of tourism potential, so 75% of respondents said that the territorial administrative units they manage have tourism potential. The comparative analysis of the perception of local public authorities regarding the existence of tourist potential reveals the fact that this aspect is overestimated by the respondents either from the desire to show off or from ignorance of the meaning of the concept of "tourist potential" as it is treated in the specialized literature (Dehoorne et al., 2019; Raha and Gayen, 2022; Xiao et al., 2018).

The integrated analysis of the answers provided by the decision-makers at the level of the analyzed territorial administrative units (100 units) reveals the existence of a good perception, 75% of the respondents considering tourism a development engine for the local economy (Table 1).

However, the following typological categories of territorial administrative units can be deduced from the spatial analysis of perception at the level of territorial administrative units: unanswered (13%); with an indicator (24%); with two indicators, with a good perception (63%) (figure 3).
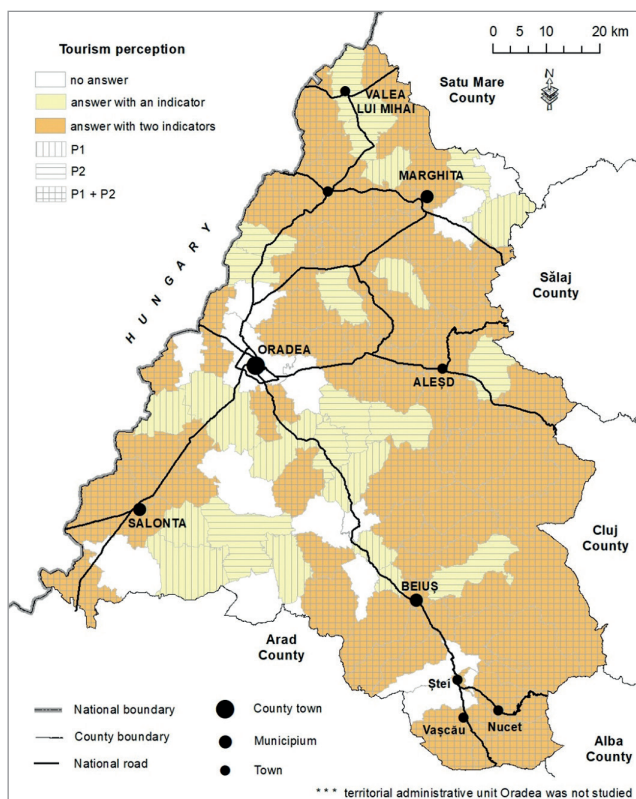

Fig. 3 Tourism perception

Tourist reality

The tourist reality is a defining situation for a certain tourist space that results from the collaboration of a series of factors, among which the natural ones stand out (relief, hydrography, vegetation and fauna), followed by the anthropic ones (tourist and technical infrastructure, management of the tourist destination etc.). Therefore, the tourist reality is a constant of what exists in a given space, being represented by all the structural elements (natural and anthropic tourist resources, technical and specific infrastructure, the human resources involved, management organizations, etc.). Aiming at the economic, social and ecological side, the tourism reality is a reflection of the level of development in time and space under a quantitative and qualitative ratio.

In this context, in quantifying the tourist reality, three indicators were taken into account: access to nonreimbursable financing; tourist services and the existence of picnic areas and those declared as areas for tourism development in urban planning documents. Thus, the tourist reality viewed through the prism of the local public authorities falls into the weak category (30.66%), to this fact bringing
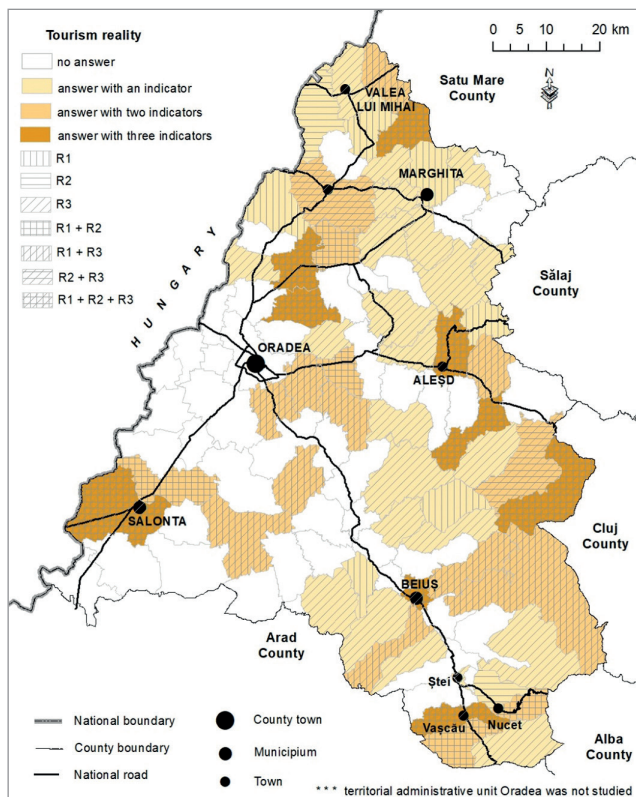
Fig. 4 Tourist reality

the contribution of the following analyzed indi-cators: accessing nonreimbursable financing for tourism (30%); the existence of tourist services such as tourist offices and tourist information and promotion centers (18%); the existence of picnic areas and those declared as areas for tourism development in urban planning documents (44%) (Table 1).

The analysis of the tourist reality at the level of the analyzed territorial administrative units (100 units) reveals the existence of the following typological categories of territorial administrative units: without answer (43%); with an indicator (31%); with two indicators (17%); with three indicators, with a good tourist reality (9%) (figure 4).
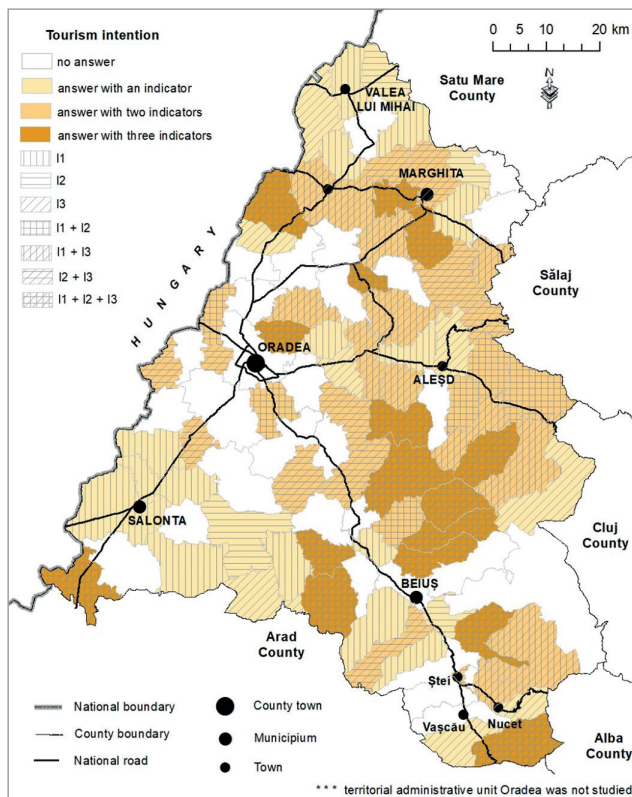
The existence of a tourism reality in the poor value category will have an impact as such on-tourist perception and intention, while the existence of a good tourism reality below the value ratio will have positive effects in economic, social and ecological terms, inevitably contributing, over time, to the change in tourist perception and intentions.

Tourist intention

Tourist intention is a very important variable in the development of tourist destinations that are created by perception, depending on the experience and satisfaction gained by tourists (Çizel et al., 2022; Johannes, 2022). In the present case, knowing the tourist intention (result of the way the local public authorities perceive tourism, through the prism of its economic, social and ecological role) is a particularly important aspect in the formation of a forecast regarding the tourist reality in the Bihor destination.

The evaluation of the tourist intention of the local public authorities involved the use of three indicators: access to nonreimbursable financing; tourist services and the existence of picnic areas and those declared as areas for tourism development in urban planning documents (Matlovicova et al. 2016). Thus, the intentions of the representatives of the local public authorities regarding the development of tourism in the immediate near future are weak (44%), they result in the analysis of the answers offered to the indicators regarding access to nonreimbursable financing for tourism (48%), development of tourist services), the establishment of new picnic areas (46%) and the declaration of new tourist development areas within the urban planning documents (0%) (table 1).

The analysis of tourist intentions at the level of the analyzed territorial administrative units reveals the existence of the following typological categories of territorial administrative units: without answer (30%); with an indicator (25%); with two indicators (29%); with three indicators, with good tourist intentions (16%) (figure 5).
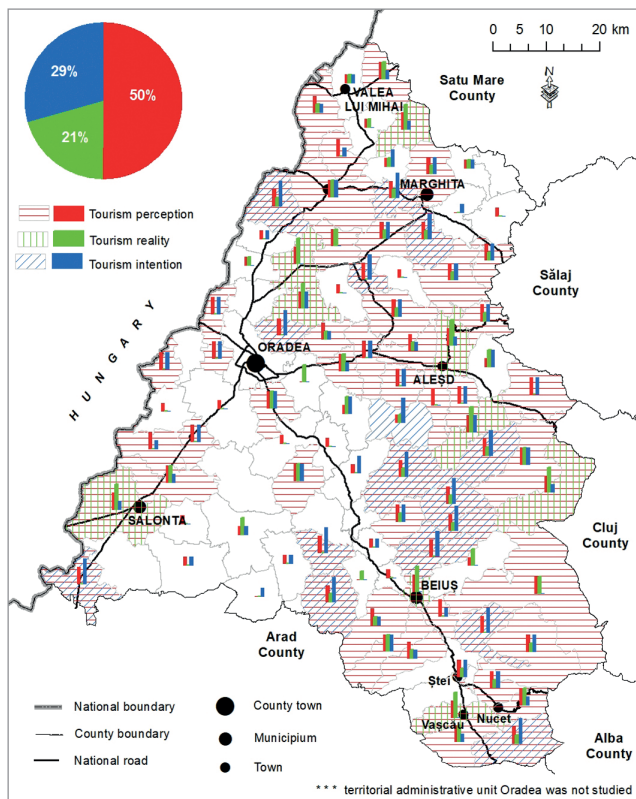
Fig. 5 Tourist intention

CONCLUSIONS

The results obtained in the present study highlighted the existence of some relationships between the perceptions, the intentions of the local public authorities and the tourist reality in the studied area. Thus, the analysis of the perception, reality and intentions regarding tourism in Bihor County, Romania, at the level of local public authorities from 100 territorial administrative units, reveals the existence of a correlation between the value of perception (good, 75%) and the total value of tourism reality. 30.66%) and that of tourism development intentions (weak, 44%) (Table 1, Figure 6).

In other words, we can say that the tourist reality doubled by the intentions regarding the development of tourism rises to the level of perception of the importance of tourism in the development of the local economy, starting from the existence of a significant tourist heritage in terms of quantity and quality.

Fig. 6 Perception, Reality and Intent in Bihorean Tourism, Romania

However, the analysis of the perception, reality and tourist intentions at the spatial level can show the existence of deviations from the general rule, stated above, so that there are the following categories of territorial administrative units: with a good perception and reality (9 units, Aleșd, Beiuș, Bulz, Cetariu, Sălacea, Sălard, Salonta, Vadu Crișului and Vașcău); with good perception and good intentions (16 units); only with a good perception (39 units) and only with good intentions (one unit, Vârciorog commune) (Figure 6). The rest of the territorial administrative units (37 units) did not obtain a good value following the assessment of perception, reality and intentions.

From the analysis of figure 5, tourism in Destination Bihor is a discontinuous activity, it being defined and conditioned by a series of particularities, including the degree of diversification of the infrastructure, from a qualitative and quantitative point of view (Chan et al., 2022; Herman et al., 2020b).

The information obtained in the present study can be used further in conducting other specialized studies, as well as in substantiating the strategic directions for tourism development in Bihor, Romania.

Thus, based on the results obtained, the following recommendations can be made regarding the UATs in which the value:

- the existence of a good perception at the level of 63% of the UATs of the Bihor Tourist Destination necessarily requires the intensification of efforts in the direction of accessing non-reimbursable financing, the development of tourist services and the creation of picnic areas and those declared as tourist development areas within the urban planning documents, to create and develop a good tourism reality in close connection with local, regional and global tourism demand and supply.
- the existence of a good tourist reality at the level of 9% of the UATs of the Bihor Tourist Destination is a favorable situation that represents the pinnacle of summing up the results of tourist perception and intentions. In the case of these UATs, it is recommended to preserve and consolidate the current situation.
- the existence of good tourist intentions at the level of 16% of the UATs of the Bihor Tourist Destination requires, at their level, access to non-reimbursable financing, the development of tourist services and the creation of picnic areas and those declared as tourist development areas in the urban planning documents for to achieve a better tourism reality, which in turn will contribute to changing the tourist perception.

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INVESTIGATING THE SENSE OF PLACE ATTITUDES TO QUALITY OF LIFE OF URBAN COMMUNITIES NEARBY THE RIVER

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Abstract

Despite extensive research on the impact of sense of place attitudes to the quality of life, including in urban areas, its relationship and impact in an urban community that lives nearby with natural factors have received little attention. The purpose of this research is to investigate the effect of sense of place attitudes to the quality of life of urban community nearby the river. Natural factors are closely related to the sense of place and quality of life of citizens. This article was conducted in three European communities, which according to their location in the three cities of Budapest, Vienna, and Bratislava, among citizens whose quality of life is formed by the sense of place along the Danube River. We surveyed 450 citizens who lived along the Danube River. Our results show that three components, place attachment, place identity and place dependence, as variables that express the sense of place of the urban community, are related to the quality of life of citizens who live by the river. The findings highlighted that the quality of life and satisfaction of citizens, originates from the sense of place formed by living by the river. By presenting a model, this study provides insights into the influence of the sense of place on the quality of life of the urban dwellers who live by the Danube River and highlights significant results in three different geographical areas.

Key words

Sense of place, Quality of life, Urban community, Danube River, Bratislava, Budapest, Vienna

INTRODUCTION

Cities are diverse environments, populated by people with different interests who should be motivated to work together to create a balanced atmosphere and sufficient quality of life (Guimarães et al. 2020; Camboim et al. 2019). The quality of life and well-being of the community is in relation of community happiness (Sung and Phillips, 2016), and originates from the growth in the economic sectors of the society (Saberifard and Mishra, 2020). Due to its growing relevance, quality of life is a useful instrument for managing and planning development concerns as well as

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urban and regional studies. It is one of the fundamental conditions for growth and one of the most significant subjects of research in many nations (Mousazadeh et al. 2020). The quality of life is the link between human being and the geographical environment, which is considered according to the quality of the place. Health-related quality of life (HQOL) has received worldwide attention in recent years. In this respect, several multidimensional classifications of health status have been used increasingly to describe and assess HQOL (Ping et al. 2020). In the recent decade, an accumulating body of evidence shows the high correlation between sense of place attitudes with quality of life outcomes (e.g., Schröter et al. 2020; Arias-Merino 2019; Counted 2019; Carmona 2019; Joaquim et al. 2013), environmental and natural factors such as urban rivers and parks (e.g., Mulvaney et al. 2020; Mousazadeh and Lotfi 2020; Ainsworth et al. 2020; Verbrugge et al. 2019), rural and urban residents (e.g., Valizadeh et al. 2020, Žlender and Gemin 2020; Gheitarani et al. 2020; Acedo et al. 2017; Tartaglia 2013), health and psychological science (e.g., Counted et al. 2020; Arias-Merino et al. 2019; Farokhnezhad Afshar et al. 2017; Marcheschi et al. 2015), and university students (e.g., Scannell and Gifford 2017). Today, urban rivers are used as a high capacity for urban development (Mousazadeh, Lotfi, 2020), improving quality of life of urban dwellers (Titilawo et al. 2017), and as a natural capital (Xie et al. 2022). Rivers as water sources can contribute to communities' economic and social well-being (Faye, 2019). The lack of experimental research on relationships with characters of sense of place attitudes on quality of life outcomes among urban dwellers nearby the environmental and natural factors such as urban rivers can be considered a significant gap in this field. This study gap exists in the knowledge of sense of place attitudes as health-related support routes for addressing demands for autonomy, identity development, connection, reliance, and social integration among urban inhabitants (Mousazadeh et al. 2020). Sense of place is one of the vital concepts in promoting the quality of life of citizens in an urban area (Acedo et al. 2017). This concept in line with green spaces and rivers leads to the creation of high quality of life (Zhao et al. 2022), and quality of the environment because of its essential role in initiating interactions among the citizens and the urban environment (Najafi and Shariff 2011). Moreover, there have been cases of COVID-19 pandemic in both low and high-income countries, affecting people from different socioeconomic backgrounds (Mosazadeh et al. 2022; Takian et al. 2020; Buchanan et al. 2020), and impacted on personal lives (Taleb et al. 2022), economy, scientific communication, the environment (Hiscott et al. 2020). COVID-19 has quickly and widely spread, having a significant influence on people's quality of life (Khan et al. 2020; Lara et al. 2020; Nguyen et al. 2020).

According to the ranking of the Commonwealth of Independent States (CIS), Hungary is ranked 31 in terms of quality of life (Petróczy, 2021). Research highlights that the banks of the Danube River in Budapest are the main factors in forming urban communities and the center of citizen gatherings (Dúll and Pálfy, 2014). The

Danube bank can be used for holding festivals, which in turn has an impact on the quality of life of the citizens (Pavluković et al. 2019). In the research of Egedy and Kovács (2010), almost half of the citizens of Budapest expressed their quality of life as dire in recent years. Moreover, In the dimension of quality of life, the research indicates the inconsistency of Budapest in the country (Izsák and Uzzoli, 2012). In the ranking of cities in terms of quality of life criteria, Vienna has often been the leader (Cremer et al. 2021; Mocca et al. 2020). In 2019, Vienna was chosen as the best city in the world from the point of view of more livable city and quality of urban life. Urban open spaces in Vienna have a direct impact on the quality of life of citizens (Ring et al. 2021). Vienna has provided a high quality of life for its citizens by providing comprehensive services, the Danube River is one of the most important reasons for the livability of the city of Vienna (Soepper-Quendler, 2019). Kristiánová et al. (2016), confirm that the quality of life of citizens can be improved by converting historical industrial areas into green spaces in Bratislava.

Sense of place is a social indicator that measures how much different individuals respect unique places (Mulvaney et al. 2020). According to the sense of place, attitudes toward participation, social development aspirations, contentment, passion for community development (Phillips and Lee 2019), and support for the construction of public amenities among people are all strongly connected. According to the sense of place, attitudes toward participation, social development aspirations, contentment, passion for community development, and support for the construction of public amenities among people are all strongly connected (Li et al. 2021; Matarrita-Cascante et al. 2010; Hallak et al. 2012). According to Lynch (1984), a good urban setting should have a sense of place that can be sensed and recognized, since this sensation triggers people's memories to form relationships between space and time. More than just " sense of place," or place attachment, place meanings provide a chance to bring fundamental insight to bear on the interactions that individuals have with a place (Devine-Wright et al. 2015; Nicolosi and Corbett 2018). When seen as a generic perspective on a geographic context, sense of place seems to affect understanding and a feeling of inclusiveness place (Butler, 2007), migration (Rudzitis, 1993) and argue that attitude analysis conceptualizes human behaviors based on instrumental and consummatory values (Jorgensen and Stedman 2006). According to Stedman and Jorgensen (2001), the multidimensional approach to sense of place encourages a better understanding of place when navigating the complexities associated with place change and mobility. The concept of sense of place can be divided expresses three place-specific according to attitude structure: emotions (place attachment), beliefs (place identity) and behavioral commitments (place dependence) (e.g., Nelson et al. 2020; Jorgensen, 2010; Jorgensen and Stedman, 2001; Lewicka 2008; Pretty et al. 2003;

Jorgensen and Stedman, 2006). A variety of research areas, including sociology, anthropology, and environmental psychology, have explored and theorized the sense of place as a multidimensional term (Hussein et al. 2020).

The quality of life and its relationship with other social, economic, and environmental factors in the community of citizens have been widely studied in the cities of Budapest (Smith et al. 2021; Natera Orozco et al. 2019; Izsák and Uzzoli, 2012), Vienna (Soepper-Quendler, 2019; Höglhammer et al. 2018; Haslauer, 2015), and Bratislava (Štefkovičová and Koch, 2022; Oláh et al. 2020; Ira, 2005). Nevertheless, many urban communities living by the river they have a different sense of place compared to other citizens (Gottwald et al. 2022; Mousazadeh, 2021; Verbrugge et al. 2019). The purpose of this research is to investigate the effect of sense of place attitudes to the quality of life of citizens who live by the river. Specifically, the research aim is to understand the impact of the sense of place on the quality of life and the relationship between them and to explain it by experimentally testing the proposed conceptual model in the urban community that lives along the Danube River.

CONCEPTUAL RESEARCH MODEL

The conceptual framework of this study comes from research on sense of place and quality of life, which have shown that sense of place attitudes can affect the quality of life in urban communities. We use a conceptual framework, based on the relationships between research variables, and argue that the sense of place of citizens living along a river potentially affects their quality of life. The conceptual model (Figure 1) tests five hypotheses related to the relationships between sense of place, general quality of life, physical health, psychological health, social relationships, and environment. Structural equation modelling has been used to investigate the existence and intensity of relationships between variables.

- Sense of place will significantly and positively influence the general quality of life of urban community nearby the river (H1),
- Sense of place will significantly and positively influence the physical health of urban community nearby the river (H2),
- Sense of place will significantly and positively influence the psychological health of urban community nearby the river (H3),
- Sense of place will significantly and positively influence the social relationships of urban community nearby the river (H4), and
- Sense of place will significantly and positively influence the environment of urban community nearby the river (H5).
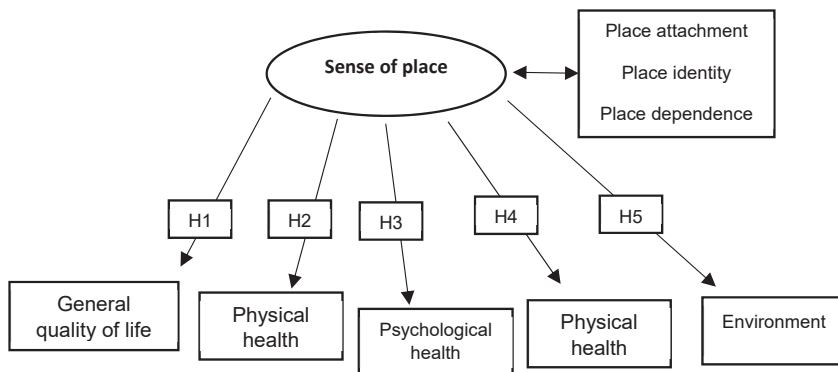
Fig. 1 The conceptual model
Source: Research finding 2022

DATA AND METHODS

Study context

Three case studies are conducted in various environmental, political, and regional fields, including the three capitals of the European countries through which the Danube River flows and the densely populated areas of these cities along the river in Hungary, Austria, and Slovakia (Fig. 2). The general scale was that the river should pass through areas where the presence of the river affected the quality of life and the sense of place of the people. Furthermore, all three studies should be in the same geographical and political context. In addition, the three case studies should be in a multiple environment including researchers, policymakers, governments, urban professionals, and planners and intend to use the obtained information in regional planning, psychological studies, and environmental health. The location of many urban projects and policies along the river in all three case studies highlights the importance of these cities. The Danube River has been considered a key element in the planning of stakeholders and researchers in all three cities.

Budapest is the most populous and immigrant-friendly city in Hungary. The altitude of the city ranges from about 95 m to 520 m. Budapest located along the Danube River with substantially different districts on both the western (Buda) and eastern (Pest) sides, many of city districts are found in the eastern side. Budapest has 23 districts, 12 districts are located along the Danube River, which are considered to be the study areas of this city. Vienna is the biggest city in Austria and an urban structure typical of a Central European city. Vienna located in the north-east on the Danube River and the city is transacted by the river. In Vienna, 9 districts are located along the Danube River, which are considered to be the study areas of this city. The Danube in Vienna is versatile - whether in the form of the Old Danube National Park or the Danube Island or the Danube Canal. Citizens of Vienna use it for fun, games and sports or enjoyable hours at beach cafes, bars and restaurants and generally
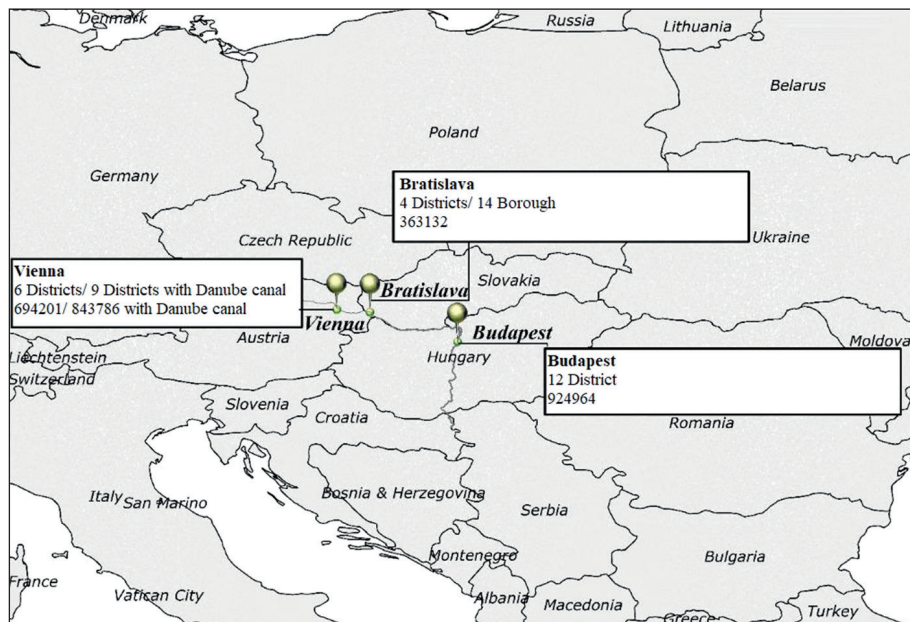
Fig. 2 Geographical location of case studies with details
Source: Research finding 2022

for leisure time. Bratislava divided into 5 main city zones, altogether consisting of 17 districts. Every district has its own mayor and council. In Slovakia, cities, especially Bratislava in the capital, have developed national guidelines with regard to their specific characteristics. While Bratislava with its own region is a cultural, commercial tourism center and it has other tourism potentials, the Danube region is of national and regional importance, and quality development services and quality policies are envisaged. The Danube in Bratislava has long been the focus of planners and urban experts in the area. Bratislava serves as a port for travel along the Danube. The Danube passes from west to southeast overlooking the city. The Danube River where is one of Europe's multi-faceted transportation systems, is one of the city's main assets. In Bratislava, by the Danube River, there is a continuous green space with diverse personality and great potential for quality of life in the city. A group of Danube city professionals, enthusiasts, urban planners, natural scientists and landscape scientists have developed the Bratislava Danube Park (BDP).

Data collection
To collect data, we used World Health Organization Quality of Life Questionnaires (WHOQOL-BREF), Sense of place questionnaire, and a researcher-made questionnaire to collect the perspective of urban residents in all three cities on the following: (1) Identifying the sense of place of the urban community near the

river, (2) level of satisfaction, (3) Basic questions about citizens' attitudes and their relationship with the river, and respondents' social and demographic information. In the third part, the respondents were given a list of questions about their relationship with the river, the length of time they stayed by the river, the frequency of their visits to the river, their feelings, and the purpose of using the river.

The statistical population of the research includes all citizens who lived in the three cities of Budapest, Vienna, and Bratislava along the Danube River. Districts from all three cities that were in the vicinity of the river were located as a pilot for the selection of the statistical sample. These areas were different in each city, in Budapest 12 districts with a population of 925,000 people, Vienna with nine districts with a population of 844,000 people, and four districts in Bratislava with 363,000 people constitute the statistical population of our research. The statistical population includes citizens (adults) who live by the river. The sample size was using Morgan's table and Cochran's formula, because the differences within the society (differences in culture, language, spatial and geographical distribution, and different perceptions of citizens about quality of life and sense of place) were large, 450 citizens were selected. The simple systematic sampling method is stratified. According to the statistical population, questionnaires were distributed among a total of 520 citizens and 450 questionnaires that were completed correctly were analysed. To calculate the statistical sample size in the three investigated communities, to creating a balance to achieve the aim of the research, based on the number of citizens in each city who lives nearby river, and the lake of cooperation of some citizens due to the synchronization of data collection with the period of COVID-19 the number of questionnaires was determined for Bratislava, 135 questionnaires, Budapest 170, and Vienna 145. Since this study focused on the perspective of urban residents, if necessary, questionnaires in Hungarian, German and Slovak languages were distributed among the urban communities nearby the river in each city. Due to the synchronization of data collection with the spread of the Covid-19 pandemic, in some cases we were faced with non-cooperation of the respondents. Hence, additional paper questionnaires were distributed in public parks and open spaces around the river to maintain the age balance among the respondents.

Measures and analysis
After 4 rounds of Delphi method finally, at the end of the Delphi process, the Kendall rank Correlation Coefficient (KCC) was calculated, and the final factors were extracted for designing the model and questionnaires. Cronbach's alpha and divergent validity have been used to calculate the validity and reliability of the questionnaire, which related quantitative information will be mentioned below. Sense of place attitudes, including place attachment, place identity, and place dependence, were measured with 7, 6, and 7 items, respectively, on a five-point Likert scale, from "Completely disagree" (1) to "Completely agree" (5). The items

were adapted from Jorgensen and Stedman (2001), Tartaglia (2013), Scannell and Gifford (2019), and Counted (2019). To measure the level of satisfaction of urban community near the river, the quality of life was measured in five statements, on a five-point Likert scale from "Very dissatisfied" (1) to "Very satisfied" (5).

First, we will examine the demographic characteristics of the respondents who have cooperated in the research and completing the questionnaire. In the demographic information section, first, the general information of the respondents will be examined separately. Then, the measurement model for construct validity is presented and divergent validity is also examined. The correlations between the research variables and the primary research model have been examined in the following utilizing the partial least squares method. For entering and analyzing the primary information IBMS SPSS Statistics V 26 was used. Considering that in the partial least squares method, the results are more reliable in different sample sizes and it does not require presuppositions about the type of distribution of the measurement variables, structural equation modeling (SEM) was used to verify the hypotheses. Moreover, examine the relationship and intensity of relationships between research variables and all data was analyzed in Smart-PLS software.

RESULTS AND DISCUSSION

General characteristics of the respondents

This study used data from completed surveys by 450 urban dwellers who live nearby the Danube River in Budapest, Vienna, and Bratislava. Descriptive findings actually express the demographic characteristics of the participants of the studied area. Demographic indicators will be examined according to the results obtained from the questionnaire (See table 1).

Tab. 1 Demographic variables of respondents

Age	Less than 20	21-35	36-50	+50
	54	97	132	167
Gender	Male		Female	
	218		232	
Marital status	Single	Married	Divorced	Separated
	151	197	64	38
Level of education	Under high school	Bachelor's degree	Master's degree	Doctorate degree/higher
	56	184	147	63
Income	Under 500 €	500-1000 €	1000-1500 €	+1500
	120	229	59	42
Total	450			

Source: Research finding 2022

Examining basic questions

The duration of living by the river certainly shows a direct relationship with people's sense of place. This means that the longer the time spent living by the river, the greater the dependence, attaching and identity to the living place. This complements the literature on citizens' sense of place and quality of life, where the identification of factors influencing the strengthening of citizens' sense of place has been less researched. Rivers are complex ecosystems that have attracted the attention of policy makers, governments and citizens due to various uses. It should also be noted that due to the close relationship between rivers and human societies, the ecosystem of rivers has been damaged by tensions and human activity and many changes have been made in the river. However, the Danube River in the study area is used by citizens for different purposes. Walking and cycling along the river show the most uses for the respondents.

Rivers provide the opportunity to use their situation to develop cities along the river. The effect of rivers on creating an urban landscape is undeniable. With careful study and investigation in this area, the potential characteristics of rivers can be linked to creating a sustainable landscape to prepare a sustainable city. Participation of citizens will definitely be important in these plans. Besides, facilities must be provided along the river to satisfy the citizens to achieve and succeed in this important matter. According to the questionnaire findings, security by the river is the most frequently mentioned by the participants. When citizens can live and work by the river without worries or stress, their quality of life and sense of place will increase in the long run, increasing their sense of participation in river programs.

The increasing population growth and urban development along the rivers and the increasing demand for the development of economic-commercial and residential uses have increased the attention to the river boundaries. Riverside protection is an inevitable issue considering the development process of cities, and the centrality of water resources for water supply and different river uses. One of the basic pillars of urban planning is paying attention to citizens' conscious and active participation in all aspects of development. The urban management system can be efficient when the citizens have a conscious and active participation in all dimensions and hub programs of urban development. In this regard, the preservation of rivers is not an exception to this rule. In this process, participation is not only considered a cost but also leads to improving citizens' quality of life, peace, and comfort. Most citizens believe that both the citizens and the government are jointly responsible for river preservation.

Governments are trying to achieve citizens' satisfaction with comprehensive planning and strengthening the relationship of citizens with natural factors such as rivers. In the study area, many national programs, festivals, and exhibitions are held by the river. Field findings show that diversity in uses around the river

and educating citizens can help improve the conditions of the Danube River. In recent years, almost every aspect of people's lives in almost all countries worldwide changed due to the COVID-19 disease. Research shows that this pandemic has had a negative impact on the mental and physical health of people and their lifestyles. The declined quality of life of people in the community during the quarantine period, facing the COVID-19 disease, and their fear caused them to be no longer able to go to their favourite places, such as rivers and parks. Accordingly, those living along the Danube River were also asked about their relationship and attitude toward the river during the COVID-19 era. In the following, the basic questions asked in the questionnaire are examined (see Table 2).

Tab. 2 Statistics of answers to selected questions

Living near the river	Under 5 years		5-10 years	10-15 years	+15 years	
	107		200	75	68	
Frequency of river use	Almost every day	1-3 times per week	About once per month	About 2-3 times per year	About once per year	Other
	170	197	38	15	10	20
Purpose of river use	Walking	Cycling	Enjoy and recreation		Rest/relax	Fishing
	132	115	77		89	37
Thought good of Danube	Abundant nature		Security	Car parking	Access	Other
	87		139	56	104	64
Impact of river health affecters	Agriculture/ horticulture	Industry	Sewerage	Ships and Boats	Rubbish	Other
	61	97	65	79	132	16
Responsibility for maintaining the Danube River	Citizens	Government	Citizens and Government	Non-governmental organizations (NGOs		Other
	50	134	147	79		40
Improve the conditions of the Danube river	Educational actions	Revitaliza-tion of the margins	Users diversity	Easier access (Transpor-tation)	Environ-mental actions	Other
	96	93	125	50	39	47
Feeling	Security	Confidence	Cooperation	Relaxation		Other
	138	124	112	52		24
COVID-19, relationship, and attitudes with the river	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
	161	92	69	78	50	
Total	450					

Source: Research finding 2022

Most of the respondents lived by the river between 5-10 years. About 68% of respondents in Bratislava, 78% in Budapest and 72% in Vienna visit or use the river almost every day or 1-3 times per week for walking and cycling along the river. A direct effect has been observed between sense of place, length of stay and frequency of visits, which means that citizens who live more along the river and frequently visit the river show more identity. In Bratislava and Vienna, this is quite evident, but in Budapest, the place attachment and the place dependence were more significant. In Bratislava, respondents on general quality of life seem to be satisfied with quality of life, this is replicated in Budapest. But in the case of Vienna the participants indicated higher satisfaction than the other two cities, this could be due to the higher level of general quality of life in Vienna as described in the introduction section.

Measurement model assessment
This study used partial least squares structural equation modeling (PLS-SEM) to investigate the effect of sense of place attitudes on the quality of life of urban communities near the river. Analyzes and checking hypotheses were done in two sections, measurement model assessment and structural model measurement. This inquiry is a suitable fit for the PLS-SEM analysis since it was carried out concurrently for structural and measurement models and produced more precise results.

Several statistical tests were used to evaluate the measurement model. In Table 3, its results are presented. Moreover, divergent validity is confirmed by comparing the correlation of a concept with its indicators to the correlation of those indicators with other constructs (Fornell-Larcker criterion), the findings of which are provided in Table 4. The root of the Average Variance Extracted (AVE) values of the study constructs is contained in the major diameter of this matrix.

Tab. 3 Reliability and convergent validity of the final structural model

Variables	Indicators	Outer Loadings	Cronbach's alpha	AVE	CR
Sense of place	SOP	0.704	0.845	0.61	0.855
	PD	0.602			
	PI	0.686			
	PA	0.825			
Quality of life	General QOL	0.333	0.893	0.63	0.901
	GQ1	0.567			
	GQ2	0.557			
	GQ3	0.515			

Variables	Indicators	Outer Loadings	Cronbach's alpha	AVE	CR
Quality of life	GQ4	0.606			
	GQ5	0.629			
	GQ6	0.557			
	GQ7	0.590			
	GQ8	0.558			
	GQ9	0.671			
	Physical health	0.314	0.763	0.57	0.794
	PH1	0.646			
	PH2	0.646			
	PH3	0.501			
	PH4	0.703			
	PH5	0.575			
	PH6	0.557			
	PH7	0.550			
	Psychological health	0.440	0.825	0.73	0.839
	P1	0.536			
	P2	0.527			
	P3	0.754			
	P4	0.661			
	P5	0.705			
	Social relationships	0.566	0.872	0.62	0.875
	SR1	0.831			
	SR2	0.503			
	SR3	0.827			
	Environment	0.402	0.783	0.59	0.814
	E1	0.541			
	E2	0.619			
	E3	0.668			
	E4	0.480			
	E5	0.647			

Note: SOP= Sense of place, QOL= Quality of life, PD= Place dependance, PI= Place identity, PA= Place attachment, AVE= Average Variance Extracted, CR= Composite Reliability.
Source: Research finding 2022

Tab. 4 Fornell–larcker criterion

	SOP	General QoL	Physical health	Psychological health	Social relationships	Environment
SOP	0.783					
General QoL	0.432	0.795				
Physical health	0.252	0.484	0.760			
Psychological health	0.401	0.337	0.606	0.854		
Social relationships	0.322	0.608	0.344	0.235	0.789	
Environment	0.375	0.542	0.543	0.654	0.610	0.769

Source: Research findings 2022

The software outputs show that the social relationships with a factor load of 0.565 have the greatest impact on citizens' quality of life. Paying attention to the strength of people's social relationships is very important in predicting their benefit from the resources and facilities available in society and in improving the quality of life. The concept of social relations and communication with friends and the health of the physical environment is defined as a network based on relationships, resources, and indicators. These indicators include social trust, a sense of empathy and cooperation between people, social participation, and quality of life. Generally, these indicators improve people's social relations. In fact, humans are linked via a variety of networks, and these networks' participants often have similar values. Psychological health is ranked second with a factor load of 0.440. In this regard, concentration, personal relationships, emotions, and the material condition of a person's life also play a decisive role in the sense of place and the quality of life of the citizens living by the river. However, it is noteworthy that man is a creature whose conduct is affected by his perceptions of reality and the environment. Therefore, psychological factors are related to the living environment as a quality of life and sense of place and have a direct and meaningful relationship. The environment has been ranked third with a factor load of 0.402. Environmental quality is used as an indicator to measure the degree of the environment (Quality of life) that is suitable for human living. Therefore, the quality of the living environment for the citizens living by the river depends on their satisfaction, access, and needs. In the study area, people's access to urban facilities and equipment is acceptable, which leads to their satisfaction and ultimately strengthens their sense of place and increases their quality of life. The quality of life and evaluating a person's life have gained much value in today's world. The reason is that the amount of pleasure a person gets from life and the satisfaction he has from life gives them the most important opportunity to have a happy life. Different researchers have tried to examine the many factors affecting it, with geographers and urban planners not being any

exception. However, these efforts should be made to make the environment in which citizens live more stable and habitable and to achieve the goal of sustainable urban development. The current study is a precursor to the study of the sense of place and the quality of life of the citizens living by the river as the missing link of urban and regional planning in three different spatial and geographical regions. It is hoped that it can be a useful step in the direction of such studies and can pave the way for future researchers.

Structural model assessment

The model tests five hypotheses concerning the relationships and effects of sense of place attitudes on quality of life of urban communities nearby the Danube river in Budapest, Vienna and Bratislava. In this level, the hypothesis was set according to the model. Due to previous studies (e.g., Mousazadeh et al. 2020; Counted et al. 2020; Counted 2019; Marcheschi et al. 2015; Scannell and Gifford 2016; Tartaglia 2013; Rollero and De Piccoli 2010; Prezza and Costantini 1998), which highlighted the relationship sense of place attitude with quality of life outcomes, in the present study it was expected that measures of sense of place attitudes will relate and effect on quality of life. A structural model was conducted to examine the proposed connections between the latent variables. For this purpose, t-statistics, variance inflation factor, standard deviation, and coefficient parameters were observed to evaluate the structural model. The result of structural model evaluation is summarized in Table 5.

Tab. 5 Hypothesis testing results

Relationship	Coefficient	T	VIF	Standard deviation	Test result: Hypothesis
SOP → General QOL	0.333	2.553	0.486	0.697	Confirmed
SOP → Physical health	0.314	2.097	0.484	0.696	Confirmed
SOP → Psychological health	0.440	4.919	0.719	0.848	Confirmed
SOP → Social relationships	0.565	5.424	0.603	0.776	Confirmed
SOP → Environment	402.0	4.307	0.739	0.860	Confirmed

Note: T= t-statistics, VIF= Variance Inflation Factor.
Source: Research finding 2022

The partial least squares PLS approach has been used to test the relationship between the investigated variables in each of the research hypotheses. Figure 3 shows the general model of all the variables and their relationships, including both the measurement model (relationships between visible variables) and the path model (relationships between hidden variables). Using the bootstrapping

technique, the t-statistic is computed to assess the importance of associations. By computing the path coefficients and t-statistics for each construct, the assumptions were proven correct. The results of the standard factor loading of the relationships between the research variables were summarized using the Smart PLS software. Based on the relationship between each variable, each research hypothesis tested.

To evaluate the standard error, a new method was needed, and in this study, non-parametric bootstrapping was used to overcome this difficulty. Bootstrapping is a statistical method to evaluate the correctness and accuracy of sample statistics (such as standard error and confidence interval), which is based on estimating the empirical distribution of the sample from random resampling (Hesterberg, 2015; Berkowitz and Kilian, 2000). In this study, bootstrapping with re-sampling of 5000 sub-samples was also performed for detailed analysis, that suggested by Hayes (2018).
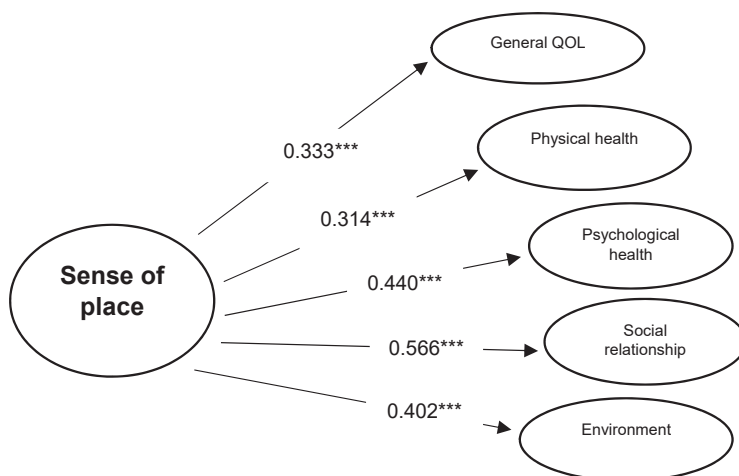
Fig. 3 The best-fitting model for the entire hypotheses
Note: *** indicates p < 0.001
Source: Research finding 2022

DISCUSSION AND CONCLUSION

This study investigated the relationship between the sense of place and the quality of life of the urban community nearby the river in three European cities. The evaluation of this new conceptual model helps to further develop urban and regional planning models for citizens who live alongside natural factors in cities. Most importantly, this study helps to better understand the relationship between place and quality of life in urban community, which has not yet been investigated in areas of the city that are nearby the river. To conduct this research, five hypotheses

were proposed at the beginning, which were all confirmed at the end and after the data analysis. Considering that the sense of place in this research is affected by the Danube river, therefore the current study highlights the environmental vision of the place. According to the results of the research, the Danube River is the main reason for staying in the place, the satisfaction, and the quality of life of the citizens. The findings showed that the citizens are satisfied with the place where they live and the proximity to the river has influenced their quality of life and sense of place. However, in both Budapest and Vienna, almost 70% of respondents were very or completely satisfied with their place. At the same time, almost half of Bratislava respondents thought that there are better places than this place. As predicted and in line with the findings of other studies, the duration of stay had a favorable impact on the respondent's participations in all three cities. In general, among place attitudes, higher place identity was reported in Bratislava and Vienna than in Budapest, while place dependence and place attachment appeared stronger in the third case.

Applying partial least squares structural equation modeling (PLS-SEM) to model the effect of sense of place on the quality of life of the urban community near the river was the main application of this study. This study showed that PLS-SEM can be used to evaluate the hypothesized model. With community development and the change in people's way of life and residence, the attention of urban planners and policymakers has increased to the quality of places and built environments, and the role of place as a tool for shaping the quality of life of citizens has become more important. Therefore, the present research obtains several important consequences in relation to the planning and management of the areas located along the river. Calculating how people perceive a place can lead to a better understanding of citizens' responses to urban planning and participation. The current research has shown the effect of the sense of place in dealing with these plans and community development. The results of this article were able to help the tested hypothesis through bootstrapping, and it revealed that social relationships has the greatest effect on the quality of life of urban community nearby the river. As a conclusion of this research, it is possible to determine the effect of sense of place on the quality of life of citizens in nearby the river. Based on this, Sense of place attitudes including place attachment, place identity, and place dependence can improve the quality of life of citizens. These factors are always connected and influence each other.

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