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MAPPING THE TOURISM POTENTIAL OF REGIONS FOR THE DEVELOPMENT OF INCOMING TOURISM WITHIN THE SLOVAK REPUBLIC

Diploma Thesis

2024 **Bc. Martin Schmidt**

UNIVERSITY OF ECONOMICS IN BRATISLAVA
FACULTY OF COMMERCE

MAPPING THE TOURISM POTENTIAL OF REGIONS FOR THE DEVELOPMENT OF INCOMING TOURISM WITHIN THE SLOVAK REPUBLIC

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Bratislava 2024 **Bc. Martin Schmidt**

Sworn statement

I honestly declare that I have prepared the master's thesis entitled Mapping the tourism potential of regions for the development of incoming tourism within the Slovak Republic independently and that I have listed all the literature used.

Date: **.....**

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Acknowledgment

I would like to thank my supervisor, Dipl. Ing. Jozef Gáll, PhD. for the professional approach, constructive feedback, and insightful suggestions that helped me in processing the master's thesis.

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ABSTRAKT

SCHMIDT, Martin: *Mapping the tourism potential of regions for the development of incoming tourism within the Slovak Republic*. – University of Economics in Bratislava. Faculty of commerce; Department of tourism. – Dipl. Ing. Jozef Gáll PhD. – Bratislava: FC UE, 2024, 96 p.

The final thesis is elaborated on the topic of Mapping the tourist potential of regions for the development of inbound tourism within the Slovak Republic. The thesis aimed to identify the six most developed tourist regions and undertake an in-depth analysis of the revenue of accommodation facilities. At the same time, we also focused on the partial objectives, based on which we could come to the main findings of the thesis. The partial objectives that were set in the thesis are the identification of the most developed tourist regions in Slovakia, identification of indicators that affect the revenues of accommodation facilities in the most developed regions of Slovakia, identification of how the number of domestic and foreign tourists affects the revenues of accommodation facilities, analysis of the further development of inbound tourism in the six identified regions, formulation of a vision and recommendations for the further development of inbound tourism in the most developed regions of Slovakia.

The individual parts of the thesis focused on several issues related to regional tourism, inbound tourism, tourism statistics, and forecasting of the number of foreign tourists. The thesis also contains 6 graphs, 11 figures, and 16 tables. The first chapter is devoted to the current state of the issue at home and abroad, while the theoretical background is discussed. The first chapter consists of seven subchapters that aim to summarize the literature and present a wide range of opinions from domestic and foreign authors. The seven subchapters deal with tourism typology, factors affecting tourism, regionalization of tourism in Slovakia, current trends in tourism, tourism development potential, competitiveness of Slovakia, and inbound tourism. In the second chapter, we defined the main and partial objectives and the research questions and hypotheses. The next chapter was devoted to the methodology of the thesis and the research methods used in the practical part. The practical part is divided into four subchapters, dealing with several issues. In the first subchapter, we identified Slovakia's most developed tourism regions. The second subchapter focused on identifying relations of the tourism indicators. In the third subchapter, we have conducted several regression analyses to reject or confirm the predetermined hypothesis. The last

subchapter focused on the prediction analysis, which showed the potential increase of one particular indicator. Finally, the conclusion and discussion were formulated.

The result of solving the given issues is the identification of the six most important tourism regions in Slovakia. Based on cluster analysis, we can claim that in 2020, the most important tourism regions were Bratislava region, Liptov, Turiec, High Tatras, Horehronie, and Pohronie. Moreover, we have also found that the indicators focused on inbound tourism had the most significant impact on the revenues of accommodation facilities in the Bratislava region. The regression analysis confirmed that the number of foreign tourists positively influences the revenues of accommodation facilities, but only in the Bratislava region. It can also be concluded that the increasing number of domestic tourists positively affects the revenues of accommodation facilities in the Bratislava region, the High Tatras, Turiec, and Horehronie. Finally, we have found out that in the upcoming four years, we can expect an increase in the number of overnight stays in all six studied regions.

Keywords: cluster analysis, regression analysis, correlation analysis, predictions, tourism region, tourism indicators, revenues of accommodation facilities, incoming tourism

ABSTRAKT

SCHMIDT, Martin: *Mapovanie turistického potenciálu regiónov pre rozvoj incomingového cestovného ruchu v rámci Slovenskej republiky.* – Ekonomická univerzita v Bratislave. Obchodná fakulta; Katedra cestovného ruchu. – Ing. Jozef Gáll PhD. – Bratislava: OF EU, 2024, 96 s.

Záverečná práca je spracovaná na tému Mapovanie turistického potenciálu regiónov pre rozvoj príjazdového cestovného ruchu v rámci Slovenskej republiky. Cieľom práce bolo identifikovať šesť turisticky najrozvinutejších regiónov a vykonať hĺbkovú analýzu tržieb ubytovacích zariadení. Zároveň sme sa venovali aj čiastkovým cieľom, prostredníctvom ktorých sme dospeli k hlavným zisteniam tejto práce. Parciálne ciele, ktoré boli stanovené v diplomovej práci, sú identifikácia najrozvinutejších turistických regiónov Slovenska, identifikácia ukazovateľov, ktoré ovplyvňujú tržby ubytovacích zariadení v najrozvinutejších regiónoch Slovenska, identifikácia vplyvu počtu domácich a zahraničných turistov na tržby ubytovacích zariadení, analýza ďalšieho rozvoja príjazdového cestovného ruchu v šiestich identifikovaných regiónoch, formulácia vízie a odporúčaní pre ďalší rozvoj príjazdového cestovného ruchu v najrozvinutejších regiónoch Slovenska.

Jednotlivé časti práce sa zameriavali na viaceré otázky súvisiace s regionálnym cestovným ruchom, príjazdovým cestovným ruchom, štatistikou cestovného ruchu a prognózou počtu zahraničných turistov. Práca obsahuje 6 grafov, 11 obrázkov a 16 tabuliek. Prvá kapitola bola venovaná súčasnému stavu problematiky na Slovensku a v zahraničí a sú v nej rozobrané teoretické východiská. Prvá kapitola pozostáva zo siedmich podkapitol, ktorých cieľom je zhrnúť literatúru a predstaviť široké spektrum názorov domácich aj zahraničných autorov. Sedem podkapitol sa zaoberá typológiou cestovného ruchu, faktormi ovplyvňujúcimi cestovný ruch, regionalizáciou cestovného ruchu na Slovensku, súčasnými trendami v cestovnom ruchu, potenciálom rozvoja cestovného ruchu, konkurencieschopnosťou Slovenska a príjazdovým cestovným ruchom. V druhej kapitole sme definovali hlavný cieľ a čiastkové ciele, ako aj výskumné otázky a hypotézy. Ďalšia kapitola bola venovaná metodike práce a výskumným metódam, ktoré boli použité v praktickej časti. Praktická časť je rozdelená do štyroch podkapitol, v ktorých sa venujeme viacerým otázkam. V prvej podkapitole sme sa zaoberali identifikáciou najrozvinutejších regiónov cestovného ruchu na Slovensku. Druhá podkapitola bola zameraná na identifikáciu vzťahov medzi ukazovateľmi cestovného ruchu. V tretej podkapitole sme vykonali niekoľko

regresných analýz s cieľom zamietnuť alebo potvrdiť vopred stanovené hypotézy. Posledná podkapitola sa zameriava na analýzu predpovedí a ukazuje potenciálny nárast jedného konkrétneho ukazovateľa. Na konci záverečnej práce bol formulovaný záver a diskusia.

Výsledkom riešenia danej problematiky je identifikácia šiestich najvýznamnejších regiónov cestovného ruchu na Slovensku. Na základe zhlukovej analýzy môžeme tvrdiť, že v roku 2020 boli najvýznamnejšími regiónmi cestovného ruchu Bratislavský región, Liptov, Turiec, Vysoké Tatry, Horehronie a Pohronie. Okrem toho sme tiež zistili, že ukazovatele zamerané na príjazdový cestovný ruch mali najväčší vplyv na tržby ubytovacích zariadení v Bratislavskom regióne. Regresná analýza potvrdila, že počet zahraničných turistov pozitívne ovplyvňuje tržby ubytovacích zariadení, ale len v Bratislavskom regióne. Možno tiež konštatovať, že zvyšujúci sa počet domácich turistov má pozitívny vplyv na tržby ubytovacích zariadení v Bratislavskom regióne, Vysokých Tatrách, Turci a na Horehroní. Na záver sme zistili, že v najbližších štyroch rokoch môžeme očakávať nárast počtu prenocovaní vo všetkých šiestich skúmaných regiónoch.

Kľúčové slová: klastrová analýza, regresná analýza, korelačná analýza, predikcie, región cestovného ruchu, indikátory cestovného ruchu, príjmy ubytovacích zariadení, príjazdový cestovný ruch

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Introduction

The issue of the regionalization of tourism is a comprehensive theme that influences the future development of the tourism industry. Unfortunately, the document based on which the tourism regions are divided is almost twenty years old. This may cause slower tourism development and poor competitiveness when it comes to the international level. For Slovakia, it is vital to become competitive due to increasing competition in neighboring countries like Poland, Austria, Czech Republic, and Hungary. Therefore, it is essential to undertake a comprehensive analysis, which can help the executives take the necessary measures to stimulate tourism development.

The main objective of the diploma thesis is to identify six tourism regions that are the most developed in terms of tourism and to provide an in-depth analysis of the Revenues of accommodation facilities. We also set several partial goals. These are the identification of the most developed tourist regions in Slovakia, identification of indicators that influence the Revenues of accommodation facilities in the most developed regions in Slovakia, identification, furthermore, how the number of domestic and foreign tourists affect the Revenues of accommodation facilities, analysis of further development of inbound tourism in the six identified regions, and formulation of a vision and recommendations for further development of inbound tourism in the most developed regions in Slovakia. The outcome of the diploma thesis will be the identification of six, the most developed tourism regions in terms of tourism, which have the greatest potential to attract foreign tourists. Then, we want to identify the indicators that influence the revenues of accommodation facilities and prepare the prediction of further development in case of one indicator reflecting the incoming tourism in Slovakia. Last but not least, we would like to formulate recommendations that could help increase Slovakia's inbound tourism. This is inevitable for the tourism industry in Slovakia as their impact on the local economy is significant.

The master thesis is divided into four chapters. The first chapter deals with the theoretical basis of regionalization and regional tourism. The second chapter defines the main objective and partial goals. The third chapter explains the methodology of the diploma thesis. The last chapter contains four subchapters. In these subchapters, we have conducted cluster analysis, correlation and regression analyses, and the prediction of further development of overnight stays (by foreign tourists) in the most developed tourism regions in Slovakia.

1 Theoretical overview

1.1 Typology of tourism – types and forms

"*The tourism has been always considered to be one of sectors, which could contribute to the economic growth of the country*" (Gajdošíková et al., 2016, p. 411).

Many European countries search for different opportunities that could increase the pace of development in various sectors of the economy. Among very often, tourism is seen as an option for the development of underdeveloped regions (Nestoroska, 2012). Gúčik (2011) agrees with Nestoroska and adds, that tourism cannot be overlooked, due to its growing influence in the regions.

"*The types of tourism are dynamic in time, they vary a lot. The types of tourism presented in a given period are generated by the needs of its objectives, the level of cultural and social facilities, and the existing means of transport*." (Tureac, 2008, p. 93)

According to Novacká and Colletive (2014), different types of tourism can be recognized regarding the place of realization and balance of payments. Domestic tourism is realized by domestic participants in the territory of one's state. On the other hand, foreign tourism can be divided into two types, incoming or outgoing tourism. Foreign participants in the territory of our country realize foreign incoming tourism (inbound tourism). From the economic point of view, incoming tourism represents an income for the economy because foreign tourists pay for all services to the tourism business entities of the given country. From the point of the state's balance of payments, it represents an asset. Foreign outbound tourism (outgoing tourism) is organized for Slovak citizens who travel to another country. For the companies, it represents expenses associated with payment fee services that are provided to our participants in the tourism industry. Regarding the point of view of the balance of payments, foreign outbound tourism is largely a liability. That doesn't mean all the tourist's expenses are going abroad. Even in the case of outbound tourism, domestic business entities can provide services that could eventually generate a profit. This relates to the bus, ship, or railway industry.

Regarding defining tourism types concerning the balance of payments, Ryglová et al. (2011) and Gregorová et al. (2015) agree with Novacká. Moreover, Ryglová (2011) and Gregorová et al. (2015) also mention transit tourism as a type of tourism which can be defined as the passage of passenger through the territory of the country on the way to their final destination. Usually, passengers travel without needing an overnight stay in the transit country or pass through the airport area without going through customs clearance and passport control. Kučerková and Makovník (2014) consider transit tourism a major threat to further sustainable tourism development. In 2011, over 54% of all incoming visitors were transit tourists. Therefore, the objective of the tourism policy should be to prolong the stay of incoming visitors and create attractive products that can encourage tourists to spend more money on services and products.

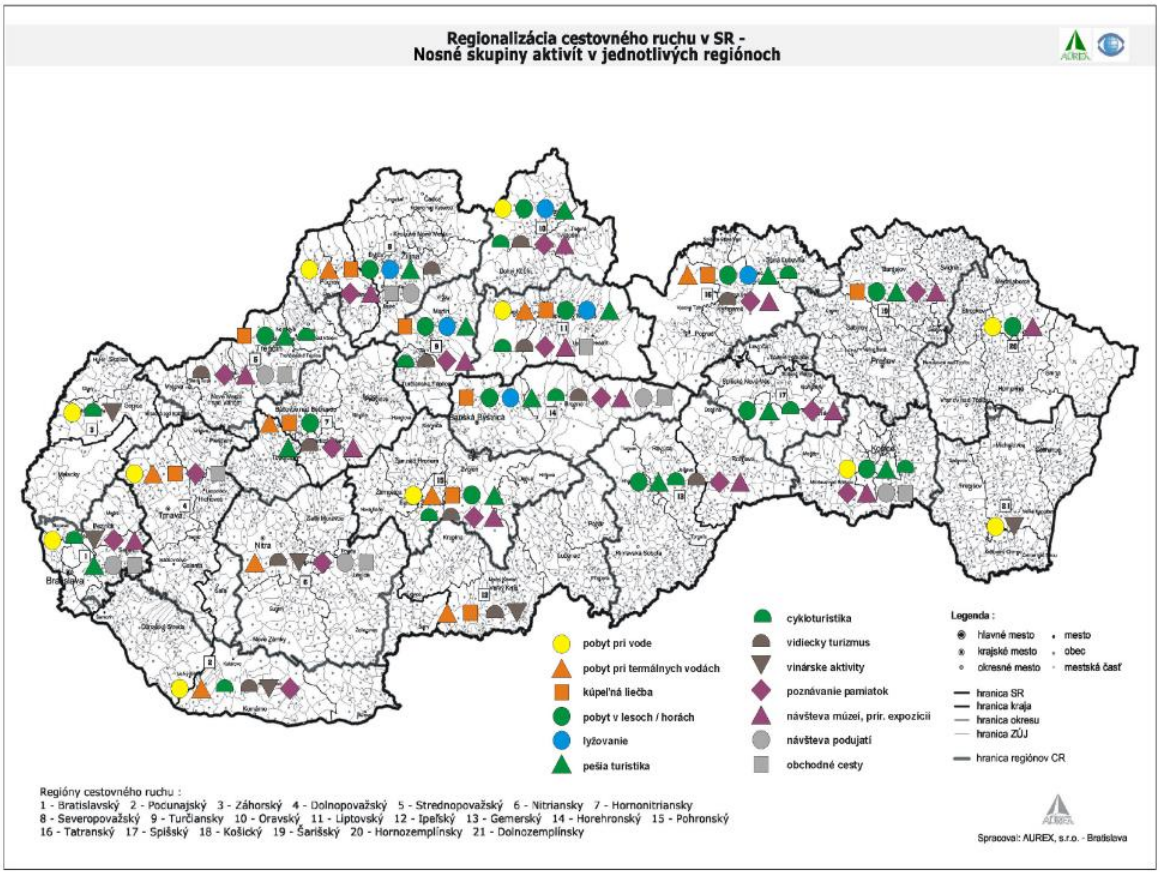
Moreover, the types and forms of tourism are divided according to several other aspects. Types of tourism can be split into many categories regarding motivation, from a geographical point of view, according to the method of organization, the age of tourists, duration of participation in the tourism industry, and number of visitors, etc. Regarding the geographical point of view, we distinguish between foreign, internal, and international tourism (Gúčik, 2010).

Every set of needs has specific characteristics reflected in particular requirements for achieving a utility effect. It is the main factor according to which we can distinguish variable forms of tourism. According to this factor, the following primary forms of tourism can be defined as a recreational, cultural-cognitive, religious, spa-therapeutic, medical, rural, agricultural, incentive, shopping, virtual, hunting, sport, and eco-tourism (Novacká et al., 2014). Every form of tourism responds to the needs of its participants. Therefore, Ryglová et al. (2011) define two forms of tourism, basic and specific. Primary forms of tourism include recreational, cultural-cognitive, sport and touristic tourism, and medical and spa tourism. Specific forms are based on various specialized customer segments, which reflect the particular needs of every type of clientele. This division coincides with Gregorová et al. (2015).

It is assumed that the new trends in the tourism industry will stimulate the emergence of new forms of tourism in the future. At present, we include among specific forms, for example rural, urban, agrotourism, congress and incentive, bicycle tourism, shopping tourism, and many more (Ryglová et al., 2011).

Loredana et al. (2021) have a different view on forms of tourism. They focus more on" alternative" forms of tourism. The whole concept of alternative forms of tourism is based on a perception of the problems that mass tourism brings. Ecological and sustainable aspects of development more influence Western society, while the economy has moved towards disorganized capitalism and a sharing economy. Furthermore, alternative tourism is based on different philosophies related to the ecological conservation of water and energy, using public transport, and recycling waste and wastewater. Furthermore, volunteer tourism is becoming more popular among the young segment of clientele. Nowadays, it is a significantly growing segment of alternative tourism due to its sustainable form and positive effects on tourism destinations. Furthermore, the following Figure 1 presents the most essential activities in all tourism regions in Slovakia.

Figure 1: Main forms of tourism in all tourism regions in Slovakia



Source: Ministry of Transport of the Slovak Republic, 2005

1.2 Factors affecting tourism

According to Plesník (2017), visitation of a tourism destination, in most cases, depends on the quality and level of services provided, the attractiveness of the environment, and the socio-economic status of the participants who participate in tourism activities. Gúčik (2020) adds that the main factors affecting tourism development are natural, cultural, and historical resources, which can generate attendance.

The great majority of authors, such as Plesník (2017), Krogmann and Nemčíková (2014), Hrala (2013), and Ryglová et al. (2011) agree on how we divide the set of prerequisites for the development of tourism. The prerequisites can be divided into three groups, these are:

- Localization prerequisites of tourism
- Realization prerequisites of tourism
- Selective prerequisites of tourism

Localization prerequisites are based on a tourism destination's primary potential and localization. They represent the basis of a tourist's motivation and serve as a motivator for visiting a destination. The character of environmental localization prerequisites is related to the diversity of the natural environment on the Earth's surface, not forgetting the natural phenomena beneath it. The most developed tourism destination naturally arose in the areas with the best environmental resources. Furthermore, the most important factors that influence the development of tourism in regions are relief, water, climate, fauna, and flora. All these factors are creating the destination and its unique character and potential. Plesník (2017) explicitly mentions rock relief forms, which can be used as a destination's unique selling proposition. In terms of Slovakia, we can see many different types of rock formations, especially in mountainous regions in the north. The most significant number of rock formations can be found in the limestone mountains, such as in Slovenský kras, Slovenský raj, etc. Cultural and administrative prerequisites belong to the first section of prerequisites. Cultural monuments, social events, and institutions are primarily identifying cultural and administrative prerequisites. The second group of prerequisites, the realization prerequisites, focuses mainly on services, accommodation, catering, and ancillary services. Selective prerequisites determine the ability of clients to participate in tourism and create conditions

for the intensity of demand for tourism products. Therefore, the level of infrastructure development is essential in terms of tourism accessibility (Plesník, 2017). Ryglová et al. (2011) agree with Plesník and add that regarding the realization prerequisites, it is the capacity and quality of services on which the development of a destination is based.

According to Khan et al. (2020), many factors can affect tourism worldwide. Some of these factors are high prices of services, terrorist attacks, and global pandemics.

Tourism was one of the most affected economic sectors by the COVID-19 pandemic. During this period, a rapid decline in demand for traveling and a slight increase in unemployment was observed (Vašaničová et al., 2023). According to Grešš (2021), the solution for global pandemics should be to set understandable and unchanging rules to create safe conditions for traveling even in tough times. If we follow the rules, we can minimize the negative impacts on tourism. Regarding the research conducted by Michálková and Gáll (2021), the most vulnerable regions in Slovakia are Tatras, Liptov, Spiš and Orava. Due to the COVID-19 pandemic, the whole tourism sector struggled. The decrease between the first and second quarters of 2020 was more than 12% in the employment in tourism. 75,38% in number of overnight stays and almost 80% of visitors in Slovakia. During this period, it was crucial to maintain as many jobs as possible and to prevent further decline. Moreover, the COVID-19 pandemic could help resolve the problem of fragmented destination management in the most vulnerable tourism regions.

According to research conducted by Vašaničová et al. (2023), we can state that destination competitiveness has a direct impact on tourism performance. Destination competitiveness can be measured by many indicators, which have different importance. International tourism inbound receipt is more relevant than, for example, the number of international tourists. According to the table of 125 counties, which are sorted based on their international tourism inbound receipts, we can see Slovakia on the 86. Place behind Austria, Poland, Hungary, and the Czech Republic. Based on these findings, Slovakia should strengthen its potential by increasing its competitiveness through new effective policies to become more competitive in Central Europe.

1.3 The current concept of regionalization and the potential of tourism regions in Slovakia

The criteria for defining tourism regions listed in the Regionalization of tourism in Slovakia include natural and anthropogenic conditions and a common demand for tourism. Regionalization also considers the cadastral boundaries of municipalities and higher territorial units. Before the current valid regionalization of tourism, regionalization was also created in 1962, when 20 regions were identified, and in 1981, when 24 tourism regions were identified (Orságová, 2020).

Tourism regions belong to the group of purpose-built regions. In Slovakia, a good example could be regions such as Liptov or Tatras. They can be defined as a territory characterized by relatively homogeneous cultural as well as natural resources, which can then be transformed for the further development of these regions. Tourism regions can be classified in terms of:

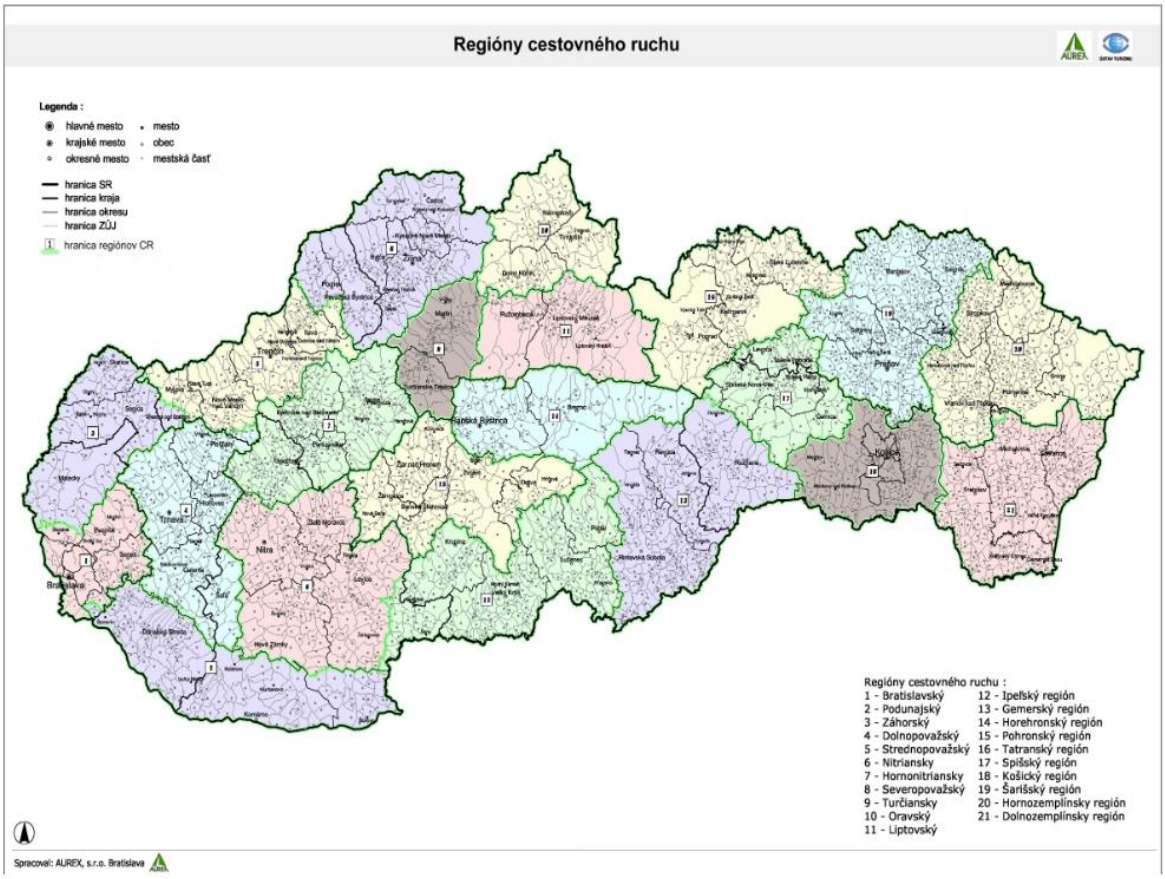
- the character of the landscape,
- life cycle,
- degree of attractiveness.

The landscape's character depends mainly on the altitude of the region, its infrastructural facilities, and the level of provided service. Tourist regions can also be classified according to their phase during the life cycle. Regions can be in the phase of discovery, involvement, development, consolidation, stagnation, decline, or revival. The degree of attractiveness depends mainly on natural and cultural-historical resources, infrastructure facilities, and communication of the destination. Thanks to these aspects, we can easily identify regions with local, regional, national, and international importance (Gúčik, 2021)

The regionalization in Slovak conditions is determined by a document issued by the Ministry of Economy in 2005. According to this document, tourism regions are defined in terms of various factors such as homogeneity of conditions, geographical proximity, historical aspects, the existence of natural centers, and internal links in the region. There are currently 21 tourism regions in Slovakia. ("Bratislavský, Podunajský, Záhorský,

Dolnopovažský, Nitriansky, Hornonitriansky, Severopovažský, Turčiansky, Oravský, Liptovský, Ipeľský, Gemerský, Horehronský, Pohronský, Tatranský, Spišský, Košický, Šarišský, Hornozemplínsky, Dolnozemplínsky region") The document of regionalization was developed for business sector, regional organizations and state administration. This indicative and supportive document should be helpful at all levels of tourism management, local, regional, and national, and should support coordination, investment, conceptual and marketing activities (Orságová, 2020).

Figure 2: Tourism regions in Slovakia

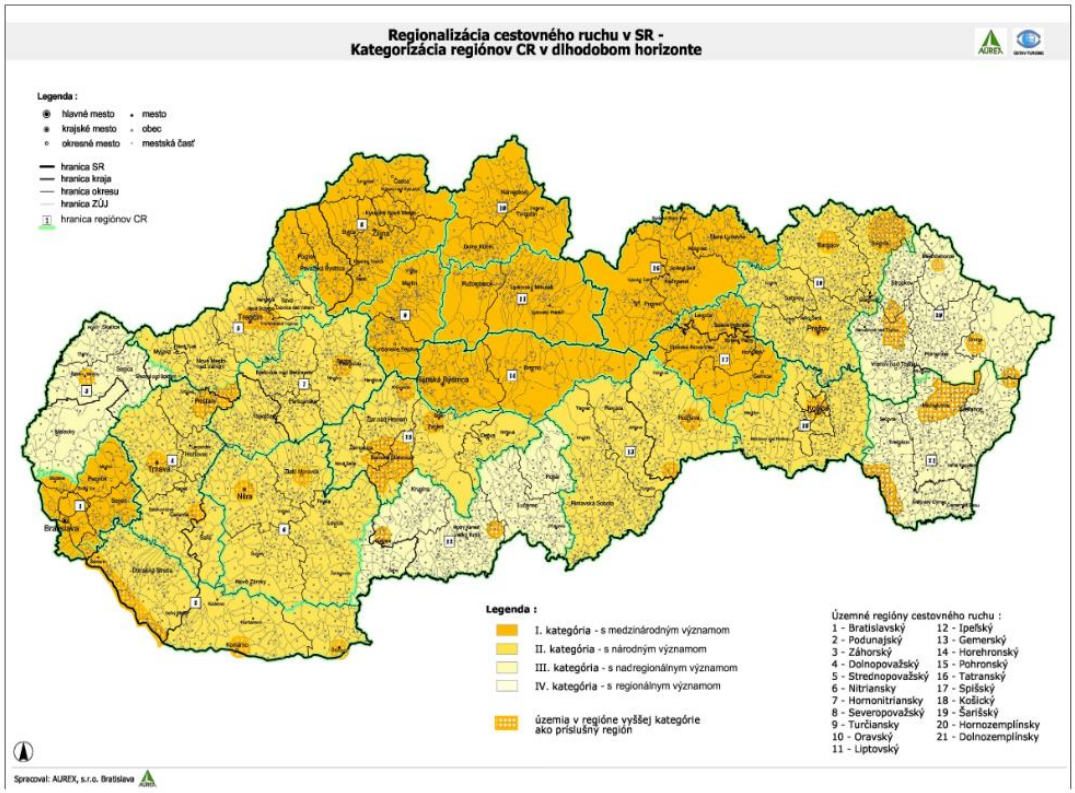


Source: Ministry of Transport of the Slovak Republic, 2005

Even though Slovakia is a landlocked Central European country, its various geographical features make it an attractive holiday destination. Every tourism region is, therefore, unique and offers different types of services and infrastructure depending on natural, historical, and social assumptions. The potential for future tourism development is also different among them. The document mentioned above also examines the tourist potential of individual regions. Two approaches are outlined in this paper. The first is categorization in the medium-term horizon, and the second is the long-term horizon

(Ministry of Economy of the Slovak Republic, 2005). Regarding the map published in the document of Regionalization, in the medium-term horizon approach, there have been identified 5 regions that have international importance. These are: Region of Bratislava, Upper Považie, Liptov, Horehronie and Tatras. From the long-term perspective, there have been identified 8 regions. Orava, Turiec, and Spiš were added to the previous regions. (Ministry of Economy of the Slovak Republic, 2005).

Figure 3: Categorization of tourism regions in the long-term



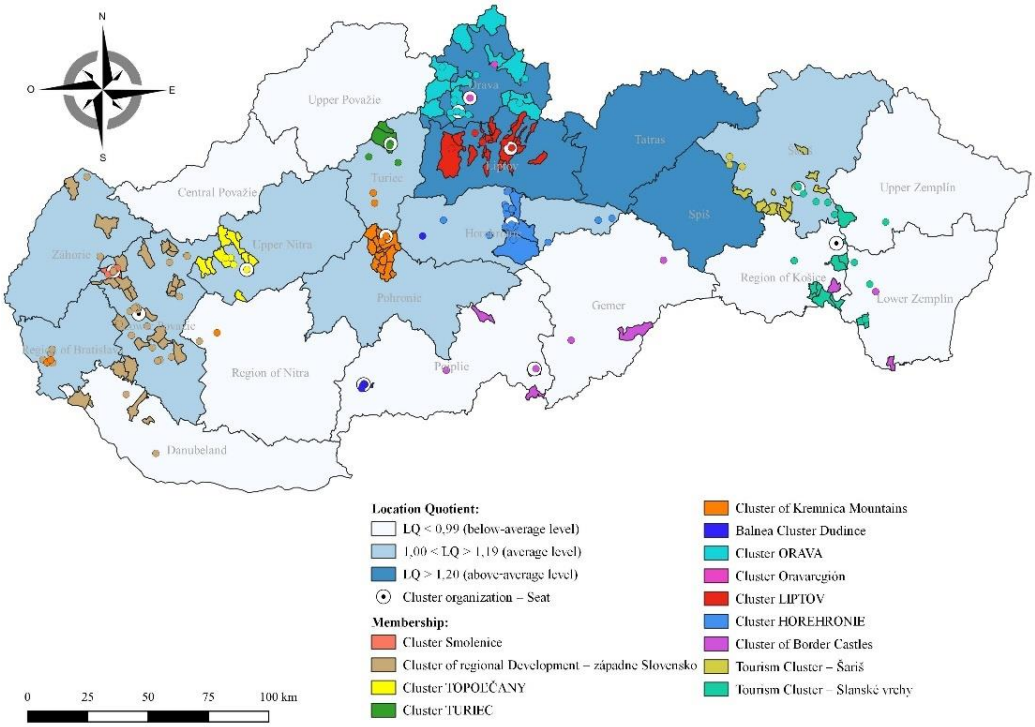
Source: Regionalization of tourism in the Slovak Republic, Ministry of Transport of the Slovak Republic

Another essential tool in terms of regional development is the creation of cluster organizations. Thanks to EU funding opportunities, most cluster organizations were established from 2007 - 2013. Till the year 2020, 13 tourism clusters were founded in Slovakia. In the coming years, other tourism clusters may emerge because we see an effort to connect private companies with the public sector. However, tourism clusters are a long-term problem in Slovakia. To the present, there is still a lack of awareness of the importance of clustering in tourism. There is still no evidence of a strategic document, cluster policy, or cluster concept. Therefore, we lag behind foreign countries where this tool is used more

effectively, and its position in tourism development is indispensable (Michálková et al., 2012). Mydlár (2015) agrees with Michálková and adds that, regarding regional innovation strategies, cluster organizations are perceived as an important tool for sustainable development, increasing competitiveness and innovation potential.

Already established clusters of tourism are, however, the result of insufficient regional tourism management, an international need for better coordination, and a greater need for alternatives to regional associations. They are meant to provide clear evidence for the activeness of tourism entities operating in the region. The time will show if the cluster organizations can move the destination towards competitiveness, greater development, and innovations, or they will focus more on activities typical for DMOs (Michálková et al. 2012). Furthermore, in 2020, twelve tourist regions with above-average tourism concentration were identified. These clusters are the Region of Bratislava, Upper Nitra, Turiec, Lower Považie, Liptov, Horehronie, Spiš, Orava, Tatras, Pohronie, Šariš and Záhorie. However, only eight of these tourism regions have a cluster organization, which helps the region further develop the tourism industry. It is also questionable if the regions with low sectoral concentration and low competitiveness could benefit from setting up a cluster organization in the region. Conversely, in the regions where the sectoral concentration is growing (Upper Považie., a cluster organization could potentially stimulate their regional competitiveness (Michálková et al., 2020). The following Figure 4 shows the existing cluster tourism organizations and sectoral tourism concentration.

Figure 4: Existing cluster tourism organizations and sectoral tourism concentration



Source: Michálková et al., 2020

According to the research conducted by Michálková and Gáll (2021), the regions of Tatras and Liptov are above the average in three different categories. The first category is the potential for tourism development. The second category is the level of industry concentration in the tourism sector, and finally, the number of overnight stays. Both regions are doing well in tourism development, however, a significant difference has been identified in the case of the concentration in tourism development. An increasing concentration of tourism is developing in the Liptov region. In the Liptov region, we can see a growing number of employees in the tourism industry. It is based on the great competitiveness of the region and the growth of the whole economy. On the contrary, the concentration of the tourism sector and the decrease in total employment in this sector are continuously decreasing in the case of the Tatras region. Regarding the shift-share analysis, the core problem of this region is its low competitiveness as a tourism destination. The same difference was noticed between the regions of Spiš and Orava. The importance of tourism is continuously growing in the region of Orava. This can be observed via the number of employees in the tourism sector, which is constantly growing. Unfortunately, the opposite development can be seen in the region of Spiš.

Moreover, in Slovakia, more than 35 DMO's operate. They are responsible for propagating tourism regions within the Slovak Republic or abroad. However, marketing activities are usually overlapping, and they are often duplicated, which limits regional development in many regions (Maráková and Kvasnovská, 2017). Michálková and Gáll (2021) agree with Maráková and Kvasnovská that in some regions, DMO's compete with each other. They also point out that some large parts of specific regions remain uncovered by DMO's. This has caused problems and may slow down the development of tourism. The current situation in Slovakia allows the existence of more DMO's in the same region or subregion. An excellent example of a region with four DMO's operating in this region is the Tatras region. Compared to other regions such as Liptov, Orava, and Spiš, which have only one DMO covering all activities in the region, it is clear that soon, the region of Tatras will have to come up with a reorganization of destination management.

Furthermore, the financing of organizations in Slovakia needs to be set better. Most state support receives regions with the best-developed infrastructure and tourism supra structure and with the best tourism potential. This way only deepens the differences between regions, while the goal in Slovakia should be to reduce these differences (Maráková and Kvasnovská, 2017). Even a strategic objective of the Tourism Development Strategy 2020 focuses on minimalizing regional disparities (Ministry of Transport of the Slovak Republic, 2013). In this particular example, we can see how the tourism strategy is disorganized and non-conceptual (Maráková and Kvasnovská, 2017). Gajdošíková et al. (2016) agree with Maráková and Kvasnovská and add that in the case of founding of these organizations, it is crucial to focus more on increasing their revenues from own activities or stimulate the organizations to get more members, who pay member fees. This can lead to better performance of these organizations.

On the other hand, Maráková and Kvasnovská (2017) argue that to ensure the success of tourism development and moderate regional disparities, it is important to decrease the number of existing DMOs and change the criteria for obtaining governmental subsidies. Maráková and Kvasnovská, therefore, have the same position as Michálková and Gáll (2021) when it comes to reducing some existing Destination management organizations. Moreover, the government should emphasize the public interest through different tools, such as better use of destination marketing management.

Unfortunately, there is an agreement among several authors Koščo et al. (2016), Maráková and Kvasnovská (2017), Gajdošíková et al. (2016) that tourism development in Slovakia has been, in recent years, uncoordinated, chaotic, non-conceptual, and without strategic direction. It is caused mainly by a lack of measuring key statistical indicators on an economic, national, or regional level (Koščo et al., 2016). Moreover, Slovakia is up to now an unknown tourism destination in the international tourism market, which results from the high competition in our region. Although we have accepted many documents focusing on the tourism policy, many have not been implemented on the praxis, which slows down the tourism development in the country.

Based on Act No. 91/2010 Coll., a new destination management organization can be established. In 2019, seven regional tourism organizations (RTO) were registered, according to the Ministry of Transport of the Slovak Republic. On the other hand, in the Register of Local Tourism Organizations (LTO), 37 organizations have been signed (Gajdošík and Šebová, 2020). Regarding information gained on the Ministry of Transport of the Slovak Republic website, eight Regional tourism organizations and 39 Local tourism organizations are registered (Ministry of Transport of the Slovak Republic, 2024).

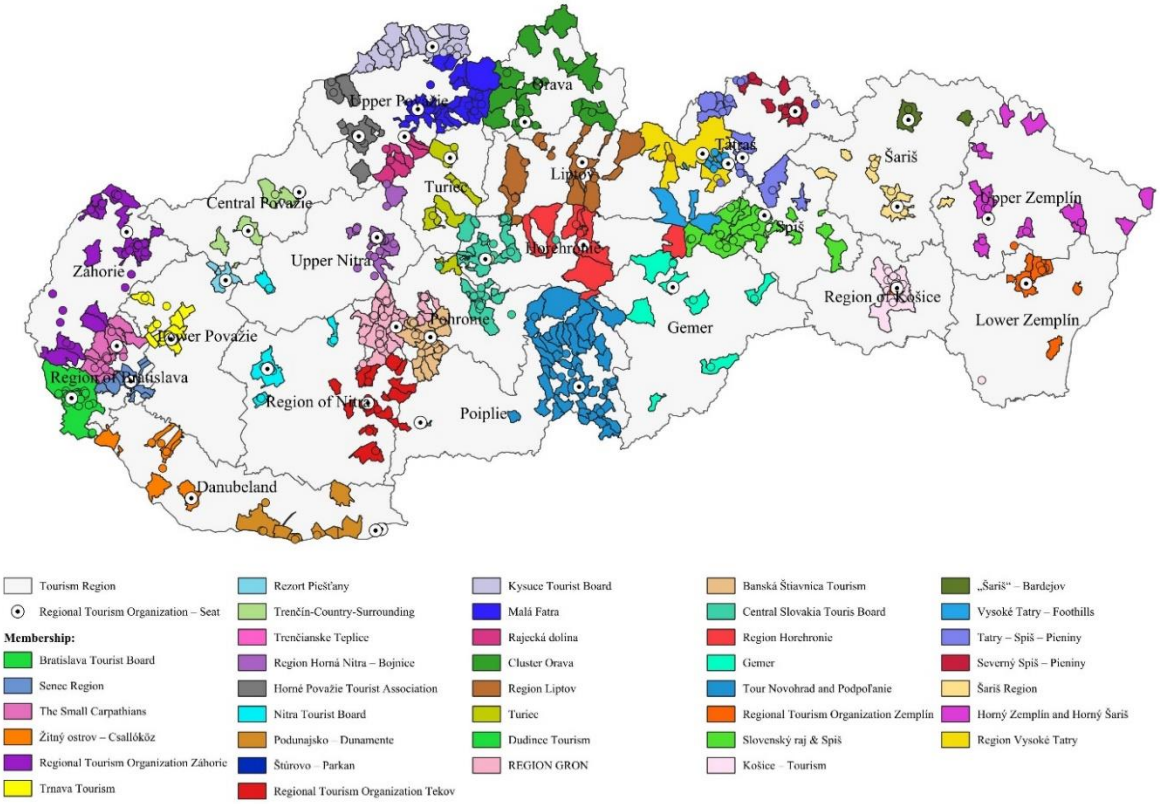
Table 1: The list of destination management organizations in Slovakia

Regional tourism organizations	Local tourism organizations
Turizmus regiónu Bratislava	LTO Región Vysoké Tatry
Krajská organizácia cestovného ruchu Severovýchod Slovenska	LTO Severný Spiš-Pieniny
Žilinský turistický kraj	LTO Visit Košice
Košice Región Turizmus	LTO Slnečný Hont
Banskobystrický kraj Turizmus	LTO Región Horehronie
Krajská organizácia cestovného ruchu Trenčín región	LTO„Šariš" – Bardejov
Krajská organizácia cestovného ruchu Nitriansky kraj	LTO Region Gron
Trnavský kaj	LTO Trenčianske Teplice
	LTO Región Horné Považie
	LTO Trnava Tourism
	LTO Rajecká dolina

	LTO Horný Zemplín
	LTO Turiec
	Nitrianska LTO
	Zemplínska LTO
	LTO Stredné Slovensko
	LTO Malá Fatra
	LTO Región Banská Štiavnica
	LTO Vysoké Tatry-Podhorie
	LTO Kysuce
	LTO Resort Piešťany
	LTO Region Liptov
	LTO Turistický Novohrad a Podpoľanie
	LTO Klaster Orava
	LTO Tatry – Spiš – Pieniny
	LTO Región Horná Nitra-Bojnice
	LTO Región Senec
	LTO Záhorie
	LTO Podunajsko
	LTO Trenčín a okolie
	LTO Malé Karpaty
	LTO Slovenská raj &Spiš
	LTO Tekov
	LTO Gemer
	LTO Región Šariš
	LTO Žitný ostrov – Csallóköz
	Bratislava Tourist Board
	LTO Štúrovo – Parkan
	LTO Matúšova zem - Mátyusföld

Source: Own elaboration based on the information provided on the website of the Ministry of Transport of the Slovak Republic, 2024

Figure 5: Map of the Local tourism organizations in 2020



Source: Michálková and Gáll, 2021

1.4 Current trends in tourism

The European integration process was the main driver of changes in the tourism industry in recent decades. New, transformed Europe can see the outcomes of this process today. Europeans in the new member states that joined the European Union in 2004 tend to prefer trips to neighboring countries, resulting from similar cultural environments, geographical proximity, and affordable prices (Ana, 2017). Fodranová and Kubíčková (2016, s. 380) adds that we should implement some innovative steps to remain competitive in the future. For the future development of the tourism industry, it is essential to develop professional training programs, which could increase the number of well-skilled workforce. Apart from improvements in education, a lot has to be done in promoting tourism among the general public. People in Slovakia need to know the benefits of tourism developed by the Stane Tourism Organization. They need to realize that tourism is everybody's business and that everybody gets different benefits from tourism, even though many people don't realize that the benefits come from the development of the tourism industry.

Furthermore, the external environment significantly influences the tourism industry. The way of obtaining information in tourism is changing dramatically. The effects of information technology and the internet are especially significant. This can be seen throughout the whole tourism sector. In recent years, new models of visitor behavior, creating new products, offering new services, better evaluation, and analysis of organizational activities might be noticed. Strategies of tourism organizations are exposed to a lot of pressure, facing the rapid development of information and communication technologies. Tourism organizations must employ highly educated professionals who understand online communication and marketing, know how to analyze data and know the current trends that reshape the tourism market. The trends that are expected to reshape the tourism industry are new sources of obtaining information, more competent visitors, focus on empirical experience in the destinations in order to evoke an emotion, collecting and processing of information of tourists, and the use of artificial intelligence in various areas of the tourism industry (Gajdošík, 2017).

According to current research, we can conclude that the biggest changes are taking place in the field of evaluation of data, policy monitoring, and use of data, as well as in the field of tools generally. The major trends include:

- ” *the importance of evidence in policy planning, implementation and evaluation,*
- *the unprecedented availability of open and big data,*
- *and the rapid developments in the intelligence and analytical tools* (Kalvet, 2020, p. 22).”

These trends play a significant role also in tourism, especially the role of data science and open and big data analytics. Nowadays, we can also see a decline in the importance of surveys, which are already complemented by other data sources. The main goal for tourism managers should be to build a conceptual framework based on precise definitions of what should be measured and to link it with the most relevant data sources. With the help of these frameworks, managers can avoid falling into a “data supply” trap (Kalvet, 2020). Moreover, we can see rising demand for Big Data analytics to find a competitive advantage, which could ensure that the destination or companies stay competitive in the market (Belias et al., 2021). Kubíčková and Fodranová (2016) remind us that it is necessary to constantly monitor the cultural environment of foreign tourists to ensure the right development of the tourism

industry. It is inevitable due to possible misunderstandings between cultures, which can cause major damage to the tourism industry through job losses, decline of the economy, and frustration in society.

It is known that various studies have shown the importance of well-educated and qualified employees for a company. The research conducted by Üngüren et al. (2015) also showed that managers who have special training and skills in the field of tourism can secure higher profitability and better performance for a company. The study conducted by Kršák, Tobisový, and Sehnálková (2014) has also confirmed the importance of providing employees required education. This is the result of Slovakia joining the European Union, where Slovakia's entrepreneurs face growing competition on an international scale.

Slovakia should aim to increase the readiness of human resources, which can stimulate tourism's revenue contribution to the GDP. Slovakia's education system should focus more on language skills, student motivation, information and communication skills, and level of qualification. It is also important to emphasize that increasing the quality of services in the tourism industry through adjusting already existing services is easier than building completely new services (Vašaničová et al., 2016).

1.5 Analysis of regional development in terms of potential

*"We can say that tourism is an important part of Slovakia's sector and has a high untapped potential, especially in comparison with the tourism sectors of other countries," (*Vašaničová, et al., 2016, p. 1945).

A large number of authors, such as Mydlár (2015), Vašaničová (2016), and Vongrej (2014), agree that tourism in Slovakia has great potential. However, this potential is still untapped, and it's far from an efficient use of resources which Slovakia have at its disposal.

For the regional economy, it is important to identify the most important sectors of the national economy. Therefore, Gáll and Strežo (2019) conducted research focusing on cluster mapping, which can provide a clear picture of the regional economy. The research shows the level of industry concentration in the regions. The result of this study shows that the region of Upper Považie will significantly impact the regional economy. Based on the growing trend of this region, we can predict that in the future, the region of Upper Považie will gain

a better position on the national scale. This region can even overtake the Bratislava region, where even the cluster organization already operates. Other results showed the regions of Spiš and Tatras recorded a loss of their specialization in the surrounding region, and in the regions Horehronie and Turiec, there has been an identified decline due to the loss of jobs compared to the national level.

Regarding regional development, it is important to state that Slovakia is a winter tourism destination. This is a result of the natural and climate conditions that prevail in Central Europe. Beside the Alps, the Carpathians are the second-largest mountain range in Europe. The highest part of the Carpathian Mountains range is in Slovakia, implying that Slovakia has the best natural conditions for developing winter tourism besides the Alpine states. However, western countries have not yet discovered Slovakia as a winter tourism destination. This may change soon because Slovakia has many competitive advantages over Western Alpine countries. Although our winter destinations cannot compete with other western tourism destinations in terms of length of ski slopes, altitude, and infrastructure, we can be competitive through lower prices of services and accommodation, the inclusion of sustainability issues, or an increasing level of destination management. To become a more sustainable and competitive destination, we must differentiate already offering products to ensure a stronger position in international markets. Furthermore, due to changes coming with global warming, our winter destinations have to develop new product concepts, ensuring an all-year-round destination with complex products for all seasons (Gajdošíková, 2019). Vodeb (2012) adds that through enhanced cooperation between bordering regions, more innovative, cross-border products can be created. This can help the destinations stay competitive towards more developed tourism regions. Maráková and Dzúriková (2023) agree with Vodeb that creating products shouldn't be limited to the borders of the region. On the contrary, destination management organizations should create products based on tourism flows and the ecosystem of services. After that, they can become a 3rd generation of destination management organizations. According to a study conducted by Šambronská et al. (2023), 50 % of the interviewed subject (DMOs) consider the application of sustainability in tourism products to be dynamic, 32 % did not identify with dynamic product development, and the last 18 % were neutral. According to the authors, the quality and sustainability of tourism products are two inseparable conditions to ensure the right trajectory of sustainable tourism development. Krajinović (2022), however, has a more comprehensive view of the sustainability of the destinations. He emphasizes that sustainability should not be just a

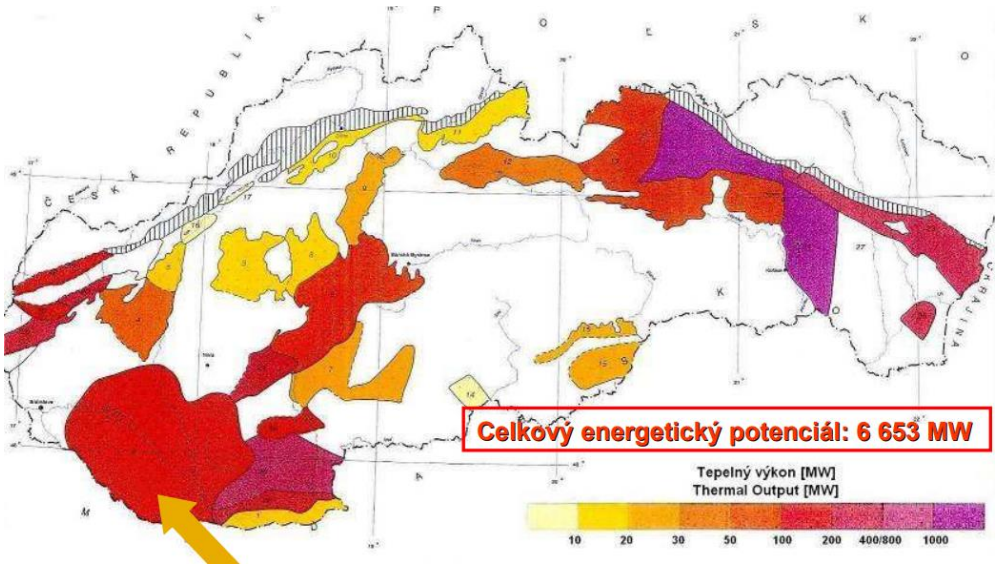
catchword for attracting socially responsible tourists. Sustainability should be part of every dimension of the destinations. It should refer to the permanent effort to achieve environmental goals, better collaboration between the partners and universities, and setting measurements, which are inevitable for further sustainable development. Dziekański and Wyszkowski (2023) and Michálková (2023) point out that the environment should be perceived as an important stimulating factor but simultaneously a limiting factor for tourism development. Therefore, more systematic studies dedicated to developing sustainable tourism destinations should be applied to the regions that focus on tourism. Sieglinde and Joao (2005) emphasize the need to consider the following dimensions when the destination wants to move towards sustainability. To become a sustainable destination, these dimensions have to be considered:

- ecological and environmental sustainability,
- economic sustainability,
- social-cultural sustainability,
- political-institutional sustainability (Sieglinde and Joao, 2005).

Another under-tapped or literally speaking, hidden potential is geothermal energy. In Slovakia, we have many regions rich in geothermal resources that have not yet been utilized. Such a region can be found in the surrounding area of the second-largest city in Slovakia, Košice. This region is one of Slovakia's richest regions in terms of geothermal energy. Even the strategy of the Košice region is also considering the use of geothermal energy. Unfortunately, the minimum has been done. In the neighboring country, Hungary, geothermal energy is utilized for recreational and therapeutic purposes. Therefore, it is just Slovakia's responsibility that we cannot develop our tourism destinations, even though we have the necessary resources (Koščo et al., 2016). Since 2016, it has changed a lot. The Ministry of Investments, Regional Development and Informatization of the Slovak Republic is preparing Central Europe's greatest geothermal project. This project would help Košice with home heating, while the costs should exceed 80 million Euro (Ministry of Investment, Regional Development and Informatics of the Slovak Republic, 2023). This geothermal energy can also be used for a potentially new aquapark close to Košice, which could help the region attract more domestic and foreign tourists (Kačmáry, 2022). According to Halás (2010), Slovakia has above-average geothermal conditions not only in the surrounding area

around Košice. The potential of utilizing geothermal energy to develop destinations is also in regions such as Tatras, Šariš, Podunajsko, Lower Považie, Region of Nitra, and Pohronie. This can be seen in Figure 6.

Figure 6: Geothermal conditions in Slovakia



Source: Halás, 2010

Regional development also depends on the quality of infrastructure. Transport infrastructure is especially vital for tourism development. Without modern, safe, and maintained infrastructure the regions can hardly think about their development in any sector of the economy. Due to the shift of paradigm in traveling, more and more people use public and eco-friendly means of transport. The railway network is, therefore, crucial for the further development of regions. In Slovakia, significant railway infrastructure modernization occurs only on the main lines in western Slovakia and partially in the northern part of Slovakia. Unfortunately, constructing a high-speed railway is not a question for a decade. The infrastructure is very important because without working and maintained infrastructure, there is no railway transport and one less option to access the destination with a comfortable means of transport (Michniak, 2016). Even the study conducted by Baláž (1991) more than three decades ago showed a significant difference in the infrastructure and supra structure between Slovakia and Austria. The author of the study pointed out the abysmal difference in the development of speed trains and a low number of mountain transport facilities, which could potentially boost tourism in regions.

In the case of Slovakia, small airports can play a key role in developing tourism. A few years ago, they significantly improved their financial performance. However, they are still dependent on funding of their operational costs, therefore, they are balancing at the age of bankruptcy. These airports ensure the transport of Slovak citizens to foreign destinations and the transport of foreign clientele to Slovakia. It is important to realize the economic benefits of the airport for the region. Regarding the study that measured the direct economic impact, compared with an average annual loss, it can be stated that the highest revenues have been achieved by the Poprad-Tatry airport. However, it still cannot cover all the costs of the airport. The same problems were seen in the case of Žilina and Piešťany airports. According to the study, the economic impact of Piešťany airport in 2016 was 220 000 €, which is still less than the loss produced by the airport operator. In the case of Žilina airport, we can see the same situation where the airport's economic impact (64 500 €) cannot cover the loss from the airport operation (129 173 €). However, we can see different situations at Poprad-Tatry airport. The economic impact of this airport is greater than 5.5 mil. €, far higher than their average loss (270 748 €). This study has shown the significance of incoming leisure passengers for the small airports in Slovakia and their great economic impact on the regions (Kazda et al., 2017).

However, air transport is used mainly for outgoing and incoming tourism and is operated by foreign airlines. Because it is more profitable, tour- operators focus less on incoming tourism and more on outgoing tourism. For greater development of incoming tourism, it is important to deepen the cooperation between the domestic incoming tour operators with international airports and create an attractive offer for foreign tourists (Gúčik et al., 2018).

1.6 Competitiveness of Slovakia

"The main objective of policy should be cohesion of regions based on economic activities connected with tourism, support of socio-economic cohesion and competitiveness of tourism regions on international tourism market by respecting principles of sustainable tourism development." (Kučerová and Makovník, 2009, p. 11)

Slovakia's tourism policy should focus on recreational tourism, then on sport and adventure tourism, spa and wellness tourism, cultural tourism, and business tourism. To develop these forms of tourism, it is essential to improve the entrepreneurial environment, invest more in public tourism infrastructure, improve the marketing strategy, set better

communication channels between public and private sector, and last but not least, increase the income per incoming tourists. Moreover, the discrepancies between the 21 tourism regions are significant and cannot be ignored. The DMOs in these regions should focus more on their own marketing and entrepreneurial activities, which can help the organizations to finance their activities (Kučerová and Makovník, 2009).

Turbulent development in the world economy confirmed that an essential part of the progress of every national economy is its competitiveness, thus supporting its viability. Unfortunately, the Slovak Republic has many competitive disadvantages that must be mitigated or eliminated. Therefore, developing tourism, one of the fastest-growing industries can help (Mydlár, 2015). The competitiveness of countries in terms of tourism is vital for the future development of a destination. There are many ways how we can measure competitiveness when it comes to tourism development (Dogru et al., 2019).

The Travel and Tourism Competitiveness Index (TTCI) from 2017 listed 136 countries worldwide. Following the TTCI 2017 ranking, Slovakia ranked 59th. When benchmarking Slovakia with other EU countries, we must admit that the 27th position is not a good sign for Slovakia. Despite the recorded increase in the index value by 0.06 points, Slovakia ends still at the bottom of all monitored EU countries. Regarding the in-depth analysis of the sub-indexes of TTCI, Bednárová et al. (2018) found that the weak competitiveness position of Slovakia in tourism affects many factors and indicators. Indicators that limit the development of the tourism industry in Slovakia are, first of all:

- the number of operating airlines,
- the ease of finding skilled employees in the field of tourism
- prioritization of tourism by the government,
- effectiveness of marketing and branding,
- the number of aircraft departures,
- the price level of fuels, etc. (Bednárová et al. 2018).

Shift Share Analysis (SSA) is one of many tools academics and analytics use to measure changes in their regional economy. Moreover, it can be used to dig deeper into economic statistics and help us understand what changes are happening. SSA can also help

to identify which regions are more likely to grow faster and which are shrinking (Clouse, 2021). Dogru et al. (2019) have conducted a Shift Share Analysis with countries worldwide. This analysis found that focusing on tourist arrivals does not help the destination with further development. Although Turkey is, according to SSA, the third most competitive country in attracting tourists, it lacks the efficiency of generating revenues from tourism. Nowadays, it is crucial to focus more on the revenues that come with tourism consumption.

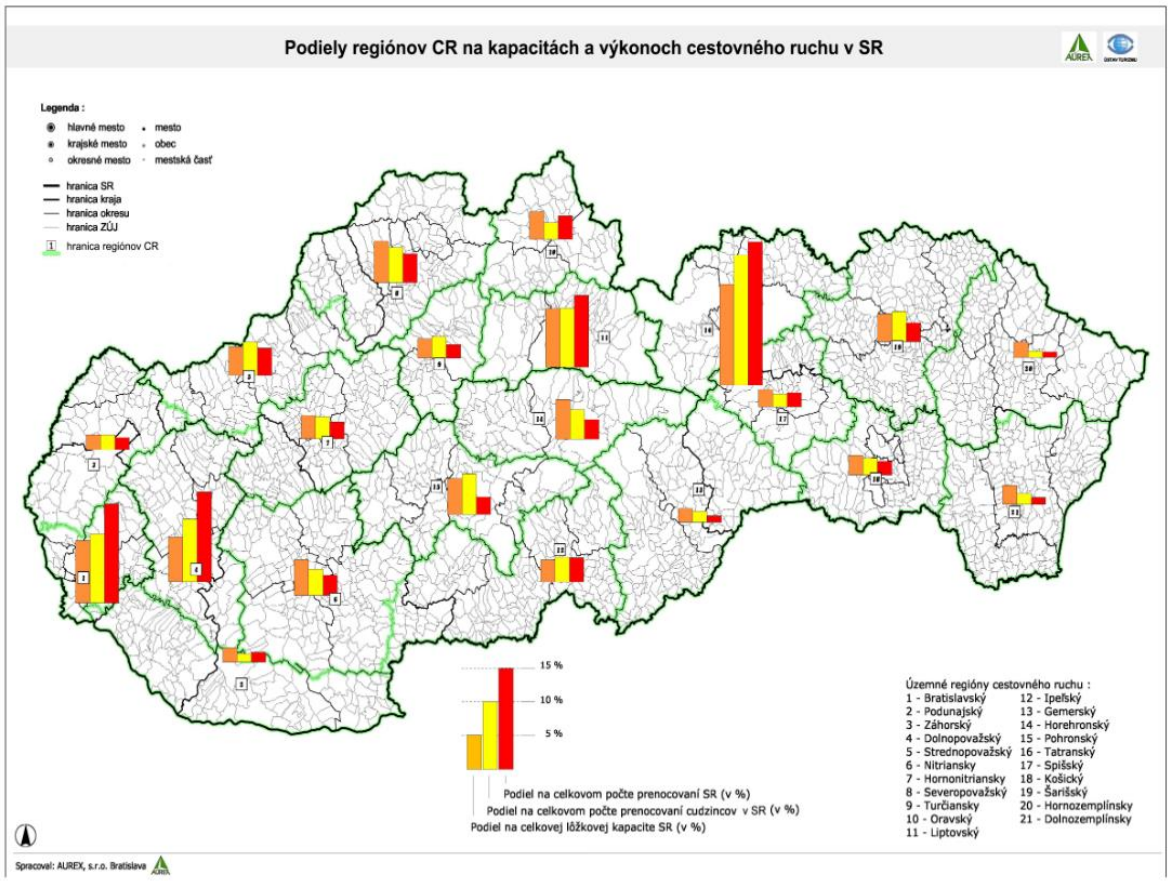
Another research have been conducted by the output-oriented DEA model in the first stage and the panel Tobit regression model in the second stage with the 27 EU countries and five Balkan states over the period 2011-2012. The outcome of this research showed that 15 EU countries have relatively high-efficiency scores, unlike other countries with room for improvement. Slovakia belongs to the group whose results are not efficient. With average efficiency of 0,76 out of 1, Slovakia ranks at 2. place when comparing V4 countries. Only the Czech Republic scored better, and Hungary and Poland had slightly worse results. Thanks to this research, we can see a distinct difference between Western EU countries and V4 countries to which Slovakia belongs (Radovanov, 2020).

North Macedonia is struggling with problems similar to those in Slovakia. The country is still poorly recognized as a tourist destination within broader international frames. Therefore, they have identified weak competitive market position and poor destination recognition as major problems for future development. In the past years, little attention was given to the issue of policymakers. The result is an absence of a defined policy for tourism development (Nestoroska, 2012). Unfortunately, the example of North Macedonia is very similar to Slovakia, which also lacks comprehensive documents that would cover the tourism policy on a national scale.

After 1990, tourism in Slovakia recorded growth rates resulting from the economic boom in the whole of Europe. However, if Slovakia wants to stay competitive in the tourist market, it must set up and implement short-term and long-term goals. In terms of already established source markets, Slovakia has to adjust its product portfolio. Moreover, Slovakia should penetrate on other markets by setting up new innovative products. To ensure the competitiveness of Slovakia in the tourism market, it is necessary to stabilize the organizational structure of tourism on the regional, local, and national levels (Malochvský, 2014). It is important to mention that the positive and negative impacts of tourism affect the

sustainable development of tourism. For greater tourism development, it is important to maximize positive tourism impacts and minimize negative tourism impacts. Therefore, comprehensive, systematic, and legislative changes are needed (Štrba et al., 2022). Regarding Slovakia, it is important to implement nature-friendly forest management to ensure the sustainability of natural resources in mountainous regions, which are vital for tourism development (Kovalčík, 2020). To stay competitive, Zemanová (2023) recommends in her dissertation thesis Slovakia to participate in exhibitions and B2B meetings organized under the brand Discover Central Europe. Moreover, Slovakia should increase the number of direct flights from countries targeted by the DCE brand, such as Germany, Austria, Holland, etc.

Figure 7: Capacity and performance indicators of regions in Slovakia



Source: Ministry of Transport of the Slovak Republic, 2005

1.7 Incoming tourism within the Slovak Republic

Foreign visitors influence the economic activities of the visited country and its economy with their purchasing funds. It is important to notice that the development of foreign tourism stabilizes and increases the demand for goods and services consumed while traveling and staying in the destination (Gúčik, 2020). Michálková (2013)points out that tourism policy should find adequate tools to strengthen the active balance of foreign tourism.

Most authors, such as Pompurová and Šimočková (2014) and Michálková et al. (2013), agree that Slovakia still has great potential to increase visitation of the country. Michálková (2013), however, adds that Slovakia should focus more on reducing regional disparities through tourism development.

According to Baláž (1991), the visitation of the country and the structure of foreign clientele are determined by the following groups of factors:

a) political stability in the visited country and the surrounding states,
b) political stability in the source states,
c) degree of attractiveness of the country for tourists
d) price level of products and services of the visited country.

The neighboring countries play a significant role for many countries in the EU regarding inbound tourism. Therefore, the destinations are usually dependent on their neighboring countries. The success rate of the destinations varies from the marketing activities conducted on the source market. Slovakia's most important inbound source markets are the Czech Republic, Poland, Germany, and Hungary (2017). Based on these findings, we can confirm that Slovakia’s dependence on its neighbors is relatively high, while three out of the four most important source countries are Slovakia’s neighbors. Overall, the research confirmed Poland to be the most dependent on its neighbors in the case of inbound tourism (Borzyszkowski, 2019). Pompurová and Šimočková (2014) agree that the Czech market is one of the most important source markets for the tourism sector in Slovakia. Therefore, it is important to maintain a high level of satisfied demand in this market. As a primary source of foreign tourism, Poland plays also a significant role in inbound tourism in northern Slovakia. However, during the period 2001-2012, we noticed a significant decrease in the number of foreign tourists from Poland. According to a survey conducted by the

Slovak Agency for Tourism, visitors from Poland are attracted mainly by winter products. These products primarily focus on skiing and thermal parks in Bešeňová, Tatralandia, and Oravice. The Unique combination of products can be found in the Liptov, Tatras, and Orava regions. The main barrier to a more significant increase in the number of tourists from Poland are relatively high prices of services in Slovakia. Due to the euro, Slovakia is among the Polish population that is perceived as an expensive destination compared with the Polish ski resorts and hotels. Unfortunately, the number of Polish visitors from the years 2001 and 2002 is hardly reachable. Therefore, we expect the number of Polish tourists will not increase dramatically in the near future. (Klamár and Mika, 2015).

In 2020, the third highest number of foreign tourists was recorded in the Prešov self-governing region after Žilina and Bratislava regions. The same order applies to overnight stays of foreign tourists. On the contrary, in the case of overnight stays of domestic visitors, the Prešov region took second place (Šambronska, 2021). However, tourism is based mainly on incoming tourists in the microregion of Bratislava. The rest of Slovakia still depends mainly on domestic tourism (Michálková and Gáll, 2021).

Tourism plays an important role in the economic development of the countries. However, it has to be managed properly. To ensure the industry's future development, V4 counties decided to start cooperation to intensify marketing activities. Developing a strong position in the market and creating a consistent and long-term brand is the right way to increase the flow of tourists to V4 countries. During the period 2009 – 2014, an increase in the number of foreign visitors was observed. However, in 2014, Slovakia observed a decline in the number of foreign visitors due to unsuitable conditions for skiing during this particular season. In the future, it is essential to recreate the winter offer reflecting the upcoming global warming and associated degraded conditions for skiing. To be able to create new products within the tourism industry, it is essential to monitor all statistical indicators, which can help us understand the demand of individual segments and their needs and desires. To stay competitive in the international market, V4 must develop new packages that could potentially attract foreign tourists. This should eventually ensure the creation of a new project called “Discover Europe,” where all V4 countries participate. The project should focus on non-traditional forms of tourism that can attract more foreign tourists, such as creative tourism, glamping tourism, and culinary tourism (Matúšiková et al., 2020). Discover Central Europe (DCE) is a market brand used to attract foreign clientele to visit countries in

Central Europe. Among the key source markets for the DCE brand are countries such as the USA, Russia, and China. For Slovakia, it is essential to coordinate a propagation with other neighboring countries because Slovakia would not be able to assert itself in such distant markets. (Zemanová, 2023) The importance of having a solid brand position was also confirmed by the study conducted by Goda (2020). This benchmarking study has shown Slovakia's weak brand position compared to Austria. This statement also confirmed the director of Slovakia Travel, Václav Mika, who drew attention to the long-term neglect of building the brand of Slovakia as a tourism destination. On the other hand, he sees positively the establishment of the agency Slovakia Travel, which should increase the brand awareness of Slovakia (Oláhová, 2022).

The total share of the number of overnight stays by tourists from source markets of the DCE brand in the total foreign overnight stays in 2021 increased by 6.77 %. In Slovakia, this increase was recorded in the case of tourists from the USA, Holland, Izrael, and Sweden. The most dynamic increase was recorded among the tourists from Izrael, with a 32.5 % increase. In the overall statistics, the Izrael tourists don’t represent a significant share of incoming tourists; they do not belong even to the top ten in terms of visitors. However, they are essential for the Slovak economy because of their length of stay, which is much longer than in the case of tourists from other countries (Ministry of Transport of the Slovak Republic, 2023). In May 2023, an airline to Izrael was even opened, which should help the Trnava region and Piešťany attract more foreign tourists. This new air connection can significantly help Spa Piešťany because, according to the Statistical Office of the Slovak Republic, the tourists from Izrael spend an average of 11,75 nights, which is significantly higher than the average length of stay of other foreign tourists. This average length of stay is just 3,61 nights (Piešťanský denník, 2023). Unfortunately, the air connection with Tel Aviv had to be temporarily suspended due to terrorist attacks on Izrael. According to RTO, the air connection should be in operation after February 2024, but there may be a later resumption of the air connection, which will depend on the situation in Israel (PNky.sk, 2023).

2 Research aim

The development of the tourism industry is becoming increasingly important in the current situation when the differences between stronger and weaker regions are increasing. Therefore, based on current data, we need a strategy that reflects the regionalization of tourism regions. However, the document of regionalization is 18 years old. Therefore, we need to put effort into analyzing the current situation in tourism regions. The goal of this thesis is precisely to address this issue.

The main objective of this diploma thesis is an identification of six tourism regions that are the most developed in terms of tourism and an in-depth analysis of Revenues of accommodation facilities. We also set several partial goals:

- identification of the most developed tourist regions in Slovakia,
- identification, of indicators that influence the Revenues of accommodation facilities in the most developed regions in Slovakia,
- identification, how the number of domestic and foreign tourists affect the Revenues of accommodation facilities,
- analyzation of further development of inbound tourism in the six identified regions,
- formulation of a vision and recommendations for further development of inbound tourism in the most developed regions in Slovakia.

We have formulated several hypotheses and research questions based on available data on the issue at hand.

Research question 1: Which tourism regions in Slovakia are economically the most developed and the most successful in terms of tourism in 2022?

Task 1:

H0: The most developed tourism regions in 2022 coincide with the identified regions with the greatest potential for tourism development, resulting from the Regionalization of tourism in the Slovak Republic.

H1: The most developed tourism regions in 2022 do not match with the regions with the highest potential identified in the document of Regionalization of tourism in Slovak Republic from 2005.

Research question 2: Which of the determined indicators have greater impact on the Revenues of the accommodation facilities in the identified regions?

Task 2:

H0: The growing number of domestic tourists does not affect Revenues of accommodation facilities in the most developed regions.

H1: The growing number of domestic tourists has a positive effect Revenues of accommodation facilities in the most developed regions.

Task 3:

H0: The growing number of foreign tourists does not affect Revenues of accommodation facilities in the most developed regions.

H1: The growing number of foreign tourists has a positive effect Revenues of accommodation facilities in the most developed regions.

Research question 3: In which of the most developed tourism regions can we expect a higher increase in the number of foreign tourists in the future?

Research question 4: What steps should be undertaken to stimulate the number of incoming foreign tourists in Slovakia's most attractive tourism regions?

3 Methodology

Before processing the theoretical part, we carried out information preparation focused on collecting available sources and their subsequent analysis. We summarized all knowledge in Slovak and foreign professional and scientific literature that was relevant to tourism regionalization. In the theoretical part, we used various methods, such as analysis, synthesis, induction, and deduction.

In the diploma thesis, we used secondary sources of information, primarily existing statistical data from the Statistical Office of the Slovak Republic. Our main source of information was the document "Výsledky hosporárenia krajov za roky," 2016, 2017, 2018, 2019, and 2020. According to this source, we prepared the datasets, which have been used in the following analyses. We processed the data and datasets in Microsoft Word and Microsoft Excel. These datasets were then used to calculate mathematical relationships and create necessary tables. Furthermore, we used the statistical program R in the case of hierarchical cluster analysis.

In our case, the object of investigation is all tourism regions in Slovakia. There are 21 tourism regions, which were defined in 2005. After identifying the six most developed tourism regions, we have just used these regions for further research. These six regions were the focus of correlation analysis, regression analysis, and, in the final chapter, prediction analysis.

Hierarchical cluster analysis

In the practical part, we focused on the identification of the most developed tourism regions in Slovakia. Therefore, we used hierarchical cluster analysis as a data processing method. The tourism regions in Slovakia will be selected using the multivariate statistical method of hierarchical cluster analysis in the statistical software program R. We have chosen to proceed with hierarchical cluster analysis according to Gáll et al. (2021).

1. **Choice of input database.** As a input dataset we have chosen the data from the document *" Správa o hospodárskom vývoji v krajoch SR v roku 2020 "*. In this document, we have identified several indicators reflecting tourism development in the regions. These indicators focus on domestic and foreign tourists, overnight stays, revenues, etc.

2. **Determination of the Euclidean distance.** At the beginning of the research, the same number of clusters (six) was determined. They will be used in the results of all hierarchical cluster analysis techniques. Moreover, the Euclidean distance will be adjusted to three decimal places. Euclidean distance is otherwise known as the geometric distance, which is one of the most used metrics given by the following relationship:

$$d_{ij} = \sqrt{\sum_{k=1}^{n}(K_{ik-} K_{jk})^2},$$

where:

d_{ij} = Euclidean distance

n = number of variables

X_{ik} = value of the k-th variable for the i-th object

X_{jk} =value of the k-th variable for the j-th object (Stankovičová and Vojtková, 2007)

3. **Types of clustering techniques.** The result of the cluster analysis represents the five clustering techniques. We used Complete linkage, Single linkage, Average linkage method, Wards method, and Centroid method.
4. **Verification of the results.** To verify the correctness of the results, we used the Cophenetic correlation coefficient calculated for the Euclidean distance to find out which cluster analysis method gives the best cluster model. The best cluster model had the highest Cophenetic correlation coefficient.
5. **Identification of clusters.** After choosing the most relevant cluster model, we can easily identify the tourism regions belonging to all six clusters.
6. **Evaluation of individual clusters.** Before evaluating all clusters, the average values of the selected indicators must be calculated. Based on the calculated average, the clusters can be ordered according to their level of development.

Correlation analysis

Correlation analysis describes the relationship between two or more quantitative characteristics, examining the relationship between independent and dependent variables. It is defined as a narrower area of research included in free dependence with a broader character (Šoltes, 2008). Correlation analysis is one of the most popular statistical methods

closely related to regression analysis. While the main task in regression is to determine the dependence between variables, the primary goal of correlation is to capture the strength or intensity of correlation dependence (Grofik et al., 1987). "Correlation dependence is a type of free stochastic statistical dependence between quantitative variables Y and Xj (j = 1,2...k). The variable Y is correlatedly dependent on variables Xj, if, with different values of the vector of the explanatory variables xi, the conditional mean values of the variable Y are also different (Šoltés, 2008).

The correlation coefficient ranges between <-1,1>. The sign determines the direction of the correlation. Plus represents positive correlation minus negative correlation. The absolute value determines the degree of tightness of the correlation. Zero value indicates independence and a value equal to one indicates a fixed dependence. All other cases between zero and one characterize a free dependence. The closer it is, the closer it gets to the number one (Grofik et al., 1987). The strength and value of the correlation coefficient relationship are divided into several scales. This scale is not uniform, each professional literature defines its own. Grofik and Collective (1987) divided it as follows: The strength and value of the correlation coefficient relationship:

$r < 0.3$ none

$0.3 \leq r < 0.5$ very weak

$0.5 \leq r < 0.7$ weak

$0.7 \leq r < 0.9$ medium

$0.9 \leq r$ strong.

Regression analysis

In the third subchapter of the practical part, we have used the regression analysis. The regression analysis consists of a set of machine learning methods, which allow the prediction of the continuous result of a variable. This method is widely used in economics, finance, quantitative marketing, politics, international relations, agriculture, medicine, and biology. Psychologist F. Galton used this model in the 19th century in his study of heredity, especially when examining the height of adult children in relation to the height of parents.

Since then, the regression analysis methodology has been improved and developed in many ways. It is not exaggerated changing the methodology, regression analysis has become an integral part of research in almost all scientific disciplines (R. Silvestrini and S. Burke, 2018). In tourism, regression analysis is primarily associated with prediction and the creation of various models. The regression analysis was processed in Excel using the regression function. After inserting all the necessary data, the regression models were formed. If the regression model did not show statistical significance, we excluded the indicator and repeated the regression only with significant indicators. We repeated this process until we had only significant indicators in the model. Finally, we interpreted the results that emerged from the given regression analysis.

Prediction analysis

In the final subchapter, the prediction analysis was used to identify the highest increase of the Number of overnight stays by foreign tourists among the most developed regions. The object of research was the six, in previous chapters, identified tourism regions. They emerged from cluster analysis as the most developed in terms of tourism. These regions are the Region of Bratislava, Tatras, Liptov, Turiec, Horehronie, and Pohronie. To proceed with the research we used Excel as a tool and the forecast function as a research method. After creating tables with predicted data, we have transformed the information into graphs that can better showcase the rising trend of the indicator. All six graphs can be seen in the final subchapter, where these graphs are compared.

4 Findings and recommendations

The practical part of the diploma thesis deals with identifying Slovakia's most successful tourism regions. Moreover, we examined causes that influence accommodation facility revenues. In the final chapter, we formulate recommendations for these regions.

The results of this study are divided into four parts. The first part focuses on identifying Slovakia's most developed tourism regions through cluster analysis. After identifying the six most developed tourism regions of Slovakia, correlation and regression analysis with selected indicators was conducted. In the third part, we deal with predicting incoming tourism in the most developed tourism regions in Slovakia. In the final part, we propose recommendations for increasing the competitiveness and attractiveness of the identified regions.

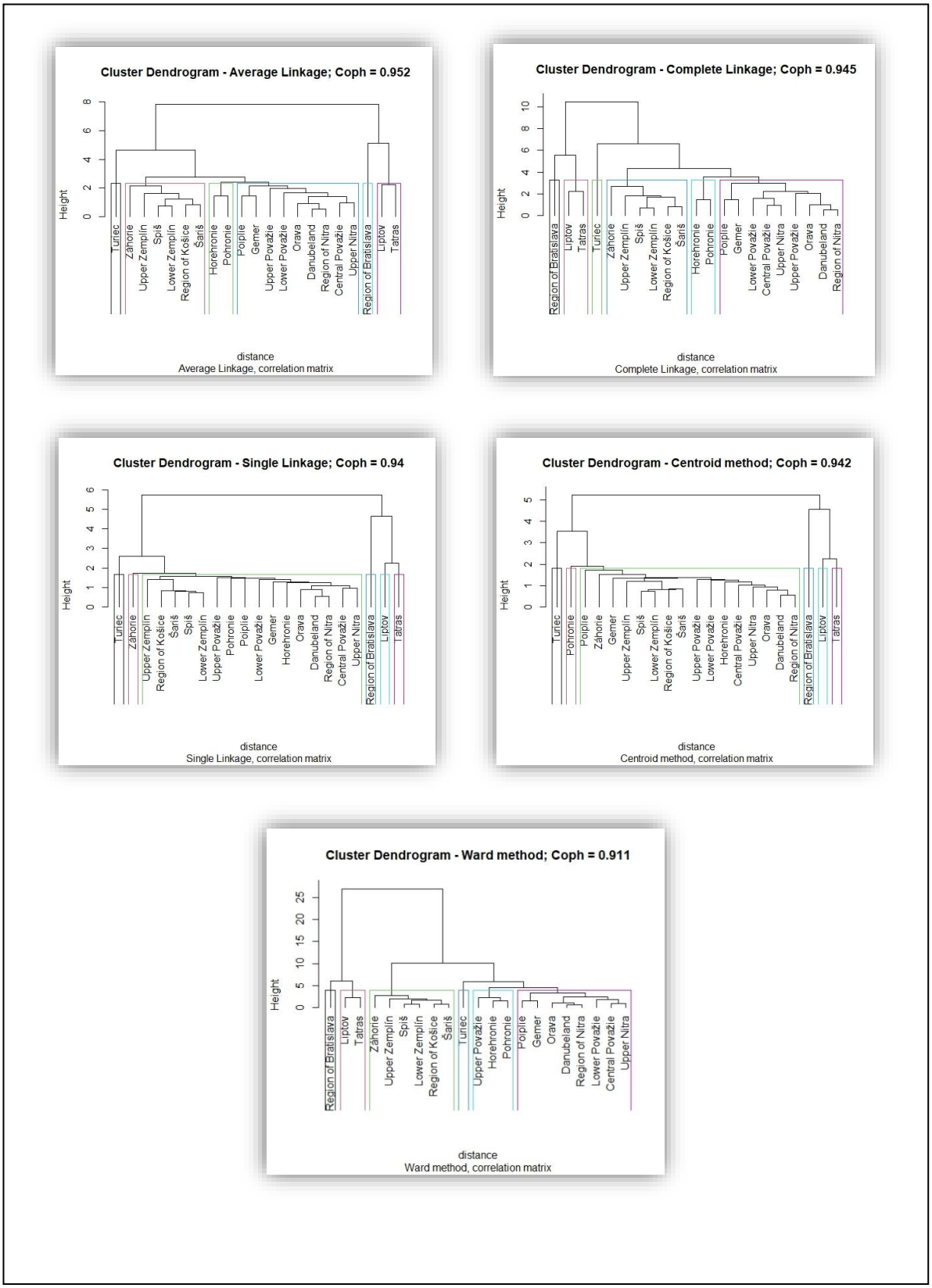
4.1 Cluster analysis of tourism regions in Slovakia

The following subsection focuses on applying hierarchical cluster analysis, which categorizes tourism regions into clusters using pre-prepared datasets. These datasets are based on the data from documents called “Výsledky hospodárenia krajov”. By applying this stochastic method, we can identify the level of tourism development in every tourism region in Slovakia. At the research's beginning, we determined that we would work with six clusters. This number of clusters will be used in all agglomerative hierarchical clustering techniques. On average, each cluster may contain 4-5 objects. Considering the number of investigated objects (21 tourism regions), the number of clusters resulting from the analysis is suitable. However, the results of all hierarchical clustering techniques are diametrically different. Very discrepant clusters were formed when all techniques were used (regarding the number of objects in every cluster). We have identified the significantly larger or smaller groups. Even individual objects were formed as clusters.

The first phase of the cluster analysis is the cluster formation itself. The results from the cluster analysis are presented in Figure 8, which illustrates the results of selected hierarchical clustering techniques in the form of the five different dendrograms. These dendrograms show the result of the cluster analysis based on all necessary collected data. Figure 8 presents five dendrograms, which consist of six clusters. The conclusion of each clustering technique is different, but some similarities are retained. In all dendrograms, the Region of Bratislava is always in its cluster, indicating its relative distance from other

investigated regions. The same applies to the Turiec region. The other clusters consisting of regions Liptov, Tatras, Horehronie, and Pohronie indicate relative proximity, as they often appear in common clusters. Compared to the clusters mentioned above, the rest of the clusters consist of more than five tourism regions. Moreover, clusters containing up to 16 variables have emerged within the two clustering techniques. We can further note that despite the total number of regions we worked with, not a single dendrogram came out with the same result. Although each dendrogram provides an interesting evaluation of the input variables, it is not yet possible to determine the degree of significance of individual clusters at this stage of hierarchical cluster analysis.

Figure 8: Cluster dendrograms



Source: own processing in statistical program R based on the data from the document: Správa o hospodárskom vývoji v krajoch SR v roku 2020

To validate and compare the applied clustering techniques, the cophenetic correlation coefficient, which is recalculated for Euclidean distance, will be used to determine the adequacy of the clustering technique and to determine the best clustering model. The resulting values of the cophenetic correlation coefficient are presented in Table 2.

Table 2: Cophenetic correlation coefficient applied agglomerative hierarchical clustering techniques

Euclidean distance	
Hierarchical clustering technique	Cophenetic correlation coefficient
Average Linkage	0.952
Complete Linkage	0.945
Single Linkage	0.94
Centroid method	0.942
Ward method	0.911

Source: own processing in statistical program R based on the data from the document: Správa o hospodárskom vývoji v krajoch SR v roku 2020

Table 2 shows the Cophenetic correlation coefficient for every Hierarchical clustering technique. The least appropriate technique in this case is the Ward method, with a Cophenetic correlation coefficient value of 0.911. On the other hand, the most suitable technique for hierarchical cluster analysis is the Average Linkage with a Cophenetic correlation coefficient of 0.952. This coefficient is the highest among all examined techniques. Therefore, the Average Linkage technique will be used for further research. This clustering technique has resulted in six clusters representing the following regions:

Cluster 1. Turiec

Cluster 2. Záhorie, Upper Zemplín, Spiš, Lower Zemplín, Region of Košice, Šariš

Cluster 3. Horehronie, Pohronie

Cluster 4. Poiplie, Gemer, Upper Považie, Lower Považie, Orava, Danubeland, Region of Nitra, Central Považie, Upper Nitra

Cluster 5. Region of Bratislava

Cluster 6. Liptov, Tatras

Table 3: Average values of input variables (indicators) in individual clusters

Cluster	Indicators										Average
	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	
1	0.983	2.270	1.290	3.394	0.901	2.524	0.667	2.806	-0.807	-0.470	-0.521	1.185
2	-0.741	-0.698	-0.646	-0.477	-0.703	-0.520	-0.667	-0.517	0.940	-0.659	-1.037	-0.521
3	-0.580	-0.614	-0.553	-0.518	-0.357	-0.515	0.062	-0.457	1.336	3.117	2.160	0.280
4	-0.179	-0.196	-0.288	-0.275	-0.216	-0.277	-0.301	-0.282	-0.078	0.155	0.493	-0.131
5	2.540	2.146	2.574	1.617	2.609	2.220	2.686	2.059	1.959	0.398	0.833	1.967
6	0.289	0.002	0.293	-0.385	0.200	-0.417	0.304	-0.415	0.945	-0.441	-0.759	-0.035

Source: own processing in statistical program R based on data data from the document: Správa o hospodárskom vývoji v krajoch SR v roku 2020

The legend:

- I1 - Number of accommodation facilities
- I2 - Number of beds
- I3 - Number of domestic tourists
- I4 - Number of foreign tourists
- I5 - Number of overnight stays (domestic tourists)
- I6 - Number of overnight stays (foreign tourists)
- I7 - Revenues from accommodation (domestic tourists)
- I8 - Revenues from accommodation (foreign tourists)
- I9 - Average use of accommodation facilities
- I10 - Average number of overnight stays (domestic tourists)
- I11 - Average number of overnight stays (foreign tourists)

Table 3 shows the average normative values of the input variables used in the analysis. According to the outcome of this analysis, we can now accurately identify regions' success in terms of tourism development. The average values provide a closer look at the level of importance of six identified clusters.

Table 4: Identified clusters sorted by their level of importance (1. position: the most important tourism region - 6. position: region with the lowest importance)

Order	Average value in Cluster analysis	Cluster	Regions
1.	1.967	Cluster 5	Region of Bratislava
2.	1.185	Cluster 1	Turiec
3.	0.280	Cluster 3	Horehronie, Pohronie
4.	-0.035	Cluster 6	Liptov, Tatras
5.	-0.131	Cluster 4	Poiplie, Gemer, Upper Považie, Lower Považie, Orava, Danubeland, Region of Nitra, Central Považie, Upper Nitra
6.	-0.521	Cluster 2	Záhorie, Upper Zemplín, Spiš, Lower Zemplín, Region of Košice, Šariš

Source: own processing in statistical program R based on the data from the document: Správa o hospodárskom vývoji v krajoch SR v roku 2020

In Table 4, we can see all six clusters in order from the most important cluster in the first place to the cluster with the lowest importance of tourism regions in the sixth place. The outcome of the Hierarchical cluster analysis is the determination of six categories, representing each cluster, which consists of one or several regions:

1. **Category**

To the first category belongs the Claster 5 with the Region of Bratislava. In terms of tourism, this region is, according to Hierarchical cluster analysis, the most developed in Slovakia. The region has perfect localization prerequisites for tourism development. This is reflected in the various indicators we used in this study. The region of Bratislava is a well-developed tourism region, and its impacts are significant at the regional, national, and international levels.

2. **Category**

Cluster 1, which achieved the second-best average values, consists of only one region: Turiec. Turiec is located in the northern part of Slovakia, close to the Czech and Polish borders. It is precisely this location and its various attractions that predestine it for attracting more foreign tourists.

3. **Category**

Cluster 3, which includes the regions Horehronie and Pohronie, took third place. Within the regions, we can find plenty of castles, historical cities, and one of the most renowned ski centers in the country. These regions are located in the central part of Slovakia, close to the border of Hungary, so their future potential has an international reach.

4. **Category**

In the fourth category, we have another two popular tourism destinations. Cluster 6 consists of the Liptov and Tatras regions. These regions are popular among tourists because of their historical and natural beauty. In these two regions, our two highest mountain ranges are located, which creates perfect prerequisites for attracting domestic and foreign tourists. Therefore, the regions Liptov and Tatras can be considered national and international destinations.

5. **Category**

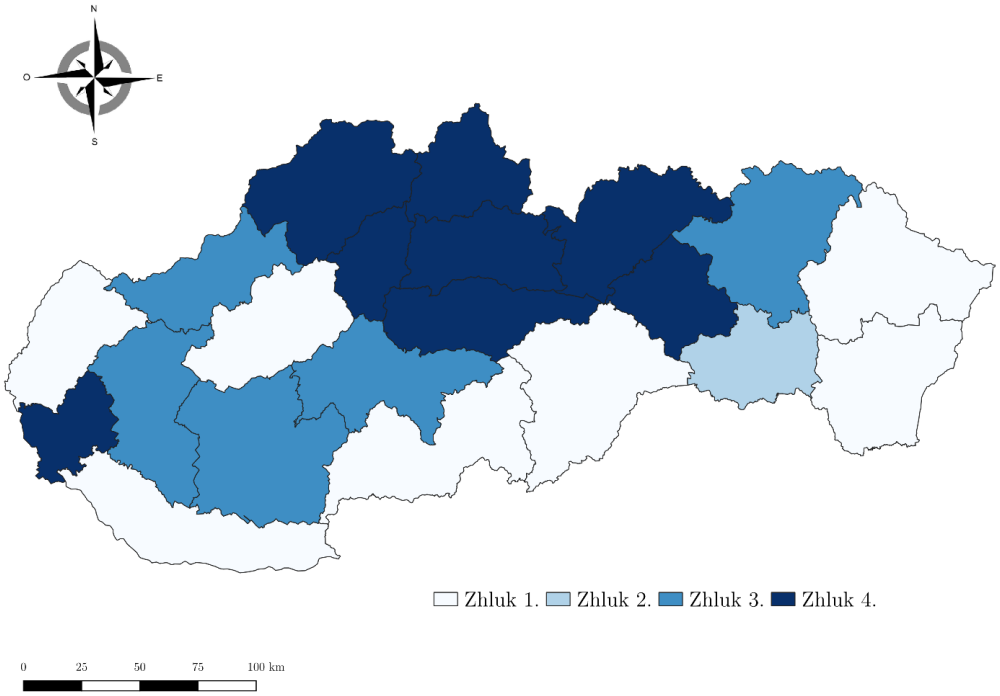
In fifth place, we can see Cluster 4, which consists of several regions. Namely: Poiplie, Gemer, Upper Považie, Lower Považie, Orava, Danubeland, Region of Nitra, Central Považie and Upper Nitra. All of these regions have high-quality localization and implementation prerequisites for tourism development, however, their potential is not yet fully exploited.

6. Category

The last place has been taken by Cluster 2. As in the case of Cluster 4, Cluster 2 also contains several regions. These regions are Záhorie, Upper Zemplín, Spiš, Lower Zemplín, Region of Košice and Šariš. Some of these regions, mainly in eastern Slovakia, don't have the right localization and implementation prerequisites. Therefore, the outcome of this analysis ranks these regions among the least developed in terms of tourism.

Furthermore, we can now benchmark three different maps, which can give us a clear view of the importance of the tourism regions in Slovakia. Two maps represent the results of the Hierarchical cluster analysis, which are based on datasets from 2019 and 2020. This comparison can show us the most successful regions in both years. Moreover, we are now able to identify the changes that have occurred as a result of the COVID-19 pandemic. The Cluster analysis from 2019 (the best year for tourism overall) shows us four clusters representing the different levels of development of tourism. On the other hand, the cluster analysis of tourism regions from 2020 shows slightly different results. This year, the COVID-19 pandemic significantly impacted the economy, especially the tourism industry. Finally, the third map shows us the differentiation between the regions with regional importance, transregional importance, national importance, and international importance.

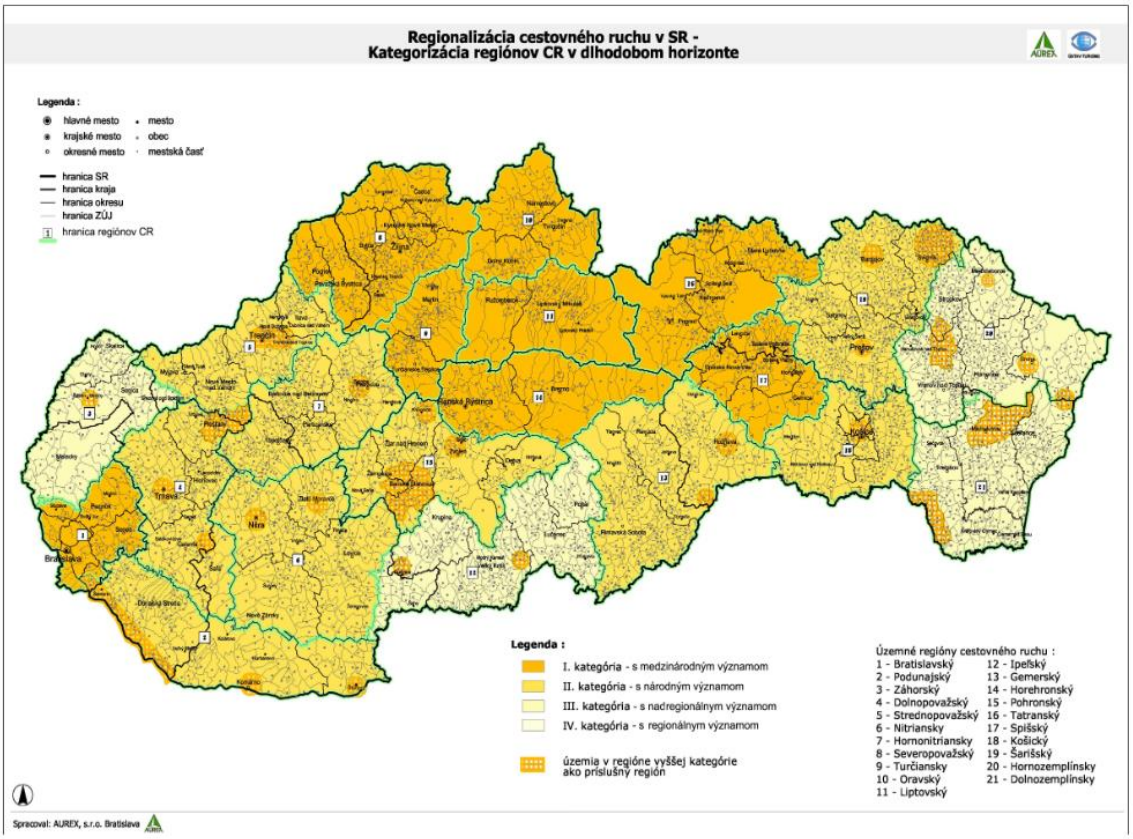
Figure 9: Map of clusters of tourism regions according to the degree of importance in 2019



Source: author's own processing in the statistical program R, 2019 (Gall, 2021)

Figure 9 shows the four clusters containing the tourism regions resulting from their significant position in the tourism industry. The most important cluster is Cluster 4 with Upper Považie, Orava, Horehronie, Turiec, Liptov, Tatras, Spiš, and Region of Bratislava. From this map, we can see the two parts of Slovakia, where the most developed regions are located. Almost all major tourism regions are focused in the northern part of Slovakia, only Region of Bratislava is located in the western part of Slovakia.

Figure 10: Categorization of tourism regions in the long-term

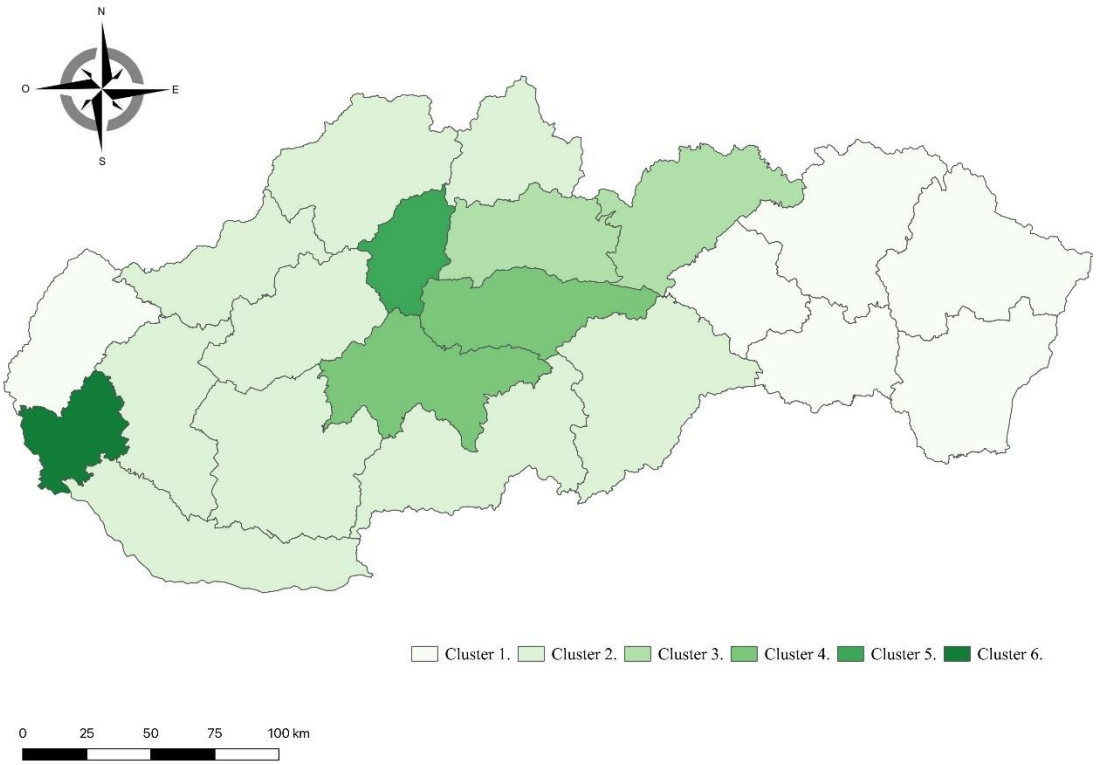


Source: Regionalization of tourism in the Slovak Republic, Ministry of Transport of the Slovak Republic

In the document, Regionalization of Tourism in the Slovak Republic, we can find many maps defining the potential of Slovak tourism regions in terms of tourism development. The most comprehensive map is the long-term categorization map of tourism regions. The regions are divided into four categories depending on their significance in tourism. The first category represents the regions of international importance, the second category represents the regions of national importance, and the other two categories represent the subregional and regional importance. Despite being nineteen years old, this

document relatively accurately predicted the development of the tourism region. In the first category, we can see a hundred percent match with the most successful tourism regions identified in the cluster map from 2019 (Figure 9)

Figure 11: Map of clusters of tourism regions according to their degree of importance in 2020



Source: own processing in statistic program R based on the data from the document: Správa o hospodárskom vývoji v krajoch SR v roku 2020

The final map (Figure 11) shows 21 tourist regions in Slovakia, which are divided into six clusters according to their importance in tourism. This third map distinguishes from the above two almost identical maps. We can see that Upper Považie, Orava, and Spiš are not among the most successful tourism regions. On the other hand, the region of Pohronie was, according to the cluster analysis, assigned to the most developed tourism regions according to data gathered in 2020. The rest of the most developed tourism regions are identical to the previous maps. The other significant difference is that they are not located in the same cluster but are divided into 4 clusters. Despite this considerable segmentation, we can say that these six regions can be considered the most significant in terms of tourism development. The reason for the slightly different positions of some regions may be the strong impact of the COVID-19 pandemic on these regions. The year 2020 was challenging

for all sectors of the economy. However, tourism was among the most affected sectors (Vărzaru, 2021). Therefore, we can also conclude that regions that have maintained their positions compared to 2019 are resilient and have the best prerequisites to overcome potential risk periods such as pandemics. These regions are the Region of Bratislava, Turiec, Tatras, Liptov, Pohronie, and Horehronie.

Furthermore, to answer the first research question, we can conclude that according to cluster analysis, the most developed tourism regions in 2020 are:

- Region of Bratislava
- Liptov
- Tatras
- Turiec
- Horehronie
- Pohronie

We can conclude that the six clusters identified as the most developed in terms of tourism coincide with the regions identified as having the greatest potential in regionalization from 2005. However, another three regions with the highest potential identified in regionalization (Upper Považie, Orava, and Spiš) have not been identified as the most developed according to cluster analysis. Therefore, we reject the H1 hypothesis and confirm the null Hypothesis.

H0: The most developed tourism regions in 2022 coincide with the identified regions with the greatest potential for tourism development, resulting from the Regionalization of tourism in the Slovak Republic.

H1: The most developed tourism regions in 2022 do not match with the regions with the highest potential identified in the document of Regionalization of tourism in Slovak Republic form 2005

4.2 Correlation analysis of the six most developed tourism regions in Slovakia according to Cluster analysis

In this part of the diploma thesis, we have analyzed in detail the Revenues of accommodation facilities and their relation to other indicators. From now on, we will focus primarily on the most successful region identified in the cluster analysis in the previous chapter. Therefore, we have conducted the correlation analysis based on datasets from Region of Bratislava, Liptov, Tatras, Turiec, Horehronie, and Pohronie.

Table 5: Correlation matrix for Region of Bratislava

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.00									
I2	-0.19	1.00								
I3	-0.32	0.99	1.00							
I4	0.99	-0.30	-0.43	1.00						
I5	0.99	-0.32	-0.44	0.99	1.00					
I6	0.95	-0.40	-0.52	0.98	0.96	1.00				
I7	0.99	-0.28	-0.41	0.99	1.00	0.96	1.00			
I8	0.96	-0.42	-0.54	0.99	0.98	0.99	0.98	1.00		
I9	0.52	-0.88	-0.92	0.63	0.61	0.74	0.58	0.73	1.00	
I10	-0.48	-0.13	-0.09	-0.38	-0.44	-0.22	-0.45	-0.31	0.16	1.00

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The legend:

- I1 - Revenues of accommodation facilities
- I2 - Number of accommodation facilities
- I3 - Number of beds
- I4 - Number of domestic tourists
- I5 - Number of foreign tourists
- I6 - Number of overnight stays by domestic tourists
- I7 - Number of overnight stays by foreign tourists
- I8 - Average capacity utilization of accommodation facilities
- I9 - Average number of overnight stays by domestic tourists
- I10 - Average number of overnight stays by foreign tourists

Each cell of the correlation matrix shows the correlation between two specific variables. In the Region of Bratislava, we can see a strong positive correlation between Revenues of accommodation facilities and Number of domestic tourists, Number of foreign tourists, Number of overnight stays by domestic tourists, Number of overnight stays by foreign tourists, and Average capacity utilization of accommodation facilities. The correlation between these variables ranges between 0.95 - 0.99. A much weaker positive correlation (0.52) can be seen between Revenues of accommodation facilities and the Average number of overnight stays by foreign tourists. On the other hand, the correlation

between Revenues of accommodation facilities and the Number of accommodation facilities and Number of beds is -0.19 and -0.32, which indicates that there is almost no correlation.

Table 6: Correlation matrix for Liptov

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.00									
I2	0.86	1.00								
I3	0.84	0.96	1.00							
I4	0.90	0.57	0.56	1.00						
I5	0.56	0.12	0.03	0.83	1.00					
I6	0.97	0.74	0.75	0.97	0.66	1.00				
I7	0.55	0.09	0.02	0.83	1.00	0.67	1.00			
I8	0.79	0.89	0.91	0.51	0.03	0.68	0.00	1.00		
I9	-0.41	0.08	0.14	-0.74	-0.98	-0.55	-0.98	0.12	1.00	
I10	-0.25	0.11	0.29	-0.51	-0.89	-0.30	-0.86	0.24	0.87	1.00

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The legend:

- I1 - Revenues of accommodation facilities
- I2 - Number of accommodation facilities
- I3 - Number of beds
- I4 - Number of domestic tourists
- I5 - Number of foreign tourists
- I6 - Number of overnight stays by domestic tourists
- I7 - Number of overnight stays by foreign tourists
- I8 - Average capacity utilization of accommodation facilities
- I9 - Average number of overnight stays by domestic tourists
- I10 - Average number of overnight stays by foreign tourists

Regarding to region Liptov, we can see the strongest positive correlation between Revenues of accommodation facilities and the Number of overnight stays by domestic tourists. This correlation is at a level of 0.97. The correlation matrix also shows a strong positive correlation between Revenues of accommodation facilities and Number of accommodation facilities, Number of beds, Number of domestic tourists, and Average capacity utilization of accommodation facilities. The correlation between these variables ranges between 0.79 – 0.9. A much lower positive correlation can be seen in the yellow cells. On the contrary, a very weak negative correlation was noted between Revenues of accommodation facilities and the Average number of overnight stays by domestic tourists and the Average number of overnight stays by foreign tourists.

Table 7: Correlation matrix for Tatras

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.00									
I2	0.67	1.00								
I3	0.53	0.98	1.00							
I4	0.92	0.37	0.23	1.00						
I5	0.57	-0.21	-0.35	0.83	1.00					
I6	0.94	0.44	0.31	1.00	0.78	1.00				
I7	0.47	-0.32	-0.45	0.75	0.99	0.70	1.00			
I8	0.98	0.68	0.57	0.92	0.54	0.94	0.43	1.00		
I9	-0.25	0.26	0.33	-0.51	-0.74	-0.48	-0.78	-0.19	1.00	
I10	-0.12	-0.77	-0.83	0.25	0.74	0.17	0.81	-0.16	-0.78	1.00

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The legend:

- I1 - Revenues of accommodation facilities
- I2 - Number of accommodation facilities
- I3 - Number of beds
- I4 - Number of domestic tourists
- I5 - Number of foreign tourists
- I6 - Number of overnight stays by domestic tourists
- I7 - Number of overnight stays by foreign tourists
- I8 - Average capacity utilization of accommodation facilities
- I9 - Average number of overnight stays by domestic tourists
- I10 - Average number of overnight stays by foreign tourists

Regarding the correlation matrix based on data from the Tatras region, we can see the strongest positive correlation between Revenues of accommodation facilities and Number of domestic tourists, Number of overnight stays by domestic tourists, and Average capacity utilization of accommodation facilities. The correlation in these cases ranges between 0.92 - 0.98. A weaker positive correlation showed a correlation matrix between Revenues of accommodation facilities and Number of accommodation facilities, Number of beds, Number of foreign tourists, and Number of overnight stays by foreign tourists. Regarding the correlation matrix, almost no correlation can be seen between Revenues of accommodation facilities and the Average number of overnight stays by domestic and foreign tourists (0,12 – 0,25).

Table 8: Correlation matrix for Turiec

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.00									
I2	0.24	1.00								
I3	0.34	0.96	1.00							
I4	0.92	0.29	0.43	1.00						
I5	0.72	-0.26	-0.18	0.79	1.00					
I6	0.90	0.15	0.33	0.98	0.80	1.00				
I7	0.75	-0.14	-0.03	0.87	0.98	0.88	1.00			
I8	0.77	-0.36	-0.28	0.73	0.96	0.77	0.92	1.00		
I9	-0.83	-0.27	-0.27	-0.86	-0.84	-0.79	-0.85	-0.77	1.00	
I10	-0.50	-0.76	-0.61	-0.37	-0.09	-0.21	-0.10	-0.07	0.60	1.00

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The legend:

- I1 - Revenues of accommodation facilities
- I2 - Number of accommodation facilities
- I3 - Number of beds
- I4 - Number of domestic tourists
- I5 - Number of foreign tourists
- I6 - Number of overnight stays by domestic tourists
- I7 - Number of overnight stays by foreign tourists
- I8 - Average capacity utilization of accommodation facilities
- I9 - Average number of overnight stays by domestic tourists
- I10 - Average number of overnight stays by foreign tourists

The correlation matrix based on data from the Turiec region shows a strong positive correlation between Revenues of accommodation facilities, Number of domestic tourists, and Number of overnight stays by domestic tourists. The correlation between these three variables was 0.92 and 0.90. On the other hand, a very weak correlation can be seen between Revenues of accommodation facilities and Number of accommodation facilities and Number of beds. A medium and weak negative correlation is between Revenues of accommodation facilities and the Average number of overnight stays by domestic and foreign tourists. The correlation in these two cases was -0.83 and -0.50.

Table 9: Correlation matrix for Horehronie

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.00									
I2	0.73	1.00								
I3	0.72	1.00	1.00							
I4	0.93	0.46	0.43	1.00						
I5	0.71	0.09	0.05	0.91	1.00					
I6	0.97	0.58	0.55	0.99	0.83	1.00				
I7	0.81	0.25	0.21	0.96	0.99	0.91	1.00			
I8	0.50	0.89	0.86	0.26	-0.13	0.40	0.03	1.00		
I9	-0.36	0.29	0.32	-0.65	-0.90	-0.51	-0.82	0.50	1.00	
I10	-0.10	0.56	0.58	-0.42	-0.76	-0.27	-0.64	0.72	0.95	1.00

Cource: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The legend:

- I1 - Revenues of accommodation facilities
- I2 - Number of accommodation facilities
- I3 - Number of beds
- I4 - Number of domestic tourists
- I5 - Number of foreign tourists
- I6 - Number of overnight stays by domestic tourists
- I7 - Number of overnight stays by foreign tourists
- I8 - Average capacity utilization of accommodation facilities
- I9 - Average number of overnight stays by domestic tourists
- I10 - Average number of overnight stays by foreign tourists

In the case of Horehronie, we can see the strongest positive correlation between Revenues of accommodation facilities and the Number of domestic tourists and Number of overnight stays by domestic tourists. A medium positive correlation can be seen between Revenues of accommodation facilities and Number of accommodation facilities, Number of beds, Number of foreign tourists, and Number of overnight stays by foreign tourists. This correlation ranges between 0.71 – 0.81. The correlation matrix also shows the very weak almost no correlation between Revenues of accommodation facilities and the Average number of overnight stays by domestic and foreign tourists (-0.36 and -0.10).

Table 10: Correlation matrix for Pohronie

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.00									
I2	0.49	1.00								
I3	0.44	1.00	1.00							
I4	0.97	0.40	0.35	1.00						
I5	0.63	-0.31	-0.35	0.75	1.00					
I6	0.98	0.33	0.28	0.99	0.78	1.00				
I7	0.59	-0.38	-0.42	0.69	0.99	0.74	1.00			
I8	-0.14	0.73	0.75	-0.26	-0.80	-0.33	-0.86	1.00		
I9	-0.59	0.04	0.06	-0.77	-0.86	-0.74	-0.81	0.56	1.00	
I10	-0.50	-0.61	-0.59	-0.52	-0.12	-0.44	0.02	-0.47	0.40	1.00

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The legend:

- I1 - Revenues of accommodation facilities
- I2 - Number of accommodation facilities
- I3 - Number of beds
- I4 - Number of domestic tourists
- I5 - Number of foreign tourists
- I6 - Number of overnight stays by domestic tourists
- I7 - Number of overnight stays by foreign tourists
- I8 - Average capacity utilization of accommodation facilities
- I9 - Average number of overnight stays by domestic tourists
- I10 - Average number of overnight stays by foreign tourists

The last correlation matrix focuses on the Pohronie region. In the matrix, we can see a strong positive correlation between Revenues of accommodation facilities, and Number of domestic tourists, and Number of overnight stays by domestic tourists (0.97 and 0.98). This correlation is really strong and almost reached the linear correlation. Variables dedicated to foreign tourists (Number of foreign tourists and overnight stays by foreign tourists) have shown a weaker correlation.

Comparison of correlation matrixes of the six most developed regions in terms of tourism

After the comparison of all six correlation matrixes, we can state that the strongest correlation between Revenues of accommodation facilities and the Number of foreign tourists and Number of overnight stays by foreign tourists is in the Region of Bratislava. The correlation even reached 0.99, which represents an almost perfectly positive linear correlation between the mentioned variables. In other regions, the correlation between these variables is, however, not as strong as in the Region of Bratislava. An interesting finding is the significantly different results from the correlation between Revenues of accommodation facilities and Average capacity utilization of accommodation facilities. We can see a strong positive correlation reaching an almost perfectly positive linear correlation in the Region of Bratislava (0.96) and Tatras (0.98). Lower, medium positive correlations have been identified in the case of Liptov (0.79) and Turiec (0.77) regions. The last two regions have different results as well. In the region of Horehronie, a weak correlation occurred. On the other hand, in the region of Pohronie, almost no correlation was identified (-0.14). Moreover, the comparison of correlation analyses shows that the correlation between Revenues of accommodation facilities and the Average number of overnight stays by domestic and foreign tourists was in almost all regions very weak negative except the correlation between Revenues of accommodation facilities and the Average number of overnight stays by domestic tourists in Region of Bratislava, where weak positive correlation was identified.

To sum up, we can see the strongest influence of Revenues of accommodation facilities by the Number of foreign tourists and the Number of overnight stays by foreign tourists in the case of the Region of Bratislava. Regarding the relationship between the Revenues of accommodation facilities and the Average number of overnight stays by foreign tourism, we have identified only a weak or very weak negative correlation in all examined regions.

4.3 Regression analysis of the six most developed tourism regions in Slovakia according to cluster analysis

In this chapter, we have conducted six regression analyses, which should show whether there is a relationship between dependent variable y, which will be the Revenues of accommodation facilities. In our analysis, we have set these independent variables (2016-2020):

- Revenues of accommodation facilities
- Number of accommodation facilities
- Number of beds
- Number of domestic tourists
- Number of foreign tourists
- Number of overnight stays by domestic tourists
- Number of overnight stays by foreign tourists
- Average capacity utilization of accommodation facilities
- Average number of overnight stays by domestic tourists
- Average number of overnight stays by foreign tourists

Table 11: Regression based on a dataset from Region of Bratislava

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.990251563
R Square	0.980598159
Adjusted R Square	0.961196317
Standard Error	6964.931049
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	4903563004	2451781502	50.541499	0.01940184
Residual	2	97020529.02	48510264.51		
Total	4	5000583533			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-20018.90209	44006.83106	-0.454904423	0.693786	-209365.014	169327.21	-209365.01	169327.21
Number of domestic tourists	0.178646009	0.288613	0.61898116	0.5990383	-1.0631555	1.4204475	-1.0631555	1.42044752
Number of foreign tourists	0.042884821	0.108934938	0.393673711	0.7318271	-0.42582439	0.511594	-0.4258244	0.51159403

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The intercept in this regression analysis is the estimated value of Revenues of accommodation facilities in the Region of Bratislava when all independent variables are equal to zero. In this case, when there are zero domestic tourists and foreign tourists we can

estimate that the Revenues of accommodation facilities will be negative. Regression coefficient K1- Coefficient of domestic tourists (0.179) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of domestic tourists is recorded. In this case, one domestic tourist can increase the Revenues of accommodation facilities by 0.179 EUR. Coefficient K2 – The coefficient of foreign tourists (0.043) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of foreign tourists is recorded. In this case, one foreign tourist can increase the Revenues of accommodation facilities by 0.043 EUR.

In order to have a comprehensive view of the output, it is important to state, that both coefficients have high p-values (higher than 0.05), which indicates their low significance in the prediction of Revenues of accommodation facilities.

The multiple R value (0.990) expresses the strength of the linear relationship between the independent variables and dependent variables and all the independent variables in the model. The coefficient R Square (0.981) indicates the percentage of variation in the dependent variable that is explained by the independent variables in the model. In this case, 98% of the variability of Revenues of accommodation facilities in the Region of Bratislava can be explained by the independent variables used in our regression model. In his case, the significance value of F (Significance F) is lower than 0.05, indicating that the regression model is statistically significant at the 0.05 significance level.

Table 12: Regression based on a dataset from Liptov region

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.970265946
R Square	0.941416006
Adjusted R Square	0.921888009
Standard Error	1997.747175
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	192399929.9	1.92E+08	48.208527	0.00612729
Residual	3	11972981.32	3990994		
Total	4	204372911.2			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-11490.9397	8188.663502	-1.403274	0.2551285	-37550.9217	14569.042	-37550.92	14569.04216
Number of overnight stays by domestic tourists	0.055008635	0.007922622	6.943236	0.0061273	0.02979532	0.080222	0.0297953	0.080221954

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The second regression is based on data from the Liptov region. Regarding intercept, when there is zero Number of overnight stays by domestic tourists, we can estimate that the Revenues of accommodation facilities will be negative. Regression coefficient K1- The coefficient of the Number of overnight stays by domestic tourists (0.550) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of overnight stays by domestic tourists is recorded. In this case, one overnight stay can increase the Revenues of accommodation facilities by 0.179 EUR.

Moreover, it is important to state, that the coefficient has a lower p-value than 0.05, which indicates its high significance in the prediction of Revenues of accommodation facilities.

The multiple R value (0.970) expresses the strength of the linear relationship between the independent variables and dependent variables and all the independent variables in the model. The coefficient R Square (0.941) indicates the percentage of variation in the dependent variable explained by the model's independent variables. In this case, the 94% of the variability of Revenues of accommodation facilities in the Liptov region can be explained by the independent variables used in our regression model. Furthermore, the significance value of F (Significance F) is lower than 0.05, which indicates that the regression model is statistically significant at the 0.05 significance level.

Table 13: Regression based on dataset from Tatras region

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.922871256
R Square	0.851691355
Adjusted R Square	0.80225514
Standard Error	4579.580729
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	361317058.7	3.61E+08	17.228086	0.02541376
Residual	3	62917678.96	20972560		
Total	4	424234737.7			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	1384.973862	14234.66191	0.097296	0.9286273	-43916.0733	46686.021	-43916.07	46686.02106
Number of domestic tourists	0.118196601	0.028476491	4.150673	0.0254138	0.0275717	0.2088215	0.0275717	0.208821505

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The third regression is based on data from the Tatry region. Regarding intercept, when there is a zero Number of domestic tourists, we can estimate that the Revenues of accommodation facilities will be positive. Regression coefficient K1- The coefficient of

Number domestic tourists (0.025) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of domestic tourists is recorded. In this case, domestic tourists can increase the Revenues of accommodation facilities by 0.179 EUR.

Moreover, it is important to state, that the coefficient has a lower p-value than 0.05, which indicates its high significance in the prediction of Revenues of accommodation facilities.

The multiple R value (0.923) expresses the strength of the linear relationship between the independent variables and dependent variables and all the independent variables in the model. The coefficient R Square (0.852) indicates that 85.17% of the variability of Revenues of accommodation facilities in the Tatras region can be explained by the independent variables used in our regression model. Furthermore, the significance value of F (Significance F) is lower than 0.05, which indicates that the regression model is statistically significant at the 0.05 significance level.

Table 14: Regression based on a dataset from Turiec region

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.916338234
R Square	0.83967576
Adjusted R Square	0.786234346
Standard Error	433.7208625
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2955658.852	2955659	15.71208	0.02868124
Residual	3	564341.3597	188113.8		
Total	4	3520000.212			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	7640.054942	1166.854148	6.547566	0.0072429	3926.60427	11353.506	3926.6043	11353.50562
Number of domestic tourists	0.063065269	0.015910118	3.963847	0.0286812	0.01243217	0.1136984	0.0124322	0.113698367

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The fourth regression is based on data from the Turiec region. Regarding intercept, when there is a zero Number of domestic tourists, we can estimate that the Revenues of accommodation facilities will be positive. Regression coefficient K1- The coefficient of Number domestic tourists (0.063) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of domestic tourists is recorded. In this case, domestic tourists can increase the Revenues of accommodation facilities by 0.063 EUR.

Furthermore, it is important to state, that the coefficient has a lower p-value than 0.05, which indicates its high significance in the prediction of Revenues of accommodation facilities.

The multiple R value (0.916) expresses the strength of the linear relationship between the independent variables and dependent variables and all the independent variables in the model. The coefficient R Square (0.840) indicates that 83.97% of the variability of Revenues of accommodation facilities in the Tatras region can be explained by the independent variables used in our regression model. Furthermore, the significance value of F (Significance F) is lower than 0.05, which indicates that the regression model is statistically significant at the 0.05 significance level.

Table 15: Regression based on a dataset from Horehronie

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.992537961
R Square	0.985131603
Adjusted R Square	0.970263207
Standard Error	444.8999898
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	26229191.38	13114595.69	66.256748	0.0148684
Residual	2	395872.0018	197936.0009		
Total	4	26625063.39			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-8082.437195	3034.220641	-2.663760534	0.1167594	-21137.6349	4972.7605	-21137.635	4972.76053
Number of beds	1.682700256	0.405677918	4.147872437	0.0535014	-0.06279095	3.4281915	-0.0627909	3.42819146
Number of domestic tourists	0.052694221	0.006652355	7.921138129	0.0155665	0.02407145	0.081317	0.02407145	0.08131699

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The fifth regression is based on data from the Horehronie region. Regarding intercept, when there is a zero Number of domestic tourists, we can estimate that the Revenues of accommodation facilities will be negative. Regression coefficient K1- Number of beds (1.683) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of beds is recorded. In this case, the Number of beds can increase the Revenues of accommodation facilities by 1.683 EUR.

The coefficient of Number of domestic tourists (0.053) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of domestic tourists is recorded. In this case, domestic tourists can increase the Revenues of accommodation facilities by 0.053 EUR.

Moreover, it is important to state, that the coefficient has in the case of the Number of beds higher p-value than 0.05, which indicates its low significance in the prediction of Revenues of accommodation facilities. On the contrary, the Number of domestic tourists has a lower p-value than 0.05, which indicates its high significance in the prediction of Revenues of accommodation facilities.

The multiple R value (0.993) expresses the strength of the linear relationship between the independent variables and dependent variables and all the independent variables in the model. The coefficient R Square (0.985) indicates that 98.51% of the variability of Revenues of accommodation facilities in the Tatras region can be explained by the independent variables used in our regression model. Furthermore, the significance value of F (Significance F) is lower than 0.05, which indicates that the regression model is statistically significant at the 0.05 significance level.

Table 16: Regression based on a dataset from Pohronie

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.976113951
R Square	0.952798444
Adjusted R Square	0.937064593
Standard Error	715.4083016
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30993736.33	30993736	60.557227	0.00441558
Residual	3	1535427.114	511809		
Total	4	32529163.45			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-961.941821	2283.636792	-0.421232	0.7019442	-8229.49329	6305.6097	-8229.493	6305.609652
Number of overnight stays by domestic tourists	0.030214807	0.003882727	7.781852	0.0044156	0.01785824	0.0425714	0.0178582	0.042571376

Source: own processing in Excel, based on own processed data from documents: Správa o hospodárskom vývoji v krajoch SR v roku 2020, 2019,2018,2017,2016

The last regression is based on data from the Pohronie region. Regarding intercept, when there is zero Number of overnight stays by domestic tourists, we can estimate that the Revenues of accommodation facilities will be negative. Regression coefficient K1- The coefficient of Number of overnight stays by domestic tourists (0.030) indicates how the Revenues of accommodation facilities change when the increase of one unit in the Number of overnight stays by domestic tourists is recorded. In this case, one overnight stay can increase the Revenues of accommodation facilities by 0.030 EUR.

Moreover, it is important to state, that the coefficient has a lower p-value than 0.05, which indicates its high significance in the prediction of Revenues of accommodation facilities.

The multiple R value (0.976) expresses the strength of the linear relationship between the independent variables and dependent variables and all the independent variables in the model. The coefficient R Square (0.953) indicates the percentage of variation in the dependent variable that is explained by the independent variables in the model. In this case, the 95.28% of the variability of Revenues of accommodation facilities in the Liptov region can be explained by the independent variables used in our regression model. Furthermore, the significance value of F (Significance F) is lower than 0.05, which indicates that the regression model is statistically significant at the 0.05 significance level.

We have established hypotheses H0 and H1 to determine the dependencies between the dependent and independent variables.

Task 2

H0: The growing number of domestic tourists does not affect Revenues of accommodation facilities in the most developed regions.

H1: The growing number of domestic tourists has a positive effect Revenues of accommodation facilities in the most developed regions.

The multiple R values range between 0.993 – 0.916, indicating the strength of the linear relationship between the independent and dependent variables. In these cases, we can state that there is a very strong relationship between the dependent variable, Revenues of accommodation facilities, and other independent variables such as Number of domestic tourists, Number of foreign tourists, Number of overnight stays by domestic tourists, and Number of beds. Moreover, the Significance F value in all regression analyses is lower than 0.05, which indicates that the regression model is statistically significant at the significance level of 0.05. To confirm or reject the hypothesis, we focus on the relationship between Revenues of accommodation facilities and the Number of domestic tourists. This relationship was confirmed in regression analyses focusing on the Region of Bratislava, Tatras, Turiec, and Horehronie. Regarding the results from regression analyses, the null hypothesis can be rejected. On the contrary, in the case of H1, we can confirm that the

growing number of domestic tourists positively affects the Revenues of accommodation facilities in the Region of Bratislava, Tatras, Turiec, and Horehronie region.

Task 3

H0: The growing number of foreign tourists does not affect the Revenues of accommodation facilities in the most developed regions.

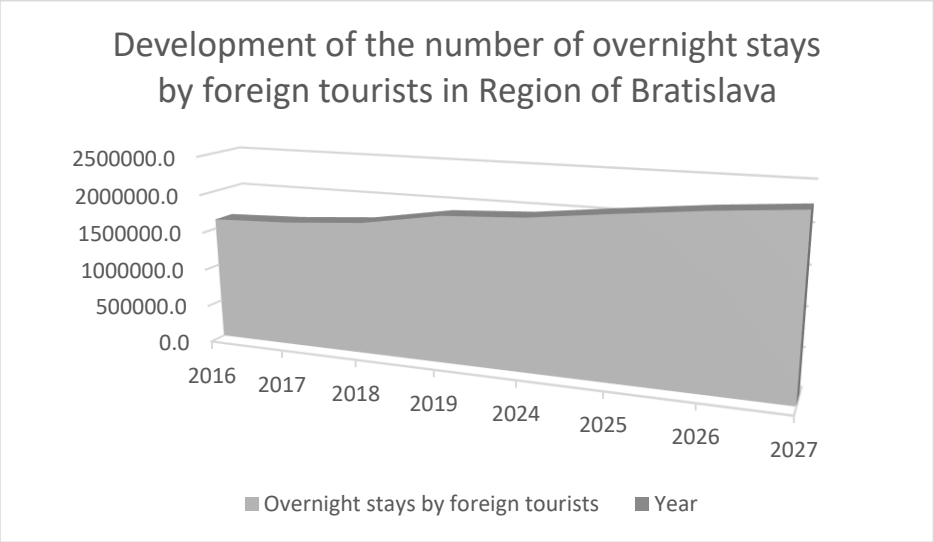
H1: The growing number of foreign tourists has a positive effect Revenues of accommodation facilities in the most developed regions.

The third Task focuses on the relationship between Revenues of accommodation facilities and the number of foreign tourists. This relationship showed only the regression model in the case of the Region of Bratislava. Other regression models from Liptov, Tatras, Turiec, Horehronie, and Pohronie did not show a relationship between Revenues of accommodation facilities and the Number of foreign tourists. The regression model showed the positive impact of foreign tourists on the Revenues of the accommodation facilities. Therefore we reject the null hypothesis and confirm the H1 hypothesis.

4.4 Prediction of the number of overnight stays by foreign tourists

According to the general director of Slovakia Travel, Václav Mika, the number of overnight stays is a more important statistical indicator than the number of arrivals because, thanks to it, we can more accurately determine how much time foreign tourists spend in Slovakia (Zemanová, 2023). We agree with this statement, therefore, in the last chapter, we have conducted a prediction analysis focusing on Overnight stays by foreign tourists. This chapter aims to identify the potential increase in the already mentioned indicator. Moreover, we have compared the percentual increase of overnight stays by foreign tourists in the 2024-2027 period to the year 2019. The following graphs consist of two time periods. The first period, from 2016 to 2019, represents already gained data, on the other hand, the period from 2024 to 2027 represents the data from prediction analysis. The period between 2019 and 2024 is purposely omitted due to the impact of the COVID-19 pandemic. At the same time, we assume that in 2024, the indicators from the tourism statistics should surpass the best year in tourism, i.e., 2019.

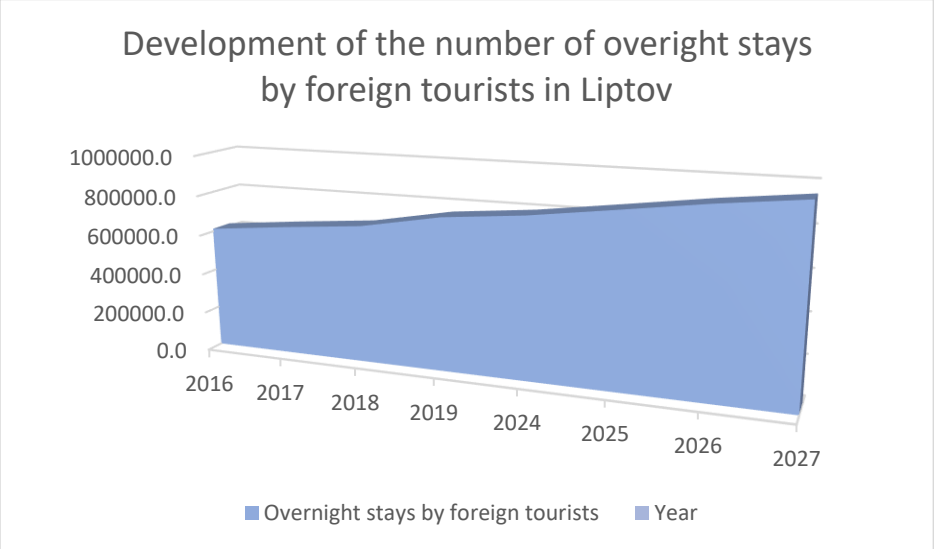
Graph 1: Development of the number of overnight stays by foreign tourists in the Region of Bratislava



Source: own processing in Excel

Graph 1 shows the increase in overnight stays by foreign tourists in the Region of Bratislava. Due to the rising tendency, the prediction of the upcoming four years is relatively positive. We can see that the number of overnight stays should have risen by 316 634 between 2024 and 2027. This represents a 17 % increase in four years compared to 2019.

Graph 2: Development of the number of overnight stays by foreign tourists in Liptov

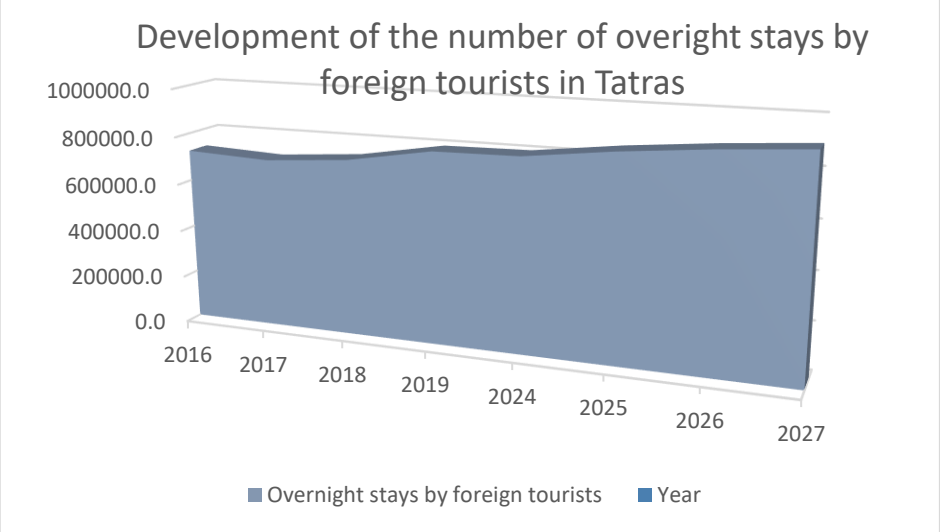


Source: own processing in Excel

Graph 2 represents the increase in overnight stays by foreign tourists in the Liptov region. Due to the rising tendency, the prediction for the upcoming four years is also

relatively positive. We can see that the number of overnight stays should have risen by 154 309 between 2024 and 2027. This represents a 20 % increase in four years compared to 2019.

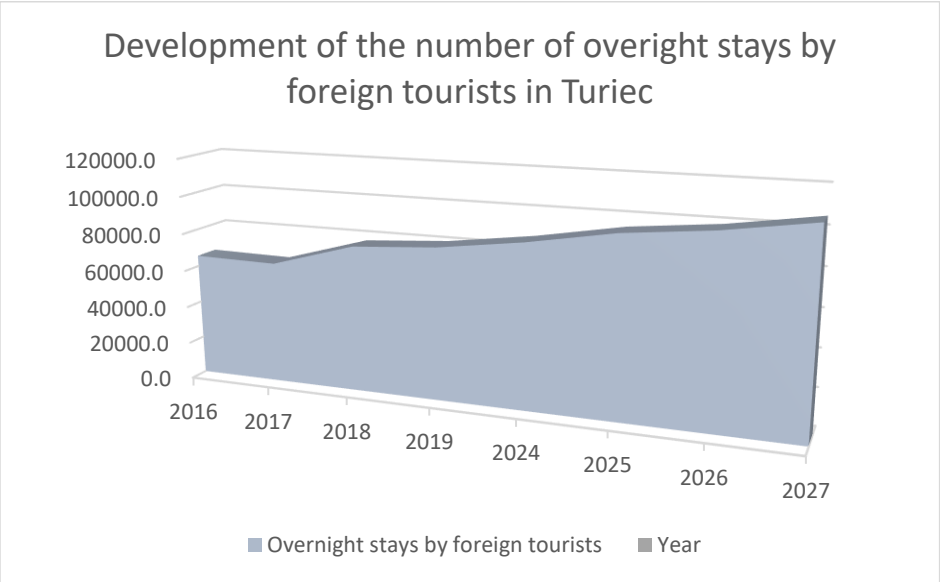
Graph 3: Development of the number of overnight stays by foreign tourists in Tatras



Source: own processing in Excel

Graph 3 shows the increase in overnight stays by foreign tourists in Tatras. The prediction for the upcoming four years is optimistic. We can see that the number of overnight stays should have risen by 99 922 between 2024 and 2027. This represents a 13 % increase in a four-year period compared to the year 2019.

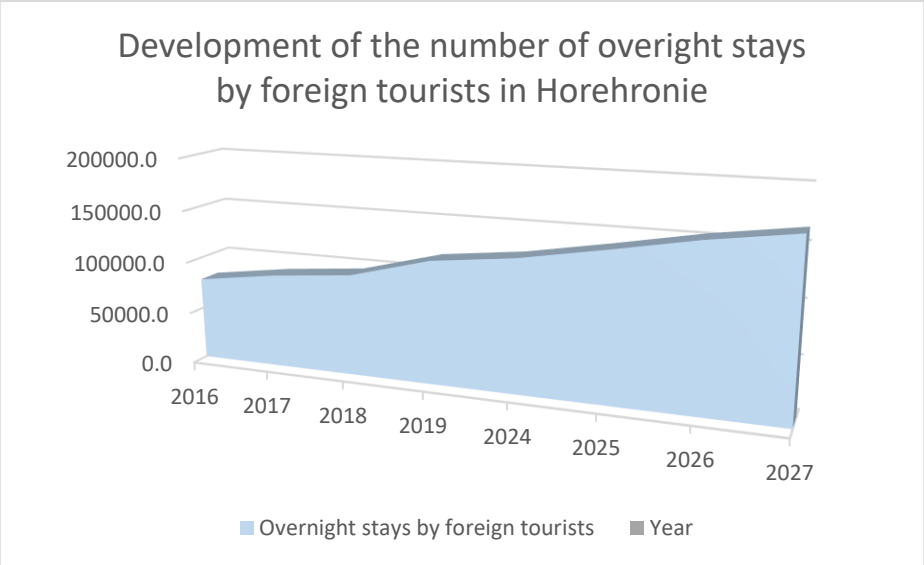
Graph 4: Development of the number of overnight stays by foreign tourists in Turiec



Source: own processing in Excel

Graph 4 represents the increase in overnight stays by foreign tourists in the Turiec region. The prediction for the upcoming four years is positive. We can see that the number of overnight stays should have risen by 19 461 between 2024 and 2027. This represents a 24 % increase in four years compared to 2019.

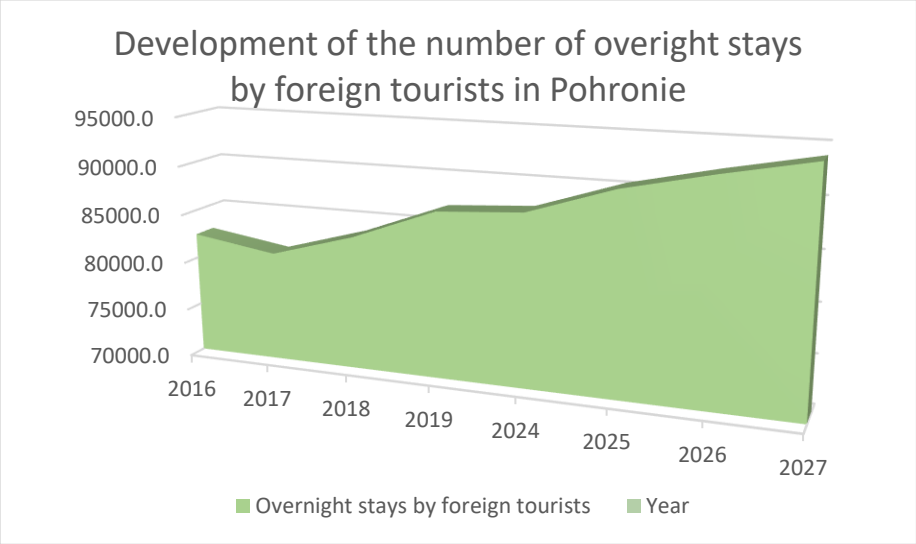
Graph 5: Development of the number of overnight stays by foreign tourists in Horehronie



Source: own processing in Excel

Graph 5 represents the increase in overnight stays by foreign tourists in the Horehronie region. The prediction in the case of Horehronie for the upcoming four years is relatively positive. We can see that the number of overnight stays should have risen by 39 682 between 2024-2027. This represents a 34 % increase in four years compared to 2019.

Graph 6: Development of the number of overnight stays by foreign tourists in Pohronie



Source: own processing in Excel

Graph 6 represents the increase in overnight stays by foreign tourists in Pohronie region. The prediction in the case of Pohronie for the upcoming four years is not as positive as in other regions. We can see that the number of overnight stays should have risen by 6 525 between 2024 and 2027. This represents a 7 % increase in four years compared 2019.

Regarding the predictions made for the most developed tourism regions in Slovakia, we can state that there are significant differences. The lowest percentual increase compared to the year 2019 can be seen in the Pohronie region (7 %). In the case of other regions, we can see a much higher percentage increase. The percentage increase in these regions ranges between 13-34 %. To answer the third research question (**Research question 3:** In which of the most developed tourism regions can we expect the higher increase in the number of foreign tourists in the future?), we can state that the highest percentage increase can be seen in the Horehronie region (34 %), where we expect the sharpest increase in upcoming years.

The percentage increase in the most developed tourism regions showed the potential development of this industry in upcoming years. This development, however, depends on all stakeholders in the regions. Without cooperation, development, and effective marketing, the increase in the overnight stays would not be that significant. The incoming tourism is vital for the most developed regions. Their main objective should be not only to attract as many tourists as possible but also to extend their stay so that they spend as much money as possible. This could help to stimulate the economic impact on the regions.

Discussion

This study opened up the issue of foreign tourism in Slovakia. In this area, there is still a lot of room for academics to carry on further research. Therefore, we recommend an In-depth analysis to clarify which forms of tourism have the biggest prerequisites and potential to boost tourism in identified, the most developed tourism regions. We also propose to design a methodology for measuring the impact of individual forms of tourism on the economy. According to this methodology, we would be able to identify the most suitable forms of tourism that would have the highest economic impact on regions.

Furthermore, the research conducted in this thesis showed other blind spots in the research activities. Therefore, we also recommend to measure the carrying capacity of the most developed and visited regions in Slovakia.

Moreover, according to the cluster analysis conducted in the first chapter of the practical part, we also suggest creating two national tourism destinations. These destinations could be created by the most developed tourism regions, while their main objective should be the propagation and creation of products to attract foreign tourists. The first suggested national tourism destination could consist of Region of Bratislava and its surrounding regions. From the cluster analysis, the Region of Bratislava came up as the most developed tourism region. The correlation analysis also showed a high dependency on foreign tourists. Therefore, we suggest creating a national tourism destination that will focus on prolonging overnight stays through the comprehensive offer. The main aim of these products should be to persuade foreign tourists to visit not only Bratislava but also the surrounding attractive regions (Malé Karpaty- vine tourism, Senecko- sports tourism). The other national tourism destination could consist of several regions. According to the cluster analysis from 2019 and 2020, we suggest these regions: Tatras, Liptov, Orava, Turiec, Spiš, Upper Považie, and Horehronie. The cluster analysis from 2020 showed that the Pohronie region belongs to the most developed tourism regions in Slovakia, however, the predictions of overnight stays by foreign tourists showed no significant increase. Therefore, we have decided not to include the Pohronie region to the second national destination. We have suggested the creation of national tourism destinations because we perceive the large fragmentation of tourism regions as a problem for further tourism development. After creating a new national tourism destination, we could create more attractive and comprehensive products for foreign

clientele. Furthermore, the marketing activities can focus more on larger parts of Slovakia, which could potentially help to increase the number of overnight stays.

Furthermore, we suggest putting more effort into collecting data in all tourism regions in Slovakia. Nowadays, it is vital for further development of the tourism industry to make decisions based on available data. This can contribute to better destination management and faster tourism development. To fulfill this objective, we recommend focusing on the indicators that have a greater impact in the regions than others. These indicators should be revenues of accommodation facilities, number of overnight stays, and average number of overnight stays in the regions. In the near future, we hope other tourism indicators will be measured. For example, these data might focus on collecting information from the tourism attractivites. When Slovakia wants to stay competitive among its neighbors, it is crucial to measure all possible indicators, which can then help the top management to take necessary steps that can ensure the competitiveness of Slovakia on the international market.

Conclusion

The main objective of the diploma thesis was to identify six tourism regions that are the most developed in terms of tourism and to conduct an in-depth analysis of the revenues from accommodation facilities. This objective has been fully fulfilled. The basic output of this thesis presents the identification of the most developed tourism regions in Slovakia based on data from 2020. After identifying the most developed tourism regions, we conducted several prediction analyses that predicted the future development of incoming tourism in these regions. Moreover, the diploma thesis presents the identified relationships between Revenues of accommodation facilities and other indicators.

In the theoretical part, we have characterized the general problematics focusing on regional development. We have taken a closer look at types and forms of tourism, factors affecting tourism, current trends in tourism, regionalization in Slovakia, Slovakia's competitiveness, and, last but not least, incoming tourism within Slovakia.

In the practical part, we have conducted several analyses to fulfill the diploma thesis objectives. In the first subchapter, we used the cluster analysis to determine six of Slovakia's most developed tourism regions. This analysis's outcome is the identification of the Region of Bratislava, Liptov, Tatras, Turiec, Horehronie, and Pohronie regions. According to cluster analysis, these regions can be considered the most developed and, therefore, have a great potential to attract foreign tourists. After the comparison of the results from the cluster analysis from 2020 and 2019, as well as the regionalization from 2005, we can state some interesting facts. We have identified the two parts of Slovakia where the most developed regions are focused. In the western part of Slovakia, the Region of Bratislava is located. This region was identified as the most developed according to the outcomes from cluster analysis. Therefore, we can see a great potential to attract more foreign tourists through the Region of Bratislava. The tourists can then be distributed not only in the area of Bratislava itself, but we see the opportunity to create more comprehensive products, which could stimulate higher visitation in other neighboring regions around Bratislava.

In the second subchapter, we have analyzed the relationship between Revenues of accommodation facilities and other indicators focusing on domestic and foreign tourists and the average capacity utilization of accommodation facilities. To find the relationship between these indicators, we used correlation analysis. The outcome of this analysis represents the correlation matrixes of the most developed regions. These correlation matrixes show the strongest correlation between Revenues of accommodation facilities and the

Number of foreign tourists and the Number of overnight stays by foreign tourists in the Region of Bratislava. Moreover, we have identified a strong positive correlation between the Revenues of accommodation facilities and the Average capacity utilization of accommodation facilities in Region of Bratislava and Tatras. On the other hand, the comparison showed a almost no correlation in the case of Pohronie. We can also state that except Region of Bratislava, in all examined regions we have identified a negative correlation when it comes to the relationship between Revenues of accommodation facilities and the Average number of overnight stays by foreign tourists.

In the third subchapter, we have conducted the regression analysis of all six researched regions. The regression models did not show the relationship between the Revenues of accommodation facilities and the Number of foreign tourists in the Liptov, Tatras, Turiec, Horehronie, and Pohronie regions. Only the regression model from the Region of Bratislava showed the positive impact of the Number of foreign tourists on the Revenues of accommodation facilities. Moreover, the regression analysis also showed that the growing number of domestic tourists positively affects the Revenues of accommodation facilities in the Region of Bratislava, Tatras, Turiec, and Horehronie.

In the last subchapter, we have conducted the prediction analysis of the Number of overnight stays by foreign tourists as we consider this indicator to be one of the most important when it comes to accessing tourism development. The result of the comparison of all prediction graphs showed some disparities between the most developed regions. In the case of Pohronie region, we expect just a 7 % increase in the Number of overnight stays by foreign tourists in the upcoming four years. The second lowest increase can be expected in Tatras (13 %). A 17 and 20 % increase should be expected in the Region of Bratislava and Liptov region. Furthermore, in Turiec, we expect a 24 % increase in the Number of overnight stays by foreign tourists, and finally, in the case of Horehronie, the increase of analyzed incicator should be 34 % by 2027. The increase in the Number of overnight stays by foreign tourists is predicted to be relatively significant. Therefore, destination management organizations must focus more on the sustainability of the tourism industry.

Based on the research activities in this thesis, we recommend the creation of two national tourism destinations within the scope of Slovakia Travel. Creating national destinations can contribute to a higher increase in all indicators related to incoming tourism. Moreover, the borders between the most successful regions in Slovakia would be erased, which would allow unity in the promotion and effective creation of comprehensive products for foreign clientele.

Resume

Záverečná práca bola vypracovaná na tému Mapovanie turistického potenciálu regiónov pre rozvoj incomingového cestovného ruchu v rámci Slovenskej republiky.

Cieľom záverečnej práce bolo identifikovať šesť najrozvinutejších turistických regiónov a hĺbková analýza príjmov ubytovacích zariadení. Zároveň sme sa venovali aj parciálnym cieľom, prostredníctvom ktorých sme dospeli k hlavným zisteniam tejto práce. Parciálne ciele, ktoré sme si v práci stanovili sú identifikácia najrozvinutejších turistických regiónov na Slovensku, identifikácia ukazovateľov, ktoré ovplyvňujú príjmy ubytovacích zariadení v najrozvinutejších regiónoch Slovenska, identifikácia, ako počet domácich a zahraničných turistov ovplyvňuje tržby ubytovacích zariadení, analýza ďalšieho rozvoja príjazdového cestovného ruchu v šiestich identifikovaných regiónoch, formulácia vízie a odporúčaní pre ďalší rozvoj príjazdového cestovného ruchu v najrozvinutejších regiónoch Slovenska.

Jednotlivé časti záverečnej práce boli zamerané na viaceré problematiky, venujúce sa regionálnemu cestovnému ruchu, incomingovému cestovnému ruchu, štatistikám zameraným na cestovný ruch a predikciám počtu prenocovaní zahraničnými turistami. Prvá kapitola je venovaná súčasnému stavu riešenej problematiky doma a v zahraničí, kde sa venujeme teoretickým východiskám.

Prvá kapitola pozostáva zo siedmich podkapitol, ktoré sú zamerané na sumarizáciu literatúry a predstavenie širokého názorového spektra domácich, ako aj zahraničných autorov. V siedmich podkapitolách sa venujeme typológii cestovného ruchu, faktorom ovplyvňujúcich cestovný ruch, regionalizácii cestovného ruchu na Slovensku, súčastným trendom v cestovnom ruchu, potenciálu rozvoja cestovného ruchu, konkurencieschopnosti Slovenska a incomingovému cestovnému ruchu. Pri spracovaní teoretickej časti sme si prehĺbili znalosti vo viacerých problematikách zameraných na regionálny cestovný ruch, príjazdový cestovný ruch a pod. V rámci teoretickej časti sme sa tiež venovali súčastným trendom v oblasti cestovného ruchu na Slovensku, ako aj v zahraničí. Zistili sme, že problematika, ktorej sme sa venovali aj v tejto práci má do budúcna veľký potenciál pre rozvoj. Hovoríme primárne o zbere dát a ich vyhodnocovaní. V súčastnej dobe, kedy je dôležité mať každé rozhodnutie podložené dátami, je zber a vyhodnocovanie dát v oblasti cestovného ruchu nepostrádateľné. Z teoretickej časti záverečnej práce tiež vyplýva, že široké spektrum autorov si myslí, že cestovný ruch má na Slovensku ešte veľký potenciál, pričom ho brzdia viaceré faktory. Jedným zo spomínaných faktorov je aj relatívna

rozdrobenosť regiónov cestvného ruchu, či prelínajúce sa kompetencie jednotlivých aktérov zastrešujúcich cestovný ruch.

V druhej kapitole definujeme hlavný cieľ a parciálne ciele, ako aj výskumné otázky a hypotézy. Tie v praktickej časti podrobíme analýzam.

Ďalšia kapitola je venovaná metodike záverečnej práce a metódam skúmania využitých v praktickej časti záverečnej práce.

V štvrtej, záverečnej kapitole, sme využili niekoľko analýz, ktoré nám pomohli potvrdiť, alebo vyvrátiť hypotézu, ako aj zistiť potrebné informácie pre zodpovedanie výskumných otázok.

V prvej podkapitole praktickej časti záverečnej práce sme pre potreby ďalšieho výskumu potrebovali rozsegmentovať slovenské regióny cestovného ruchu podľa ich stupňa rozvinutosti. Do databázy, ktorú sme pri následnej analýze použili, sme vybrali niekoľko indikátorov cestovného ruchu, na základe ktorých vieme identifikovať, do akej miery je daný region rozvinutý. V databáze, ktorú sme vytvorili z údajov zverejnených v dokumente Výsledky hospodárenia krajov za rok 2020, sa nachádzajú ukazovatele, ako napríklad počet domácich turistov, počet zahraničných turistov, počet ubytovacích zariadení, počet lôžok, počet prenocovaní domácich turistov, ako aj zahraničých turistov, tržby ubytovacích zariadení v prípade domácich a zahraničných turistov a. i. Titeto ukazovatele sme prepočítali za každý regón cestovného ruchu zvlášť. Spracované údaje boli následne využité pri zhlukovej analýze, ktorá nám rozdelila 21 regiónov cestovného ruchu do šiestich zhlukov. V jednotlivých zhlukoch sa nachádzajú jednotlivé regióny, ktorých úroveň rozvinutosti cestovného ruchu bola na podobnej úrovni. Na základe priemerných hodnôt vstupných premenných využitých v analýze, vieme určiť významnosť jednotlivých zhlukov. V každom z prvých štyroch najvýznamnejších zhlukov sa nachádzajú jeden alebo dva regióny cestovného ruchu. V dvoch, najmenej významných zhlukoch, sa nachádza významná väčšina regiónov cestovného ruchu. Zhluková analýza nám tiež ukazuje vysokú mieru segmentácie regiónov cestovného ruchu. Šesť regiónov cestovného ruchu, ktoré sú najrozvinutejšie, teda ich významosť v zhlukovej analýze je najvyššia, sa nachádza v štyroch zo šiestich zhlukov. V najvýznamnejšom zhluku sa nachádza Bratislavský región, v druhom najvýznamnejšom zhluku sa nachádza región Turiec, v treťom najvýznamnejšom zhluku sa nachádzajú regióny Horehronie a Pohronie a vo štvrtom najvýznamnejšom zhluku evidujeme regióny Liptov a Vysoké Tatry. Po identifikovaní najvýznamnejších regiónov z

pohľadu cestovného ruchu na Slovensku, sme pristúpili k porovnávaniu nami identifikovaných výsledkov s výsledkami rovnakej analýzy, avšak za rok 2019. Tento rok je významný v cestovnom ruchu, keďže pandémia COVID-19 sa prejavila až v nasledujúcom roku. Pri porovnaní výstupných údajov môžeme konštatovať, že sa významnosť niektorých regiónov zmenila. Regióny, ako napríklad Orava, Horné Považie a Spiš sa z roka na rok prepadli zo skupiny najvýznamnejších regiónov do menej význaných skupín. Regióny, ako napríklad Horehronie, Liptov, Vysoké Tatry a Bratislavský región však zostali medzi najúspešnejšími regiónmi, aj keď, samozrejme aj ich výrazne zasiahla pandémia. Výsledky zhlukových analýz za roky 2019 a 2020 sme tiež porovnali s kategorizáciou cestovného ruchu v dlhodobom horizonte. Toto porovnanie ukázalo, že výsledky zhlukovej analýzy z roku 2019 sa do významnej miery zhodujú s kategorizáciou cestovného ruchu v dlhodobom horizonte. V prípade zhlukovej analýzy z roku 2020 sme však identifikovali viaceré disparity, napríklad v prípade regiónov Horné Považie, Orava a Spiš. Regionalizácia regiónov v dlhodobom horizonte zaraďuje regióny Turiec, Horehronie, Liptov, Vysoké Tatry a Bratislavský región medzi tie s najväčším potenciálom do budúcna, čo potvrdzuje aj zhluková analýza z roku 2020.

Druhá podkapitola je zameraná na identifikovanie vzťahov medzi ukazovateľmi cestovného ruchu. V tejto pokapitole sme pracovali už len s nami identifikovanými najvýznamnejšími regiónmi cestovného ruchu na Slovensku. Po porovnaní všetkých šiestich korelačných matíc môžeme konštatovať, že najsilnejšia korelácia medzi tržbami za ubytovanie a počtom zahraničných turistov a počtom prenocovaní zahraničných turistov, je v Bratislavskom regióne. Korelácia dosiahla úroveň 0,99, čo predstavuje takmer dokonale pozitívnu lineárnu koreláciu medzi spomínanými premennými. V ostatných regiónoch však korelácia medzi týmito premennými nie je taká silná ako v Bratislavskom regióne. Zaujímavým zistením sú výrazne odlišné výsledky z korelácie tržieb ubytovacích zariadení a priemernej vyťaženosti ubytovacích zariadení. Silnú pozitívnu koreláciu dosahujúcu takmer dokonale pozitívnu lineárnu koreláciu, vidíme v Bratislavskom regióne (0,96) a Tatranskom regióne (0,98). Nižšie, ale stále stredné pozitívne hodnoty korelácie boli identifikované v prípade regiónov Liptov (0,79) a Turiec (0,77). Posledné dva regióny majú aj rôzne výsledky. V regióne Horehronie sa vyskytla nízka pozitívna korelácia. Na druhej strane v regióne Pohronie bola identifikovaná takmer žiadna korelácia (-0,14). Z porovnania korelačných analýz navyše vyplýva, že korelácia medzi tržbami ubytovacích zariadení a priemerným počtom prenocovaní domácich a zahraničných turistov, bola takmer vo všetkých krajoch výrazne negatívna, okrem korelácie tržieb za ubytovacie zariadenia a

priemerného počtu prenocovaní domácimi turistami v Bratislavskom regióne, kde bola identifikovaná nižšia pozitívna korelácia.

Suma sumárum, najsilnejší vplyv tržieb ubytovacích zariadení podľa počtu zahraničných turistov a počtu prenocovaní zahraničných turistov, vidíme v prípade Bratislavského regiónu. Čo sa týka vzťahu medzi tržbami ubytovacích zariadení a priemerným počtom prenocovaní zahraničnými turistami, vo všetkých skúmaných krajoch sme identifikovali len negatívnu koreláciu.

V tretej podkapitole sme prostredníctvom regresnej analýzy analyzovali vplyvy jednotlivých indikárotov na tržby ubytovacích zariadení. Hodnota multiple R sa v prípade všetkých regresií pohybuje v rozmedzí 0,993 - 0,916, čo naznačuje silu lineárneho vzťahu medzi nezávislými premennými a závislou premennou. V tomto prípade môžeme konštatovať, že existuje veľmi silný vzťah medzi závislou premennou, teda príjmami ubytovacích zariadení a ostatnými nezávislými premennými, ako sú počet domácich turistov, počet zahraničných turistov, počet prenocovaní domácich turistov a počet lôžok. Okrem toho hodnota Signifikancie F je vo všetkých regresných analýzach nižšia ako 0,05, čo znamená, že regresný model je štatisticky významný na hladine významnosti 0,05. Pre potvrdenie alebo zamietnutie stanovenej hypotézy sme sa zameriavali na vzťah medzi príjmami ubytovacích zariadení a počtom domácich turistov. Tento vzťah bol potvrdený regresnými analýzami, zameranými na Bratislavský región, región Vysokých Tatier, Turca a Horehronia. Čo sa týka výsledkov regresných analýz, nulovú hypotézu môžeme zamietnuť. Môžeme teda potvrdiť, že rastúci počet domácich turistov má pozitívny vplyv na tržby ubytovacích zariadení v regióne Bratislava, Vysoké Tatry, Turiec a Horehronie. V prípade ostatných regiónov nám regresná analýza neukázala významnosť tohto indikátora. V prípade počtu zahraničných turistov iba jeden regresný model ukázal významnosť tohto indikátora, a to v Bratislavskom regióne. Ostatné regresné modely, z Liptova, Vysokých Tatier, Turca, Horehronia a Pohronia, nepreukázali vzťah medzi tržbami ubytovacích zariadení a počtom zahraničných turistov.

V záverečnej podkapitole sme sa zamerali na jeden z najdôležitejších indikátorov cestovného ruchu, a to je počet prenocovaní zahraničnými turistami. Pre komplexnejšiu predstavu rozvoja najvýznamnejších regiónov cestovného ruchu sme využili predikcie, ktoré sme spracovali pre jednotlivé regióny. Ako aj v prípade predošlých analýz sme pracovali s najvýznamnejšími regiónmi cestovného ruchu, ktoré sme identifikovali v prvej podkapitole praktickej časti. Pokiaľ ide o prognózy pre najrozvinutejšie regióny cestovného ruchu na Slovensku, môžeme konštatovať, že existujú výrazné rozdiely. Najnižší

percentuálny nárast v porovnaní s rokom 2019 možno pozorovať v regióne Pohronie (7 %). V prípade ostatných regiónov môžeme vidieť oveľa vyšší percentuálny nárast. Percentuálny nárast v týchto regiónoch sa pohybuje v rozmedzí 13 až 34 %. V prípade tretej výskumnej otázky (V ktorom z najrozvinutejších regiónov cestovného ruchu môžeme v budúcnosti očakávať najvyšší nárast počtu zahraničných turistov?) môžeme konštatovať, že najvyšší percentuálny nárast môžeme vidieť v regióne Horehronie (34 %), kde očakávame najvýraznejší nárast v nasledujúcich rokoch.

Percentuálny nárast v najrozvinutejších regiónoch cestovného ruchu ukázal potenciál rozvoja tohto odvetvia v nasledujúcich rokoch. Tento rozvoj však závisí od všetkých zainteresovaných strán v regiónoch. Bez spolupráce, rozvoja a efektívneho marketingu by nárast počtu prenocovaní nebol taký výrazný. Príjazdový cestovný ruch je pre najrozvinutejšie regióny životne dôležitý. Ich hlavným cieľom by malo byť nielen prilákať čo najviac turistov, ale aj predĺžiť ich pobyt tak, aby minuli čo najviac peňazí. To by pomohlo stimulovať hospodársky vplyv v regiónoch.

Výsledkom riešenia danej problematiky je identifikácia šiestich najvýznamnejších regiónov cestovného ruchu na Slovensku. Na základe zhlukovej analýzy môžeme tvrdiť, že v roku 2020 boli najvýznamnejšie regióny cestovného ruchu Bratislavský región, Liptov, Turiec, Vysoké Tatry, Horehronie a Pohronie. Výsledkom riešenia danej problematiky je tiež zistenie, že indikátory zamerané na incomingový cestovný ruch najviac ovplyvňovali príjmy ubytovacích zariadení v Bratislavskom regióne. Regresná analýza potvrdila, že počet zahraničných turistov pozitívne ovplyvňuje príjmy ubytovacích zariadení, avšak iba v Bratislavskom regióne. Môžeme tiež konštatovať, že rastúci počet domácich turistov má pozitívny efekt na príjmy ubytovacích zariadení v Bratislavskom regióne, vo Vysokých Tatrách, Turci a Horehroní. Za výsledok riešenia danej problematiky považujeme aj zistenie, že v najbližších štyroch rokoch predpokladáme nárast počtu prenocovaní vo všetkých šiestich skúmaných regiónoch.

Môžeme tiež konštatovať, že táto štúdia otvorila problematiku zahraničného cestovného ruchu a regionalizácie cestovného ruchu na Slovensku. V tejto oblasti je stále veľký priestor pre akademikov pre ďalší výskum. Odporúčame preto zamerať sa na hĺbkovú analýzu regiónov, ktorá by objasnila, ktoré formy cestovného ruchu majú v daných regiónoch najväčšie predpoklady a potenciál. Tento potenciál by sa následne mohol pretaviť v rozvoji cestovného ruchu v danom regióne. Navrhujeme tiež vytvorenie metodiky merania vplyvu jednotlivých foriem cestovného ruchu na ekonomiku. Podľa tejto metodiky by sme dokázali identifikovať najvhodnejšie formy cestovného ruchu, ktoré by mali najväčší

ekonomický dopad na regióny. Na základe tejto metodiky by sme mohli preferovať tie najprínosnejšie formy cestovného ruchu v jednotlivých regiónoch. Uskutočnený výskum v tejto záverečnej práci ukázal ďalšie potenciálne miesta vo výskumnej činnosti. Odporúčame preto komplexnejšie meranie únosnosti destinácií v najrozvinutejších a najnavštevovanejších regiónoch Slovenska.

Zhluková analýza v praktickej časti záverečnej práce ukázala, že najvýznamnejšie regióny cestovného ruchu sú zoskupené v dvoch konkrétnych oblastiach Slovenska. Navrhujeme preto vytvorenie dvoch národných destinácií, ktoré by pozostávali z najrozvinutejších regiónov na Slovensku a boli by primárne zamerané na pritiahnutie zahraničnej klientely do týchto destinácií. Ich hlavným cieľom by mala byť propagácia a tvorba atraktívnych produktov, ktoré by dokázali pritiahnuť zahraničnú klientelu aj zo vzdialených trhov. Prvou navrhovanou národnou destináciou cestovného ruchu by mohol byť Bratislavský región a jeho susedné regióny. Zo zhlukovej analýzy vyšiel Bratislavský región ako najrozvinutejší región cestovného ruchu. Korelačná analýza tiež ukázala vysokú závislosť tohto regiónu na zahraničných turistoch. Myslíme si preto, že vytvorenie národnej destinácie cestovného ruchu, by pomohlo predĺžiť priemerné počty prenocovaní, ako aj zvýšiť tržby ubytovacích zariadení. Zvýšenie počtu zahraničných turistov by tiež pomohlo miestnym lokálnym ekonomikám, ktoré by poskytovali široké spektrum služieb zahraničnej klientele. Hlavným cieľom týchto produktov by malo byť podnietenie zahraničných turistov, aby navštívili nielen Bratislavu, ale aj okolité atraktívne regióny (Malé Karpaty - vínna turistika, Senecko - športová turistika). Ďalšia národná turistická destinácia by mohla pozostávať z viacerých regiónov. Podľa klastrovej analýzy z rokov 2019 a 2020 navrhujeme tieto regióny: Tatry, Liptov, Orava, Turiec, Spiš, Horné Považie a Horehronie. Zhluková analýza z roku 2020 ukázala, že región Pohronie síce patrí k najrozvinutejším regiónom cestovného ruchu na Slovensku, avšak predikcie prenocovaní zahraničných turistov nevykazujú tak výrazný nárast, ako v prípade ostatných regiónov. Rozhodli sme sa preto región Pohronie do druhej národnej destinácie nezaradiť. Vytvorenie národnej destinácie cestovného ruchu sme navrhli preto, že vnímame veľkú rozdrobenosť regiónov cestovného ruchu ako problém pre ďalší rozvoj cestovného ruchu. Po vytvorení novej národnej destinácie cestovného ruchu môže destinačný manažér vytvoriť atraktívnejšie produkty pre zahraničnú klientelu, ktoré sa nebudú zameriavať len na jeden región. Uvedomujeme si, že vytvorenie národnej destinácie cestovného ruchu dáva zmysel hlavne v prípade druhej navrhovanej národnej destinácie, pozostávajúcej z regiónov Liptov, Vysoké Tatry, Orava, Turiec, Spiš, Horné Považie a Horehronie. Vytvorenie národnej destinácie by tiež pomohlo

pri koordinácii aktivít zameraných na propagáciu, tvorbu produktového portfólia, organizácii podujatí, budovaní infraštruktúry atď. Uvedomujeme si, že rozvíjať cestovný ruch v konkurenčne silnom prostredí je nesmierne náročné, avšak Slovensko má predpoklady na to, aby sa dokázalo presadiť nielen v prihraničných regiónoch, ale aj na vzdialenejších trhoch. Želáme si, aby sme v budúcnosti dokázali maximálne využiť všetky predoklady pre rozvoj cestovného ruchu so zameraním sa na dlhodobý a koncepčný prístup rozvoja tohto dôležitého odvetvia.

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