

**5<sup>th</sup> INTERNATIONAL THEMATIC MONOGRAPH**

# **MODERN MANAGEMENT TOOLS AND ECONOMY OF TOURISM SECTOR IN PRESENT ERA**



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***Modern Management Tools and Economy of Tourism Sector in Present Era***

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## PREFACE

International Thematic Monograph: *Modern Management Tools and Economy of Tourism Sector in Present Era - 2020* is the fifth annual publication of this kind published by the Association of Economists and Managers of the Balkans in cooperation with the Faculty of Tourism and Hospitality, Ohrid, North Macedonia.

Presented thematic monograph characterizes the following facts:

- **23 members of its Editorial Board come from 6 different countries** of the Balkans region: 6 from Serbia, 6 from Montenegro, 5 from Croatia, 4 from North Macedonia, one from Slovenia, and one from Bosnia and Herzegovina;
- Out of more than **60 chapters** that have been submitted for publication, it has **39 double-blind peer-reviewed chapters** accepted and published in English on more than **650 pages**;
- All chapters have been scanned with Crosscheck (powered by Turnitin) and have ORCID iD integration;
- It gathered **83 authors** from **14 different countries**: Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Turkey who come from different faculties, universities, colleges, scientific institutes, enterprises and high schools – listed at the next page;
- **40% of all listed authors originate from abroad**;
- In a review process of a thematic monograph their contribution gave **86 highly esteemed reviewers all with PhDs**;
- Among listed **peer reviewers 60% of them are international by country of origin**;
- The average **grade of all published chapters** obtained according to all reviews is **78,92** out of 100.

**Best Chapter Award Candidates** of the 5<sup>th</sup> International Thematic Monograph: *Modern Management Tools and Economy of Tourism Sector in Present Era* are:

1. Jelena Vukonjanski Srdić, Bojana Ostojić, chapter title - TOURISM PROVIDERS, ACHIEVEMENT, CULTURE AND JOB SATISFACTION IN SERBIA;
2. Jani Bekő, Darja Boršič, chapter title - ARE THE MEDITERRANEAN COUNTRIES WITH TOURISM PRICE INDICES IN THE PURCHASING POWER PARITY ZONE?
3. Dragana Bešlić Obradović, Ivana Bešlić Rupiće, Bojan Rupiće, chapter title - INVESTIGATING INCOME SMOOTHING: EMPIRICAL EVIDENCE FROM SERBIAN'S HOTEL COMPANIES;
4. Miloš Pjanić, Mirela Mitrašević, chapter title - THE IMPACT OF TOURISM ON GDP GROWTH IN THE EUROPEAN UNION COUNTRIES;
5. Vesna Luković, chapter title - ONLINE PLATFORMS AS MODERN TOOLS IN TOURISM IN EXTRAORDINARY TIMES: CASE FOR FURTHER DIGITALIZATION IN WESTERN BALKANS.

**Best Chapter Award Winners** are:

Jani Bekő, Darja Boršič with the chapter title ARE THE MEDITERRANEAN COUNTRIES WITH TOURISM PRICE INDICES IN THE PURCHASING POWER PARITY ZONE?

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We would like to express our sincere gratitude to all colleagues who participated in a process of publishing this thematic monograph and with great honor would like to invite **you all to start preparing chapters for our 2021 annual edition**. Call for chapters is available at the following link: <https://www.udekom.org.rs/publications>

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# EXPLORING INTERNATIONAL DESTINATION GOVERNANCE TYPOLOGY FOR CREATING COMPETITIVE AND SUSTAINABLE DESTINATIONS

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**Abstract:** *Based on the WEF Travel & Tourism Report data, this study deploys k-means cluster analysis to build a global typology of national destination governance. Previous studies have focused on case studies, while this chapter focuses on the classification of different destination types, by deploying indicators a set of following relevant indicators: wastewater treatment, fixed broadband internet subscriptions, ground transport efficiency, quality of roads, quality of railroad infrastructure, reliability of police services, ease of finding skilled employees. The results present a four-cluster solution of national destination governance types, as well as their major characteristics. The chapter then provides and discusses important implications for the theory and practice of destination governance.*

**Keywords:** *Cluster analysis, Tourism sustainability, Tourism competitiveness*

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## 1. INTRODUCTION

Increasing tourism flows, competition between the destinations, as well as consequent pressures on local communities and the environment are calling for different approaches to destination governance globally. Tourist destinations are complex systems of different social actors who impact tourist experience, with a diverse set of economic, social and environmental goals; this, in turn, makes competition between destination often ambiguous and incongruent- therefore calling for systemic leadership and destination governance (Beritelli & Bieger, 2014; Conceição, Dos Anjos, & Gadotti dos Anjos, 2019; Crouch, 2010; Crouch & Ritchie, 2003; Paunović & Jovanović, 2019). Having this research framework in mind, the purpose of this chapter is to develop a thorough methodology that permits the identification of groups (types) of similar destinations in an inductive fashion, according to the most relevant indicators relating to their competitiveness and sustainability, developed by the World Economic Forum. The chapter sets out to present the size of these destination groups (types) in relation to the overall sample as well as their detailed configurations and what distinguishes them from other types of destinations. The underlying assumption in deploying clustering methodology is that the identified configurations are a means for purposefully capturing the complexity of various types existent in reality (Ketchen & Shook, 1996).

Different national destination governance systems across the globe are being developed across the globe, in order to develop a balanced, scientific approach to managing destinations, with a systemic perspective, and active dialogue to the advocative, cautionary and soft/adaptive tourism approaches, (Conceição et al., 2019; Jafari, 2001; Stoffelen, Ioannides, & Vanneste, 2017), while there are also examples of failed governance arrangements (Siakwah, Musavengane, & Leonard,

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2019). Therefore, the research goal of this chapter was to create a typology of destinations as regards their competitiveness and sustainability, based on the variables/indicators deployed in the WEF Travel & Tourism Report. This typology has been developed scientifically, but can be used both in the theory as well as in the practice of everyday decision making. In order to achieve this research goal and create a typology of global destination types, a k-means clustering procedure of the data from the WEF Travel & Tourism report has been conducted. Although the WEF data have been criticized in the literature for the lack of transparency regarding data collection methods (Popescu & Pavlović, 2013) it has also been acknowledged that it is the most complete and relevant global database on destination competitiveness and sustainability (Crouch, 2010; Dwyer & Kim, 2003; Dwyer, Mellor, Livaic, Edwards, & Kim, 2004; Goffi & Cucculelli, 2014).

## **2. LITERATURE REVIEW**

### **2.1. Typology and taxonomy in tourism research**

Typologies in tourism research are being used to enhance interpretation and understanding of both destination supply as well as destination demand, as two related and dependent phenomena in tourism research (Coccosis & Constantoglou, 2008). The research on destination (governance) typologies is rooted in the Jungian archetypes of tourist destination governance (Angella, De Carlo, & Sainaghi, 2010; Montgomery, Strunk, & Steele, 2017), and many different independent variables are being deployed: types of social representations and leadership approaches (Paunović & Jovanović, 2019; Valente, Dredge, & Lohmann, 2015), types of social capital for sustainable tourism (Nunkoo, 2017), types of destination residents (Presenza, Del Chiappa, & Sheehan, 2013), types of DMO business models (Reinhold, Beritelli, & Grünig, 2019), types of destination networks (Angella et al., 2010; van der Zee, Gerrets, & Vanneste, 2017), types of destination governance modes (Wan & Bramwell, 2015; Yüksel, Bramwell, & Yüksel, 2005; Zhang & Zhu, 2014) It also covers a wide range destinations: dark tourism destinations (Fonseca, Seabra, & Silva, 2015), community-type destinations (Franch, Martini, & Buffa, 2010), city destinations (Pan & Li, 2010), sun-sand-sea destinations (Perles-Ribes, Ivars-Baidal, Ramón-Rodríguez, & Vera-Rebollo, 2020), tourism intensive destinations vs. destinations left out of tourism flows (Zhao & Timothy, 2015). Other tourism-related research deploying this approach is for example typology of tourism products (Arnegger, Woltering, & Job, 2010). Statistical procedures suited for creating typologies are classification techniques, such are two-step cluster analysis and k-means cluster analysis in IBM SPSS statistical software.

Another similar methodological approach used in tourism research is the creation of taxonomies. This approach is somewhat more complex than the typological approach and is used in different areas of tourism research: from taxonomy of city destinations (Hill, Brennan, & Wolman, 1998), the taxonomy of resorts (Brey, 2011), to taxonomy of carsharing business models (Remane, Nickerson, Hanelt, Tesch, & Kolbe, 2016) and taxonomy of tourism products (McKercher, 2016). Statistical procedures suitable for creating taxonomies are hierarchical clustering and decision tree analysis in IBM SPSS statistical software.

### **2.2. GOVERNANCE**

Governance signifies a concept of coordinating various social systems with a special emphasis on the role of the state in brokering these processes, as well as formal and informal types of public-private interaction (Pierre, 2000). It can relate to a specific set of rules and styles which enable the act of performing a public action in a context of an increasingly differentiated

society with an increasing number of increasingly independent actors (Faure, 2009; Torre & Traversac, 2011). Therefore, governance as an approach usually includes a degree of autonomy and independence of non-state organizational actors in their relationship to the state, as well as their capability to form interdependencies with other public and private organizational actors, exchange resources and create governing and self-governing rules (Rhodes, 1997). A very important notion in the concept of governance is to get things done in the public sphere without necessarily relying directly on the power of government (Stoker, 1998). In the organizational and corporate context, governance is being deployed for quite some time to explain different types of non-contractual, non-hierarchical, value chain relationships between organizations that often make up clusters (Porter, 1990; Vazquez-Brust, Piao, de Melo, Yaryd, & M. Carvalho, 2020; Visser & de Langen, 2006). One of the major reasons behind the increased deployment of governance approaches is the value creation through joining dispersed capabilities in a flexible way (Mahoney & Kor, 2015).

There are several research domains where the concept of governance is being deployed successfully and which is of high relevance for tourism research: brand governance, sustainability and governance, governance of innovation/technology and organizational governance. A detailed overview of these research domains is given in Table 1 below. Further governance-related research domains, which could be useful in tourism research are the notion of “good governance” (Grzeszczak, 2015), knowledge governance (Pemsel, Müller, & Söderlund, 2016), as well as global climate change governance (Persson, 2019) as well as general global governance (Risse, 2004). Furthermore, in management research, governance has been identified as one of the most promising research fields for enhancing the decision-making process, especially when combined with a comparative governance methodology (Tihanyi, Graffin, & George, 2014).

### **2.3. Tourism and destination governance**

Tourism governance is usually defined primarily through public participation and consensus orientation; but also strategic vision; responsiveness, effectiveness and efficiency; accountability and transparency; equity and the rule of law (Buteau-Duitschaever et al., 2010; Presenza et al., 2013); as well as representativeness, harmony, trust and decision power among tourist actors (Conceição et al., 2019). Having in mind a clear orientation towards a specific, clearly defined territory and the modes of participation of various stakeholders, the concept of destination governance is very similar to the concept of territorial governance (Torre & Traversac, 2011). In this sense, previous research identified distinct types of participation in territorial and destination governance: communication, information, consultation, dialogue, discussion meetings, as well as negotiation (Beuret, 2006).

The framework of the most important governance-related research domains, presented in the previous chapter, can for the most part be applied in the tourism research, but with one important difference. While in the general governance literature organizational governance seems to be a very important field of research (see Table 1), in tourism research, this approach is virtually non-existent, and destination research focuses on leadership and governance instead (Beritelli & Bieger, 2014; Pechlaner, Harald Pechlaner, Kozak, & Volgger, 2014; Valente et al., 2015). Both leadership and governance transcend public, private and community interest, serving therefore as a tool for destination and tourism development (Ruhanen, Scott, Ritchie, & Tkaczynski, 2010; Spasojevic, Lohmann, & Scott, 2019).

As for the remaining three research areas (branding, sustainability and innovation governance), they are equally represented both in the general governance literature as well as in the tourism and destination governance literature. For example, technological innovation is often at the heart of destination development (Borin & Paunovic, 2015; Dressler, 2016; Dressler & Paunović, 2019). In recent years, innovative ridesharing technologies have created one of the biggest challenges for the regulatory framework, but generally also for tourism and mobility governance mechanisms (Posen, 2016). Moreover, destination brand governance has often been connected with the governance of innovation as part of integrated initiatives (Bichler, 2019; Hospers, 2008; Lalicic, 2018; Nordin & Svensson, 2007). Numerous complexities created through international and regional mobilities (mobile people, capital, labour, knowledge) are challenging the sustainable destination governance to create proper response through joint power and social capital, community participation as well as creating mutual trust within the destination (Dredge & Jamal, 2013; Franch et al., 2010; Nunkoo, 2017).

Tourism governance should take into account different aspects of governance as a concept because sole concentration on governance networks can both help the tourism sector adapt to fast changes, but it can also lead to a disintegration through an ineffective dissipation of power (van der Zee et al., 2017; Yüksel et al., 2005; Zehrer & Raich, 2010). In this sense, there are numerous examples of ineffective destination governance, each case containing different unresolved governance issues (Liu, Ma, Huang, & Tang, 2020; Siakwah et al., 2019; Zahra, 2011). Having in mind the extremely dynamic and volatile changes in global tourism markets, societies and environment, destination governance emerges as a much-needed approach for facilitating adaptive and innovation-oriented perspectives (Bichler, 2019; Lalicic, 2018; Mamula, 2016; Mamula & Popovic-Pantic, 2015; Paunovic, 2014; Paunovic, Dressler, Mamula Nikolic, & Popovic Pantic, 2020; Persson, 2019).

**Table 1.** Governance-related research domains which are of relevance for tourism research

Brand governance		Governance and sustainability		Governance and innovation/technology		Organizational governance	
Author	Research focus	Author	Research focus	Author	Research focus	Author	Research focus
(Cooper, Stavros, & Dobeles, 2018)	Governance in an online brand community	(Bush, Oosterveer, Bailey, & Mol, 2015)	Sustainability governance of chains and networks	(Arrona, Franco, & Wilson, 2020)	Innovation of public affairs through collaborative, place-based governance	(Dosi, Faillo, & Marengo, 2008)	Firm/corporate routines as control and governance devices
(Hatch & Schultz, 2010)	Brand co-creation and brand governance	(Klein et al., 2001; Shiroyama et al., 2012)	Sustainability governance and transdisciplinarity,	(De Guimarães, Severo, Felix Júnior, Da Costa, & Salmoria, 2020)	Governance and quality of life in smart cities	(Lew & Sinkovics, 2013)	Interfirm governance, which is based on resource-based strategy research
(Helm & Jones, 2010)	Framework for governing a co-created brand equity			(Hai, Roig-Dobón, & Sánchez-García, 2016)	Innovative and non-innovative governance modes	(Mahoney & Kor, 2015)	Human capital, capabilities and governance in organizational research
(Merrilees, 2017)	Experience-centric brand governance theory			(Lappi & Aaltonen, 2017)	Project governance and agile software development	(Singla, Veliyath, & George, 2014)	Family from internationalization and governance mechanisms

(Renton & Richard, 2019)	Brand governance in SMEs as a tool for value creation			(Lauterbach, 2019)	Governance for safe and functional AI	(Kohtamäki, Parida, Oghazi, Gebauer, & Baines, 2019)	Exploring different configurations of organizational governance
				(Wang & Li, 2019)	China's governance of innovation		

### 3. METHODOLOGY

Data from 2015. and 2017. WEF Travel and Tourism Reports (Crotti & Misrahi, 2015, 2017) have been used in this analysis. Data from previous WEF reports (2008., 2009., 2011. and 2013.) have been prepared using a different methodology which is not compatible with the ones for 2015. and 2017. In the first step, data from the two reports have been cleaned to include the same set of countries and variables/indicators, as there have been some variations between the two reports. The final dataset included 131 country destinations worldwide as well as a set of 82 indicators. In the second step, an average between the two reports (2015. and 2017.) has been calculated and a hierarchical and k-means clustering was conducted.

The clustering procedure included deploying a hierarchical clustering algorithm as a first step, in order to generate a dendrogram that has been used for determining an optimal number of clusters. This sequence of analysis has been recommended by (Sarstedt & Mooi, 2014). After that, this number of clusters has been used for running a k-means cluster analysis, where many clusters are set in advance to running the clustering procedure. In this sense, the optimal number of clusters for major destination types for running the k-means cluster analysis has been set to 4. Regarding the number of variables deployed, according to (Sarstedt & Mooi, 2014), the maximum number of clustering variables for a sample of  $N=131$  is 7, as it is being calculated via  $2^n$  formula, where  $n$  is the number of variables. Consequently,  $2^7=128$ , which is less than the total sample of  $N=131$ . In order to choose the seven most relevant variables from the WEF reports, a previous study that deployed a similar methodology has been used. Namely, Paunovic et al. (2020) have extracted twenty-three variables/predictors of destination competitiveness and sustainability by deploying a two-step clustering method on the same set of data, namely 2015. and 2017. WEF reports. Out of the identified twenty-three variables, the seven most relevant have been chosen for our clustering solution: wastewater treatment, fixed broadband internet subscriptions, ground transport efficiency, quality of roads, quality of railroad infrastructure, reliability of police services, ease of finding skilled employees. All of the seven variables have been transformed into z scores in order to normalize variables. The original values for different variables are being measured on different scales, which could potentially affect the final solution. Therefore, only z scores of all the variables have been used. The k-means clustering succeeded in 8 iterations, which speaks for a good stability of the final solution.

### 4. RESULTS

Results are being presented in tables 2, 3, and 4 as well as Figure 1, where the most relevant output has been presented, beginning with the number of cases in each cluster (destination type) continuing with final cluster centers, and finally presenting a bar chart of final cluster centers, as well as ANOVA table for clusters. The four clusters created by k-means cluster analysis and presented in Table 2 are not of equal size: whereas clusters two and three are both represented by forty-two destinations each, only eighteen destinations belong to cluster one and 29 to clus-



ter four. In order to further analyze the clustering solution, Table 2 and Graph 1 present in detail the profiles of each one of the extracted clusters.

Cluster one is characterized by relatively high scores regarding wastewater treatment and (number of) fixed broadband Internet subscriptions, above-average ground transport efficiency, quality of roads and quality of railroad infrastructure score, while the reliability of police services and ease of finding skilled employees are below average. Cluster two has a low score regarding wastewater treatment and (number of) fixed broadband Internet subscriptions and above-average quality of roads. It also has a below-average score regarding ground transport efficiency, quality of railroad infrastructure, reliability of police services and ease of finding skilled employees. Cluster three has a very low score regarding all of the variables: wastewater treatment, fixed broadband Internet subscriptions, ground transport efficiency, quality of roads, quality of railroad infrastructure, reliability of police services and ease of finding skilled employees. Cluster four has a very high score regarding all of the variables: wastewater treatment, fixed broadband Internet subscriptions, ground transport efficiency, quality of roads, quality of railroad infrastructure, reliability of police services, ease of finding skilled employees.

**Table 2.** Number of cases (destinations) in each cluster

	Cluster No.	No. of cases
	1	18
	2	42
	3	42
	4	29
Sample size		131

**Table 3:** Final cluster centers for extracted destination types

	Cluster No.			
	1	2	3	4
Zscore: Wastewater Treatment	.98574	-.54435	-.72812	1.23105
Zscore: Fixed broadband Internet Subscriptions	.85532	-.57327	-.66832	1.26728
Zscore: Ground Transport Efficiency	.54173	-.16831	-.96955	1.31168
Zscore: Quality of roads	.17938	.06726	-1.03102	1.28445
Zscore: Quality of railroad infrastructure	.29750	-.07598	-.97960	1.34413
Zscore: Reliability of police services	-.03837	-.05996	-.86105	1.35769
Zscore: Ease of finding skilled employees	-.14324	-.21012	-.62060	1.29202

By deploying K-means cluster analysis on the sample of N=131 worldwide destinations, four distinct destination types have been extracted - each type with its distinct characteristics. Cluster four represents developed destinations, with high scores regarding all measured indicators, and cluster three developing destinations, with low scores regarding all of the measured indicators. Clusters one and two are more complex types of destinations to be analyzed and interpreted. While cluster one has pretty good scores regarding most of the relevant aspects (wastewater treatment, Internet, ground transport quality and efficiency), it scores below average on the reliability of police services (to enforce law and order) and ease of finding skilled employees, pointing out to problems in the rule of law and a rather closed labour market. Cluster two is similar to cluster one in terms of a below-average score regarding reliability of police services (to enforce law and order) and ease of finding skilled employees, but the quality of ground transport is also rather below average. Only the overall quality of roads is a little above average, while the two other ground transport indicators are below average. It also has pretty low scores regarding wastewater treatment and a number of fixed broadband Internet subscriptions.



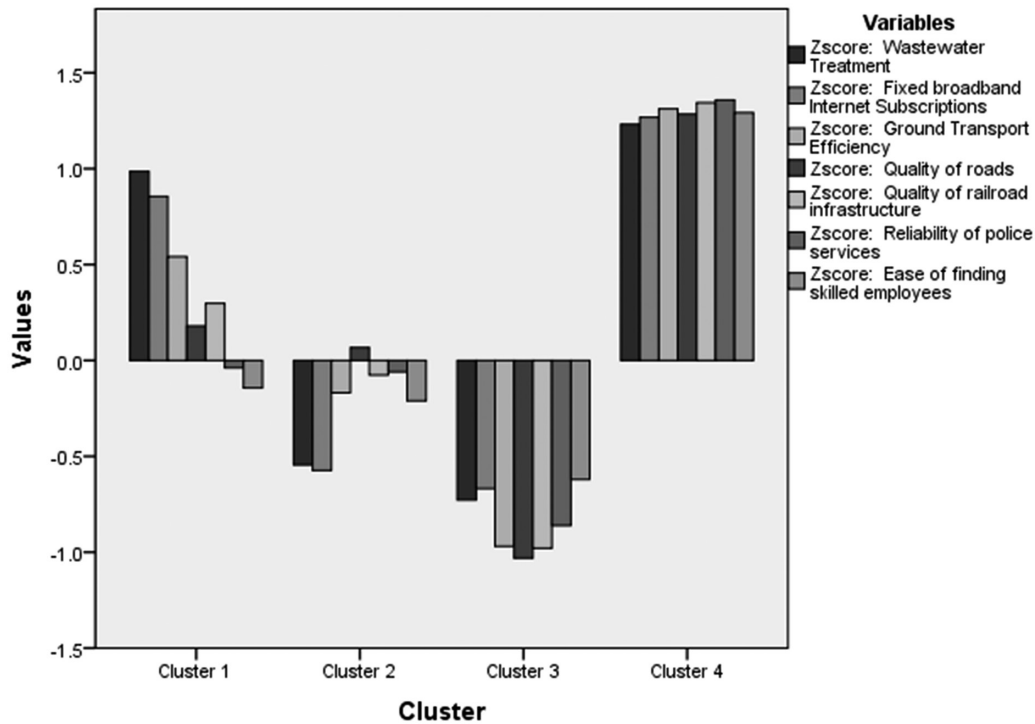


Figure 1. Final cluster centers

Table 4. ANOVA of the 7 deployed variables

Zscore	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Wastewater Treatment	32.051	3	.267	127	120.254	.000
Fixed broadband Internet Subscriptions	30.768	3	.297	127	103.661	.000
Ground Transport Efficiency	31.949	3	.269	127	118.807	.000
Quality of roads	31.087	3	.289	127	107.458	.000
Quality of railroad infrastructure	31.511	3	.279	127	112.835	.000
Reliability of police services	28.258	3	.356	127	79.350	.000
Ease of finding skilled employees	22.270	3	.498	127	44.758	.000

The ANOVA table is presented in Table 4. Although it is a standard part of the SPSS output for K-means cluster analysis, it should be used with caution as F test used is only for descriptive purposes. Nevertheless, all of the variables in the ANOVA output table (wastewater treatment, fixed broadband internet subscriptions, ground transport efficiency, quality of roads, quality of railroad infrastructure, reliability of police services, ease of finding skilled employees) have been statistically significant and therefore deemed very relevant for the presented clustering solution.

## 5. DISCUSSION AND FUTURE RESEARCH DIRECTIONS

While clusters 3 (developing destinations) and 4 (developed destinations) have already been identified by Paunovic et al. (2020), this research goes a step further to identify two additional destination types, thereby creating a more complex typology, consisting of four destination types, instead of only two. These two additional destination types are probably a good indicator for the development trajectories of destinations, starting with Cluster 3, continuing to moderately developed destinations in Cluster 2 and Cluster 1 and ending with the most developed destinations in Cluster 4.

Regarding indicators deployed for clustering, this research deploys environmentally-related indicators (wastewater treatment), technological indicators (the number of fixed broadband Internet subscriptions), physical infrastructure indicators (ground transport efficiency, quality of roads, quality of railroad infrastructure), as well as regulatory and government services (reliability of police services (to enforce law and order) and ease of finding skilled employees). This way, a relatively balanced set of indicators has been deployed for creating a typology of destinations regarding their competitiveness and sustainability. Having in mind that the St. Gallen Model of Destination Management continually updates the role of destination leadership, strategy, resilience and governance arrangements in the developed destinations (Reinhold, Laesser, & Beritelli, 2014, 2018), future research should take into consideration the creation of further destination management and governance models that take into account different types of worldwide destinations, according to their development level. In this sense, special attention should be directed to developing destinations, as they are an under-researched domain of research. Destination managers should be aware of their destination life-cycle stage and manage the advancement to the next level and not necessarily trying to reach the top destinations right away, but rather develop both competitiveness and sustainability in the long run. For example, previous research has shown that highly developed tourism destinations are marked by the institutional advantage of the tourism industry over other industries, while the opposite is true in the early phases of destination development (McLennan, Ritchie, Ruhanen, & Moyle, 2014).

Previous research on destination governance has identified the temporal and spatial differences of state activities in different destinations and how the concept of path dependence influences the adaptation of governance structures (Bramwell, 2011; Bramwell & Lane, 2011). However, the approach of this research stream has been limited by the case study methodology which is both explorative as well non-exhaustive. In contrast, the clustering approach in this chapter is explorative in nature but provides an exhaustive view of the vast majority of contemporary worldwide destinations, thereby adding necessary rigor to destination governance research. An emerging and theoretically underdeveloped research field in governance and leadership, both in destination governance research as well as general governance literature is the emergence of multi-level governance (Stoffelen et al., 2017; Tortola, 2017). Furthermore, future research should take into account what types of systemic destination leadership types, as defined by (Beritelli & Bieger, 2014), correspond with each one of the four identified destination governance types.

## 5. CONCLUSION

One of the most important aspects of the science of tourism is to support future-oriented thinking and action (Paunović & Jovanović, 2017; Pechlaner, Volgger, & Zehrer, 2017). The clustering research approach deployed in this study is novel and attempts to enrich previously scarce literature on global destination governance types and bring in a classification approach to future discussions on destination governance.

The results present a sound foundation for future research; however, the study has several limitations which need to be taken into account when building and dwelling further in this research direction. The number of independent variables deployed in clustering techniques is limited by the sample size. Future studies could therefore attempt to aggregate data from a regional level destination in order to obtain data from a more coherent geographic area, as well as to raise the number of possible independent variables used in order to explore a larger set of variables. It

would be beneficial to extend this quantitative approach with further qualitative case studies of the identified destination types in order to illustrate destination governance mechanisms from destination actors themselves. This qualitative approach could provide answers to the questions which have not been answered by present research: what are the benefits and trade-offs of certain destination governance modes? What problems, as well as problem-solving mechanisms, do destinations engage with in different governance modes? What kind of strategic path dependence phenomena occurs as the destinations develop and change regarding competitiveness and sustainability? This study highlights the importance of the global approach to national destination governance. For destination managers, it is of importance to understand the position of the destination in global terms both regarding competitiveness as well as sustainability, thereby identifying clusters of similar destinations as well as dissimilar ones. This way a benchmarking is possible for making proper decisions and adapt destination governance and involvement of different stakeholders accordingly. Regarding tourism science theory, this study will help in the development of future global destination governance models, by providing a crucial scientific step through conducting classification of destination governance types.

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# EFFICIENCY OF TOURISM DEVELOPMENT: APPLICATION OF DEA AND TOBIT MODEL

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**Abstract:** *The main goal of this chapter is to evaluate the relative efficiency of tourism development in 33 European countries using a Two-stage DEA model for the seven-year time period. The output-oriented DEA model with a variable return to scale has been applied, with one input variable (government expenditure for travel and tourism (T&T)) and four output variables (average receipts per arrival, number of international tourist arrivals, T&T share of GDP and T&T share of employment). Results of the first stage showed that the lowest average efficiency scores were achieved in countries that recently joined the European Union, while a significant increase of efficiency is observed in the results of Western Balkan countries. The highest average efficiency score achieved countries in the EU15 group. Results of the second stage indicate the statistically significant relationships of the tourism efficiency scores with average international tourism receipt per arrival, tourism industry share of GDP and share of employment, government prioritization of tourism industry, visa requirements, number of rooms, rate of use and number of natural sites.*

**Keywords:** *DEA, Tobit Model, Tourism efficiency.*

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## 1. INTRODUCTION

It is well known fact that the tourism industry has been one of the largest and the fastest-growing industries all around the world. But, current issues on global pandemics have significant negative influence on further tourism development. With international travel bans affecting over 90% of the world population and wide-spread restrictions on public gatherings and community mobility, tourism largely ceased in March 2020 (Gossling et al., 2020). Unexpected travel global restrictions and stay-at-home orders seriously affect all activities of this sector, and crucial changes are necessary in order to somehow maintain the achieved level of tourism development. Measuring and comparing efficiency on different levels of tourism sector has been gaining increasing importance in the current situation in order to manage scarce resources in the best possible way. The main goal of this chapter is to evaluate and compare efficiency of tourism development before pandemic in 33 European countries and furthermore to define factors that significantly address the achieved efficiency levels. Additionally, possible improvements in input and output levels would be suggested to inefficient countries. Hopefully, better allocation of resources that leads to higher efficiency level should be a good prerequisite for dealing with new challenges concerning tourism sector during current pandemics.

The chapter consists of four sections. After the introduction, which presents the main research questions and the objective, the second section presents the methodology and literature review addressing the Two-stage DEA method. The first part of the third section deals with an explanation of the results of DEA model and is followed by the second stage analysis and the results from the Tobit model. The final section presents the main conclusions and a discussion of how this study will contribute to the literature and future trends.

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## 2. METHODOLOGY AND DATA

In this chapter, the Two-stage DEA method has been applied in order to compare the efficiency of tourism development in 33 European countries and determine significant factors that influence efficiency score. DEA is commonly used non parametric approach in tourism efficiency evaluation on both micro and macro level. Table 1 contains a literature review of papers in which the DEA was applied to tourism industry, which motivated the research presented in this study. The selection of papers in the literature review was primarily conducted according to similarities to our research in terms of the methodology and the regions.

Data envelopment analysis (DEA) is a method of mathematical programming developed for efficiency evaluation. DEA has become a very popular non-parametric method of efficiency analysis and can be successfully applied in different areas and at different levels. This method is designed to accept a large number of input and output variables in order to determine the effectiveness of different decision units whose efficiency is required. DEA is an approach for calculating efficiency, which does not require a specific functional form, unlike most statistical approaches. They reduced multiple inputs to a single „virtual” input and reduced multiple outputs to a single „virtual” output using weight coefficients. They solved the problem of assigning weights by allowing each unit to determine its own weights in order to maximize its efficiency (the ratio of the weight sum of its outputs and inputs), with the restriction that these weights must be positive values and that the quotient of virtual output and virtual input of each units cannot be greater than 1. This problem has been defined as a linear programming task. The decision unit is inefficient if it is possible to reduce any input without increasing any other input, and achieve the same output. The efficiency limit in economic terms represents the empirically obtained maximum of output variables that each decision unit can achieve with a given input variable and acts as a wrapper for inefficient units. The efficiency scores of DEA model represent relative efficiency measures, as they highly depend on the number of entities involved in analysis, as well as the number and structure of selected inputs and outputs.

**Table 1.** Summary of relevant DEA empirical research on tourism sector

Author (year)	Period of analysis	Country/region	Input and output variables	Results
Hadad et al. (2012)	2009	105 countries	Inputs: Labour, Rooms, Natural resources, Cultural sites. Outputs: Number of tourists and Expenditure per tourist	Developed countries attract more tourists and generate more income per tourist than developing countries. Developed countries use more rooms in the tourist industry while developing countries use more labour.
Kosmaczewska, J. (2014)	2007-2009	EU Countries	Arrivals in tourist accommodation establishments, Collective tourist accommodation establishments, Gross domestic product at market prices	Significant similarity in the efficiency of the transformation of the inputs into outputs was observed in the group of richer countries or in the group of poorer countries. Richer countries achieved higher pure technical efficiency, while poorer countries achieved higher scale efficiency.

Martin et al. (2015)	2011	129 countries	5 inputs, 13 outputs	The new methodology, virtual DEA-TTCI model has been developed to improve ranking and efficiency position of counties.
Marcikić Horvat, Radovanov (2016)	2013-2015	South Eastern Europe	12 inputs, 4 outputs	Croatia, Montenegro and Bosnia and Herzegovina obtain maximal efficiency, while other observed countries have relatively low efficiency score.
Soysal-Kurt (2017)	2013	29 European countries	Inputs: Number of employees in tourism sector, tourism expenses, number of beds. Outputs: Tourist arrivals, tourism receipts, number of nights spent	Results showed that 16 countries are found relatively efficient and 13 countries are found relatively inefficient.
Chen et al. (2018)	2015	Taiwan	Inputs: Average expenditure per person per day, Average accommodation cost, Average length of stay. Output: Overall satisfaction with travel services	The empirical results of the estimation of technical efficiency revealed that the domestic tourism market is competitive, but still needs enhancements for tourism service.
Škrinjarić (2018)	2011-2015	21 Croatian counties	8 inputs, 4 outputs	Results in this study indicate that it is possible to obtain satisfactory economic and environmental results simultaneously.
Tomić, Marcikić Horvat (2018)	2013-2017	South Eastern Europe	Inputs: Government expenditure, Prioritization of tourism. Outputs: International tourist arrivals, International tourism inbound receipts, Tourism industry GDP.	Croatia and Montenegro achieve maximal efficiency, compared to the other countries in the observed region.
Radovanov et al. (2020)	2011-2017	European countries	Input: T&T government expenditure. Output: Average receipts per arrival, T&T industry employment, Sustainability of T&T industry development	Results show relatively high-efficiency scores, particularly in the case of EU 15 countries. The second stage reveals positive and significant effects on relative tourism efficiency by the sustainability of tourism development, the share of GDP, tourist arrivals and inbound receipts, as well as visa requirements and rate of use.

In this chapter, the output-oriented DEA model with a variable return to scale has been used to examine the efficiency of tourism development in European countries. The analysis is performed by solving the following model (Banker, Charnes, Cooper, 1984) of linear programming for each country and each period:



$$\begin{aligned}
 & \max \phi \\
 & s. t. \sum_{j=1}^n x_{ij} \lambda_j \leq x_{io} \quad i = 1, 2, \dots, m; \\
 & \sum_{j=1}^n y_{rj} \lambda_j \geq \phi y_{ro} \quad r = 1, 2, \dots, s; \\
 & \sum_{j=1}^n \lambda_j = 1 \\
 & \lambda_j \geq 0
 \end{aligned} \tag{1}$$

where  $n$  is the number of DMUs (Decision Making Units – countries in our case) and  $DMU_o$  represents the country under evaluation. Assume that we have  $s$  output variables and  $m$  input variables. Observed output and input values are  $y_r$  and  $x_i$  respectively, thus  $y_{ro}$  is the amount of output  $r$  used by  $DMU_o$ , while  $x_{io}$  is the amount of input  $i$  used by  $DMU_o$ .  $\lambda$  is the DMU's weight and the efficiency score is  $\phi$ .

The DEA analysis continues in the second stage through the application of regression analysis in order to determine the drivers of the technical efficiency results. In output-oriented DEA models, technical efficiency scores take values at the interval  $\{0,1\}$ . Thus, a limited dependent variable type of regression stands out to define potential relationships between the scores and group of relevant factors. The most regularly applied regression model, in this case, is the censored regression, commonly known as Tobit regression model. The application of standard regression model with no constraints on coefficient and/or variable level is unsuitable and could lead to misleading results, since the condition of the least-squares is not met (Grmanova, Strunz, 2017). Oppositely, the primary concept of a Tobit model is to censor the dependent variable by determining the threshold of the latent dependent variable. The general formulation of the model is given as follows (Greene, 2003):

$$\begin{aligned}
 y_{it}^* &= x_{it}' \beta + \varepsilon_{it}, \\
 y_{it} &= 0 \text{ if } y_{it}^* \leq 0 \\
 y_{it} &= y_{it}^* \text{ if } y_{it}^* \geq 0
 \end{aligned} \tag{2}$$

where  $y_{it}$  is the dependent variable measured by  $y_{it}^*$  as the latent dependent variable of the technical efficiency result for positive values and neglected otherwise, related to the  $i^{\text{th}}$  country and  $t^{\text{th}}$  year,  $x_{it}'$  is the vector of explanatory (independent) variables,  $\beta$  is a vector of estimated coefficients and  $\varepsilon_{it}$  is a normally and independently distributed error term. The presented model formulation is a general dynamic or panel data Tobit model that applies temporal and spatial scales data simultaneously.

Two potential forms of the panel data model are widely used in terms of omitted effects correlated with the independent variables. The principal idea behind these potential model forms is that effects of omitted variables have the same influence on independent variables through time or not. In order to check those effects, the analysis applies a modified Hausman test with the null hypothesis that random effects are independent of the explanatory variables and the alternative hypothesis that fixed effects are correlated with the explanatory variables. In other words, the null hypothesis proposes the random effects estimator to run an analysis, while the alternative one recommends the fixed effects estimator.



Based on the data published in Travel and Tourism (T&T) Competitiveness Reports, tourism efficiency development in Europe has been evaluated over seven years. The data were retrieved from the Reports published in 2013, 2015, 2017 and 2019. The only input variable used in DEA model is T&T government expenditure, presented as a percentage of total government budget. This indicator includes expenditures (transfers or subsidies) made by government agencies to provide T&T services such as cultural, recreational, clearance and so on. In performed DEA analysis four output variables were selected:

1. Average receipts per arrival in US \$. International tourism receipts are expenditures by international inbound visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country.
2. Number of international tourist arrivals.
3. T&T share of gross domestic product (GDP), as a percentage of total GDP.
4. T&T share of employment, as a percentage of total employment.

**Table 2.** Descriptive statistics of input and output variables

		Average receipts per arrival	International arrivals	Share of GDP	Share of employment	Government expenditure
<b>Western Balkan</b>						
<b>Report 2019</b>	Max	898.74	4642600.00	10.40	8.00	4.00
	Min	415.52	630600.00	2.00	1.80	0.50
	St. dev.	225.48	1600837.32	3.99	2.84	1.41
	Average	656.65	1914000.00	5.28	4.38	1.92
<b>Report 2013</b>	Max	1602.19	2865000.00	8.60	7.60	3.90
	Min	585.97	327500.00	1.30	1.20	0.80
	St. dev.	451.62	1041138.28	3.28	2.87	1.29
	Average	972.80	1109940.00	3.98	3.56	1.94
<b>EU15</b>						
<b>Report 2019</b>	Max	4352.33	86917700.00	8.50	12.70	8.10
	Min	543.33	1045900.00	1.70	2.00	2.20
	St. dev.	961.13	27186396.68	2.24	2.92	1.77
	Average	1191.99	29296726.67	4.14	5.42	3.94
<b>Report 2013</b>	Max	8862.88	81411000.00	6.70	8.90	8.00
	Min	598.58	542600.00	1.60	1.70	2.10
	St. dev.	2033.13	22834037.82	1.66	2.33	1.78
	Average	1589.71	22533353.33	3.11	4.06	3.77
<b>New member states</b>						
<b>Report 2019</b>	Max	915.58	18258000.00	10.90	11.40	11.60
	Min	383.65	1949500.00	1.50	1.90	1.40
	St. dev.	177.69	6009721.53	2.60	2.96	3.16
	Average	613.86	7610507.69	3.88	4.65	4.68
<b>Report 2013</b>	Max	16629.69	13350000.00	13.80	14.90	11.30
	Min	468.67	1411700.00	1.50	1.50	1.40
	St. dev.	4394.71	4268615.40	3.82	4.16	3.09
	Average	2024.00	4875284.62	4.47	5.06	4.56

**Source:** authors' calculations

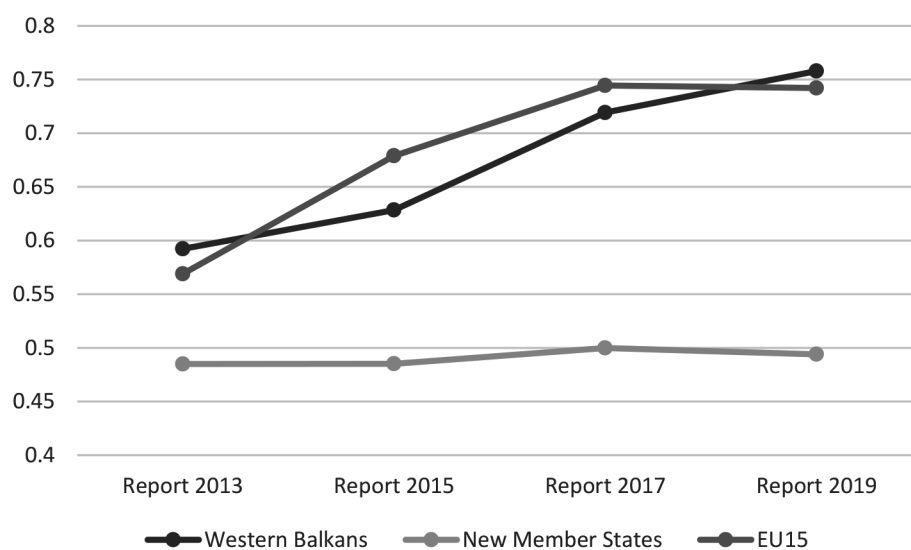
Descriptive statistics for selected inputs and outputs, for the first and the last observed period, are presented in Table 2. Furthermore, the abovementioned Two-stage DEA analysis has been performed on the sample of 33 European countries. Those countries can be divided into three groups to obtain separate comparative analysis of achieved efficiency scores. Group of Western

Balkan Countries includes Serbia, Montenegro, North Macedonia, and Albania. Group EU15 are the oldest members of the European Union (EU) together with United Kingdom (UK), since the UK has been the part of the EU in the observed years. The group New member states includes countries that joined the EU later than countries in the EU15 group.

From the data presented in Table 2, it can be noticed that the number of international tourist arrivals has been increasing in all three groups of countries, which also accentuates the significant position of the tourism industry in this region.

### 3. RESULTS AND DISCUSSION

The results obtained from the output-oriented DEA model with a variable return to scale (1) are shown in Figure 1 and Table 3. The highest average efficiency is mainly achieved by the EU15 countries, while the countries that joined EU later showed the lowest average efficiency (values around 0,48) of tourism development in the observed period. This conclusion is consistent with similar previous research (Radovanov et al. 2020). The values of the average efficiency score are very constant for the group of New member states, while Western Balkan countries and EU15 show a significant increase of efficiency score during the observed period. The values of the average efficiency score in Western Balkan countries lie between 0.59 and 0.76, similar to the average efficiency score values for the EU15 (lowest 0.57 and highest 0.75).



**Figure 1.** Average efficiency score

**Source:** authors' calculations

In the group of Western Balkan countries, Serbia has the maximal level of efficiency during the whole 6-year period, while North Macedonia has the lowest efficiency scores (from 0.20 to 0.35 in the last year). In the group of New member states, Croatia and Malta obtained significantly higher efficiency scores than other countries, while Lithuania has the lowest efficiency in the whole period. France, Luxemburg and Spain achieved the highest efficiency score values in our model from the EU15 countries, while Ireland, Finland and Denmark are the most inefficient.

**Table 3.** Results of DEA model (1)

	Report 2019	Report 2017	Report 2015	Report 2013
<b>Western Balkan Countries</b>				
Albania	0.807339	0.530918	0.414283	0.526219
Bosnia and Herzegovina	0.676323	0.723234	0.627552	0.504398
Montenegro	0.954128	1	0.796235	0.730126
North Macedonia	0.351678	0.342176	0.304077	0.200589
Serbia	1	1	1	1
<b>New Member States</b>				
Bulgaria	0.350857	0.376843	0.385577	0.343594
Croatia	1	1	1	1
Cyprus	0.696046	0.57606	0.662496	0.478429
Czechia	0.453384	0.467942	0.485811	0.43795
Estonia	0.404415	0.347671	0.314945	0.269521
Hungary	0.475061	0.539469	0.495483	0.482528
Latvia	0.376249	0.410991	0.294711	0.27367
Lithuania	0.230755	0.25517	0.252751	0.170814
Malta	0.925561	1	1	1
Poland	0.375968	0.372286	0.369963	0.28701
Romania	0.406324	0.376039	0.335743	0.21794
Slovakia	0.309908	0.306914	0.262619	1
Slovenia	0.416973	0.468602	0.44678	0.342944
<b>EU15</b>				
Austria	0.887572	0.738622	0.631718	0.584036
Belgium	0.453531	0.546062	0.501118	0.280014
Denmark	0.365978	0.428432	0.366478	0.592052
Finland	0.334708	0.379294	0.412548	0.236072
France	1	1	1	1
Germany	0.866959	0.995762	0.778562	0.633884
Greece	1	0.919108	0.791132	0.753331
Ireland	0.286862	0.323993	0.292784	0.240451
Italy	0.947178	0.848881	0.79233	0.682833
Luxembourg	1	1	1	0.624839
Netherlands	0.673687	0.737047	0.662968	0.613225
Portugal	0.80712	0.784833	0.718884	0.57717
Spain	1	1	0.989112	0.911918
Sweden	0.737727	0.576283	0.476969	0.292166
United Kingdom	0.770489	0.888351	0.769389	0.512767

**Source:** authors' calculations

Besides information on efficiency score, DEA model also generates valuable information for decision and policy makers on possible ways of efficiency improvement for inefficient countries. All countries that achieved efficiency score below 1 can improve their efficiency by increasing the level of selected outputs, since the performed DEA model was output-oriented. Ways of possible improvements are shown in the following tables 4, 5, 6 and 7. Those tables represent the results of the DEA model (1) for the last observed year in the dataset (data from the Report 2019). Therefore, table 4 presents the peer groups for our inefficient countries and the corresponding values of lambda. Peer groups are the set of efficient countries from which an inefficient unit's inefficiency has been determined. From the results presented in Table 4 we can conclude that Albania, for example, should look up to the Croatian way of efficient allocation of observed outputs and inputs. All other inefficient countries should follow the experiences of efficient ones to improve their relative efficiency position.

**Table 4.** Peer groups and lambda values for inefficient countries

Country	Benchmark(Lambda)
<b>Albania</b>	Croatia(1.000000)
<b>Austria</b>	Croatia(0.414930); France(0.046352); Greece(0.353608); Luxembourg(0.025705); Spain(0.159405)
<b>Belgium</b>	Croatia(0.103658); France(0.132423); Luxembourg(0.708195); Spain(0.055724)
<b>Bosnia and Herzegovina</b>	Croatia(0.266461); Luxembourg(0.138533); Serbia(0.595006)
<b>Bulgaria</b>	Croatia(0.661756); Luxembourg(0.157038); Spain(0.181206)
<b>Croatia</b>	Croatia(1.000000)
<b>Cyprus</b>	Croatia(0.854873); Luxembourg(0.145127)
<b>Czechia</b>	Croatia(0.426874); France(0.162756); Greece(0.268392); Luxembourg(0.141978)
<b>Denmark</b>	Croatia(0.373581); France(0.298121); Luxembourg(0.314798); Serbia(0.013500)
<b>Estonia</b>	Croatia(0.654437); Greece(0.192301); Luxembourg(0.153262)
<b>Finland</b>	Croatia(0.264900); Luxembourg(0.678142); Spain(0.056958)
<b>France</b>	France(1.000000)
<b>Germany</b>	Croatia(0.266984); France(0.385215); Greece(0.198479); Luxembourg(0.149323)
<b>Greece</b>	Greece(1.000000)
<b>Hungary</b>	Croatia(0.252839); France(0.170731); Greece(0.529380); Luxembourg(0.047050)
<b>Ireland</b>	Croatia(0.273438); France(0.000793); Greece(0.041816); Luxembourg(0.314587); Spain(0.369365)
<b>Italy</b>	Croatia(0.173937); France(0.621865); Greece(0.171162); Luxembourg(0.032428); Spain(0.000609)
<b>Latvia</b>	Croatia(0.746224); Greece(0.089502); Luxembourg(0.164274)
<b>Lithuania</b>	Croatia(0.519832); Greece(0.032217); Luxembourg(0.429582); Spain(0.018370)
<b>Luxembourg</b>	Luxembourg(1.000000)
<b>Malta</b>	Greece(0.943655); Luxembourg(0.056345)
<b>Montenegro</b>	Croatia(1.000000)
<b>Netherlands</b>	Croatia(0.601128); France(0.187254); Greece(0.028129); Luxembourg(0.183490)
<b>North Macedonia</b>	Croatia(0.349356); Luxembourg(0.186761); Serbia(0.463883)
<b>Poland</b>	Croatia(0.154754); France(0.522875); Luxembourg(0.317851); Spain(0.004520)
<b>Portugal</b>	Croatia(0.434228); Greece(0.361836); Luxembourg(0.087109); Spain(0.116826)
<b>Romania</b>	Croatia(0.343429); France(0.007503); Luxembourg(0.412368); Serbia(0.236700)
<b>Serbia</b>	Serbia(1.000000)
<b>Slovakia</b>	Croatia(0.656512); France(0.148872); Greece(0.046191); Luxembourg(0.148424)
<b>Slovenia</b>	Croatia(0.438777); Greece(0.243257); Luxembourg(0.317967)
<b>Spain</b>	Spain(1.000000)
<b>Sweden</b>	Croatia(0.039638); France(0.087806); Luxembourg(0.555696); Serbia(0.316860)
<b>United Kingdom</b>	Croatia(0.166049); France(0.514518); Greece(0.046747); Luxembourg(0.272686)

**Source:** authors' calculations

Table 5 shows the proportionate movements of input and output variables calculated in the DEA model. Those values actually represent the guidelines to decision makers on how to improve the efficiency of the tourism sector in inefficient countries. Proportionate movements of output variables show necessary increase of the outputs in order to achieve the highest efficiency level. Sometimes, apart from those proportionate movements, it is also important to take into account the values of slack variables, which are presented in table 6.

Slack variables provide vital information pertaining to the areas which an inefficient country needs to improve upon in its drive towards attaining the status of the efficient one (Kumar&Gulati, 2008). Coelli et al. (2005) stated that is important to report that both the scores of technical efficiency and any non-zero input and output slacks provide an accurate indication of technical efficiency of a unit in a DEA analysis. Therefore, the slack values should be interpreted and presented together with the efficiency values. Slacks represent the potential improvements in

input and output variables for the inefficient units in the data set when compared with their peer efficient targets. Thus, slacks are only the “leftover portions of inefficiencies”, after proportional reductions in inputs or outputs. If a decision making unit (DMU) cannot reach the efficient frontier, slacks are needed to push the DMU to the frontier (Ozcan, 2008). The presence of non-zero slacks for a DMU implies that the DMU under scrutiny can improve beyond the level implied by the estimate of technical efficiency (Jacobs et al., 2006).

Therefore, if we want to make suggestion to Albania to improve its efficiency, we should take into account both proportionate movements i.e. increase of all four output variables as well as slack movements i.e. reduction of government expenditure by 2.6%, together with the further slack increase of three output variables. This way we generate the projected input and output variable values needed to achieve the maximal level of efficiency. Those projections are presented in table 7.

**Table 5.** Proportionate Movement of input and output variables

Country	Proportionate Movement (Government expenditure)	Proportionate Movement (Average receipt per arrival)	Proportionate Movement (International tourist arrivals)	Proportionate Movement (Share of GDP)	Proportionate Movement (Share of Employment)
Albania	0	99.1585	1107893.18	2.10	1.91
Austria	0	87.97	3731722.04	0.98	1.10
Belgium	0	1799.92	10070861.43	2.65	2.89
Bosnia and Herzegovina	0	428.67	441445.56	1.34	1.53
Bulgaria	0	842.50	16435002.79	5.74	5.37
Croatia	0	0.00	0.00	0.00	0.00
Cyprus	0	374.03	1594824.29	3.01	2.75
Czechia	0	652.52	15441775.96	3.26	5.06
Denmark	0	1174.27	20343653.12	4.16	4.16
Estonia	0	739.96	4778793.46	5.60	5.89
Finland	0	2118.60	6322223.21	3.98	4.37
France	0	0.00	0.00	0.00	0.00
Germany	0	163.18	5747203.16	0.54	1.04
Greece	0	0.00	0.00	0.00	0.00
Hungary	0	431.95	17442325.92	2.87	5.41
Ireland	0	1350.70	25700213.25	4.72	4.97
Italy	0	42.35	3248636.32	0.31	0.37
Latvia	0	805.99	3231909.79	5.97	5.97
Lithuania	0	1745.21	8411687.62	6.00	6.33
Luxembourg	0	0.00	0.00	0.00	0.00
Malta	0	60.95	182872.00	0.45	0.92
Montenegro	0	26.67	90250.00	0.50	0.33
Netherlands	0	446.26	8681836.60	0.82	2.71
North Macedonia	0	955.96	1162517.85	3.69	3.32
Poland	0	1161.08	30304693.28	3.15	3.32
Portugal	0	192.97	5066223.14	1.70	1.94
Romania	0	1337.75	4032763.27	2.19	3.80
Serbia	0	0.00	0.00	0.00	0.00
Slovakia	0	854.29	16967950.78	5.79	6.01
Slovenia	0	1072.27	5014083.06	4.75	5.45
Spain	0	0.00	0.00	0.00	0.00
Sweden	0	732.37	2440605.42	0.85	1.24
United Kingdom	0	388.05	11215339.73	1.10	1.43

Source: authors' calculations

**Table 6.** Slack Movement of input and output variables

Country	Slack Movement (Government expenditure)	Slack Movement (Average receipt per arrival)	Slack Movement (International tourist arrivals)	Slack Movement (Share of GDP)	Slack Movement (Share of Employment)
Albania	-2.60	185.91	9842406.82	0.00	0.09
Austria	0.00	0.00	0.00	0.00	0.00
Belgium	0.00	0.00	0.00	0.00	0.81
Bosnia and Herzegovina	0.00	0.00	3826792.01	0.76	0.00
Bulgaria	-0.71	0.00	0.00	0.00	0.18
Croatia	0.00	0.00	0.00	0.00	0.00
Cyprus	-7.75	0.00	8234820.36	0.00	0.35
Czechia	0.00	0.00	0.00	2.20	0.00
Denmark	0.00	0.00	0.00	0.00	0.44
Estonia	-5.45	0.00	7570636.38	0.00	0.00
Finland	-0.16	0.00	0.00	0.00	0.36
France	0.00	0.00	0.00	0.00	0.00
Germany	0.00	0.00	0.00	2.67	0.00
Greece	0.00	0.00	0.00	0.00	0.00
Hungary	0.00	0.00	0.00	2.64	0.00
Ireland	0.00	0.00	0.00	0.00	0.00
Italy	0.00	0.00	0.00	0.00	0.00
Latvia	-0.92	0.00	9060139.58	0.00	0.00
Lithuania	-0.76	0.00	0.00	0.00	0.00
Luxembourg	0.00	0.00	0.00	0.00	0.00
Malta	-3.78	0.00	23264199.01	2.20	0.00
Montenegro	-1.30	119.21	13625450.00	0.00	2.87
Netherlands	0.00	0.00	0.00	5.75	0.00
North Macedonia	0.00	0.00	4544216.01	0.00	0.45
Poland	0.00	0.00	0.00	0.00	0.53
Portugal	-1.93	0.00	0.00	0.00	0.00
Romania	0.00	0.00	0.00	2.34	0.00
Serbia	0.00	0.00	0.00	0.00	0.00
Slovakia	0.00	0.00	0.00	0.35	0.00
Slovenia	-0.83	0.00	5189450.47	0.00	0.00
Spain	0.00	0.00	0.00	0.00	0.00
Sweden	0.00	0.00	0.00	0.56	0.00
United Kingdom	0.00	0.00	0.00	0.53	0.00

Source: authors' calculations

**Table 7.** Projection of input and output variables

Country	Projection (Government expenditure)	Projection (Average receipt per arrival)	Projection (International tourist arrivals)	Projection (Share of GDP)	Projection (Share of Employment)
Albania	1.40	700.59	15592900.00	10.90	10.00
Austria	4.70	782.47	33192022.04	8.68	9.80
Belgium	3.10	3293.73	18428961.43	4.85	6.10
Bosnia and Herzegovina	1.10	1324.38	5190637.57	4.90	4.73
Bulgaria	2.59	1297.86	25318002.79	8.84	8.45
Croatia	1.40	700.59	15592900.00	10.90	10.00
Cyprus	1.65	1230.55	13481744.65	9.91	9.40
Czechia	3.70	1193.74	28249775.96	8.15	9.26
Denmark	2.40	1852.09	32086653.12	6.56	6.99
Estonia	2.95	1242.41	15594329.83	9.40	9.89
Finland	2.84	3184.47	9502923.21	5.98	6.93
France	3.00	698.14	86917700.00	3.90	4.60



Germany	3.60	1226.51	43198703.16	6.71	7.84
Greece	8.10	607.77	27194200.00	8.50	12.70
Hungary	5.30	822.85	33227325.92	8.11	10.31
Ireland	4.10	1894.03	36038213.25	6.62	6.97
Italy	3.60	801.68	61501636.32	5.91	6.97
Latvia	2.28	1292.17	14241549.37	9.57	9.57
Lithuania	2.44	2268.73	10934987.62	7.80	8.23
Luxembourg	3.10	4352.33	1045900.00	4.10	5.90
Malta	7.82	818.75	25720871.01	8.25	12.32
Montenegro	1.40	700.59	15592900.00	10.90	10.00
Netherlands	2.20	1367.58	26605836.60	8.27	8.31
North Macedonia	1.30	1474.51	6337333.86	5.69	5.57
Poland	2.80	1860.61	48562693.28	5.05	5.85
Portugal	4.57	1000.45	26266223.14	8.80	10.04
Romania	1.90	2253.33	6792863.27	6.03	6.40
Serbia	0.50	898.74	1497200.00	2.40	2.10
Slovakia	2.20	1237.94	24587950.78	8.74	8.71
Slovenia	3.57	1839.14	13789533.54	8.15	9.35
Spain	6.50	831.99	81868500.00	5.40	5.00
Sweden	2.20	2792.42	9305605.42	3.81	4.74
United Kingdom	3.00	1690.77	48866339.73	5.33	6.23

Source: authors' calculations

Furthermore, we continue with the second stage of analysis. The Tobit model estimated coefficients, using the panel sample from 33 European countries and 4 T&T Competitiveness Reports, presented in Table 8, indicate the statistically significant relationships of the tourism efficiency scores with average international tourism receipt per arrival, tourism industry share of GDP and share of employment, government prioritization of tourism industry, visa requirements, number of rooms, rate of use and number of natural sites. Mentioned variables could be singled out as leading drivers of tourism development. Also, the value of  $\chi^2$  statistics confirms the null hypothesis of the usage of random effects estimator instead of fixed effects run of the model.

Table 8. Tobit model results

Variable	Coefficient	z-Statistic
Constant	0.2810570**	2.2573
Average receipt per arrival	0.0000159***	6.4820
Tourism industry Share of GDP	0.0214300**	1.9084
Tourism industry Share of employment	0.0424230***	4.1485
Government prioritization of travel and tourism industry	0.0513130**	2.4437
Visa requirements	0.0106550***	3.6147
Number of rooms	-0.0000003**	-2.4151
Rate of use	0.0006110**	2.3774
Natural sites	0.0369200**	2.1788

Note: \*\*\* and \*\* indicate significance at the levels of 1% and 5%, respectively.  $\chi^2 = 1.4122$ .

Source: authors' calculations

Average international tourism receipt per arrival shows a significant and positive influence on overall tourism efficiency. The retention of international tourists in one country through the diversity of tourism offer is reflected through the amount of money spent during their stay. The coefficients of tourism industry share in GDP and employment remain significant and positive with overall tourism efficiency results, presenting that observed countries that pay special attention to the tourism industry are more efficient (Radovanov et al., 2020). The growth of the economic level and the technological progress will cause the elevation of tourism efficiency overall

(Liu et al., 2017). The coefficient concerning the relationship of government prioritization of tourism industry with tourism efficiency is positive and statistically significant at the 5% level. Giving importance to the tourism sector by official state institutions significantly increases the chances of tourism efficiency growth according to the observed sample of countries. The estimated coefficient of the relation between visa requirements and overall efficiency score indicates the positive and statistically significant connection at the 1% level. Actually, openness can possibly inspire traveling and increase international competition, which provides lower prices, better quality and product, and service variety for international visitors (Chaabouni, 2019). The number of rooms is normally a prerequisite for a great number of tourist arrivals, but in this sample of the observed countries, it is negatively related to the tourism efficiency. On the other hand, the coefficient concerning relation between the rate of use and tourism efficiency is positive and significant at the level of 5%, showing the meaning of better usage of existing tourist facilities (Radovanov et al., 2020). Finally, the number of natural heritage sites can be an issue of significant increase of tourism efficiency involving and protecting all relevant stakeholders in the tourism development process.

#### **4. CONCLUSION**

In this study, the evaluation of relative efficiency of tourism development in 33 European countries has been presented using a Two-stage DEA model, in order to compare and relate efficiency levels in Western Balkan countries, countries that are the oldest EU members and countries that recently joined EU. The analysis was performed for period of six years and the data were retrieved from the Travel and Tourism Competitiveness reports published from 2013 until 2019. The output-oriented DEA model with a variable return to scale has been applied, with one input variable (government expenditure for travel and tourism (T&T)) and four output variables (average receipts per arrival, number of international tourist arrivals, T&T share of GDP and T&T share of employment). Results of the first stage showed that the lowest average efficiency scores achieved countries that recently joined the European Union, while a significant increase in efficiency is observed in the results of Western Balkan countries. The highest average efficiency score achieved countries in the EU15 group. Results of the second stage indicate the statistically significant and positive relationships of the tourism efficiency scores with average international tourism receipt per arrival, tourism industry share of GDP and share of employment, government prioritization of tourism industry, visa requirements, rate of use and number of natural sites. Simultaneously, the number of rooms shows a significant, but negative impact on general tourism efficiency.

The implications of this chapter are reflected in the competent indicators of the position of tourism development in Western Balkan countries in comparison to the EU. These contribute to a better understanding of the situation in the tourism sector in the Western Balkan countries, which could be important during pre-accession negotiations with the EU. More specifically, the results of this chapter can be used by policymakers to identify which factors improve or degrade the efficiency of tourism development. Hopefully, the comprehensive analysis of efficiency levels and its drivers can serve as a valuable basis for dealing with new problems in the tourism sector during pandemics. Further research will be directed to explore those issues in the future.

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# THE CHAOTIC GROWTH MODEL: INTERNATIONAL TOURISM

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**Abstract** *The basic aims of this paper are: firstly, to create a relatively simple chaotic international tourism expenditure growth model that is capable of generating stable equilibria, cycles, or chaos; and secondly, to set up a relatively simple chaotic international tourism receipts growth model. This paper confirms stable growth of the international tourism receipts and expenditures in high-income countries, low & middle-income countries, lower-middle-income countries, middle-income countries, and upper-middle-income countries in the period 1995-2018.*

**Keywords:** *Expenditure, Receipts, Tourism, Growth, Stability, Chaos.*

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## 1. INTRODUCTION

Tourism is one of the fastest-growing economic sectors. In 2018 tourism receipts amounted to \$1,480 billion, an increase of 4.4. percent. Tourism exports account for 7 percent of global trade in goods and services (\$1.7 trillion). In 2019, the most popular destinations were France, Spain, the USA, and China. International tourism is among the economic sectors most impacted by the COVID-19 pandemic. The United Nations World Tourism Organization (UN WTO) estimates a loss of 850 million to 1.1 billion international tourist arrivals, \$910 million to \$1.1 trillion in export revenues, and 100-120 million jobs (UNCTAD, 2020, pg.7).

This paper uses the elements of chaos theory (Jablanovic, 2019). Also, this paper confirms stable growth of the international tourism receipts (as the ratio to exports of goods and services) and the international tourism expenditures (as the ratio to imports of goods and services) in high-income countries, low & middle-income countries, lower-middle-income countries, middle-income countries, and upper-middle-income countries in the period 1995-2018.

## 2. THE CHAOTIC INTERNATIONAL TOURISM EXPENDITURE GROWTH MODEL

International tourism expenditures (E) are expenditures of international outbound visitors in other countries, including payments to foreign carriers for international transport. They may include those by residents traveling abroad as same-day visitors, except in cases where these are important enough to justify separate classification. Their share in imports (e) is calculated as a ratio to imports of goods and services (I), which comprise all transactions between residents of a country and the rest of the world involving a change of ownership from non-residents to residents of general merchandise, goods sent for processing and repairs, nonmonetary gold, and services (www.worldbank.org).

$$e = E / I \tag{1}$$

where:

*e* – the ratio of international tourism expenditures (*E*) to imports of goods and services (*I*).

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We index  $e$  by  $t$ , i.e., write  $e_t$  to refer to the size at time steps  $t = 0, 1, 2, 3, \dots$  Now the international tourism expenditures growth rate is measured by the quantity already given corresponding to the expression:

$$\frac{e_{t+1} - e_t}{e_t} \quad (2)$$

It is postulated that the growth rate of the ratio of international tourism expenditures (E) to imports of goods and services (I) at time  $t$  should be proportional to  $1 - e_t$ , after introducing a suitable parameter  $\gamma$

$$\frac{e_{t+1} - e_t}{e_t} = \gamma (1 - e_t) \quad (3)$$

Solving the last equation yields the growth model, i.e.,

$$e_{t+1} = e_t + \gamma e_t (1 - e_t) \quad (4)$$

or,

$$e_{t+1} = (1 + \gamma) e_t - \gamma e_t^2 \quad (5)$$

This model given by equation (5) is called the logistic model. For most choices of  $\gamma$ , there is no explicit solution for (5). Namely, knowing  $\gamma$  and measuring  $e_0$  would not suffice to predict  $e_t$  for any point in time, as was previously possible. Lorenz (1963) discovered this effect – the lack of predictability in deterministic systems. Sensitive dependence on initial conditions is one of the central ingredients of what is called deterministic chaos. This difference equation (5) will possess a chaotic region. Two properties of the chaotic solution are important: firstly, given a starting point  $e_0$  the solution is highly sensitive to variations of the parameter  $\gamma$ ; secondly, given the parameter  $\gamma$ , the solution is highly sensitive to variations of the initial point  $e_0$ . In both cases, the two solutions are for the first few periods rather close to each other, but later on, they behave chaotically.

It is possible to show that the iteration process for the logistic equation:

$$z_{t+1} = \pi z_t (1 - z_t), \pi \in [0, 4], z_t \in [0, 1] \quad (6)$$

is equivalent to the iteration of the growth model (5) when we use the identification

$$z_t = \frac{\gamma}{\gamma + 1} e_t \quad (7)$$

and

$$\pi = 1 + \gamma$$

Using (7) and (5) we obtain

$$z_{t+1} = \frac{\gamma}{\gamma + 1} e_{t+1} = \frac{\gamma}{\gamma + 1} [(1 + \gamma) e_t - \gamma e_t^2] = \gamma e_t - \frac{\gamma^2}{\gamma + 1} e_t^2$$



Using (6) and (7) we obtain

$$z_{t+1} = \pi z_t (1 - z_t) = (\gamma + 1) \frac{\gamma}{\gamma + 1} - e_t (1 - \frac{\gamma}{\gamma + 1} e_t) = \gamma e_t - \frac{\gamma^2}{\gamma + 1} e_t^2$$

Thus we have that iterating (5) is the same as iterating (6) using (7). It is important because the dynamic properties of the logistic equation (6) have been widely analyzed (Li and Yorke (1975), May (1976)).

It is obtained that :

- For parameter values  $0 < \pi < 1$  all solutions will converge to  $z = 0$ ;
- (ii) For  $1 < \pi < 3,57$  there exist fixed points the number of which depends on  $\pi$ ;
- (iii) For  $1 < \pi < 2$  all solutions monotonically increase to  $z = (\pi - 1) / \pi$ ;
- (iv) For  $2 < \pi < 3$  fluctuations will converge to  $z = (\pi - 1) / \pi$ ;
- (v) For  $3 < \pi < 4$  all solutions will continuously fluctuate;
- (vi) For  $3,57 < \pi < 4$  the solution become „chaotic“ which means that there exist aperiodic solution or periodic solutions with a very large, complicated period. This means that the path of  $z_t$  fluctuates randomly over time, not settling down into any regular pattern whatsoever.

### 3. EMPIRICAL EVIDENCE

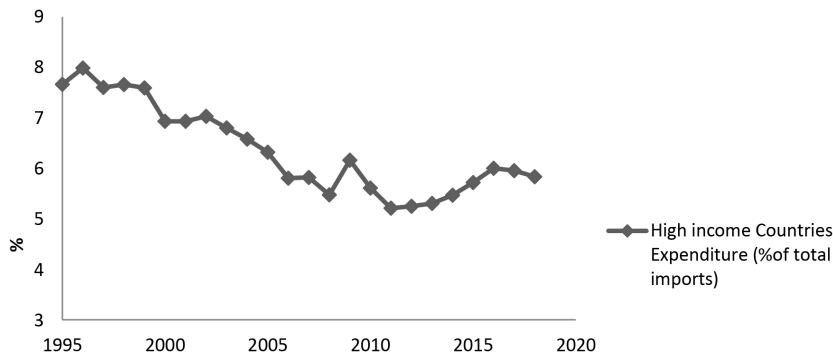
The main aim of this paper is to analyze the local growth stability of the ratio of international tourism expenditures (E) to imports of goods and services (I) in the period 1995-2018. in: high-income countries, low&middle income countries, lower-middle-income countries, middle-income countries, and upper-middle-income countries (see Figures 1-5). In this sense, it is important to use the logistic model (8):

$$e_{t+1} = \pi e_t - \gamma e_t^2 \tag{8}$$

where:

- e - the international tourism expenditure (as the ratio to imports of goods and services),
- $\pi - (1+\gamma)$ ,  $\gamma$  – the constant of proportionality.

Now, model (8) is estimated (see Tables 1-5).



**Figure 1.** High-income countries, Expenditures (% of total imports), 1995-2018.

Source: <https://data.worldbank.org/indicator/ST.INT.XPND.MP.ZS?view=chart>

**Table 1.** The estimated model (8): High-income countries, 1995-2018

High-income countries	R = 0.93318 Variance explained: 87.082%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.06864	0.099957
	<b>Std.Err.</b>	0.07663	0.091512
	<b>t(21)</b>	13.94467	1.088348
<b>p-level</b>	0.00000	0.288775	

The expenditures moved from 7.6654 to 5.8421 (unit of measure: % of total imports) in the period 1995-2018 in high-income countries. According to the logistic equation, for  $1 < \pi < 2$  the expenditures moved to  $z = (\pi - 1) / \pi$ , or  $(1.06864 - 1) / 1.06864 = 0.06423$ . According to (7.), the equilibrium value of the expenditures was  $0.06423 / (0.099957 / 1.06864)$  or  $0.06423 / 0.09354$  or  $0.68666$  or  $5.4858$  (unit of measure: % of total imports) in high-income countries in the observed period.

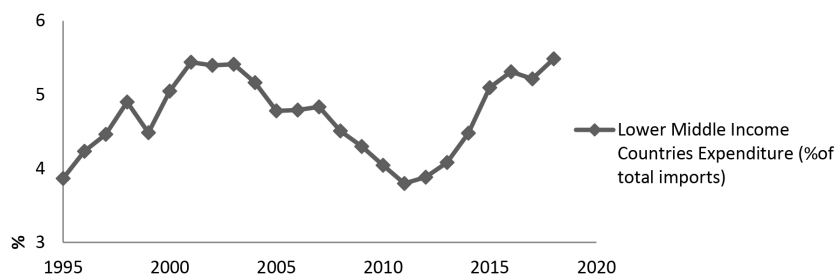


**Figure 2.** Low & middle-income countries, Expenditures (% of total imports)  
 Source: <https://data.worldbank.org/indicator/ST.INT.XPND.MP.ZS?view=chart>

**Table 2.** The estimated model (8): Low & middle-income countries, 1995-2018.

Low & middle-income countries	R = 0.89689 Variance explained: 80.441%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.08412	0.092879
	<b>Std.Err.</b>	0.10069	0.129867
	<b>t(21)</b>	10.76675	0.715185
<b>p-level</b>	0.00000	0.482371	

The expenditures moved from 5.6032 to 7.7564 (unit of measure: % of total imports) in the period 1995-2018 in low & middle income countries. According to the logistic equation, for  $1 < \pi < 2$  the expenditures moved to  $z = (\pi - 1) / \pi$ , or  $(1.08412 - 1) / 1.08412 = 0.0776$ . According to (7.), the equilibrium value of the expenditures was  $0.0776 / (0.092879 / 1.08412)$  or  $0.0776 / 0.08567$  or  $0.9058$  or  $7.5411$  (unit of measure: % of total imports) in low & middle income countries in the observed period.



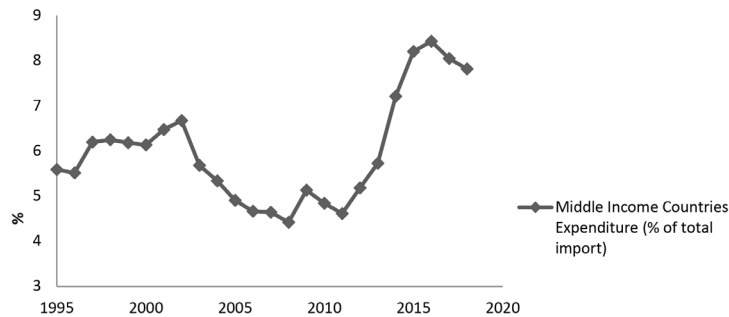
**Figure 3.** Lower middle-income countries, Expenditures (% of total imports).

Source: <https://data.worldbank.org/indicator/ST.INT.XPND.MP.ZS?view=chart>

**Table 3.** The estimated model (8): Lower middle-income countries, 1995-2018.

Lower middle-income countries	R = 0.831127 Variance explained: 69.101%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.217294	0.234344
	<b>Std.Err.</b>	0.127489	0.145221
	<b>t(21)</b>	9.548255	1.613702
	<b>p-level</b>	0.00000	0.121519

The expenditures moved from 3.8661 to 5.4868 (unit of measure: % of total imports) in the period 1995-2018 in lower-middle-income countries. According to the logistic equation, for  $1 < \pi < 2$  the expenditures moved to  $z = (\pi - 1) / \pi$ , or  $(1.217294 - 1) / 1.217294 = 0.1785$ . According to (7), the equilibrium value of the expenditures was  $0.1785 / (0.234344 / 1.217294)$  or  $0.1785 / 0.1925$  or 0.9273 or 5.0879 (unit of measure: % of total imports) in lower-middle-income countries in the observed period.



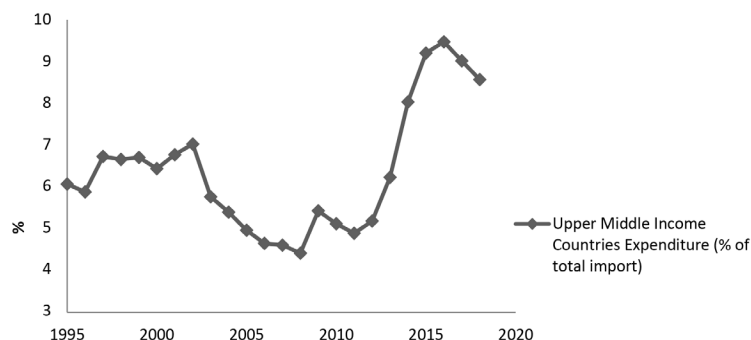
**Figure 4.** Middle-income countries, Expenditures (% of total imports).

Source: <https://data.worldbank.org/indicator/ST.INT.XPND.MP.ZS?view=chart>

**Table 4.** The estimated model (8): Middle-income countries, 1995-2018.

Middle-income countries	R = 0.89829 Variance explained: 80.623%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.07946	0.087817
	<b>Std.Err.</b>	0.09972	0.129405
	<b>t(21)</b>	10.82471	0.678620
	<b>p-level</b>	0.00000	0.504789

The expenditures moved from 5.5851 to 7.8151 (unit of measure: % of total imports) in the period 1995-2018 in middle-income countries. According to the logistic equation, for  $1 < \pi < 2$  the expenditures moved to  $z = (\pi - 1) / \pi$ , or  $(1.07946 - 1) / 1.07946 = 0.0736$ . According to (7), the equilibrium value of the expenditures was  $0.0736 / (0.087817 / 1.07946)$  or  $0.0736 / 0.0814$  or 0.9042 or 7.6189 (unit of measure: % of total imports) in middle-income countries in the observed period.



**Figure 5.** Upper middle-income countries, Expenditures (% of total imports).  
**Source:** <https://data.worldbank.org/indicator/ST.INT.XPND.MP.ZS?view=chart>

**Table 5.** The estimated model (8): Upper middle-income countries, 1995-2018.

Upper middle-income countries	R = 0.46421 Variance explained: 21.549%	
		$\pi$
	<b>Estimate</b>	1.144775
	<b>Std.Err.</b>	0.281749
	<b>t(21)</b>	4.063107
	<b>p-level</b>	0.000559

The expenditures moved from 6.0463 to 8.5599 (unit of measure: % of total imports) in the period 1995-2018 in upper-middle-income countries. According to the logistic equation, for  $1 < \pi < 2$  the expenditures moved to  $z = (\pi - 1) / \pi$ , or  $(1.144775 - 1) / 1.144775 = 0.1265$ . According to (7), the equilibrium value of the expenditures was  $0.1265 / (0.218628 / 1.144775)$  or  $0.1265 / 0.191$  or  $0.6623$  or  $6.2701$  (unit of measure: % of total imports) in upper-middle-income countries in the observed period.

#### 4. THE CHAOTIC INTERNATIONAL TOURISM RECEIPTS GROWTH MODEL

International tourism receipts (R) are expenditures by international inbound visitors, including payments to national carriers for international transport. They include any other prepayment made for goods or services received in the destination country. They also may include receipts from same-day visitors, except when these are important enough to justify separate classification. Their share in exports (r) is calculated as a ratio to exports of goods and services (E), which comprise all transactions between residents of a country and the rest of the world involving a change of ownership from residents to nonresidents of general merchandise, goods sent for processing and repairs, nonmonetary gold, and services (www.worldbank.org).

$$R = R / E \tag{9}$$

We index r by t, i.e., write  $r_t$  to refer to the size at time steps  $t = 0, 1, 2, 3, \dots$ . Now the growth rate is measured by the quantity already given corresponding to the expression:

$$\frac{r_{t+1} - r_t}{r_t} \tag{10}$$

It is postulated that the growth rate of the ratio (r) between international tourism receipts and exports at time t should be proportional to  $1 - r_t$ , after introducing a suitable parameter  $\delta$ , i.e.,

$$\frac{r_{t+1} - r_t}{r_t} = \delta (1 - r_t) \tag{11}$$

Solving the last equation yields the unemployment rate growth model, i.e.,

$$r_{t+1} = r_t + \delta r_t (1 - r_t) \tag{12}$$

or

$$r_{t+1} = (1 + \delta) r_t - \delta r_t^2 \tag{13}$$

This model given by equation (13) is called the logistic model. For most choices of  $\delta$ , there is no explicit solution for (13). This difference equation (13) will possess a chaotic region.

Also, it is possible to show that iteration process for the logistic equation:

$$z_{t+1} = \pi z_t (1 - z_t), \pi \in [0, 4], z_t \in [0, 1] \tag{6}$$

is equivalent to the iteration of the growth model (13) when we use the identification

$$z_t = \frac{\delta}{1+\delta} r_t \text{ and } \pi = 1+\delta \tag{14}$$

Using (13) and (14) we obtain:

$$z_{t+1} = \frac{\delta}{1+\delta} r_{t+1} = \frac{\delta}{1+\delta} [(1 + \delta) r_t - \delta r_t^2] = \delta r_t - \frac{\delta^2}{1+\delta} r_t^2$$

Using (6) and (14) we obtain:

$$z_{t+1} = \pi z_t (1 - z_t) = (1 + \delta) \frac{\delta}{1+\delta} r_t (1 - \frac{\delta}{1+\delta} r_t) = \delta r_t - \frac{\delta^2}{1+\delta} r_t^2$$

Thus we have that iterating (13) is the same as iterating (6) using (14).

### 5. EMPIRICAL EVIDENCE

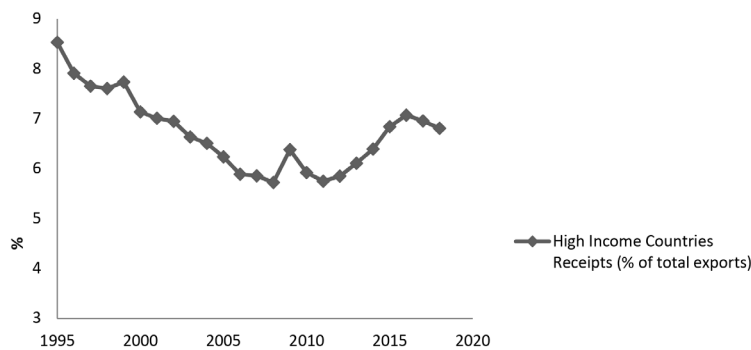
The main aim of this paper is to analyze the local growth stability of the ratio of international tourism receipts (R) to exports of goods and services (E) in the period 1995-2018. in: high-income countries, low & middle-income countries, lower-middle-income countries, middle-income countries, and upper-middle-income countries (see Figures 6-10). In this sense, it is important to use the logistic model (15):

$$r_{t+1} = \pi r_t - \delta e_t^2 \tag{15}$$

where:

- r - the international tourism receipts (as the ratio to exports of goods and services),
- $\pi$  -  $(1+\delta)$ ,  $\delta$  - the constant of proportionality.

Now, the model (15) is estimated (see Tables 6-10.).



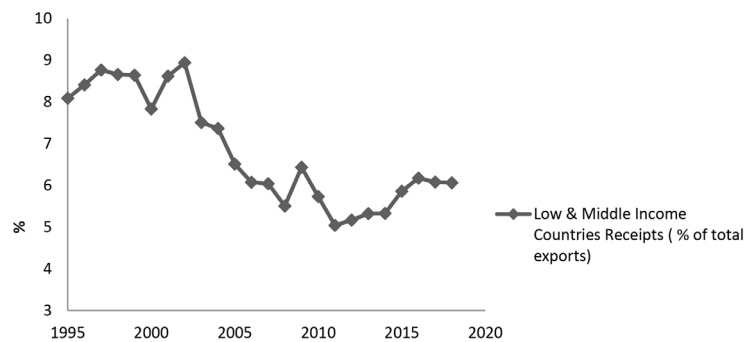
**Figure 6.** High-income countries, Receipts (% of total exports).

Source: <https://data.worldbank.org/indicator/ST.INT.RCPT.XP.ZS?view=chart>

**Table 6.** The estimated model (15): High-income countries, 1995-2018.

High-income countries	R = 0.91797 Variance explained: 84.268%	
	$\pi$	$\gamma$
<b>Estimate</b>	1.17528	0.233532
<b>Std.Err.</b>	0.17395	0.090804
<b>t(21)</b>	15.89264	2.571812
<b>p-level</b>	0.00000	0.017778

The receipts moved between 6.0463 and 8.5266 (unit of measure: % of total exports) in the period 1995-2018 in high-income countries. According to the logistic equation, for  $1 < \pi < 2$  the receipts moved to  $z = (\pi - 1) / \pi$ , or  $(1.17528 - 1) / 1.17528 = 0.1491$ . According to (14.), the equilibrium value of the expenditures was  $0.1491 / (0.233532 / 1.17528)$  or  $0.1491 / 0.1987$  or 0.7504 or 6.3984 (unit of measure: % of total exports) in high-income countries in the observed period.



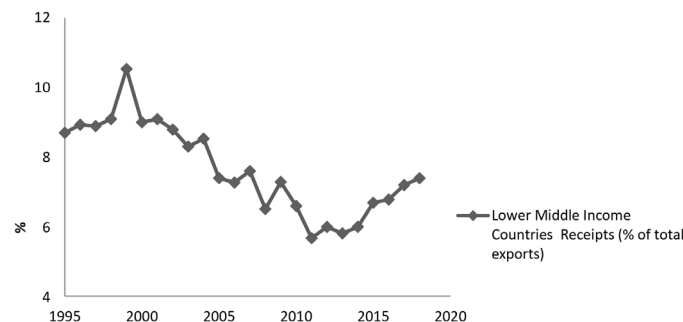
**Figure 7.** Low & middle-income countries, Receipts (% of total exports).

Source: <https://data.worldbank.org/indicator/ST.INT.RCPT.XP.ZS?view=chart>

**Table 7.** The estimated model (15): Low & middle-income countries, 1995-2018.

Low & middle-income countries	R = 0.91255 Variance explained: 83.275%	
	$\pi$	$\gamma$
<b>Estimate</b>	1.06888	0.102672
<b>Std.Err.</b>	0.09616	0.114700
<b>t(21)</b>	11.11570	0.895135
<b>p-level</b>	0.00000	0.380861

The receipts moved from 8.0903 to 6.0655 (unit of measure: % of total exports) in the period 1995-2018 in low & middle income countries. According to the logistic equation, for  $1 < \pi < 2$  the receipts moved to  $z = (\pi - 1) / \pi$ , or  $(1.06888 - 1) / 1.06888 = 0.0644$ . According to (14.), the equilibrium value of the expenditures was  $0.0644 / (0.102672 / 1.06888)$  or  $0.0644 / 0.0961$  or 0.6701 or 5.9928 (unit of measure: % of total exports) in low & middle income countries in the observed period.



**Figure 8.** Lower middle-income countries, Receipts (% of total exports).

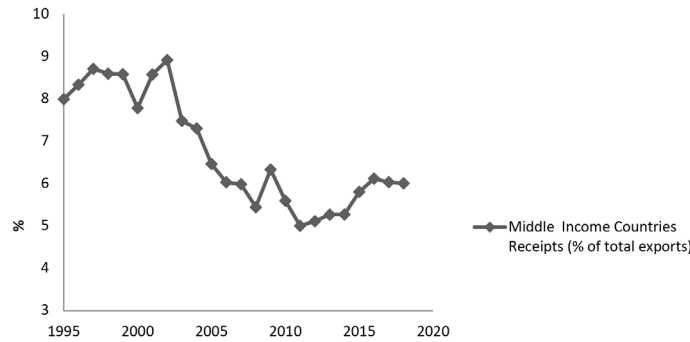
Source: <https://data.worldbank.org/indicator/ST.INT.RCPT.XP.ZS?view=chart>



**Table 8.** The estimated model (15): Lower middle-income countries, 1995-2018.

Lower middle-income countries	R = 0.86711 Variance explained: 75.188%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.14345	0.200432
	<b>Std.Err.</b>	0.11413	0.146230
	<b>t(21)</b>	10.01858	1.370659
	<b>p-level</b>	0.00000	0.184955

The receipts moved from 8.7120 to 7.4149 (unit of measure: % of total exports) in the period 1995-2018 in lower-middle-income countries. According to the logistic equation, for  $1 < \pi < 2$  the receipts moved to  $z = (\pi - 1) / \pi$ , or  $(1.14345 - 1) / 1.14345 = 0.1255$ . According to (14), the equilibrium value of the expenditures was  $0.1255 / (0.200432/1.14345)$  or  $0.1255 / 0.1753$  or 0.7159 or 7.5422 (unit of measure: % of total exports) in lower middle-income countries in the observed period.



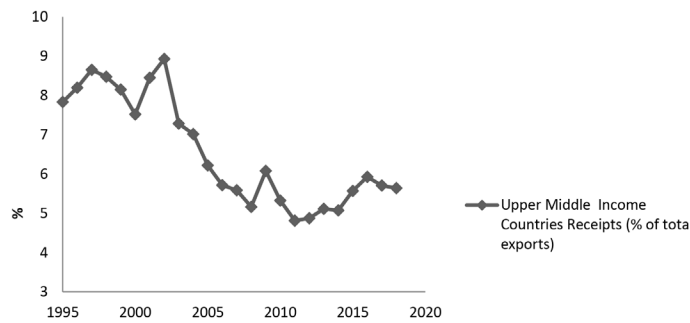
**Figure 9.** Middle-income countries, Receipts (% of total exports).

Source: <https://data.worldbank.org/indicator/ST.INT.RCPT.XP.ZS?view=chart>

**Table 9.** The estimated model (15): Middle-income countries, 1995-2018.

Middle-income countries	R = 0.47489 Variance explained: 22.552%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.06727	0.101047
	<b>Std.Err.</b>	0.09536	0.114224
	<b>t(21)</b>	11.19247	0.884637
	<b>p-level</b>	0.00000	0.386370

The receipts moved from 7.9876 and 5.9977 (unit of measure: % of total exports) in the period 1995-2018 in middle income countries. According to the logistic equation, for  $1 < \pi < 2$  the receipts moved to  $z = (\pi - 1) / \pi$ , or  $(1.06727 - 1) / 1.06727 = 0.063$ . According to (14), the equilibrium value of the expenditures was  $0.063 / (0.101047 / 1.06727)$  or  $0.063 / 0.0947$  or 0.6653 or 5.927 (unit of measure: % of total exports) in middle-income countries in the observed period.



**Figure 10.** Upper middle-income countries, Receipts (% of total exports).

Source: <https://data.worldbank.org/indicator/ST.INT.RCPT.XP.ZS?view=chart>

**Table 10.** The estimated model (15): Upper-middle-income countries, 1995-2018.

Upper-middle-income countries	R = 0.90943 Variance explained: 82.707%		
		$\pi$	$\gamma$
	<b>Estimate</b>	1.07053	0.110353
	<b>Std.Err.</b>	0.09825	0.120360
	<b>t(21)</b>	10.89623	0.916863
<b>p-level</b>	0.00000	0.369624	

The receipts moved from 7.8344 to 5.6439 (unit of measure: % of total exports) in the period 1995-2018 in upper middle-income countries. According to the logistic equation, for  $1 < \pi < 2$  the receipts moved to  $z = (\pi - 1) / \pi$ , or  $(1.07053 - 1) / 1.07053 = 0.0659$ . According to (14), the equilibrium value of the expenditures was  $0.0659 / (0.110353 / 1.07053)$  or  $0.0659 / 0.1031$  or 0.6392 or 5.7091 (unit of measure: % of total exports) in upper middle-income countries.

## CONCLUSION

This paper confirms the stable movement of the international tourism expenditure (as the ratio to imports of goods and services), in high-income countries, low & middle-income countries, lower-middle-income countries, middle-income countries, and upper-middle-income countries in the period 1995-2018.

Also, this paper confirms the stable movement of the international tourism receipts (as the ratio to exports of goods and services) in high-income countries, low & middle-income countries, lower-middle-income countries, middle-income countries, and upper-middle-income countries in the period 1995-2018.

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# AN EMPIRICAL ANALYSIS OF RELATIONSHIP BETWEEN TOURISM AND ECONOMIC GROWTH: PANEL EVIDENCE FROM WESTERN BALKAN COUNTRIES

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**Abstract:** *Tourism is one of the most important sectors in the world and it has multiplier effects due to indirect implications to a wide variety of small, service-oriented businesses. This paper aims to determine the effects of the tourism sector on economic growth in terms of tourism share, international tourism receipts and international tourism arrivals. The subject of the chapter is estimating the effects of the tourism sector on economic growth in selected Western Balkan countries such as Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia for the period 2007-2018. Results of the fixed effects model show tourism sector has significant and positive impact on economic growth in these countries for the observed period. Empirical findings manifest that governments in Western Balkan countries should focus on a higher share of the tourism sector in their economy in order to provide positive implications to economic development.*

**Keywords:** *Tourism, Economic growth, Panel data estimation, Western Balkan countries.*

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## 1. INTRODUCTION

Tourism is one of the largest industries in the world and this industry has an enormous effect on the national economy and people's lives (Petrevska, 2017). It implies that the tourism sectors are recognized to positively contribute to economic growth (Brida et al. 2020). In past decades there was a dramatic growth in global tourism in terms of international arrivals and receipts (Lim et al. 2018). Ongan and Gozgor (2018) notice that international tourism has become one of the leading determinants to affect economic development. Visitors to tourism destinations spend money on goods and services, making economic effects on value-added, income, and employment (Tafel and Szolnoki, 2020). Shahzad et al. (2017) highlight that the tourism industry generates employment and tax revenues as well as stimulates investment in human capital, infrastructure and technology where tourism plays a significant role in stimulating consumption, promoting trade and, improving international communication (Qian et al. 2018).

Cerović Smolović et al. (2018) defined the concept of sustainable tourism development that implies a tourism sector enabling high-quality products, satisfying the needs of tourists and keeping tourism resources for future generations. Iatu (2018) emphasizes that sustainable tourism is the concept of visiting a place as a tourist and creating only a positive effect on the environment, society and economy.

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Zhang and Chan (2019) identified governments as the parties responsible for initiating sustainable tourism platforms. Determining the drivers of tourism growth is important for explaining the growth patterns of tourism and creating sustainable tourism development (Zha et al. 2019). Yfantidou and Matarazzo (2016) argue that tourism is one of the most important industries in the world in terms of environmental protection and socio-cultural conservation. Lu et al. (2018) point out that the tourism industry, regional economy and ecological environment form mutually interactive and interdependent relationships. Bianchi and de Man (2020) argue that tourism development creates new forms of value and reshuffles the internal distribution of capital, land use and organization of labour. Seetanah et al. (2018) argued that the implementation of concurrent policy measures based on stimulating air access liberalization and the promotion of marketing efforts have positive implications to tourism demand. Summers et al. (2019) emphasize the government's support to communities, especially in remote communities in order to provide opportunities for collaboration and stimulating business innovation.

Many developing economies, that are successfully exploiting their natural resources for tourism purposes, increased international receipts level due to tourism development (Chingarande, Saayman, 2018). Tourism is an important driver of the use of natural resources, cultural resources, traditions and local customs and it provides connecting people from all over the world, as well as creating profit and contributing to economic growth and employment (Băndoi et al. 2020). Banerjee et al. (2018) highlight that tourism is one of the fastest-growing economic sectors that generate 10% of GDP and 30% of export in the services sectors at the global level. Zhou and Chan (2019) highlighted the education of employees and entrepreneurs about the complex nature of the tourism sector and the importance of sustainable development. Tourism is an essential economic engine and provides socioeconomic development creating employment opportunities (Usmani et al. 2020). Dwyer et al. (2015) highlight tourism destinations in South Easter Europe as the main origin and source market for future tourism flows. Kalaš et al. (2019) point out that the tourism industry in Serbia and countries in the region such as Hungary, Croatia, Slovenia and Romania reflect the great interest in tourism development.

The structure of this chapter is as follows. After the introduction, there is a short preview of the implications of the COVID-19 pandemic on the tourism sector in the world. Further, there is a literature review where previous empirical studies have examined the relationship between tourism and economic growth. The third part is methodology and data which determines variables, develops hypotheses and makes a panel regression model. The fourth part is the descriptive and empirical analysis of gross domestic product per capita, tourism share in GDP, international tourism receipts and international tourism arrivals in Western Balkan countries for the period 2007-2018. This part includes various panel data estimations such as pooled ordinary least squares, fixed-effects model and the random-effects model. The last part summarizes the findings and conclusions by providing informational support to policymakers in these countries from the aspect of the nexus between tourism and economic growth.

## **2. THE IMPLICATIONS OF COVID-19 PANDEMIC ON TOURISM SECTOR**

In light of the COVID-19 pandemic that has now become a global economic and social problem, there are many issues about its impact on the tourism sector in the short and long term (Romagosa, 2020). As the COVID-19 pandemic is ongoing and has serious implications for global economic flows, the effect of this virus on the tourism sector needs to be considered. As this pandemic swept across the world, travel limitations and lockdowns were introduced in many

economies (Qiu et al., 2020). COVID-19 pandemic is widely recognized as a challenge for the travel and tourism sector (Higgins-Desbiolles, 2020) and this virus is highly transmittable and affects the world's economy with the travel and tourism industry one of the most ravaged sectors (Yang et al., 2020). Rodríguez-Antón and Alonso-Almeida (2020) argue that the epidemic caused by COVID-19 is the largest pandemic that has affected the world in the last hundred years. Galvani et al. (2020) argue that it is not too surprising the effect of COVID-19 on the tourism and travel industry, because these components were exposed by positive and negative implications of the globalization process. This pandemic caused a lockdown around the world that was reflected in the reduction of travel and tourists number and the COVID-19 outbreak has put on hold the whole tourism and travel industry (Niewiadomski, 2020). Tourism is most affected in countries where the share of this sector is significant in the gross domestic product. Tourism is especially exposed to restricted mobility and social distancing (Gössling et al., 2020) where Uğur and Akbiyik (2020) point out that the tourism industry is easily affected by global crises where Lapointe (2020) notice that 166 countries restrict entry into their national territories and cause empty tourism destinations. Farzanegan et al. (2020) argue that COVID-19 has important policy effects for major tourist destinations such as France, Italy and Spain as well as for China and the United States that have a high level of outbound tourism. Accordingly, Polyzos et al. (2020) determined a significant drop in tourist arrivals from China to the United States and Australia. Prideaux et al. (2020) emphasize that a return to pre-pandemic growth level will take time and it depends on the depth and extend of the recession caused by the COVID-19 pandemic.

### 3. LITERATURE REVIEW

Tourism is increasingly a significant part of the economy as well as the source of income in today's conditions of globalization and open economy. Therefore, the relationship between tourism and economic growth represents an important issue for policymakers in creating an adequate tourism strategy in order to provide sustainable economic development. Many empirical studies have examined the relationship between tourism and economic growth (Belloumi, 2010; Tang and Tan, 2013; Dogru et al., 2017; Wu and Wu, 2018; Mitra, 2019; Yazdi, 2019; Khan et al., 2020; Usmani et al., 2020). Belloumi (2010) determined cointegration between tourism and economic growth in Tunisia for the period 1970-2007 as well as unidirectional causality from tourism to economic growth measured by gross domestic product in the observed period. Saleh et al. (2013) examined the relationship between tourism and economic growth in Bahrain, Jordan and Saudi Arabia for the period 1981-2008. Their findings indicated the long-run relationship between tourism growth and economic growth measured by gross domestic product. Tang and Tan (2013) identified cointegration between tourism and economic growth in Malaysia to 12 different tourism markets from 1995 to 2009. Tugcu (2014) argue that tourism is an essential source of foreign exchange that is used for financing economic growth where Bezić and Nikšić Radić (2017) confirmed tourism sector significance to foreign direct investments in order to provide sustainable economic growth. Dogru et al. (2017) examined the relationships between tourism development and economic growth in the United States, France, Spain, China, Italy, Turkey and Germany for the period 1995-2012. Their results confirmed that tourism development and economic growth are independent in Germany.

Similarly, tourism development stimulates economic growth in China and Turkey, whereas the reverse relationship is identified in Spain for the observed period. Selimi et al. (2017) analyzed the effects of tourism on economic growth in Western Balkan countries for the period 1998-2014. Their findings showed the significant and positive impact of tourism on economic growth



in analyzed countries where a 1% increase of tourist arrivals enhances economic growth by 0.08%. Similarly, Hysa and Gjergi (2018) examined the relationship between tourism and economic growth in Western Balkan countries from 2000-2014. Although visitor exports and capital investment are significant to economic growth, their results showed that in total there is no long-run nexus between tourism and economic growth in these countries. Wu and Wu (2018) examined the causality between tourism and economic growth in 11 Asian countries. Their results showed unidirectional causality from tourism to gross domestic product in Cambodia, China, and Malaysia, while reverse causality is identified in Hong Kong, Indonesia, Philippines, and South Korea for the observed period.

Aratuo and Etienne (2019) analyzed the relationship between economic growth and tourism-related sub-industries such as accommodation, air transportation, shopping, food and beverage, other transportation, recreation and entertainment in the United States for the period 1998-2017. Their findings confirmed unidirectional causality from economic growth to each of the sub-industries for the observed period. They suggest that tourism investment could be important in the long-run even during economic stagnation. Mitra (2019) analyzed the causal relationship between tourism growth and economic growth in 158 countries for the period 2001-2017. Their empirical findings show that bidirectional causality between these variables is identified in three subsamples for the observed period.

Yazdi (2019) researched the causality between tourism and economic growth in Iran from 1981-2014 and his analysis confirmed unidirectional causality running from tourism to economic growth. Khan et al. (2020) point out that tourism is considered a competent driver of development in emerging economies and Ehigiamusoe (2020) defined the tourism-led growth hypothesis in terms of positive implications of the tourism sector on economic growth. Khan et al. (2020) revealed the significant and positive effect of economic growth on tourism in Pakistan. Empirical results show that a 1% increase in economic growth enhances tourism by 1.9% in the long-run while the same increase in economic growth raises tourism by 1.32% in the short-run. Santamaria and Filis (2019) found a significant impact of tourism on economic growth in Spain and their analysis confirmed the tourism-led growth hypothesis.

Tang et al. (2019) investigated the effect of tourism and financial development on economic growth in Hong Kong, South Korea, Singapore and Taiwan for the period 1984-2016 and their empirical analysis indicated that these variables are important for growth in Asia. Usmani et al. (2020) have examined the effect of tourism arrivals and tourist expenditure on economic growth in Brazil, Russia, India and China for the period 1995-2016. Their findings confirmed that tourist expenditure positively affects economic growth as well as the existence of bidirectional causality between these variables.

#### **4. METHODOLOGY AND DATA**

The chapter includes annual data obtained from World Bank (WB) and International Monetary Fund (IMF) for five Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia) for the period 2007-2018.

The chapter implies panel data estimation where gross domestic product per capita is the dependent variable, while tourism share in GDP, international tourism receipts and international tourism arrivals are independent variables.



**Table 1.** Variable definition

Variable	Notation	Calculation	Source	Expected effect
<b>Dependent variable</b>				
Gross domestic product per capita	GDPpc	US	IMF	/
<b>Independent variables</b>				
Gross domestic product	TRS	% of GDP	WB	+
International tourism receipts	ITR		WB	+
International tourism arrivals	ITA		WB	+

**Source:** Authors illustration

The chapter includes four hypotheses based on defined research's objectives that are developed as follows:

- H<sub>0</sub>:** Tourism sector has a significant and positive effect on economic growth in Western Balkan countries.
- H<sub>1</sub>:** Greater level of tourism share in GDP significantly increases economic growth in Western Balkan countries.
- H<sub>2</sub>:** Greater level of international tourism receipts significantly increases economic growth in Western Balkan countries
- H<sub>3</sub>:** Greater number of international tourism arrivals significantly increases economic growth in Western Balkan countries.

The chapter includes various panel models such as pooled least squares, fixed effects model and random-effects model. The random-effects model was identified as an appropriate model in order to estimate the impact of explanatory variables.

The model can be presented as:

$$GDPpc_{it} = \beta_1 + \beta_2 TRS_{it} + \beta_3 ITR_{it} + \dots + \beta_4 ITA_{it} + \varepsilon_i + \mu_{it} \quad (1)$$

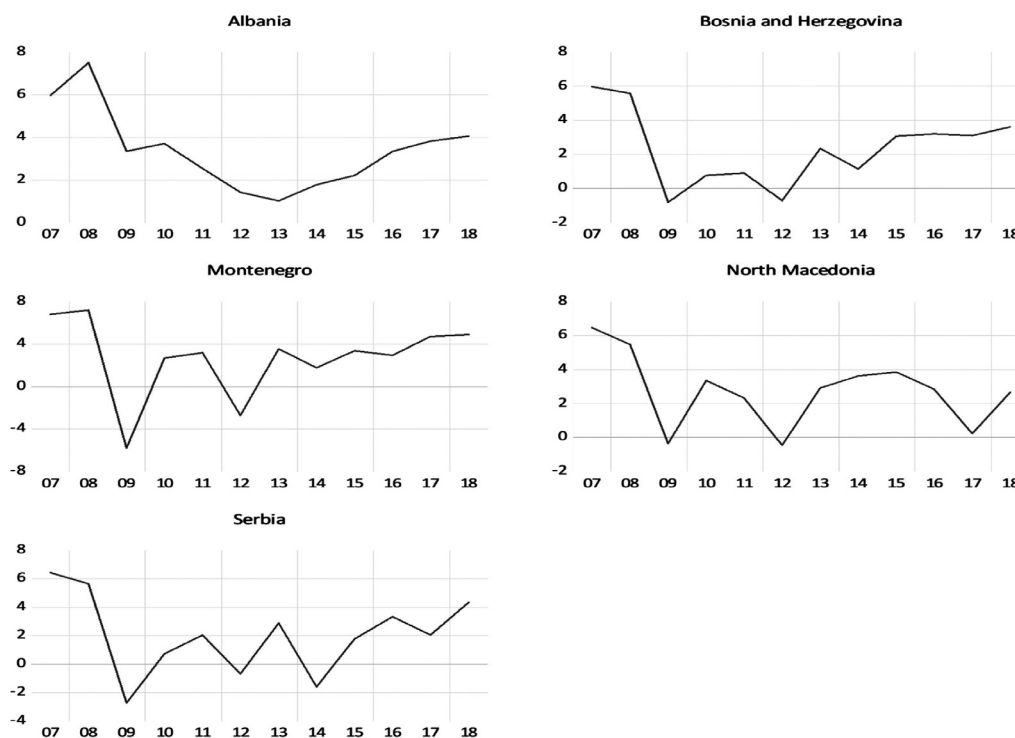
where GDPpc – gross domestic product per capita, TRS – tourism share in the gross domestic product, ITR – international tourism receipts, ITA – international tourism arrivals, N denotes the number of observations, T number of period,  $\alpha$  constant,  $\beta_1$  a random variable with a mean value of parameters and  $\varepsilon_i$  - random error with mean value 0 and variance  $\sigma^2_{\varepsilon}$ ,  $\mu$  - random error.

## 5. EMPIRICAL ANALYSIS AND RESULTS

This segment includes descriptive statistics, panel unit root tests, multivariate analysis results and panel regression models such as pooled ordinary least squares, fixed effects model and random effects model in order which explanatory variables are significant for economic growth in Western Balkan countries. Before empirical analysis, there are trends in tourism share in GDP, international tourism receipts and international tourism arrivals for the period 2007-2018.

Figure 1 shows economic growth in Western Balkan countries measured by annual gross domestic product rate for the period 2007-2018. The average GDP growth rate was 2.65% for the observed period while Albania recorded the highest economic growth by 3.33% at an average

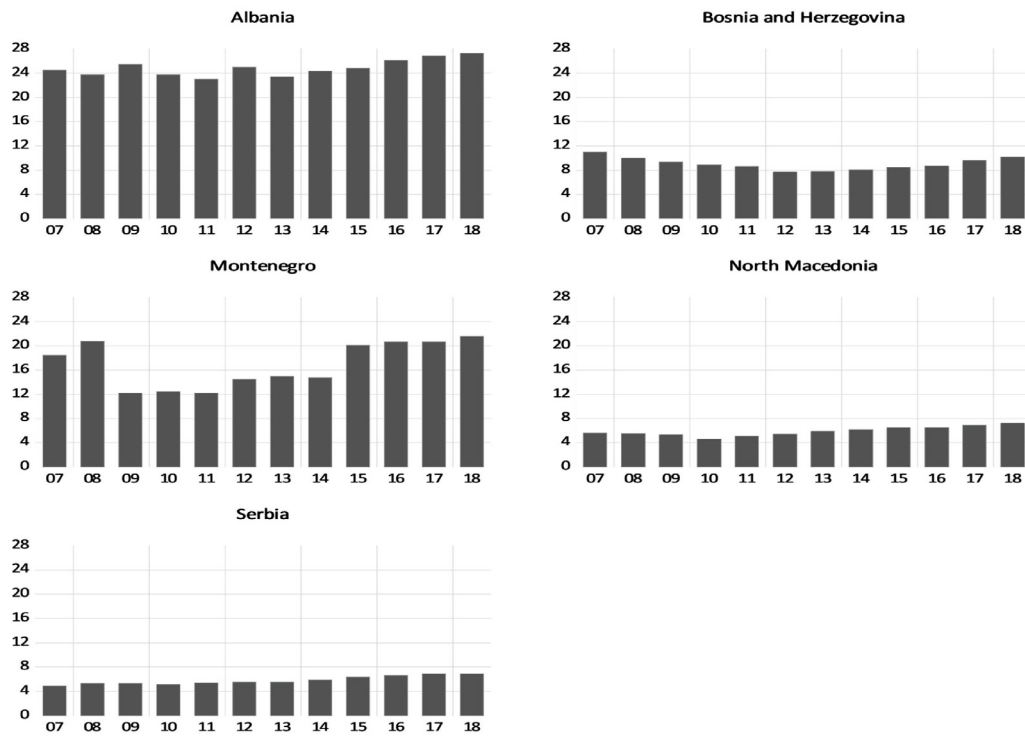
level. It can be seen that all countries, except Albania, had a negative growth rate during 2009 and 2010, while the highest negative value is identified in Montenegro (-5.5%). It is important to notice that in last year (2018) selected countries recorded average economic growth of 3.26% where Montenegro and Serbia recorded growth above 4%. Likewise, Albania and Bosnia and Herzegovina had a gross domestic product rate above 3%, while North Macedonia recorded economic growth near 0.3%.



**Figure 1.**  
 GDP growth rate in selected Western Balkan countries  
**Source:** Authors calculation

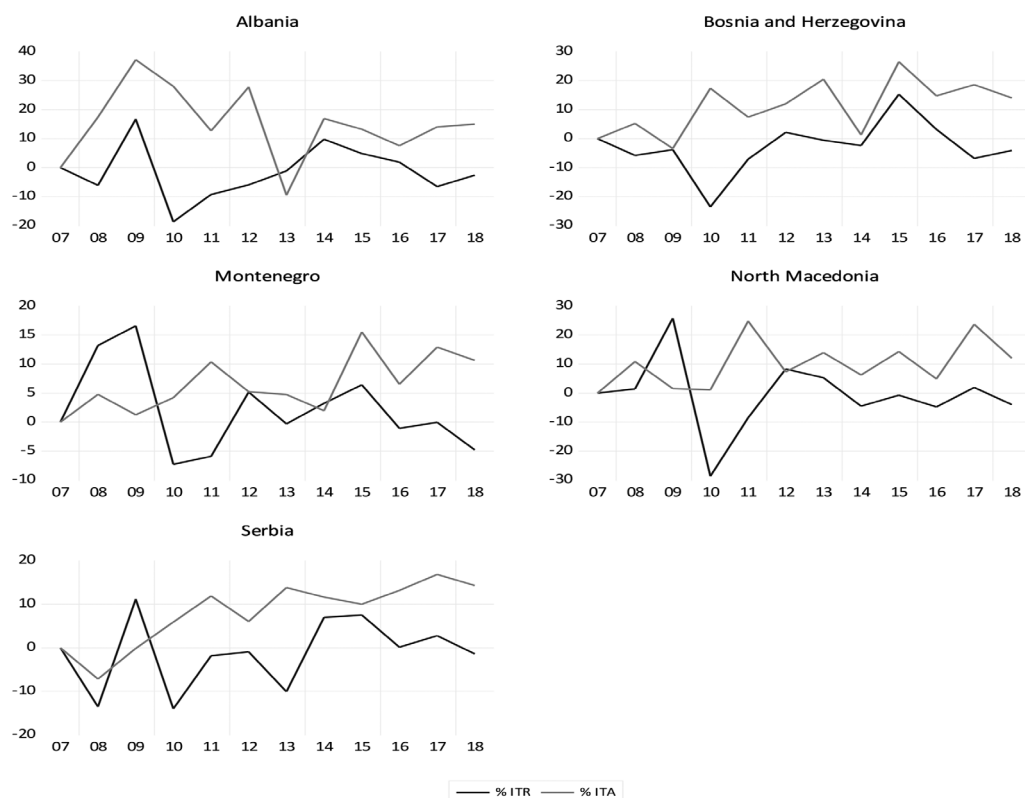
After presenting economic trend in Western Balkan countries there is a tourism share in the gross domestic product in observed countries from 2007 to 2018. Analyzing by countries it can be noticed that tourism share increased for 31. % of the gross domestic product in Montenegro during the observed period. This is the highest growth compared to other countries while Albania and Serbia recorded similar growth of this indicator by 2.8% and 2% in gross domestic product. On the other hand, only Bosnia and Herzegovina had a smaller share of tourism compared to 2007 and 2018 and this fall was 0.8% of gross domestic product. Also, it is necessary to emphasize that the relative trend of tourism share in the gross domestic product was 1.74% for the period 2007-2018 which implies a positive tourism trend in this region.

Analyzing the level of international tourism receipts and the number of international tourism arrivals in selected Western Balkan countries, we can see that the average number of international tourist arrivals increased by 10.17%. Although these countries recorded growth of tourism arrivals, the average level of international tourism receipts was negative. Namely, international tourism receipts declined by 0.78% at the average level for observed countries in the analyzed period. The highest average growth of international tourism receipts is identified in Montenegro (2.11%) while other countries recorded an average negative growth rate of this indicator. Finally, Albania recorded the highest average growth rate of international tourism arrivals (15.05%).



**Figure 2.**  
 Tourism share in selected Western Balkan countries (% GDP)

Source: Authors calculation



**Figure 3.**

Relative changes of international tourism receipts and international tourism arrivals

Source: Authors calculation

**Table 2.** Descriptive statistics

Variable	GDPpc	TGDP	ITR	ITA
<b>Albania</b>				
Mean	10068.22	24.87	52.26	2588750
Std. Dev.	1053.88	1.36	6.04	1332158
Max	11841.9	27.3	65.76	5340000
Min	8154.2	23	45.13	1062000
<b>Bosnia and Herzegovina</b>				
Mean	10318.8	9.04	14.09	552666.7
Std. Dev.	951.21	1.02	2.37	252480.2
Max	12069.96	11	18.75	1053000
Min	9000.42	7.7	11.97	306000
<b>Montenegro</b>				
Mean	14677.35	16.97	51.09	1371833
Std. Dev.	1109.97	3.77	3.97	352942.4
Max	17035.92	21.6	55.11	2077000
Min	13427.69	12.2	41.74	984000
<b>North Macedonia</b>				
Mean	12434.58	5.89	5.69	403583.3
Std. Dev.	983.32	0.78	0.73	154965.4
Max	13964.12	7.2	7.74	707000
Min	10929.94	4.6	5.05	230000
<b>Serbia</b>				
Mean	13725.7	5.82	7.69	9984666.7
Std. Dev.	905.65	0.7	0.68	355356.5
Max	15596.91	6.9	9.13	1711000
Min	12424.63	4.9	6.59	645000
<b>Total</b>				
Mean	12244.93	12.52	26.16	1260400
Std. Dev.	2076.92	7.68	21.45	1127427
Max	17035.91	27.3	65.76	5340000
Min	8154.2	4.6	5.05	230000

Source: Authors calculation

Based on descriptive statistics by Western Balkan countries, it can be seen that the average GDPpc is 12.244,93 US for the observed period. These countries have a share of the tourism sector of 12.52% in GDP from 2007 to 2018. Further, international tourism receipts are 26.16% at the average level, while average international tourism arrivals are 1.180.300 in these countries. Analyzing by country, the highest average level of GDPpc is identified in Montenegro (14.4677 US), while Albania had the smallest GDPpc (10.068 US). On the other hand, Albania recorded the highest number of international tourism arrivals (5.340.000 in 2017), while the smallest number of international tourism arrivals is determined in Macedonia (240.000 in 2007).

Table 3 shows multivariate analysis results for Western Balkan countries in terms of estimating the different levels of tourism share in GDP, international tourism receipts and international tourism arrivals for the period 2007-2018. Analyzing obtained values of Pillai's Trace = 0.000 for explanatory variables TRS, ITR and ITA, we can conclude that there is a significant difference in tourism share in GDP, international tourism receipts and international tourism arrivals in selected Western Balkan countries for the observed period.

**Table 3.** Estimating difference level of tourism indicators

TRS	W = Wilks' lambda		L = Lawley-Hotelling trace		
	P = Pillai's trace		R = Roy's largest root		
Source	Statistic	F(df1)	F(df2)	F	Prob>F
W	0.0576	4.0	55.0	225.11	0.0000
P	0.9424	4.0	555.0	225.11	0.0000
L	16.3716	4.0	55.0	225.11	0.0000
R	16.3716	4.0	55.0	225.11	0.0000
Residual	55				
Total	59				
ITR	W = Wilks' lambda		L = Lawley-Hotelling trace		
	P = Pillai's trace		R = Roy's largest root		
Source	Statistic	F(df1)	F(df2)	F	Prob>F
W	0.0238	4.0	55.0	562.90	0.0000
P	0.9762	4.0	555.0	562.90	0.0000
L	40.9380	4.0	55.0	562.90	0.0000
R	40.9380	4.0	55.0	562.90	0.0000
Residual	55				
Total	59				
ITA	W = Wilks' lambda		L = Lawley-Hotelling trace		
	P = Pillai's trace		R = Roy's largest root		
Source	Statistic	F(df1)	F(df2)	F	Prob>F
W	0.3731	4.0	55.0	23.10	0.0000
P	0.6269	4.0	555.0	23.10	0.0000
L	1.6804	4.0	55.0	23.10	0.0000
R	1.6804	4.0	55.0	23.10	0.0000
Residual	55				
Total	59				

**Source:** Authors calculation

Results from Table 4 show that panel series are stationary at level of 5% and provide making various panel regression models such as pooled ordinary least squares, fixed effects model and random effects model.

**Table 4.** Panel unit root test

H0: Panels contain unit roots				
H1: Panels are stationary				
Variables	Number of panels	LLC test	IPS test	Hadri test
GDPpc	27	-8.53 (0.000)	-7.17 (0.002)	5.08 (0.000)
TRS	27	-2.22 (0.000)	-1.93 (0.000)	1.52 (0.000)
ITR	27	-2.37 (0.000)	-1.06 (0.023)	2.62 (0.004)
ITA	27	-8.96 (0.000)	-7.24 (0.001)	5.24 (0.000)

**Source:** Authors calculation

Table 5 shows the effect of tourism variables on economic growth measured by gross domestic product per capita in Western Balkan countries through POLS, FE and RE models. Results of Hausman test determined that the fixed effects model is appropriate for the analysis of explanatory variables on economic growth in the analyzed period. Fixed effects model explains 92. %

variations of independent variables and indicated a significant effect of selected tourism determinants on gross domestic product per capita in observed countries. The selected model shows that TRS, ITR and ITA have a positive impact on GDPpc where a 1% increase of these variables enhances economic growth for 0.22%, 0.21% and 0.09%. These empirical findings manifest that these countries should focus on a higher share of the tourism sector in GDP as well as a greater level of international tourism receipts and number of arrivals in order to provide a higher level of economic growth.

**Table 5.** Panel Data Estimation

Models						
Variable	POLS		FE		RE	
GDPpc	Coeff	Prob.	Coeff.	Prob.	Coeff.	Prob.
TRS	0.35	0.001	0.22	0.000	0.21	0.000
ITR	0.10	0.008	0.21	0.004	0.19	0.000
ITA	0.14	0.000	0.09	0.000	0.09	0.000
C	3.46	0.000	3.55	0.000	3.56	0.000
R-squared	0.28		0.92		0.59	
Model specification	Chi-Sq. Stat		Chi-Sq. d.f.		Prob.	
Hausman test	36.58		3		0.000	

**Source:** Authors calculation

## 6. CONCLUSION AND DISCUSSION

Tourism is an increasingly important sector in the world economy and positive implications of this sector should be used to provide faster economic growth and development. This also applies to Western Balkan countries that must be better positioned on the world tourist map by using natural resources and all available capacities. The relationship between the tourism sector and economic growth is an essential issue for policymakers in making an adequate tourism strategy. The chapter has estimated the effect of the tourism sector on economic growth in selected Western Balkan countries such as Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia from 2007 to 2018. Empirical analysis includes three-panel estimation data such as pooled least squares model, fixed effects model and random effects model in order to determine the significance of the tourism sector in these countries. We have examined the effect of tourism share in the gross domestic product, international tourism receipts and international tourism arrivals on economic growth measured by gross domestic product per capita. Within selected models, Hausman test has presented that the fixed effects model is appropriate and it reflects that a 1% increase of TRS, ITR and ITA raise economic growth by 0.22%, 0.21%, and 0.09% respectively. It means that  $H_0$  can be accepted because all tourism indicators have positive effects on economic growth. Likewise,  $H_1$ ,  $H_2$ , and  $H_3$  can be accepted, where TRS, ITR and ITA have significantly enhanced the economic growth. These findings show that policymakers should focus on these tourism indicators in order to provide a positive impact on economic growth in Western Balkan countries. Future research will be focused on the knowledge-based platform in the tourism system in these economies (Popesku & Pavlović, 2013; Paunović et al. 2020) in order to provide a scientific contribution from the aspect of this indicator.



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# THE IMPACT OF TOURISM ON GDP GROWTH IN THE EUROPEAN UNION COUNTRIES

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**Abstract:** *Tourism represents one of the most important economic activities for the global economy. Over the last several decades, the tourism industry has been achieving substantial growth and development in the global market, as well as a positive direct and indirect impact on other economic activities. The paper aims to examine the connection between five tourism indicators and the growth of gross domestic product on the example of EU countries in the period from 2001 to 2019. The research included a total of six variables; the gross domestic product being the dependent variable, while the selected five tourism indicators were independent variables. The main aim of the paper is to determine which of the researched tourism indicators have a statistically significant impact on GDP growth. The empirical analysis is based on IBM SPSS linear mixed procedures. The main findings are that business tourism spending (BTS) and domestic tourism spending (DTS) can predict in a statistically significant and positive way the growth of the gross domestic product in European Union countries.*

**Keywords:** *Tourism, Economy, GDP, European Union.*

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## 1. INTRODUCTION

Tourism is one of the most complex economic activities at the global level. The entire social community uses its services and it is often considered to be an essential determinant when analysing the situation in a society (Serban, 2017). The primary purpose of the paper is to assess the impact of international, domestic and business tourism, variations in the number of employees and capital investment in the tourism industry on the economic growth, measured by GDP growth, in 27 European Union countries. The research covers 19 years in the 21<sup>st</sup> century and, therefore, enables us to make the factual comparison of our research, from a certain distance, with specific researches on the impact of tourism development on economic growth in various turbulent periods encountered by the economies of the countries currently belonging to the EU as well as with the other countries which, according to numerous authors, are interesting in terms of analysing the impact of tourism on the economic growth. The literature comprises the papers that provide empirical evidence that tourism development has a positive effect on economic growth, as well as the studies that could not determine if tourism has an impact on economic growth, or according to which the impact is negative.

Along with the increasing importance of tourism in the economies of certain countries, the spread of theoretical and practical studies in this area have been enabled by more transparent data as well as statistical software allowing fast and accurate processing of a large amount of data.

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The paper is interesting since it considers the importance of tourism for European Union countries' economies, as well as the potential economic losses that certain countries, where tourism is a dominant economic activity, would have due to the measures of their government in the period assessed as critical for COVID-19 virus spread.

There are numerous ways to present the development of tourism in a particular country. Since tourism is one of the most important types of service export, the indicator of international tourism development in the paper will be displayed by the percentage of international tourism receipts (IT) in the total exports in a country in the analysed year. According to the World Travel & Tourism Council in the period 2001-2018, the lowest average value of the percentage of international tourism receipts in the total exports was recorded in the Netherlands (2.89%), while the highest one was in Croatia (41.78%). Since there are still no data on the percentage of international tourism receipts in the total exports for 2019, the Expectation-Maximization (EM) method was used to estimate the missing values.

As tourism encourages the purchase of domestic services and goods, the indicator of the development of domestic and business tourism spending was chosen to present the percentage of expenditure in this economic activity in the gross domestic product. As for domestic tourism spending, the data of the World Travel & Tourism Council show that the highest average percentage in GDP in the period 2001-2019 was recorded in Germany (8.79%), and the lowest one in Poland (1.14%). On the other hand, the percentage of business tourism spending is lower compared to domestic tourism spending and its average percentage in the observed period ranged from 0.24% for Hungary to 1.28% for Estonia.

The positive effect of tourism development in a country is reflected in the increase in the number of employees. The statistics in European Union countries display that in 2019 the highest average percentage of employees in the tourism sector in the total number of employees in the analysed period was in Croatia (22.89%), while the lowest one was recorded in Poland (4.76%). In this research, we wanted to answer whether variations in employment in tourism in relation to total employment have a positive effect on economic growth.

Given the role investment plays in the economic development of a country, it has a prominent place in economic theory. Furthermore, investment is a basic component of GDP. Therefore, what certainly should not be left out when analysing the impact of tourism on economic growth are the investments in tourism. In the research, investments were calculated as a percentage of total investments in the analysed country. The country with the highest average percentage of tourism investments in the total investments in these 19 years was Greece (14.56%), while the lowest one was recorded in Belgium (2.19%).

The abovementioned variables are also key indicators for the tourism sector available at the World Banks and World Travel & Tourism Council (WTTC) website. To examine whether there is a positive correlation between the selected variables regarding GDP growth, we used linear mixed models analysis. The research demonstrated that the growth of domestic and business tourism spending had an impact on the economic development of European Union countries.



## 2. LITERATURE REVIEW

Establishing stable economic growth and development, primarily in the countries lacking capital and managing numerous problems such as unemployment, imbalance of payment, disturbed overall macroeconomic stability can be achieved with tourism as one of the fastest-growing economic activities in recent decades. Tourism generates a significant amount of foreign exchange inflows, alleviates the imbalance of payments, generates employment opportunities, increases income by taxing tourists, encourages entrepreneurial activities, encourages the growth of GDP, and improves the overall economic structure (Hundt, 1996).

Tourism as a topic has played a crucial role over the last few years when discussing economic growth and development in many countries worldwide. Initially, tourism used to be viewed as a phenomenon resulting in travelling and vacation for a certain period and not being considered as a possibility for permanent generating a significant amount of income. Nowadays, tourism is viewed in a completely different way, as one of the key factors in the growth and development of many countries (Vanhove, 2005). Many national economies, where tourism participates with the largest percentage in GDP and whose economic growth depends on tourism, have been forced to improve their competitive advantages in the conditions of fierce competition in the international market (Radukić & Kostić, 2019).

The research conducted by (Holik, 2016) aims to determine the impact of the tourism sector on the economic growth (GDP) of five ASEAN member states (Indonesia, Malaysia, the Philippines, Singapore, and Thailand). The obtained results indicate that international tourism has a positive and significant impact on the economic growth in these countries, with the variables such as tourist arrival, the number of international tourist arrivals, and the exchange rate. Similar research by (MADEN, BULGAN, & YILDIRIM, 2019) also emphasizes a positive and statistically significant link between tourism and economic growth.

However, the research conducted by (Chou, 2013) gave rather interesting results when stating that the tourism sector did not have an impact on economic growth in three countries: Bulgaria, Romania, and Slovenia. Interestingly, the same research for other countries, such as Cyprus, Latvia and Slovakia confirmed the positive impact of tourism on economic growth, whereas in the Czech Republic and Poland this relationship was negative. A reciprocal relationship between tourism and economic growth was recorded in Estonia and Hungary.

Having analysed the relationship between economic growth and the tourism sector for ten leading world destinations (China, France, Germany, Italy, Mexico, Russia, Spain, Turkey, Great Britain, and the United States), (Shahzad, Shahbaz, Ferrer, & Kumar, 2017) indicated that the relationship between tourism and economic growth is positive, still, there are considerable differences between these countries through different quintiles of tourism and GDP per capita within each country. These differences between the countries are reflected in the openness of each economy, the participation of tourism in the overall economy of the country, the importance and participation of local companies in the tourism sector, etc.

It is essential to outline certain studies that show the opposite effect, the ones that emphasize the fact that economic growth encourages tourist expansion. This hypothesis is called the tourism-led growth hypothesis indicating that sustainable economic growth contributes and facilitates the development of tourism in a certain country. The more resources become available

for tourism infrastructure, the more positive the economic climate encourages further development, diversity, and the expansion of tourism activities. International tourists are attracted by the economic vitality and safety of the country (Chen & Chiou-Wei, 2009). Therefore, the economic benefits of tourism depend on the willingness and ability of countries to provide appropriate favourable conditions for developing tourism (Haretsebe, 2012).

Tourism is one of the most important sectors that encourages the development of the national economy and employs a large number of people. The study conducted by (Manzoor, Wei, Asif, Zia ul Haq, & Rehman, 2019) indicates the importance of employment in tourism, outlining the positive impact of employment on economic growth. The research including a group of Asian countries in the period from 1995 to 2004 indicates that international tourism receipts have a significant and positive impact on economic growth (Shakouri, Yazdi, Nategian, & Shikhrezaei, 2017) and (Hajdinjak, 2014).

Considering the impact of international tourism receipts on economic growth in Turkey, as one of the world's most important tourist destinations in the period 1972-2004, (BAL, AKÇA, & BAYRAKTAR, 2016) it can be pointed out that international tourism receipts created a positive impact on Turkey's economic growth. Furthermore, an increase in international tourism receipts by 1% led to the economic growth of 0.314%. Similar researches by (Fayissa, Nsiah, & Tadasse, 2007) were conducted in 42 African countries indicating that tourism receipts and capital investment significantly contributed to the growth of GDP, with an increase in domestic and business tourism spending of 10% leading to the growth of GDP of 0.4%. Moreover, the research on a sample of SADC countries shows that an increase in tourism receipts by 1% led to GDP growth of 0.16%. Also, the investment in tourism by 1% caused GDP growth by 0.29% (Makochekanwa, 2013). Thus, these studies indicate that there is a two-way link between tourism receipts and economic growth (Ongan & Demiröz, 2005) and (Massidda & Mattana, 2012). Interestingly, some studies present the opposite causality between tourism and economic growth (Risso & Brida, 2009).

While generating wealth and employment, the tourism industry employs over two hundred million people and plays a significant role in increasing employment and foreign exchange inflows in developing countries. The extent to which this impact will be manifested also depends on the application of liberal policy, adequate tax policy and other comprehensive policy measures that could result in a larger proportion of domestic and foreign direct investment (Vijayaragavan, 2014).

Generally speaking, there are three types of employment in the tourism industry. Firstly, direct employment implies employment in tourist facilities resulting from tourism spending. Secondly, indirect employment as a result of employment in the tourism sector, not being a direct outcome of tourism spending, and induced employment which is the result of „multiplicative effects”. The impact of employment on economic growth is evident; however, the growth rate is not always of the same standard because certain types of tourism activity have a specific effect on employment since different tourism activities are labour intensive at different levels (Arda-haey, 2011). Over the last couple of decades, huge investments have been made in the tourism industry. However, these investments, in addition to their significant features, also have certain „weaknesses” which indicate that a certain part of the funds from host countries is withdrawn to the home countries of the investors. Thus, in Thailand, as one of the most popular tourist destinations, about 60% of annual income from tourism „leaves” the country, because tourists spend money in foreign hotels, mostly consume foreign drinks, and a significant part of profits goes to

investors' home countries. Nevertheless, despite all the above, capital investments in the tourism sector are flourishing year after year, amounting to over 950 billion dollars (Pjanić, 2019).

To achieve the set purpose of the paper and main objective five hypotheses were formed:

**H<sub>1</sub>:** Variations of international tourism receipts has a statistically significant impact on GDP growth.

**H<sub>2</sub>:** Variations of employment in tourism has a statistically significant impact on GDP growth.

**H<sub>3</sub>:** Variations of capital investment in tourism has a statistically significant impact on GDP growth.

**H<sub>4</sub>:** Variations of business tourism spending has a statistically significant impact on GDP growth.

**H<sub>5</sub>:** Variations of domestic tourism spending has a statistically significant impact on GDP growth.

### 3. METHODOLOGY

#### 3.1. Research design and data description

The quantitative research design was employed in empirical research conducted for this paper and its hypothesis testing. This kind of research design was chosen because it focuses attention primarily on rigor measurement and discovering of causal relationships between researched variables (Martin & Bridgmom, 2012).

The 27 member-countries were included in empiric research with 19 years period researched. The period of 19 years was taken into consideration because it allows the building of a predictive model and identification of variables that have a meaningful and statistically significant relationship with an outcome in multiple variable contexts (Rachev, Hochstotter, & Fabozzi, 2010) and (Focardi & Fabozzi, 2004).

Data for our empiric research represents secondary data and they were collected from the World banks and World Travel & Tourism Council (WTTC) database available on the internet (The World Bank, 2020) and (World Travel & Tourism Council, 2020). A total of six variables were included in the research. Their descriptions, notations, measurements and roles are presented in Table 1.

**Table 1.** Description of researched variables

Variable name	Notation	Measurement	Role of variable
<b>GDP growth</b>	GDP	annual %	dependent
<b>International tourism, receipts</b>	IT	% of total exports	independent
<b>Employment in tourism</b>	ET	% of total employment	independent
<b>Capital investment in tourism</b>	CIT	% of total investment	independent
<b>Business tourism spending</b>	BTS	% GDP	independent
<b>Domestic tourism spending</b>	DTS	% GDP	independent

**Source:** World banks and World Travel & Tourism Council (WTTC)

As it is presented in Table 1, our dependent variable was gross domestic product growth (GDP) measured on an annual level. Independent variables were international tourism, receipts (IT), expressed as a percentage of country export, employment in tourism as a percentage of total employment (ET), capital investment in tourism as a percentage of total investment (CIT), and

business tourism spending (BTS) and domestic tourism spending (DTS) expressed as a percentage of GDP. The observation matrix for collected data included 27 countries, six variables and 19 years which give the total number of 3,078 observations. There were missing data for variable IT for the 2019 year. Moreover, the three variables GDP, BST and DTS had negative values in their distributions. Our data-set represents an unbalanced macro longitudinal set because all members of the set were not observed for one year in one case (Das, 2019) and (Liu, 2016).

### **3.2. Procedure of data analysis**

Due longitudinal nature of collected data IBM SPSS linear mixed model procedure was chosen for their analysis. This procedure allows identification of three models - independence model without any random effect with main effect design and restricted maximum likelihood option for parameters estimation, random intercept model which employed factorial design and restricted maximum likelihood option for parameters estimation, and random intercept and slope model with main effect design and maximum likelihood option for parameters estimation (Vehkalahti & Everitt, 2019);(Landau & Everitt, 2004). Several reasons led us to choose such a procedure. First, it has well theoretical background; second, it allows models with both fixed and time/subject-varying, covariates and heterogeneity, as well as heterogeneity in intercepts and slopes for random effect model; third it does not treat fixed and random effect models as mutually exclusive choices, but combines them to overcome biases of each separate model (Heck, Thomas, & Tabata, 2014); (Vehkalahti & Everitt, 2019); (Liu, 2016); (Hedeker & Gibbons, 2006); (Fitzmaurice, Laird, & Ware, 2011); (West, Welch, & Galecki, 2015).

Before IBM SPSS linear mixed procedure employment, we took rigor exploratory analysis of our data and tested several assumptions characterized for multivariate data analysis.

## **4. RESULTS**

### **4.1. Preliminary analysis**

The preliminary analysis comprised of fourth parts. The first part was dealing with missing values in variable IT. For solving that problem, we used the missing data substitution technique via Expectation Maximization (EM), available within Missing Value Analysis option in IBM SPSS (Allen, Bennett, & Heritage, 2014). EM represents an effective technique, often used in missing data analysis which can overcome limitations of other similar techniques such as mean substitution or regression substitution, and it can be applied whenever the data are missing completely at random or not (Schafer & Olsen, 1998). Moreover, EM is a stable and robust iterative procedure founded on maximum-likelihood estimates (Najim, Ikonen, & Daoud, 2004).

The result of EM procedure implementation, which substitutes missing values in variable IT, was presented in Table 2.

Estimated values for each country for variable IT in the 2019 year were included in the research.

The second part of the preliminary analysis was testing assumptions for linear mixed models analysis. It means accessing the appropriateness of variables natures, linearity, multivariate normality, homoscedasticity, and absence of autocorrelation, multicollinearity, multivariate outliers and high influential points (Snijders & Bosker, 2003);(Bordens & Abbott, 2008).

**Table 2.** EM procedure results

Country	Variable IT					
	Descriptive Statistics			EM Estimated Statistics		
	N	Missing		Means	SD	Covariances
Count		%				
Austria	18	1	5.3	9.746	.876	.767
Belgium	18	1	5.3	3.293	.580	.336
Bulgaria	18	1	5.3	15.148	3.233	10.456
Czech Republic	18	1	5.3	6.139	1.639	2.687
Denmark	18	1	5.3	4.214	.790	.625
Estonia	18	1	5.3	11.179	3.272	10.710
Finland	18	1	5.3	4.554	.656	.430
France	18	1	5.3	8.564	.659	.434
Greece	18	1	5.3	26.310	2.906	8.445
Netherlands	18	1	5.3	2.895	.980	.960
Croatia	18	1	5.3	41.784	3.631	13.190
Ireland	18	1	5.3	3.926	.412	.169
Italy	18	1	5.3	7.857	.716	.513
Cyprus	18	1	5.3	25.485	8.635	74.571
Latvia	18	1	5.3	5.736	.931	.866
Lithuania	18	1	5.3	5.309	1.896	3.594
Luxemburg	18	1	5.3	5.619	1.377	1.898
Hungary	18	1	5.3	6.833	1.619	2.623
Malta	18	1	5.3	11.615	5.078	25.795
Germany	18	1	5.3	3.445	.2608	.068
Poland	18	1	5.3	6.128	1.449	2.099
Portugal	18	1	5.3	18.420	1.898	3.604
Romania	18	1	5.3	3.414	1.011	1.022
Slovakia	18	1	5.3	3.449	.806	.650
Slovenia	18	1	5.3	8.367	.706	.499
Spain	18	1	5.3	16.709	1.167	1.361
Sweden	18	1	5.3	4.905	.569	.324

Source: author's research

Dependent and five independent variables had continuous characters and metric nature, which satisfied variable nature assumption. Construction of histograms, normal P-P plots of regression standardized residuals and scatterplots on the univariate and multivariate base were employed to access linearity and multivariate normality. They indicate that data met linearity assumption, but fall to meet multivariate normality because they were negatively skewed data. Glejser test, performed by regression of the absolute values of ordinary least squares residuals from the main regression equation on the explanatory variable GDP, was used to test, homoscedasticity. Results of this test for independent variables IT show statistically significant p-value on the level of  $p < .050$ ,  $B(SE) = -.086(.038)$ ,  $t = -2.287$ , which indicate presence of heteroscedasticity (Gujarati & Porter, 2009). Absence of autocorrelation, multicollinearity, multivariate outliers and high influential points were accessed by calculation of Durbin-Watson statistics, VIF and TOL values, Mahalanobis distance (MD), Cook's distance (CD) and leverage-value (h) (Brooks, 2014); (Meyers, Gamst, & Guarino, 2013). The result of Durbin-Watson test,  $d = 1.133$  indicated the existence of positive autocorrelation following the rule that Durbin-Watson statistic has a value between 0 and 4, with values from 0 to less than 2 mean positive autocorrelation and values from 2 to 4 means negative autocorrelation (Sreejesh, Mohapatra, & Anusree, 2014). Multicollinearity was accessed by calculation of VIF and TOL values. Obtained values  $VIF = 2.609$ ,  $TOL = .383$  for independent variable IT,  $VIF = 1.199$ ,  $TOL = .834$  for independent variable BTS,



VIF = 2.669, TOL = .375 for independent variable ET, VIF = 1.305, TOL = .767 for independent variable DTS, VIF = 2.065, TOL = .484 for independent variable CIT, led to conclusion that multicollinearity is not present (Sreejesh, Mohapatra, & Anusree, 2014). The existence of multivariate outliers and high influential points was explored by calculation of Mahalanobis distance (MD), Cook's distance (CD) and leverage value (h). The obtained value of  $MD_{(max)} = 34.404$  indicated presence of multivariate outliers, because maximum allowed value of MD for  $df = 5$   $\alpha = .001$  is 20.520 (Denis, 2018); (Lomax & Hahs-Vaughn, 2020). Besides, the calculated MD/df value was 6.8808 which was greater than the appropriate value of 4 for large samples (Denis, 2018); (Lomax & Hahs-Vaughn, 2020). Moreover, the calculated value of  $CD_{(max)} = .054$  showed the absence of high influential points following the rule of thumb that high influential points exist if CD value exceeds 1 (Denis, 2018); (Lomax & Hahs-Vaughn, 2020). Leverage value h ranges from 0 to 1, and it represents a measure of how far away the independent variable values of observation are from those of the other observations (Denis, 2018). In this research calculated  $h_{(max)} = .067$ , and following the rule that values close to 1 indicating great leverage, it was concluded that there are influential cases (Lomax & Hahs-Vaughn, 2020).

The third part of the preliminary analysis was dealing with negative values in the distribution of variables GDP, BST and DTS. This dealing was necessary because some of the common data transformation types, such as natural logarithm, cannot be performed with negative or zero values (Kennedy, 2008). For that purpose, we corrected all negative and zero values by adding the appropriate value of constant M, following recommendations from the literature (Mickey, Dunn, & Clark, 2004).

The fourth part refers to outliers and violations of assumptions of multivariate normality, homoscedasticity, and the presence of autocorrelation. In accordance with the nature of assumptions violation and our data nature we decided to recode outliers in regard to avoids the loss of a large amount of data following M-estimation technique and then to transform all data by reflecting and logarithm function:  $\text{Log}_{10} x$  (K - old variable value), where K = the greatest possible value of variable + 1 (Aguinis, Gottfredson, & Joo, 2013); (Leys, Delacre, Mora, & Lakens, 2019); (Tabachnick & Fidell, 2014).

## 4.2. Main finding

The independence model, random intercept model and random intercept and slope model obtained by IBM SPSS linear mixed procedure are presented in Table 3.

All three models produced by IBM SPSS mixed procedure were statistically significant - independence model Wald  $Z = 15.906$ ,  $p = .000$ , random intercept model Wald  $Z = 16.000$ ,  $p = .000$ , random intercept and slope model Wald  $Z = 15.875$ ,  $P = .000$ . It implied that all models had to be taken into consideration for the best model, but the best model has to be chosen by calculated information criteria (West, Welch, & Galecki, 2015); (Heck, Thomas, & Tabata, 2014); (Konishi & Kitagawa, 2008); (Gurka, 2006). Following the rule of thumb regarding information criteria as the best model we chose Model 3, i.e. random intercept and slope model because it improved fit in -2LL, AIC and BIC values over the previous models. Results obtained in Model 3 showed indicated that variables  $BTS\_transf$ , estimated on .249090, SE = .115674,  $t = 2.153$ ,  $p = .032$ , and variable  $DTS\_transf$ , estimated on .155744, SE = .045979,  $t = 3.387$ ,  $p = .001$ , pose as statistically significant predictor of depended variable GDP-transf.



**Table 3. Linear mixed procedure models**

<b>Independence model</b>						
Information Criteria						
-2LL		AIC			BIC	
-461.374		-459.374			-455.147	
Estimates <sup>a</sup>						
Parameter	Estimate	SE	t	p	95% Confidence Interval	
					Lower bound	Upper bound
Intercept	1.257627	.043285	29.055	.000	1.172587	1.342667
IT_transf	-.055463	.034428	-1.611	.108	-.123101	.012176
ET_transf	.036223	.056386	.642	.521	-.074556	.147001
CIT_transf	.028846	.040108	.719	.472	-.049953	.107645
BTS_transf	.208594	.113658	1.835	.067	-.014705	.431893
DTS_transf	.141957	.045433	3.125	.002	-.052697	.231217
Estimates of Covariance Parameters <sup>a</sup>						
Parameter	Estimate	SE	t	p	95% Confidence Interval	
					Lower bound	Upper bound
Residual	.022690	.001427	15.906	.000	.020060	.025665
<b>Random intercept model</b>						
Information Criteria						
-2LL		AIC			BIC	
-491.387		-475.387			-441.481	
Estimates <sup>a</sup>						
Parameter	Estimate	SE	t	p	95% Confidence Interval	
					Lower bound	Upper bound
Intercept	1.257627	.043030	29.226	.000	1.173089	1.342165
IT_transf	-.055463	.034225	-1.621	.106	-.122702	.011776
ET_transf	.036223	.056054	.646	.518	-.073902	.146347
CIT_transf	.028846	.039873	.723	.470	-.049488	.107180
BTS_transf	.208594	.112990	1.846	.065	-.013386	.430575
DTS_transf	.141957	.045166	3.143	.002	-.053224	.230690
Estimates of Covariance Parameters <sup>a</sup>						
Parameter	Estimate	SE	t	p	95% Confidence Interval	
					Lower bound	Upper bound
Residual	.022424	.001402	16.000	.000	.019839	.025346
<b>Random intercept and slope model</b>						
Information Criteria						
-2LL		AIC			BIC	
-441.369		-437.369			-428.924	
Estimates <sup>a</sup>						
Parameter	Estimate	SE	t	p	95% Confidence Interval	
					Lower bound	Upper bound
Intercept	4.679476	2.53786	1.844	.066	-.306628	9.665580
IT_transf	-.061445	.036064	-1.704	.089	-.132299	.009408
ET_transf	.046276	.056935	.813	.417	-.065583	.158135
CIT_transf	.033266	.040618	.819	.413	-.046536	.113068
BTS_transf	.249090	.115674	2.153	.032	.021827	.476353
DTS_transf	.155744	.045979	3.387	.001	-.065410	.246078
Estimates of Covariance Parameters <sup>a</sup>						
Parameter	Estimate	SE	t	p	95% Confidence Interval	
					Lower bound	Upper bound
Residual	.022614	.001425	15.875	.000	.019987	.025586

<sup>a</sup>Dependent Variable: GDP\_transf.  
 Note: -2LL = -2 log-likelihood; AIC =Akaike's information criterion; BIC = Bayesian information criterion

Source: author's research

Chosen model reliability was accessed by calculation of interclass correlation coefficients (ICC) (Shrout & Fleiss, 1979);(Johnson & Koch, 2011). Based on 95% confidence interval, ICC for random slope and intercept model had a value of .49916, which means that 49.916% of the variation in variable GDP\_transf was due to within-unit differences in the model. Following guidelines for ICC interpretations, the obtained value may be treated as fair (Cicchetti, 1994).

## **5. DISCUSSION**

Obtained results confirmed only hypotheses  $H_4$  and  $H_5$  indicating that business tourism spending (BST) and domestic tourism spending (DST), expressed as a percentage of GDP, in a statistically significant and positive way can predict gross domestic product (GDP) growth in EU countries. Those findings are in accordance with Eurostat data which indicates that the citizens of the EU spent 82 % of their tourism expenditure on trips inside Europe, i.e. 78 % inside the EU (Eurostat, 2020).

Even though international tourism receipts are part of a country's export revenues that are included in the GDP, our results did not confirm the hypothesis that the variations of international tourism receipts have a statistically significant impact on GDP growth. The reason for this can be found in the characteristics of the trends of the selected indicators in the analysed period. Comparing the proportion of international tourism receipts in the total exports in 2018 compared to 2009, it can be noticed that majority of countries recorded a decline and that significant decline was recorded in Malta. The growth was recorded in Austria, Portugal, Romania, Sweden, and Finland with the highest growth. Moreover, it is interesting to compare the trends of GDP growth and international tourism receipts in total exports in 2009 compared to 2008. The data from the World Travel & Tourism Council (WTTC) indicate that all these countries had negative GDP growth in 2009. Nevertheless, international tourism receipts in total exports in 2009 decreased in Estonia, Ireland, Cyprus, Malta, Poland and Romania, while other countries recorded growth.

The abovementioned results may indicate the need to consider the potential of individual segments of tourism and the need for additional investment which could boost economic growth. The need for further researches in the field of tourism is becoming essential especially due to movement restrictions aimed to slow down the spread of COVID 19 infection. The measures of the governments of the analysed countries led to significant losses in the tourism sector. Moreover, according to the baseline scenario published by the World Travel & Tourism Council (WTTC) (Council, 2020) a reduction in the number of employees by 18.4 million is expected in European countries in 2020 or 50 % compared to 2019, as well as a reduction of the contribution of the tourism sector to GDP by \$ 1,000 billion.

## **6. FUTURE RESEARCH DIRECTIONS**

Taking into account the fact that the whole world is affected by the Covid-19 pandemic, which has caused a drastic decline in tourism activity, it will be necessary to review what measures many countries have taken to save the industry since for many of them it is the source of their economic survival. Furthermore, it will be necessary to thoroughly analyse the existing and future consequences of the loss regarding the decline in employment, expenditure, investment and the extent to which all of the above items will affect the decline in overall economic activities in many countries. Undoubtedly, almost all governments will face tough challenges, as well as sat-

isfaction/dissatisfaction with the measures they will have to take in order to try to save a large number of tourist companies, agencies, hotels, employees, etc. Future researches should be directed towards the analysis of the measures that the countries will take and their final effects.

## 7. CONCLUSION

This paper examines the hypotheses of the impact of the key indicators of the development of the tourism sector on the growth of GDP of 27 countries of the European Union in the period 2001-2019 using linear mixed models analysis. Our empirical results show a statistically significant correlation between business and domestic tourism development and economic growth, still, they do not confirm a statistically significant relationship between the variations of international tourism receipts, the variations of employment in tourism and the variations of capital investment in tourism on GDP growth. We believe that these results can be partly explained by the impact of the global financial crisis on the tourism sector as a significant component of export of certain countries, but also by other indicators that constitute the export and GDP and which are the reasons why, even though export presents one component of GDP, the applied method has not proved that the proportion of international tourism receipts in the total exports of a country can predict the growth of the gross domestic product in a statistically significant and positive way.

The paper was written at a time when numerous restrictive measures were in force, which according to the competent authorities, were considered justified to prevent COVID-19 transmission. These measures significantly reduced travelling, and thus tourism receipts and employment. Since the tourism sector can play a significant role in the economic recovery of European Union countries, future researches should be directed towards the analysis of the measures that countries could take in order to recover and further develop this sector.

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# HOUSEHOLD LOGISTICS IN TOURISM SUPPLY CHAIN

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**Abstract:** *The tourism supply chain (TSC) consists of different participants: suppliers, tour operators and customers; in TSC, numerous physical and information flows to end customers are realized. Efficient realization of flows is enabled by logistics systems and technologies. In this way, logistics contribute to the competitiveness of tourism products. TSC participants can be trade, production, catering, logistics companies, travel agencies, but also households, primarily in rural areas. Households can play a role at all levels of TSC (suppliers of goods, materials and services, tour operators, travel agencies, end customers) and in various forms of tourism, but they play the most important role in rural and agritourism. Logistics is important in the optimization of logistics flows of households in TSC, having in mind imperatives of quality of goods, services, or complete tourism products that they can supply customers with. Therefore, in this paper, the role, significance and basic characteristics of subsystems of household logistics in TSC are analyzed.*

**Keywords:** *Tourism supply chain, Agri-food supply chain, Rural household, Logistics subsystems, Rural tourism, Agritourism.*

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## 1. INTRODUCTION

Tourism involves the travel and stay of people outside the usual environment, which is temporary (Mathieson & Wall, 1982), i.e. lasts up to a year (United Nations – World Tourism Organization, 1994). The growth and development of the tourism sector have been stimulated in recent decades by various social and economic factors (Tadić & Veljović, 2020b): globalization, development of information and communication technologies (ICT), development of transport infrastructure, better living standards and more free time, consumerism and hedonism, the offer of new tourist services and contents, etc. On the other hand, tourism has increasing importance in the socio-economic development of regions and countries (Szpilko, 2017). As tourism is not a pure manufacturing industry or a pure service industry (Jafari, 1974; Page, 2009; Zhang & Murphy, 2009; Piboonrungrroj & Disney, 2009), the tourism product is a combination of goods and services (Piboonrungrroj & Disney, 2009; Tadić et al., 2012).

The tourism supply chain (TSC) is a network of tourism organizations engaged in various activities, from offering different components of tourism products/services such as flights and accommodation to the distribution and marketing of the final tourism product at a specific tourism destination, and involves a wide range of participants in both the private and public sectors (Zhang et al., 2009). The main intermediaries between end customers and suppliers of goods and services are travel agencies, which sell tourism products, and tour operators, which in addition to sales also organize logistics activities in order to provide the tourism product to

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the end customer at the right time, in the right place, under the most favorable conditions (Tadić & Veljović, 2020b). In this context, tour operators can be considered 4PL providers (Piboonrungraj & Disney, 2009).

In TSC, physical (flows of goods, materials and freights) and information flows to end customers are realized (Piboonrungraj & Disney, 2009). The quality and competitiveness of the tourism product depend on the optimization of flows (Mrnjavac & Ivanovic, 2007) and the application of logistics principles and technologies (Tadić & Veljović, 2020b). Tourism logistics can be defined as the science of planning, controlling and managing operations performed during the process of preparing a tourist offer, delivering the finished product to the customer following his interests and requirements, as well as during the process of transferring, storing and processing information about these activities (Kochadze et al., 2013).

In addition to end customers, travel agencies and tour operators, TSC consist of numerous suppliers of goods and services at various tiers. TSC participants can be trade, production, service, catering, logistics, marketing and other companies, cultural and educational institutions, but also households. Households can be TSC participants at various tiers. In addition to supplying goods, materials and services, households can perform the functions of tour operators and travel agencies, i.e. create and sell complete tourism products, but also be end customers of them.

Households usually have the role of suppliers of goods and materials. They can supply other participants in the supply chain of natural resources, agricultural, food, handicraft products and raw materials, souvenirs, etc. In order to reduce logistics costs, affirm local production and ensure the safe origin and quality of goods, companies usually buy goods from rural households in the immediate vicinity. Therefore, goods and materials from households are most often used by participants in the supply chain in rural tourism, but often also by participants in supply chains in other forms of tourism (urban, coastal, etc.).

The expectations and demands of tourists are increasingly diverse. Thus, they not only want to change the location, but also the ambience, everyday life, and even to „travel through time”. Therefore, a significant role in the tourist offer is played by cultural and historical monuments, the natural environment, but also the rural, countryside ambience and way of life. In recent decades, various forms of rural tourism have been intensively developed, which includes all tourist services and activities in rural areas, which do not have an urban character (tourism in households, ecotourism, recreational, adventure, sports, health, art, heritage tourism, etc.). (Lane, 1994). One of them is agritourism, which is related to households and agricultural production (Tadić & Veljović, 2020b). In this case, the household is not only a producer of goods but also a creator and provider of tourism services.

Households are significant generators of logistics flows and logistics systems with specific characteristics, attributes and way of functioning. Households that supply goods to other participants in the supply chain realize numerous input, output and internal flows in the process of realization of production (primarily agricultural) (Tadić & Veljović, 2020a), while agritourism households in addition realize flows related to tourism services (Tadić & Veljović, 2020b). Therefore, household logistics directly affects the quality of goods and services, or tourism products, and has a very important role in TSC. In direct connection with the concept of household logistics in TSC are the concepts of agri-food supply chain, logistics of agricultural products, rural logistics and logistics of rural tourism, which also significantly affect the quality of tourism products.

Current, but also epidemics and economic crises that could occur in the future affect primarily international tourism and renowned tourist destinations, while domestic, especially rural and agritourism in some cases even record growth (Vaishar & Štátná, 2020), contribute to economic recovery (Piboonrungraj & Disney, 2009) and represent an opportunity to change the tourism paradigm towards sustainability and local interests (Higgins-Desbiolles, 2020). At the same time, epidemics can increase customers' interest in the origin of goods, especially agri-food, as well as production and logistics processes in the supply chain (Aguiar et al., 2018). Also, the impossibility or difficulty of the realization of flows due to the epidemic can lead to the reaffirmation of local production and short supply chains (Renting et al., 2003). In that case, the logistics of the household as a supplier of goods and services could play an even more significant role in the TSC.

Despite its importance, this topic is very poorly covered in the literature. Although a growing body of research is concerned with TSC management (Guo & He, 2012; Zhang et al., 2009; Sigala, 2008; Font et al., 2008; Tapper & Font, 2004) and logistics in tourism (Ajagunna et al., 2017; Muhcina & Popovici, 2008; Ivanovic & Baldigara, 2007; Mrnjavac & Ivanovic, 2007), there is still a very small number of papers dedicated to logistics in rural and agritourism (Tadić & Veljović, 2020b; Brzozowska et al., 2018; Niedziółka, 2015; 2012), where most of these papers do not fully address the logistics subsystems, processes and activities of the household as participants in the TSC. Households as logistics systems and generators of logistics flows have been analyzed in a very small number of papers (Tadić & Veljović, 2020a), which do not analyze the role of households in TSC.

This paper analyzes the role of households in TSC, describes the basic characteristics of household logistics in TSC in the context of agricultural production, rural areas and agritourism, as well as the characteristics and importance of individual logistics subsystems. This achieved the basic contribution and goal of the paper. Also, bearing in mind that households participating in TSC as suppliers of goods, services, or complete tourism products often lack education and professional knowledge that would ensure competitiveness and profitability, they can use the ideas presented in the paper to improve their business. Finally, as it establishes a link between supply chains, logistics, tourism, households and agriculture, the paper is a significant contribution to interdisciplinary research on the topic, and a basis for future research.

The paper is organized as follows. The role of the household in the TSC is analyzed below. The third chapter deals with household logistics as a supplier of goods, services or complete tourism products in TSC and its connection with the logistics of agricultural production, rural areas and rural tourism. The fourth chapter describes the basic characteristics and importance of the household logistics subsystem in TSC. The fifth chapter gives directions for future research. Finally, concluding considerations are given.

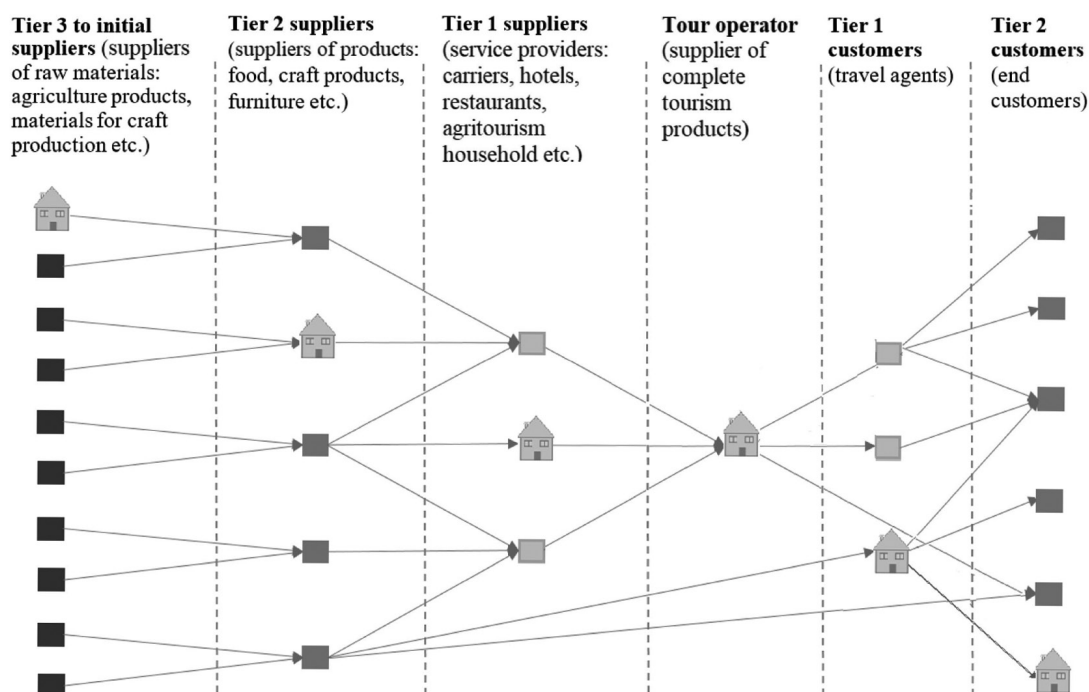
## **2. THE ROLE OF HOUSEHOLDS IN TSC**

TSC is a complex system consisting of different supply chains (Tapper & Font 2004; Muhcina & Popovici, 2008; Piboonrungraj & Disney, 2009). It includes suppliers of all goods and services involved in the delivery of tourism products to customers (Tapper & Font, 2004). Participants are very connected (March & Wilkinson 2009; Zhang et al., 2009), so communication (Babu et al., 2018) and coordination in the supply chain is very intensive (Piboonrungraj & Disney, 2009).

Tour operators (Tadić et al., 2012) play a key role in supply chain management, selling tourism products to customers directly or through travel agencies. They create products by buying tour-

ism services from the first tier of suppliers (Figure 1). On the other hand, the first tier of suppliers, i.e. tourism service providers uses the goods of second and third-tier suppliers.

Households can be participants in the tourism supply chain at all tiers, in the role of supplier, tour operator or customer (Figure 1). Depending on the place in the supply chain, households partially (suppliers of goods, materials or services) or fully participate in the creation and sale of a tourism product. They can supply other participants with natural resources and other raw materials for agricultural, craft, food or souvenir production (tier 3 suppliers), but also with final products (tier 2 suppliers) and tourism services (tier 1 suppliers). Also, households can perform the functions of tour operators and travel agencies (tier 1 customers) and sell complete tourism products to end customers. Finally, households are very often end customers of tourism products (tier 2 customers).



**Figure 1.** The role of the household in the TSC

**Source:** revised Tadić et al., 2012

Households most often participate in the production of finished agricultural or food products (Liu et al., 2017), which are consumed within the tourist offer. Therefore, households are very important suppliers in TSC (Font et al., 2008), especially in rural tourism supply chains. Given the specific characteristics and requirements of goods, materials and freights that appear in the flows in the TSC, logistics has a very important role in their realization.

Households can also provide transport, accommodation, food, entertainment services, etc. within the agritourism offer. The material and non-material basis for these services are also provided by household logistics (Tadić & Veljović, 2020b).

Also, households can supply end customers with complete tourism products. Direct internet sales of agritourism products are increasingly eliminating professional tour operators and travel agencies from the supply chain (Tadić & Veljović, 2020b), and their functions are taken over by households. In this case, the household provides goods and services and combines them into a

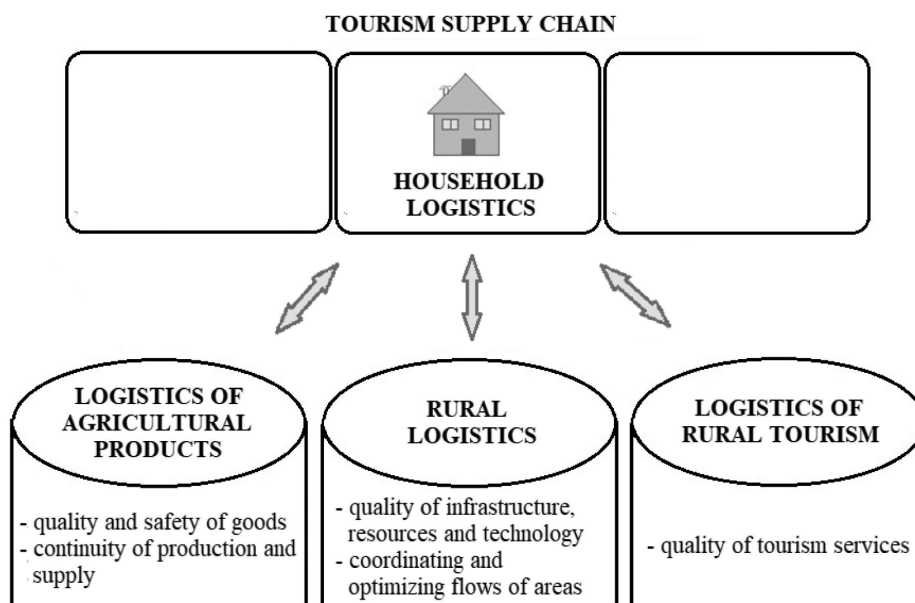
tourism product that sells directly to end customers. Therefore, household logistics plays a significant role at these tiers of TSC as well.

Finally, the household can be the end customer of tourism products. In this context, the term household is identified with a natural person or family using a tourism product. Given that family tourism has a significant share in tourism activities globally (Schänzel & Yeoman, 2015), households can be considered as one of the main end customers of tourism products. The role of households as end customers of tourism products will not be discussed in more detail in this paper.

### 3. HOUSEHOLD LOGISTICS IN TOURISM

In recent decades, the number of researches dealing with logistics in tourism has been growing, but it is still insufficient. Szpilko (2017) states that logistics is one of the 11 key areas of research in the field of tourism supply chain management. However, most research in the field of tourism supply chain management is focused on distribution and marketing activities, not taking into account the range of different suppliers involved in creating tourism products in the „upstream” part of the supply chain (Zhang et al., 2009). It is in this part of the supply chain that households play a significant role. Households can supply other participants with goods, materials, services or complete tourism products, whose quality and continuity of supply directly depend on the realization of logistics flows, processes and activities. The role of logistics of the household as a participant in TSC will be described below.

Logistics has a special significance in the supply of food and agricultural products, which are produced by households in rural areas, but also in the realization of rural and agritourism services. In this context, the terms agri-food supply chain (Blandon et al., 2009), logistics of agricultural products/production (Tan, 2012), rural logistics (Shui-qing, 2006) and logistics of rural tourism (Tadić & Veljović, 2020b) are particularly important for the analysis of household logistics in TSC (Figure 2). Optimization of flows, processes, activities, infrastructure and technologies within the mentioned areas of logistics contributes to the quality and competitiveness of the tourism offer and products that are partially or completely created by households.



**Figure 2.** Household logistics in TSC



The term **agri-food supply chains** describes activities from production to distribution, by which agricultural or horticultural products (Aramyan et al., 2006) are transferred “from the farm to the table” (Ahumada & Villalobos, 2009). The production of these goods largely depends on nature and natural resources, which makes management and logistics very complex (Biere, 2001). Such supply chains are especially important in tourism. Gastronomy conveys not only the taste of food but also local cultural experiences (Liu et al., 2017). It is often an essential ingredient of tourism production and consumption (Richards, 2003) and directly affects customer satisfaction. Having in mind the requirements for safety and quality of goods (Grunert, 2005), in the realization of flows of agri-food products, it is necessary to apply modern logistics principles, knowledge and technology. In recent decades, the **logistics of agricultural products** have attracted increasing attention of researchers (Gebresenbet & Bosona, 2012; Rokicki, 2013; Caixeta-Filho, 2003; Kramar et al., 2013; Wajszczyk, 2016). Logistics of agricultural products is a branch of the logistics industry, which includes physical and information flows from producers (in this case households) to customers (other participants in TSC), that satisfy consumer demand, including agricultural production, acquisition, transportation, storage, loading and unloading, handling, packaging, distribution processing, distribution, and information activities (Liping, 2009). Logistics costs have a very large share in the total cost of agricultural production (about 40%) (Tan, 2012; Wajszczyk, 2013). Therefore, logistics plays a central role in modern agricultural production (Federico, 2011), and is based on technology and modern scientific knowledge (Zhang & Wang, 2011). Technologies such as the Internet of Things, RFID, blockchain, etc. are of increasing importance in the production and distribution of agricultural products (Tian, 2016; Capello et al., 2016; Verdouw et al., 2013). Research and application of knowledge in the field of logistics of agricultural products are of great importance for their quality and competitiveness (Tan, 2012; Qi et al., 2008), and thus the competitiveness of the tourist offer within which they are used for processing or consumption. Also, logistics has a role in maintaining the continuity of agricultural production and supply to customers, meeting their requirements and optimizing costs (Kramar et al., 2013). Logistics and supply chain management largely depends on the type of agricultural products (Biere, 2001). Due to specific requirements, logistics is of particular importance in the production and distribution of perishable agri-food products (meat and dairy products, fresh fruits and vegetables) (Ahumada & Villalobos, 2009).

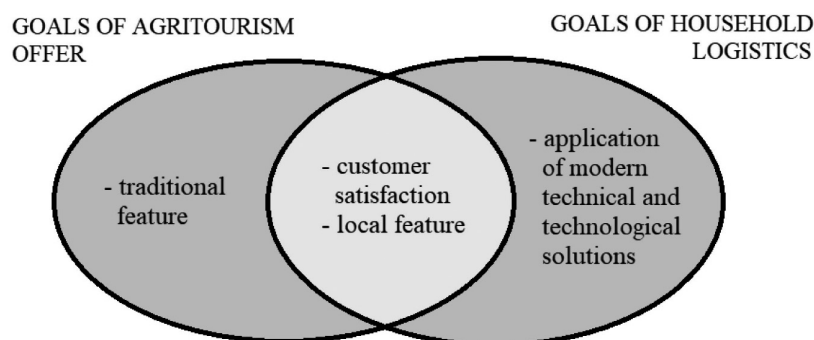
**Rural logistics** is equivalent to the concept of city logistics and includes various logistics activities related to life, production and other socio-economic activities of the population in rural areas (Shui-qing, 2006). The logistical activities of the households-participants of TSC are also included there. In the context of rural areas and households that are participants in the TSC, logistics has a role in ensuring the quality of infrastructure, resources and technology, as well as optimizing, coordinating and efficient realization of flows of customers, goods, materials, freights and information. Although rural logistics can significantly contribute to the progress of rural areas (Liming, 2006), it still attracts significantly less attention from researchers than city logistics (Ji-gang, 2006) and is developing very slowly (Chen & Zhou, 2011). It is characterized by the divergence of logistics flows, dispersion of their generators, seasonality, etc. (Shui-qing, 2006; Tadić & Veljović, 2020a; 2020b). Besides, the realization of logistics flows is hampered by poor infrastructure, obsolescence of logistics technologies and low application rates of modern information technologies (Chen & Zhou, 2011). It is precisely these problems that pose a challenge for household logistics in tourism. Namely, poor technical and technological features of rural logistics can have a very negative impact on the attractiveness of tourism products and destinations and the quality of goods and services. The availability of traffic and logistics infrastructure (different categories of storage systems, different types of logistics units, etc.), transport and logistics services (packaging, storage, marking, labeling, sorting, order picking, etc.) increases mobility and encourages production



(Gebresenbet and Oodalli, 2005; Gebresenbet & Bosona, 2012), but also the tourist activity of rural areas. Therefore, governments should attach more importance to improving logistics infrastructure in rural areas and increase investment (Chen & Zhou, 2011).

The *logistics of rural tourism*, i.e. agritourism, have the most direct influence on the quality of the tourist offer (Tadić & Veljović, 2020b). The concept of agritourism is based on a practical economic model that describes the transition from a market-oriented production strategy to a service-oriented sustainability strategy (Liu et al., 2017). Namely, in this case, the rural household is a tourist destination and, in addition to goods, it also provides services to customers. Agritourism services include accommodation, food, entertainment, etc. (Ciolac et al., 2019). Customer satisfaction largely depends on the household as a service provider, as direct contact is made with customers (Yilmaz & Bititci, 2005; Piboonrungraj & Disney, 2009). The household as a tourist destination has the characteristics of a logistics system (Mrnjavac & Ivanovic, 2007). Logistics provides a material (warehouses, means of transport, flows of goods, materials, freights, etc.) and non-material basis (sales, promotion, information flows, etc.) for agritourism services (Tadić & Veljović, 2020b). During the creation and consumption of tourist products, households realize numerous input, output and internal flows of goods, materials and freights. Logistics activities are present in the procurement or exploitation of raw materials, energy and finished products, promotional and sales activities, transportation of tourists and their personal belongings, the process of providing services to end customers in catering facilities, the realization of reverse flows, etc. (Tadić & Veljović, 2020b).

The goals of agritourism offer and household logistics can be concordant or conflicting (Figure 3). Customer satisfaction is the main goal of both agritourism offer and household logistics. Namely, the household strives to provide the customer with a tourism product at the right time in the right place under the most favorable conditions (Tadić & Veljović, 2020b; Tadić et al., 2012; Muhcina & Popovici, 2008), using logistics as the basic instrument. The tourism product in rural and agritourism has a distinct local character in terms of supply, production, consumption, characteristics of goods, services, etc. Thus, in the preparation and during the performance of tourist activity, the household usually uses locally available natural raw materials (e.g. wood), goods from its production, existing storage facilities, etc. (Tadić & Veljović, 2020b). This contributes to the reduction of logistics costs through the reduction of distances covered, consolidation of flows, utilization of existing storage capacities, etc. On the other hand, goals are sometimes conflicting. In order to achieve logistical efficiency, modern technical and technological solutions are applied, which can disrupt the traditional spirit and environment in which tourist services should be realized. Therefore, it is necessary to achieve a tradeoff between these goals and offer customers the optimal combination of traditional and modern features, in accordance with their needs, desires and expectations.



**Figure 3.** Goals of agritourism offer and household logistics

## **4. HOUSEHOLD LOGISTICS SUBSYSTEMS**

The quality of the tourism product, which is partially or completely created and sold by the household, depends on the quality of infrastructure, resources and technologies of the household logistics subsystems, as well as connecting, coordinating and synchronizing processes and activities that are realized within them. The basic characteristics of the logistics subsystems of ordering, transport, inventory management, warehousing and packaging in the context of the role of the household in TSC as a supplier of goods, services or complete tourism products will be described below.

### **4.1. Ordering, promotion and other information flows**

The household as a supplier of goods, services or complete tourism products in TSC has intensive communication with other participants. In the first case, information flows follow the planning, organization and realization of the production of goods and the supply of other participants in the supply chain. Ordering goods, agreements on the dynamics and quantity of delivery are realized through modern ICT.

Also, information flows play a very important role in the promotion and sale of services and products of agritourism households. Nowadays, the promotion and reservation of household capacities are most often realized via the Internet, but tourist and gastronomic fairs and events, as well as the distribution of promotional material (brochures, guides, etc.) also play a very important role (Tadić & Veljović, 2020b).

### **4.2. Transport**

Bearing in mind the necessity of intensive realization of transport flows, the German agronomist Albrecht Thaer stated in 1813 that a rural household/farm was inadvertently a transport company (Wolszczan, 1988; Wajszczuk, 2016). Rural households realize numerous transport flows, primarily in the process of realization of agricultural production. Transport costs have a very high share in the total logistics costs of a household engaged in agricultural production (Ongkunaruk & Piyakarn, 2011; Wajszczuk, 2013). The additional increase in transport activities is contributed by the engagement of households in TSC. In this case, except in agricultural production, transport flows are realized in order to supply other participants in the supply chain and provide agritourism services.

Both passenger and freight transport are important for TSC. Passenger transport provides unhindered movement of tourists (Fawcett, 2000; Duval, 2007; Piboonrungraj & Disney, 2009), and freight transport provides unhindered movement of goods, materials and freights between participants in the supply chain, primarily between suppliers of goods, materials (input providers) and service providers (Véronneau & Roy, 2009; Piboonrungraj & Disney, 2009). The characteristics of freight transport realized by households in TSC will be described below, while passenger transport will not be discussed in more detail.

The analysis of transport in the context of TSC is important from the aspect of the quality of tourism products, but also the economic, ecological and ethical aspects. Adequate means of transport, infrastructure and operation management should enable safe transport and preservation of the quality of goods, materials and freights. For households supplying other participants

in TSC agri-food products, transport infrastructure is a significant factor of success and competitiveness (Caixeta-Filho, 2003). Many agricultural households have little chance of success in the market because their marketing activities are hampered by the use of inadequate or poor means of transportation (Gebresenbet & Bosona, 2012). Also, great challenges for these households are (Wajszczuk, 2016): high costs of internal transport, heterogeneity of goods, materials and freights, which generates the need for different means of transport and transport conditions, large volume and number of transport flows, empty trips, short distances and poor transport infrastructure, the low transport capacity of perishable agricultural products and high risk of losses, etc. In recent decades, increasing importance has been given to the analysis of the impact of transport on the environment, pollution and noise. Therefore, households in TSC must also take into account the environmental aspect in the planning, organization and implementation of transport flows.

Transport also plays an important role for agritourism households, both in the preparation phase and during the tourist activity. A special challenge is the delivery of old buildings and ethnographic exhibits, having in mind the specific characteristics and requirements for preserving their integrity, quality and authenticity (Tadić & Veljović, 2020b). Transport can be an area of conflict of goals between agritourism offer and household logistics, i.e. traditional and modern characteristics, but also a problem from the ethical aspect. Namely, in some countries, traditional methods of transport are still used, which involve the engagement of human or animal strength (e.g. head loading, using animals to pull carts or sledges, using pack animals, etc.) (Gebresenbet & Bosona, 2012). Such methods can be attractive to tourists, sometimes economically justified, and very often in line with environmental imperatives. However, some of them do not meet modern criteria of logistical efficiency (limited quantity of cargo, low transport speed, inadequate transport of perishable goods, etc.; Gebresenbet & Bosona, 2012), as well as health or ethical criteria related to human and animal welfare, which should be taken into account when planning the transport subsystem.

### **4.3. Inventory management**

Depending on the role in the TSC, households manage different inventory. Households that realize agricultural production for the needs of their tourist offer or supply goods to other participants usually have an inventory of agricultural products, goods and materials needed for the process of agricultural production, logistics units and packaging materials, etc. Agricultural production has a seasonal character and is realized mainly during the warmer part of the year. Households in the TSC must provide inventory for the rest of the year, to ensure continuity of supply and consumption. Therefore, large quantities of inventory are formed in a short time (Wajszczuk, 2016). Inventory management costs account for 12.2% of the total logistics costs of agricultural production (Wajszczuk, 2013). Agritourism households, in addition to the above, most often have the inventory needed for accommodation (bedding, towels, chemicals for hygiene and cleaning, etc.), food services (groceries, dishes, etc.), entertainment (sports equipment, books, etc.). The application of various theoretical models and modern technologies can support efficient inventory management in the household (Tadić & Veljović, 2020b).

### **4.4. Warehousing**

Efficient inventory management requires adequate facilities, equipment and storage technologies. The characteristics of the warehouse/storage subsystem depend on the type of goods, materials. Agricultural and food products as the most important household stocks in TSC are usually

easily perishable, so it is necessary to provide special conditions for their storage and protection from harmful physical, chemical and biological influences. On the other hand, non-perishable agricultural products such as cereals, potatoes and nuts can be stored longer, without special conditions (Ahumada & Villalobos, 2009). Since seasonality causes the need to form large stocks, it is often necessary to provide a very large storage space (Wajszczuk, 2016). Apart from the purpose of keeping stock, storage is in some cases realized as part of the production process (e.g. ripening of brandy and wine, drying of meat and fruit) (Tadić & Veljović, 2020b).

The characteristics of the household warehouse subsystem also depend on its role in the TSC. The household that is the supplier of the goods must take into account only the logistical aspect of planning the warehouse system. On the other hand, the agritourism household must take into account the perception of tourists. In that case, warehousing can be an area of conflict between the goals of the tourist offer and household logistics and requires the establishment of their balance. First of all, it is necessary to harmonize traditional architectural-construction and modern logistical goals. Old buildings (e.g. wooden buildings covered with straw or shingles, basements, etc.) are often used for storage, which can positively affect the tourist offer, but it is necessary to renovate them in order to be purposeful and functional. In case a new storage facility is built, its appearance (primarily exterior) should also be adjusted to the archaic ambience of the household.

Similar challenges are related to storage equipment and technologies. Traditional storage equipment and methods (e.g. storage of dried meat in grain, storage of dairy products in wooden utensils or stuffed animal skins, etc.) can contribute to the authenticity and quality of the tourist offer. Thus, the traditional method of storing fruit in straw provides a specific aroma that can be attractive to tourists (Dorobanțu & Nistoreanu, 2012). However, even in this case, the basic criteria of logistical efficiency, safety and quality of goods should be taken into account.

Educating household members on storage process management is very important. Namely, their training can significantly reduce losses incurred during the storage of goods (Gebresenbet & Bosona, 2012).

#### **4.5. Packaging**

The management of the packaging subsystem should be taken into account in the development of agricultural logistics systems (Gebresenbet & Bosona, 2012), as well as the household logistics system in TSC. Packaging of goods produced by the household is very important for its sale and should provide information to customers, recognizability of the indigenous product, sustainability of its quality and the possibility of proper storage (Tadić & Veljović, 2020b).

Lack of packaging capacity may be one of the limitations in the logistics system of households during the transition from own-account production to commercial agricultural production (Gebresenbet & Bosona, 2012). Product packaging contains information on the origin, production process and quality of goods. Also, packaging has a protective function, since significant losses occur due to mechanical damage to agricultural products (Ferris et al, 1993). Although the introduction of packaging can contribute to the recognition and sale of products, in this way the amount of packaging waste increases (Tadić & Veljović, 2020b), which should be borne in mind when planning the packaging subsystem.

## 5. FUTURE RESEARCH DIRECTIONS

Given that the paper is a significant contribution to interdisciplinary research on the topic, which is insufficiently addressed in the literature, it can be the basis for numerous future researches. The optimization of the logistics processes of the household in TSC in the context of the relationship between transport and inventory costs, logistics costs and the quality of the tourist offer, can be the subject of the research. Also, it is necessary to do a detailed analysis of the characteristics of the logistics system and technologies of the traditional household, their applicability and efficiency in modern agricultural production and tourism. On the other hand, the application of modern technical-technological solutions and their adaptation in the context of harmonization of the goals of agritourism offer and household logistics can also be the subject of future research.

## 6. CONCLUSION

The household can be a TSC participant at all tiers: as a supplier of goods, materials, services, complete tourism products (tour operator/travel agency) or end customer. The quality and competitiveness of tourism products, which partially or completely create and sell by households, depends on the optimization of physical, flows of information and customers. Efficient realization of these flows is enabled by logistics systems, technologies and application of logistics principles. Therefore, household logistics can play a very important role in TSC, especially in rural and agritourism.

This paper analyzes the role of households in TSC, describes the basic characteristics of household logistics in TSC in the context of agricultural production, rural areas and agritourism, as well as the characteristics and importance of individual logistics subsystems. This achieved the basic contribution and goal of the paper.

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# IMPACT OF TOURISM ON PORTUGAL'S REGIONAL DEVELOPMENT

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**Abstract:** *It is widely recognized that tourism is an essential factor in the economic development of the regions. However, the different socio-demographic characteristics of each region can contribute to attracting or not tourists and tourist investment.*

*In this chapter, the regional characteristics that contribute to the attraction of tourism are analyzed and carried out through linear regression models.*

*Likewise, the authors analyze the impact of tourism on the development of regions, in terms of unemployment and wealth creation.*

*The authors also try to understand the degree of dependence of the regions on foreign tourism, given that the tourism sector was severely affected by the beginning of the pandemic.*

*This analysis is made in Portugal, by NUTS II, comparing the different regions of the country.*

**Keywords:** *Monetary income, Unemployment, National tourism, Foreign tourism, NUTS II.*

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## 1. INTRODUCTION

The interest in the development of the interior of the countries is growing and has been supported by the European Union, for example, through financing. In a more traditional view, regional policies try to fight regional asymmetries, facilitating the mobility of productive factors and promoting the material and immaterial well-being of territories, through the redistribution and financing of collective facilities in favor of less developed regions (eg. Silva, R., & Ferreira-Lopes, A., 2014 and Aicep 2017).

Portugal, with its accession to the European Economic Community on January 1st of 1986, started to benefit from financial aid provided by the European Structural Funds. And, over the years, investments have been made and measures have been taken to promote competitiveness and development to reduce the economic and social disparities that exist among the regions of Portugal.

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Tourism is a strategic economic activity for the country's economic and social development, namely for employment and for the growth of exports and the strategy advocated by Turismo de Portugal for the next decade is the theme highlighted in this edition of global Portugal, where we detail the main lines of action that aim to position Portugal as one of the most competitive, innovative and sustainable tourist destinations in the world, becoming a reference in the production of goods and services for the tourist activity. The strong growth of this sector in recent years has largely contributed to the development of the national economy - currently, it has a weight of almost 7 percent in the Gross Domestic Product, being today the largest export economic activity in the country, responsible for 16.7 percent of total exports. (Turismo de Portugal, 2017 and Aicep, 2017).

The level of economic development in the region's influence and is influenced by the sociodemographic characteristics of the population, as well as by several other factors, one of which being tourism. Tourism has increasingly assumed itself as one of the main factors that contribute to regional development. These factors are both cause and effect of the economic results of the regions.

In this study, the authors analyze the impact of sociodemographic factors on tourism development in Portugal. Subsequently, the impact of tourism on the development of regions is analyzed, through the analysis of its relationship with unemployment and wealth creation. In other words, this study does not focus on policy analysis and/or support for regional development. The defined objective is to compare the regions of Portugal (NUTS II) regarding the average income of workers, considered here as a representative measure of economic growth and concerning the reduction of the unemployment rate, also considered as a representative measure for the improvement of economic conditions of the population. And to do this, the authors prepared a database at the regional level, with data collected from the PORDATA database (Portugal Contemporary Database).

This work is divided as follows: first, it is presented the literature review where several factors are considered essential to the development of regions and the reduction of asymmetries between them. The description of the variables considered in this study is presented below, as well as the respective descriptive statistics for each of the regions. This is followed by the presentation of the research hypotheses, the estimated regression models, and their analysis, which is complemented by the comparison between regions. Finally, the main conclusions, limitations, and suggestions for future research on this topic are presented.

## **2. LITERATURE REVIEW**

One of the European Union's main objectives is to reduce economic and social inequalities. This goal must be achieved both at the national and regional levels (OECD, 2019). This concern has been increasing in recent years, with policies and support that promote the development of the regions, at the level of NUTS II and NUTS III.

Regional development is a broad term, but it can be seen as a general effort to reduce regional disparities through support (employment and wealth generation) for economic activities in the regions.

In the past, regional development policy tended to try to achieve these goals by developing infrastructure on a large scale and attracting foreign investment. (OECD, 2019)

Previous policies have failed to significantly reduce regional disparities and have been unable to help less developed regions to catch up, despite the allocation of significant public funds. The result is the underutilized economic potential and weakened social cohesion.

Silva & Ferreira-Lopes (2014) highlight that Portugal remains a country marked by regional asymmetries and that needs better mechanisms and policies for regional governance. These authors developed a study where they create a regional development index (NUTS III) and for that they highlight the importance of factors such as quality of life, tourism, health, and access to knowledge, having later pointed out the importance of political and environmental factors as being equally important to compare equality/inequality between regions. According to these authors, Lisbon occupies the first position in the ranking, although three NUTS III regions in the interior have moved to the first 10 in 2009 - Beira Interior Sul, Baixo Alentejo, and Alentejo - and other NUTS III regions in the interior have improved concerning positions in the ranking.

The increase in interest in local economies and, in particular, in the way they create wealth and increase the quality of life, which agents are involved, which conditions and determining factors, fuels feed the growing interest of academics and policymakers.

According to the Strategy and Studies Office of the Portuguese Ministry of Economy and Digital Transition, regional development policies arise from the need to promote the competitiveness of territories and reduce the economic and social disparities that exist between the regions of Portugal and, in their European funds, also in the EU. Considering that, among other factors, a way to make competitiveness sustainable in the long run may be linked to the development of "clusters" that allow the use of agglomeration economies and positive externalities. The Strategy and Studies Office (2014) highlights the observations of Porter (1990), which indicates that „clusters" have the potential to improve competitiveness in three different ways:

- Increase the productivity of companies.
- Promote the capacity for innovation in products and processes.
- Stimulate the creation of new companies.

Several studies highlight the importance of entrepreneurship to boost regional development (for example, Baptista, Escária, & Madruga, 2008; Rodríguez-Pose, 2013; Šoltés & Repková Štofková, 2016). However, regional development policies consider different dimensions - the role of cities, urbanism, accessibility, and other geographic issues, demographic problems, the environment, macro-regional strategies such as the organization of the territory, etc. - its effectiveness and efficiency are highly dependent on the participation of local agents (Strategy and Studies, 2014).

Pauhofová & Stehlíková (2018) highlight in their study the relationship between unemployment and income from work. These authors report that the problem of high unemployment and expected additional growth appears repeatedly among the main global trends, together with the increase in social instability. In their study, the authors concluded that Slovakia continues to be affected by high rates of unemployment, mainly in the long-term.

Tamásy (2006), in his study, applied to Germany, highlights, among other factors, the impact of startups in reducing inequalities at the regional level. In this sense, it emphasizes the importance not only of the concept of entrepreneurship but of the need to stimulate knowledge and the development of human capital. Gennaioli, Porta, Lopez-De-Silanes & Shleifer (2011)



presented a highly comprehensive study, including 110 countries, where they combine the interregional analysis of the geographic, institutional, cultural, and human capital determinants of regional development with an examination of the several thousand establishments located in these regions. These authors concluded that the evidence points to the primordial importance of human capital in accounting for regional differences in development, but also suggests, based on the model's estimate and calibration, that business inputs and human capital externalities are essential for understanding the data.

In other studies, the emphasis is on innovation and technological development, which is increasingly important for reducing regional inequalities and promoting national and regional economic growth (Grillitsch & Sotarauta, 2020). Correia & Pereira (2007) refer that since the structure of the Portuguese corporate business fabric is characterized by the predominance of medium and small companies, and given the limitations that much of the literature attributes to these companies about their innovative capacity, it makes sense to explore the role that universities - and the research developed there - can play in the process of producing and disseminating knowledge. However, these authors concluded that the results obtained with this work do not allow to prove that the performance of companies is influenced by the proximity of universities.

Related to business activity, innovation and technological development are the conditions for access to information and knowledge sharing. It is in this sense that information and communication technologies (ICT) play an important role in regional development. The growing concern about the effects of the rapid development of ICT and its increasing integration in the daily lives of citizens and organizations has largely influenced the debate in scientific and political circles about the relationship between ICT and regional development. Santinha, Marques, & Anselmo de Castro (2006) emphasize that, on the one hand, there is a legitimate concern to promote equal opportunities, which is why territorial cohesion and harmonization are fundamental. On the other hand, there is a concern to generate agglomeration effects that benefit social and economic development and justify a differentiated action. Basically, it is a matter of avoiding being excluded from the advantages of the current globalization of opportunities.

The environmental topic assumes an increasingly predominant role in academic and political discourses. The awareness of its importance has led to more studies that seek to determine the impact of environmental issues on national and regional development. This importance is present in the political measures implemented and aim to promote the development of the regions, guaranteeing the satisfaction of the population's needs and at the same time assure an adequate use of resources. According to Gibbs (2000), some authors argue that ecological modernization is a much more rigorous approach that focuses on reconciling the tensions between economic development and the ecological crisis to form a new development model for capitalist economies. Gibbs (2000) states that ecological modernization may have more to offer as a theoretical approach where it allows us to think about these policy implementation problems.

Last but not least, it is necessary to reinforce the importance of tourism for the development of the regions. It is an activity sector that contributes strongly to the creation of wealth and employment, given that, as mentioned by Vigliarolo (2020), it is a strategic sector in which families invest. Other authors like Gibbs (2000) highlight the importance of the relationship between tourism and other determinants of regional development, such as the fact that the growing awareness that the pursuit of environmental goals can stimulate new economic activities and jobs in sectors related to the environment, and also in other sectors, such as tourism and leisure,

which benefit from a cleaner environment. In the same sense, Szymanska (2018) highlights the importance of sustainable tourism, this concept is equally essential to the development of the regions.

Specifically, for Portugal, the study of Silva & Ferreira-Lopes (2014) concluded that Lisbon is expanding in quality tourism. Since more industrialized areas, such as the Setúbal Peninsula, have a considerable level of development, although not in the tourist sector. Northern NUTS III are highly industrialized regions, but in decline, due to increasing competition from China and India in traditional sectors (for example, textiles, footwear, and leather) and with workers exhibiting low skills and productivity. In turn, the NUTS III of the Algarve, Azores, and Madeira base their economic specialization on tourism. The interior regions are mainly specialized in agriculture, a sector in decline. Low-skilled workers in these regions have little incentive to increase their skills, due to the higher rate of unemployment among highly skilled workers in those regions.

In conclusion, it is possible to say that regional development results not from a single factor, condition, or agent, but from all of them together, although differently from region to region.

### 3. DATA AND METHODOLOGY

The purpose of the study presented in this chapter is to understand what factors influence the development of tourism in the regions of Portugal. It is also intended to analyze the impact that tourism, together with other sociodemographic factors, has on the economic development of the regions. The analysis was made through the differentiation of the regions of Portugal by NUTS (Nomenclature of Territorial Units for Statistical Purposes). This nomenclature was created by Eurostat in the early 1970s, to harmonize the statistics of the various countries in terms of the collection, compilation, and dissemination of regional statistics.

The Pooled OLS method was used to estimate the parameters, considering robust standard errors. Carrying out a panel diagnostic test, the null hypothesis of the adequacy of the Pooled OLS model was not rejected. The nomenclature is subdivided into 3 levels (NUTS I, NUTS II, NUTS III), defined according to population, administrative and geographical criteria.

In this study, it is considered the division by NUTS II, since for some variables under study there is still no information available for NUTS III. In this case, NUTS II refers to the regions: North, Center, Lisbon Metropolitan Area, Alentejo, Algarve, Autonomous Region of the Azores, and Autonomous Region of Madeira.

The factors considered in the analysis were selected based on the following dimensions:

- Tourism,
- Population,
- Education,
- Security,
- Business/entrepreneurship,
- Information and communication technologies,
- Environment quality,
- Culture and sport.

And to achieve these objectives, we collected data from the PORDATA database, Database of Contemporary Portugal, organized and developed by the Francisco Manuel dos Santos Foundation. Our data are annual and referring to the period from 2009 to 2019.

The variables were selected based on the literature review carried out and they are:

- Population density - the average number of individuals per km<sup>2</sup> (DP),
- Education: Resident population aged 15 and over without secondary education (%) (PD),
- Graduates per 100 students enrolled in higher education (GEE),
- Security: Crimes registered by the police per thousand inhabitants (CRBP),
- Unemployment rate (%) (UR),
- Average monthly basic remuneration of employees in euros (AMBRE),
- Business/entrepreneurship: Density of non-financial companies - the average number of non-financial companies per km<sup>2</sup> (DNFC),
- ICT: Private households with an Internet connection (%) (PHWIC),
- Environment quality: Expenditure by municipalities on the environment as % of total expenditure (EBMOE),
- Culture and sport: Expenditure of City Councils on culture and sport as % of total expenditure (EBCCCS),
- Tourism by type of resident:
  - The average stay in tourist accommodation: residents in Portugal (ASTAP),
  - The average stay in tourist accommodation: residents abroad (ASTAA)
- Income from tourism by type of accommodation:
  - Income from overnight stays per guest in tourist accommodation (total in euros) (IFOST),
  - Income from overnight stays per guest in tourist accommodation (hotels) (IFOSH).

To achieve the previously defined objectives and based on the literature review carried out, the following research hypotheses were formulated:

- H<sub>1</sub>**: population density contributes to the increase in tourists and income from tourism.
- H<sub>2</sub>**: the education of the population contributes to the increase in tourists and income from tourism.
- H<sub>3</sub>**: lower levels of crime contribute to the increase in tourists and income from tourism.
- H<sub>4</sub>**: higher levels of unemployment contribute to the decrease in tourists and income from tourism.
- H<sub>5</sub>**: higher levels of income of the resident population contribute to the increase in tourists and income from tourism.
- H<sub>6</sub>**: higher levels of entrepreneurship contribute to the increase in tourists and income from tourism.
- H<sub>7</sub>**: better ICT conditions contribute to the increase in tourists and income from tourism.
- H<sub>8</sub>**: efforts to improve the environment contribute to the increase in tourists and income from tourism.
- H<sub>9</sub>**: efforts to improve cultural and sports development contribute to the increase in tourists and income from tourism.
- H<sub>10a</sub>**: the increase in tourists contributes to the reduction of unemployment in the regions.
- H<sub>10b</sub>**: the increase in tourists contributes to the increase in the wealth of the regions.
- H<sub>11a</sub>**: income from tourism contributes to the reduction of unemployment in the regions.
- H<sub>11b</sub>**: income from tourism contributes to increasing the wealth of the regions.

The correlation matrix between the variables used is presented below, as well as the main descriptive statistics.

First, it is possible to verify that regarding the main variables under analysis, the main differences between the regions of the country are:

- The average stay in tourist accommodations by tourists living in Portugal is an average of 2.2 nights at the national level, and these values vary between 1.5 and 3.7 nights. In other words, Portuguese tourists tend to enjoy short stays in Portugal.  
When comparing the different regions of the Portuguese territory, it appears that the autonomous regions of the Azores and Madeira are above the national average, with average stays of 2.4 nights and 3.1 nights, respectively. The biggest difference is found in the Algarve, where tourists residing in Portugal spend an average of 3.5 nights in this region.
- When analyzing the average stay in tourist accommodation residing abroad, it appears that the preference for the previously mentioned regions remains. The national average is 3.3 nights, varying between 1.7 and 6.1 nights. And, there is a clear tendency to stay more nights in the mentioned regions. In other words, foreign tourists spend an average of 3.7 nights in the Azores, 5 nights in the Algarve, and 5.9 nights in Madeira.
- In addition to analyzing the permanence of tourists in each region, it is important to analyze the income generated. In this sense, the average income, nationally, with overnight stays per guest in tourist accommodations (total) is € 101.30. Algarve, Azores, and Madeira remain above average, with an average income of € 151.10, € 102.80, and € 160.20 respectively. Besides, the Lisbon Metropolitan Area has an average income of € 107.40. In this case, even though the Lisbon region does not stand out in terms of the average number of nights in terms of residents' stay, the profits obtained place this region in a prominent position.
- When analyzing income from overnight stays per guest in hotels, where the average income is € 106.30, Lisbon is again highlighted with an average income of € 114.80. The clear highlight remains in the Algarve and the Autonomous Region of Madeira with revenues of € 177 and € 171.90 respectively.
- It is also essential to analyze the development of the different regions and an appropriate indicator for this analysis is the unemployment rate. The average unemployment between 2009 and 2019, at the national level, is 11.4%, having fluctuated between 4.9% and 18.5% during these years. In this case, only the Centro Region and the Autonomous Region of the Azores are below the national average with 8.5% and 11.2% respectively. The remaining regions are slightly above average, with no marked differences between them.
- Equally important for assessing the development of the regions is the population's income, measured through the average monthly base salary of employees. In this case, individuals receive an average of € 871.80, and between 2009 and 2019, the average remuneration varies between € 775.90 and € 1187.10. When comparing regions, there is a clear highlight for Lisbon with an average remuneration of 1,152.40 € and the Madeira region with 875 €. In other words, of the regions with slightly above average unemployment rates, Lisbon and Madeira, remain with higher wages.

**Table 1. Correlation Matrix**  
 Correlations between all the variables present in the study

	DP	PD	GEE	CRBP	UR	AMBRE	DNFC	PHWIC	EMBOE	EBCCCS	ASTAP	ASTAA	IFOST	IFOSH
DP	1	-.607**	,088	,164	,130	,976**	,992**	,349**	,590**	-.412**	-.143	-.001	,298*	,302**
N		77	77	70	77	59	70	77	70	70	77	77	73	72
PD		1	-.035	-.133	,131	-.741**	-.660**	-.724**	-.271*	,281*	,062	,124	-.258*	-.282*
N			77	70	77	59	70	77	70	70	77	77	73	72
GEE			1	-.526**	,196	,012	,001	,124	,408**	-.425**	-.093	,130	-.012	-.027
N				70	77	59	70	77	70	70	77	77	73	72
CRBP				1	,133	,171	,216	-.062	-.191	,073	,463**	,256*	,332**	,395**
N					70	59	70	70	70	70	70	70	66	65
UR					1	,066	,099	-.232*	,153	-.456**	,094	,149	-.011	-.001
N						59	70	77	70	70	77	77	73	72
AMBRE						1	,982**	,488**	,495**	-.464**	-.197	-.083	,235	,219
N							59	59	59	59	59	59	56	55
DNFC							1	,388**	,516**	-.345**	-.158	-.052	,276*	,282*
N								70	70	70	70	70	66	65
PHWIC								1	,242*	-.340**	,120	,135	,432**	,405**
N									70	70	77	77	73	72
EMBOE									1	-.645**	,309**	,533**	,611**	,580**
N										70	70	70	66	65
EBCCCS										1	-.413**	-.561**	-.636**	-.631**
N											70	70	66	65
ASTAP											1	,924**	,871**	,888**
N												77	73	72
ASTAA												1	,892**	,886**
N													73	72
IFOST													1	,989**
N														72
IFOSH														1

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

**Table 2. Descriptive statistics of all the variables present in the study by the country**

	N	Minimum	Maximum	Mean	Standard Deviation
<b>Portugal</b>					
DP	77	22,3	946,8	247,3	297,4
PD	77	48,2	80,9	67,6	7,4
CRBP	70	23,7	64,0	36,0	9,4
UR	77	4,9	18,5	11,4	3,6
AMBRE	59	775,9	1187,1	871,8	124,4
DNFC	70	2,4	121,6	27,7	35,2
PHWIC	77	38,5	88,7	65,9	12,4
EMBOE	70	5,1	18,7	8,9	3,5
EBCCCS	70	4,0	16,9	9,6	2,3
ASTAP	77	1,5	3,7	2,2	0,7
ASTAA	77	1,7	6,1	3,3	1,5
IFOST	73	51,9	180,4	101,3	42,3
IFOSH	72	48,3	209,7	106,3	51,6
<b>Norte</b>					
DP	11	167,9	174,3	170,8	2,5
PD	11	60,9	77,9	68,8	5,6
CRBP	10	27,9	34,0	30,9	2,4



<b>UR</b>	11	6,7	17,1	12,2	3,3
<b>AMBRE</b>	9	793,1	887,4	824,6	29,8
<b>DNFC</b>	10	16,4	20,3	18,2	1,2
<b>PHWIC</b>	11	47,3	77,9	63,8	10,5
<b>EBMOE</b>	10	6,6	8,5	7,6	0,7
<b>EBCCCS</b>	10	9,3	11,3	10,4	0,7
<b>ASTAP</b>	11	1,5	1,6	1,6	0,1
<b>ASTAA</b>	11	2,0	2,1	2,1	0,0
<b>IFOST</b>	11	56,8	84,6	65,4	10,7
<b>IFOSH</b>	11	58,8	90,8	69,4	11,6
<b>Centro</b>					
<b>DP</b>	11	78,6	83,0	80,8	1,6
<b>PD</b>	11	60,7	78,8	68,6	6,0
<b>CRBP</b>	10	25,5	33,5	29,6	3,2
<b>UR</b>	11	4,9	11,7	8,5	2,3
<b>AMBRE</b>	9	775,9	852,0	799,3	24,7
<b>DNFC</b>	10	8,2	9,4	8,9	0,4
<b>PHWIC</b>	11	41,4	76,7	61,2	11,5
<b>EBMOE</b>	10	6,1	7,8	6,9	0,6
<b>EBCCCS</b>	10	10,0	11,5	10,8	0,5
<b>ASTAP</b>	11	1,6	1,7	1,7	0,1
<b>ASTAA</b>	11	1,9	2,1	2,0	0,1
<b>IFOST</b>	11	51,9	61,0	54,9	3,5
<b>IFOSH</b>	11	51,1	59,7	54,8	3,1
<b>Lisbon</b>					
<b>DP</b>	11	931,4	946,8	937,2	4,9
<b>PD</b>	11	48,2	64,4	55,9	5,6
<b>CRBP</b>	10	37,6	48,2	42,3	4,1
<b>UR</b>	11	7,1	18,5	12,3	3,8
<b>AMBRE</b>	9	1137,4	1187,1	1152,4	16,1
<b>DNFC</b>	10	101,2	121,6	110,9	7,4
<b>PHWIC</b>	11	55,4	88,7	75,1	10,7
<b>EBMOE</b>	10	9,9	13,9	12,1	1,1
<b>EBCCCS</b>	10	6,8	16,9	8,3	3,1
<b>ASTAP</b>	11	1,7	1,8	1,8	0,0
<b>ASTAA</b>	11	2,5	2,6	2,5	0,1
<b>IFOST</b>	8	53,5	133,2	107,4	25,8
<b>IFOSH</b>	7	55,5	143,4	114,8	30,6
<b>Alentejo</b>					
<b>DP</b>	11	22,3	24,2	23,3	0,7
<b>PD</b>	11	62,8	78,8	70,2	5,2
<b>CRBP</b>	10	27,7	34,3	30,5	2,0
<b>UR</b>	11	6,9	16,9	11,8	3,3
<b>AMBRE</b>	9	789,7	849,9	810,8	18,1
<b>DNFC</b>	10	2,4	2,7	2,6	0,1
<b>PHWIC</b>	11	38,5	73,9	56,5	11,4
<b>EBMOE</b>	10	5,5	8,4	6,6	1,0
<b>EBCCCS</b>	10	10,4	12,7	11,7	0,7
<b>ASTAP</b>	11	1,7	1,8	1,7	0,1
<b>ASTAA</b>	11	1,7	1,9	1,8	0,1
<b>IFOST</b>	11	56,0	80,4	64,8	7,9
<b>IFOSH</b>	11	48,3	65,4	53,9	5,6
<b>Algarve</b>					
<b>DP</b>	11	87,8	89,8	88,7	0,7
<b>PD</b>	11	59,9	71,3	64,9	3,8

CRBP	10	47,1	64,0	52,9	6,4
UR	11	6,4	17,6	11,9	4,0
AMBRE	9	780,5	836,1	795,5	17,7
DNFC	10	10,9	14,7	12,5	1,3
PHWIC	11	50,6	80,3	65,8	9,4
EBMOE	10	6,9	9,0	7,7	0,7
EBCCCS	10	6,5	12,5	9,3	2,0
ASTAP	11	3,4	3,7	3,5	0,1
ASTAA	11	4,4	5,4	5,0	0,3
IFOST	11	130,6	180,0	151,1	20,6
IFOSH	11	151,3	209,7	177,0	23,3
<b>A.R.Azores</b>					
DP	11	104,6	106,6	105,9	0,7
PD	11	69,6	80,9	75,0	4,5
CRBP	10	35,7	43,8	39,6	3,2
UR	11	6,7	17,0	11,2	3,7
AMBRE	5	795,9	857,5	823,3	26,9
DNFC	10	10,5	12,2	11,2	0,5
PHWIC	11	46,7	86,5	70,3	13,5
EBMOE	10	5,1	6,9	6,0	0,5
EBCCCS	10	8,3	12,3	10,5	1,5
ASTAP	11	2,3	2,6	2,4	0,1
ASTAA	11	3,3	4,1	3,7	0,2
IFOST	11	93,2	117,6	102,8	7,7
IFOSH	11	90,3	118,0	101,0	9,0
<b>A.R.Madeira</b>					
DP	11	317,0	333,7	324,6	6,5
PD	11	62,3	77,1	70,1	5,1
CRBP	10	23,7	30,9	26,4	2,5
UR	11	6,9	18,1	12,0	4,1
AMBRE	9	855,1	902,4	875,0	14,3
DNFC	10	25,6	34,8	29,4	3,0
PHWIC	11	49,7	86,1	68,5	12,8
EBMOE	10	11,7	18,7	15,8	2,4
EBCCCS	10	4,0	7,7	6,2	1,4
ASTAP	11	2,9	3,1	3,1	0,1
ASTAA	11	5,6	6,1	5,9	0,2
IFOST	11	140,4	180,4	160,2	12,1
IFOSH	11	144,0	196,2	171,9	16,8

#### 4. RESULTS

The first four regression models presented intend to analyze which are the determinants to attract more tourists (national and foreign) and increase the profits obtained in tourist accommodations (total and hotels). These first models, allow testing the validity of hypotheses  $H_1$  to  $H_9$ .

**Table 3.** Model 1 (Dependent variable: ASTAP)

intercept	-3.443** (1.16)
DP	-0.002*** (0.0005)
PD	0.018* (0.099)

CRBP	0.067*** (0.001)
UR	-0.042*** (0.009)
AMBRE	0.004*** (0.001)
DNFC	-0.016** (0.006)
PHWIC	0.018*** (0.002)
EBMOE	0.107*** (0.016)
EBCCCS	-0.234*** (0.027)

Standard deviation between brackets,  $R^2=0.9854$ ,  $F=237.09***$ ,  $N=7$ ,  $t=8$

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

The residuals are normally distributed and are not autocorrelated.

In Model 1 we can see the variables PD, CRBP, AMBRE, PHWIC, and EBMOE contribute positively to explain ASTAP, and the variables DP, UR, DNFC, and EBCCCS contribute negatively to explain ASTAP.

**Table 4.** Model 2 (Dependent variable: ASTAA)

intercept	-8.534*** (2.01)
PD	0.083*** (0.018)
CRBP	0.0105*** (0.099)
UR	-0.067*** (0.022)
DNFC	-0.025*** (0.049)
PHWIC	0.049*** (0.005)
EBMOE	0.033*** (0.039)
EBCCCS	-0.24* (0.102)

Standard deviation between brackets,  $R^2=0.89$ ,  $F=602.65***$ ,  $N=7$ ,  $t=10$

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

The residuals are normally distributed and are not autocorrelated.

In Model 2 we can see the variables PD, CRBP and PHWIC contribute positively to explain ASTAA, and the variables UR, DNFC and EBCCCS contribute negatively to explain ASTAP.

**Table 5.** Model 3 (Dependent variable: IFOST)

intercept	-310.968** (85.16)
DP	-0.197*** (0.039)
PD	1.703** (0.547)

GEE	-2.841* (1.427)
CRBP	2.668*** (0.206)
UR	-2.088 (0.595)
AMBRE	1.51** (0.146)
PHWIC	7.4*** (1.0127)
EBMOE	7.4*** (1.027)
EBCCCS	-12.481*** (2.048)

Standard deviation between brackets,  $R^2=0.89$ ,  $F=456,725^{***}$ ,  $N=7$ ,  $t=10$

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

The residuals are normally distributed and are not autocorrelated.

In Model 3 we can see the variables PD, CRBP, AMBRE, PHWI and EBMOE contribute positively to explain IFOST and the variables DP, GEE, UR and EBCCCS contribute negatively to explain IFOST.

**Table 6.** Model 4 (Dependent variable: IFOSH)

intercept	155,91** (28.0228)
DP	0.329*** (0.069)
CRBP	3.458*** (0.331)
UR	-5.972*** (0.835)
DNFC	-3.355*** (0.541)
PHWIC	1.361*** (0.278)
EBCCCS	-19.0897*** (1.0127)

Standard deviation between brackets,  $R^2=0.809$ ,  $F=1776,893^{***}$ ,  $N=7$ ,  $t=10$

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

The residuals are normally distributed and are not autocorrelated.

In Model 4 we can see the variables DP, CRBP, and PHWIC contribute positively to explain IFOST, and the variables UR, DNF, PHWIC, and EBCCCS contribute negatively to explain IFOSH.

The results of these models allow us to verify that the population density can be attractive for the increase of non-resident tourists, as well as for the increase of tourist revenues. It is not the same regarding resident tourists, possibly because tourists residing in the country seek other types of tourism than city tourism. In this way, the  $H_1$  is partially validated (only for foreign tourists).

It is expected that the areas with the highest population density will also be those with the highest levels of crime, so hypothesis  $H_3$  is rejected. In other words, the results obtained suggest that, for the case of Portugal, the levels of crime do not influence the attraction of national or foreign tourists.

One factor that appears to be important for attracting tourists is the education of the population. Thus, hypothesis H<sub>2</sub> was validated. In the same sense, hypothesis H<sub>4</sub> is valid, where it was expected that regions with lower levels of unemployment become more attractive for national and non-national tourists. In turn, higher levels of income of the population are a determining factor to attract more resident tourists and also for the increase of gains obtained in the sector (partially validating hypothesis H<sub>5</sub>).

The H<sub>6</sub> hypothesis has not been validated. In other words, entrepreneurship does not influence tourist attraction. This may be related to the conclusions of previous studies and referred to in the literature review, which reveals that the regions of Portugal with industrial characteristics are the ones that least developed the tourism sector.

Two factors that are decisive for this sector of activity are the development and access of ICT, as well as improvements in the environment. Hypotheses H<sub>7</sub> and H<sub>8</sub> have been validated.

On the other hand, efforts to boost cultural and sports development do not stop being a determining factor in influencing the choices of national and foreign tourists, hypothesis H<sub>9</sub> having been rejected.

After analyzing the determinants of the attraction of national and foreign tourists, as well as the income obtained in this sector of activity, it is important to analyze in what aspects tourism may be contributing to the development of the regions. Models 5 and 6 allow us to analyze the determinants of this development, having been used as dependent variables the unemployment rate (Model 5) and the average income of the population (Model 6).

**Table 7.** Model 5 (Dependent variable: UR)

intercept	41.416 *** (7,257)
DP	0.042 *** (0.01)
PD	-0.176 ** (0.066)
CRBP	0.442** (0.12)
DNFC	-0.489*** (0.11)
EBCCCS	-2.076 *** (0.319)
ASTAP	-5.985* (3.039)
IHOST	0.149* (0.068)
IFOSH	-0.115* ( 0.049)

Standard deviation between brackets, R<sup>2</sup>= 0.6283, F= 348.52\*\*\*, N=7, t=10

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

The residuals are normally distributed and are not autocorrelated.



In Model 5 we can see the variables DP, CRBP and IFOST contribute positively to explain UR, and the variables PD, DNFC, EBCCCS, ASTAP and IFOSH contribute negatively to explain UR.

In Model 6 we can see the variables DP, EBCCCS, and IFOST contribute positively to explain AMBRE, and the variables PD, ASTAA, and IFOSH contribute negatively to explain AMBRE.

The results of Model 5, allow us to highlight that higher levels of education of the population, as well as higher levels of entrepreneurship and investments in culture and sport, are factors that contribute to the reduction of the unemployment rate in the regions. Instead, higher population density and higher crime rates appear to contribute to the increase in unemployment.

Regarding the average number of nights that tourists spend in tourist accommodations in the regions, it appears that tourists residing in Portugal seem to contribute to the reduction of unemployment. This is not the case for foreign tourists and, therefore, the  $H_{10a}$  hypothesis is partially validated. The  $H_{11a}$  hypothesis is also partially validated, given that only the income obtained by hotels has an impact on reducing the unemployment rate.

**Table 8.** Model 6 (Dependent variable: AMBRE)

intercept	898,456*** (0.346)
DP	0.346*** (0.008)
PD	-2.847*** (0.337)
EBCCCS	4.181*** (0.601)
ASTAA	-12.333*** (1.822)
IFOST	2.79*** (0.44)
IFOSH	-0.195*** (0.343)

Standard deviation between brackets,  $R^2=0.9879$ ,  $F=27928***$ ,  $N=7$ ,  $t=9$

\* p-value <0.1, \*\* p-value <0.05, \*\*\* p-value <0.01

The residuals are normally distributed and are not autocorrelated.

Finally, the results of Model 6, which aims to analyze the factors that contribute to the average increase in the income of the population in the regions of Portugal, suggest that the average number of nights that tourists stay in tourist accommodations does not contribute to the income of the population and in this way the  $H_{10b}$  hypothesis is not validated. In turn, the  $H_{11b}$  hypothesis is partially validated, given that the income obtained in most tutoring accommodation has a positive impact on the average income of the population. In other words, the results suggest that for each € 1 more per day obtained in tourists' stays, the average monthly income of individuals increases € 2.79.

## 5. CONCLUSIONS, LIMITATIONS AND HYPOTHESES FOR FUTURE RESEARCH

The study presented in this chapter highlights the importance of better understanding the impact of sociodemographic factors in attracting tourists. Likewise, the impact of tourism on the development of the regions was analyzed.

As expected, factors such as population density and efforts to improve the environment of each region, as well as providing better conditions and cultural and sporting attractions, are factors that contribute positively to the increase in the number of tourists and gains obtained with tourism. Equally, higher levels of education of the population, lower unemployment rates, and the higher average income of the resident population appear to contribute positively to tourism.

When analyzing the impact of this sector on the development of the regions, it is confirmed that in general there is a positive relationship between tourism and the development of the regions. However, given the current pandemic situation, it is essential to deepen the knowledge about the degree of economic dependence of the tourism sector, mainly regarding foreign tourists. This is because the current pandemic situation is leading to a paradigm shift in terms of individuals' choices about their touristic options.

The regions of Portugal that have shown the greatest results in tourism are the Autonomous Region of the Azores, the Autonomous Region of Madeira, and the Algarve. These are the regions that attract the most tourists. The Metropolitan Area of Lisbon falls into this group when it comes to assessing revenues from tourism, possibly being one of the most expensive regions in the country.

The study presented has as main limitations the fact that it is not yet possible to contemplate the conditions resulting from the current pandemic situation. This information is extremely useful to consider in a future study. It was not possible to carry out this study with analysis by NUTS III, which limits the information obtained. This study is part of a work in progress and the possibility of trying to relate the impact of the tourism sector with other equally important sectors of economic activity should be considered.

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# TOURISM AS A SOURCE OF TAXATION – THE PORTUGUESE CASE

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**Abstract:** *This research analyzes the financial contribution generated by the activity of tourism to the general budget of the state of Portugal through the taxes collected on the profits of companies linked to tourism and on VAT that tourists pay in Portugal. We concluded, in the end, that the financial values generated for the state budget are of great importance and have been growing.*

**Keywords:** *Tourism, Taxes, Portuguese national budget, VAT, Corporate income tax.*

## 1. INTRODUCTION

The phenomenon of world tourism has been growing worldwide and with it, all the economic evolution is supported by the multiple activities that support it. This study aims to understand how tourism in Portugal generates tax revenues that contribute to obtaining income for the annual budgets of the Portuguese state (J.J. Gomes Canotilho & Vital Moreira, 2007 p. 1088).

The methodology applied to this analysis focuses only on two taxes and is exclusively supported by statistical data from highly credible institutions in Portugal. Thus, we can identify it as a mixed methodology (qualitative and quantitative), using research, analysis, and interpretation of scientific data.

## 2. THE PANORAMA OF TOURISM IN PORTUGAL – STATISTICAL ANALYSIS

Tourism in Portugal has been growing, a fact that has great implications for the balance of transactions, so this subject is being analyzed as a percentage of the Gross Domestic Product – GDP – national or in monetary values.

Pay attention to “*Table 1*” to realize that concerning the Portuguese GDP, the monetary balance – in millions of Euros – between the amounts collected within tourism entering Portugal and that “goes” from Portugal to other parts of the world, is favorable to Portuguese coffers between 5,171.99 million Euros in 2011 and 13,130.87 million Euros in 2019, meaning there was a positive increase of 253.88% in an eight-year period, which represented 6.2% of the national GDP.

**Table 1.**

Years	Travel and Tourism Balance as % of GDP			Balance between exports and imports of Travel and Tourism – in millions of Euros		
	Balance	Exports	Imports	Balance	Exports	Imports
2011	2,9	4,6	1,7	5.171,99	8.145,56	2.973,57
2012	3,4	5,1	1,8	5.659,57	8.605,54	2.945,97

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2013	3,6	5,4	1,7	6.218,29	9.156,98	2.938,69
2014	4,1	5,9	1,8	7.156,89	10.284,20	3.127,32
2015	4,6	6,5	1,9	8.272,63	11.605,21	3.332,58
2016	5,0	6,9	1,9	9.261,18	12.811,41	3.550,23
2017	5,9	7,9	2,1	11.500,36	15.550,37	4.050,01
2018	6,1	8,3	2,2	12.469,11	17.053,55	4.584,44
2019	6,2	8,6	2,5	13.130,87	18.430,72	5.299,86

Source – PORDATA – <https://www.pordata.pt/DB/Portugal/Ambiente+de+Consulta/Tabela>

## 2.1. Analysis of the number of the accommodation establishments

When we started to analyze the *source* of establishments dedicated to tourist accommodation, namely, hotels, inns, guest houses, and local accommodation, in 2019 Portugal had 6.833 units, see “Table 2”, special attention is given to the North of Portugal with 1.785 units, and the metropolitan area of the capital – Lisbon with 1.155 units. These figures are a reflection of the exponential growth that Portugal has experienced, especially in the last decade, the growth of tourism in Portugal.

**Table 2.** Establishments by type and regions – Units: Number

REGION	Total of Touristic Accommodation	Total Hotel Trade	Total TA e THT	Local Housing
<b>PORTUGAL</b>	<b>6 833</b>	<b>1 923</b>	<b>1 687</b>	<b>3 223</b>
<b>CONTINENTE</b>	<b>6 048</b>	<b>1 679</b>	<b>1 522</b>	<b>2 847</b>
North	1 785	419	641	725
Center	1 365	381	400	584
MA Lisbon	1 155	338	23	794
Alentejo	753	132	355	266
Algarve	990	409	103	478
<b>AR AZORES</b>	<b>404</b>	<b>100</b>	<b>108</b>	<b>196</b>
<b>AR MADEIRA</b>	<b>381</b>	<b>144</b>	<b>57</b>	<b>180</b>

Source – Instituto Nacional de Estatística – Estatísticas do Turismo: 2019. Lisboa: INE, 2020.  
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## 2.2. Analysis of income generated by accommodation establishments

Regarding the level of billing generated by accommodation establishments in Portugal, which therefore contribute greatly to the balance of exports in Portugal, in relation to 2019, it is shown in “Table 3” below, which shows us the total amount of earnings generated by those establishments amounted to 4,295,814 TEUR.

It should be noted that the “Metropolitan Area of the city of Lisbon” stood out with 1,372,192 TEUR, followed closely by the “Algarve” with 1,225,746 TEUR.

**Table 3.** Total Income by type of establishments and by regions – Units: Thousand euros

Region	GLOBAL TOTAL Touristic Accommodations	Total Hotel Business	Total Touristic Apartments	Total Touristic Villages	Total Guest-houses and Farms in Madeira Island	Total TER – Tourism in Rural Area and TH – Housing Tourism	Total AL-Local Accommodation
<b>PORTUGAL</b>	<b>4 295 814</b>	<b>3 795 470</b>	<b>183 065</b>	<b>138 602</b>	<b>79 683</b>	<b>118 711</b>	<b>381 634</b>
<b>CONTINENTE:</b>	<b>3 771 242</b>	<b>3 310 728</b>	<b>171 016</b>	<b>...</b>	<b>58 998</b>	<b>105 529</b>	<b>354 986</b>
<b>1 – North</b>	<b>642 935</b>	<b>527 571</b>	<b>4 771</b>	<b>2 323</b>	<b>15 716</b>	<b>35 487</b>	<b>79 877</b>



<b>2 – Center</b>	355 414	286 503	2 806	8 216	9 303	24 011	44 900
<b>3 – MA Lisboa</b>	1 372 192	1 216 794	22 224	14 927	18 474	2 036	153 362
<b>4 – Alentejo</b>	174 956	125 931	4 774	...	9 273	32 328	16 697
<b>5 – Algarve</b>	1 225 746	1 153 929	136 441	104 487	6 232	11 666	60 151
<b>AR AZORES</b>	<b>117 115</b>	<b>104 512</b>	<b>6 740</b>	...	...	<b>4 193</b>	<b>8 410</b>
<b>AR MADEIRA</b>	<b>407 457</b>	<b>380 229</b>	<b>5 309</b>	...	...	<b>8 989</b>	<b>18 238</b>

**Source** – Instituto Nacional de Estatística – Estatísticas do Turismo: 2019. Lisboa: INE, 2020.

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These *Tables* give us a perspective of the importance of tourism in Portugal, showing us that these services have generated, and continue to generate, in Portugal a great source of monetary income for the country.

### 3. TAX REVENUE GENERATED BY TOURISM – STATISTICAL ANALYSIS

The aspects we have shown above, on the monetary importance, and not only, of tourism in Portugal, now leads us to analyze the importance that tourism has to generate revenue through taxes for the annual budget of the Portuguese State (José Joaquim Teixeira Ribeiro, 1997, p. 49).

In this respect, we will look at two taxes in particular. Firstly, we are going to analyze the “Corporate Income Tax – IRC” paid by corporate companies (J.J. Gomes Canotilho & Vital Moreira, 2007 p. 1100) in the area of “Accommodation, Restaurants and Similar”, that is, concerning the tax profit that these companies have annually, we will proceed to analysis through the statistical data contained in the database of the Portuguese Tax and Customs Authority – AT, to understand how much these business companies contributed to this income tax in the 2016 to 2018 three-year period. The triennial analysis relates to the fact that AT has its statistical data combined in this tax in three years.

Then, and bearing in mind that the final consumers of this sector of “Accommodation, Restaurants and Similar”, which include tourists par excellence, support “Value Added Tax – VAT on all their purchases, we will make another analysis which will affect the collection of VAT made by the State in this sector of “Accommodation, Restaurants and Similar”.

### 4. ANALYSIS OF CORPORATE INCOME TAX

The first aspect of our analysis focuses on the “Accommodation, Restaurants and Similar” activities carried out in Portugal by business companies, and that is to say, they are par excellence the legal organizational form used by entrepreneurs in the national panorama of economic actors that are dedicated to those activities.

#### 4.1. Analysis of the number of annual income tax returns subject to Corporate Income Tax

Based on the statistical elements contained in the database of the „Tax and Customs Authority – AT”, consultable on its website under the title „Statistics” and in the entry „Statistics of IR”, and in the case that interests here in „Corporate Income Tax” – “2016/2018”-“Declarations mod. 22 – fiscal years 2016/2018” (Autoridade Tributária e Aduaneira – AT – [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)) we will make a comparative analysis between the total number of annual income tax returns of

the Corporate Income Tax, (João Ricardo Catarino & Vasco Branco Guimarães, 2018, p. 293) presented by all companies in Portugal and those that only dedicate themselves to the activity of “Accommodation, Restaurants and Similar” – *Table 4*.

**Table 4.** Annual Income Statements of Corporate Income Tax – Global Total

Designation/Year/Percentage	2016	%	2017	%	2018	%
Accommodation, Restaurants and Similar	41 070	8,8%	42 911	9,0%	45 314	9,2%
Global Total	464 780	100,0%	475 119	100,0%	492 935	100,0%

Source: Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

Table 4 shows us two important facts. Firstly, it appears that there is about nine percent of all companies that carry out the activity “Accommodation, Restaurants and Similar” and, through this aspect, has the potential to be linked to tourism. Secondly, we find that in those three years there was an increase of 0.2% in business companies.

Despite this total number, not all of the declarations presented mean that the taxpayers of those activities have had taxable profit, that is, we have companies that have presented “tax losses” (João Ricardo Catarino & Vasco Branco Guimarães, 2018, p. 347) and others that had “tax profit”, that is, that had earnings that were effectively subject to the Corporate Income Tax, that is, they had “taxable income” (José Casalta Nabais, 2011, p. 570).

It is therefore important to know, among that totality of companies, which were the ones that in the end submitted annual income tax returns in those two situations. Let’s see then – *Table 5*.

**Table 5.** Annual Income Tax Returns – of Corporate Income Tax – with “Tax Loss”

Designation/Year/Percentage	2016	%	2017	%	2018	%
Accommodation, Restaurants and Similar	18 034	12,6%	17 185	12,0%	18 513	12,2%
Global Total	143 202	100,0%	143 633	100,0%	152 001	100,0%

Source: Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

It should be noted that among all the companies that had “Tax Losses”, about 12% – twelve percent – of them were dedicated to the activity of “Accommodation, Restaurants and Similar”. If from here we start to analyze companies whose annual income tax returns had “tax profit” effectively taxed, that is, their income was effectively subject to Corporate Income Tax, that is, they had “taxable income”, then we have the following – *Table 6*.

**Table 6.** Annual Income Tax Returns – of Corporate Income Tax – with “Taxable Income”

Designation/Year/ Percentage	2016	%	2017	%	2018	%
Accommodation, Restaurants and Similar	15 660	6,9%	18 393	7,6%	19 580	7,8%
Global Total	228 095	100,0%	240 690	100,0%	251 113	100,0%

Source: Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

In order to better understand the number of companies that actually had “taxable income” and to differentiate them from those that “tax loss” or “neutral tax income”, we designed a summary table – *Table 7*.

**Table 7.** Annual Income Tax Returns – of Corporate Income Tax – Summary Table

Accommodation, Restaurant and Similar						
Designation/Year	2016	%	2017	%	2018	%
<b>Global Total of the Statements</b>	41 070	100	42 911	100	45 314	100
<b>With “Taxable Income”</b>	15 660	38,1%	18 393	42,9%	19 580	43,2%
<b>With “Fiscal Loss”</b>	18 034	43,9%	17 185	40,0%	18 513	40,9%
<b>With “Null Taxable Income”</b>	7 376	18,0%	7 333	17,1%	7 221	15,9%

Source: Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

Something catches our attention in this *Table*. In fact, less than half of those societies had “taxable income”, that is, in reality it varied between a percentage of 38.1% to 43.2%.

#### 4.2. Analysis of net income for the years subject to Corporate Income Tax – Amounts in millions of Euro

Having arrived here, it is now important to know the effective accounting results and necessary corrections allowed by tax legislation and concretized on the accounting result, in order to know effectively in what monetary values those “tax losses” and the concrete “taxable amounts” were effectively generated Corporate Income Tax. Let us start by quantifying the amounts included in the annual income tax returns and which have been translated into “tax losses” – *Table 8*.

**Table 8.** Amounts declared in “Tax Losses” – in millions of Euros

Designation/Year/ Percentage	2016	%	2017	%	2018	%
<b>Accommodation, Restaurants and Similar</b>	505	3,5%	467	4,6%	447	3,6%
<b>Global Total</b>	14 307	100,0%	10 065	100,0%	12 336	100,0%

Source: Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

If we move from here to those companies that in their annual income declarations declared “Taxable Matter” and therefore effectively calculated a corporate income tax, then we have the following *table* that shows the real values, namely – *Table 9*.

**Table 9.** Amounts declared in “Taxable Matter” – in millions of Euros

Designation/Year/ Percentage	2016	%	2017	%	2018	%
<b>Accommodation, Restaurants and Similar</b>	656	3,1%	917	4,0%	1 066	4,3%
<b>Global Total</b>	21 403	100,0%	22 746	100,0%	24 984	100,0%

Source: Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

Table 9 shows us that these “Accommodation, Restaurants and Similar” activities generated “Collectible Matter” values that varied between 656 million Euros and 1.066 million Euros and that, although slowly, has been growing percentage when we do it in relation to the total values.

#### 4.3. Analysis of Corporate Income Tax effectively calculated – Amounts in millions of Euros

Once here, it is important to know how many companies those are that effectively liquidated Corporate Income Tax, that is, among all those that submitted their annual income tax returns, which were those that effectively endured final tax.

Our analysis focuses on two aspects. First, we will analyze the total number of declarations, and then we will analyze the monetary value in which this charge was translated. Let us examine, then, the quantification of the declarations that contained settled Corporate Income Tax – *Table 10*.

**Table 10.** Annual income tax returns with “settled Corporate Income Tax”

Designation/Year/ Percentage	2016	%	2017	%	2018	%
Accommodation, Restaurants and Similar	10 800	6,6%	12 988	7,4%	14 632	7,8%
<b>Global Total</b>	162 824	100,0%	175 151	100,0%	188 463	100,0%

**Source:** Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

Table 10 under analysis shows us that there has been a growing number of companies that present their annual income tax returns in which they effectively liquidate Corporate Income Tax, that is, in which they effectively present a Corporate Income Tax result in favor of the State. If we start from here for the effective quantification of the Corporate Income Tax that is calculated in those statements, we now have the following *Table 11*.

**Table 11.** The total value of “settled Corporate Income Tax” – “Collection” – in millions of Euros

Designation/Year/ Percentage	2016	%	2017	%	2018	%
Accommodation, Restaurants and Similar	115	2,7%	166	3,7%	200	4,0%
<b>Total of Corporate Income Tax settled</b>	4 333	100,0%	4 493	100,0%	4 991	100,0%

**Source:** Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

#### 4.4. Analysis of the average Corporate Income Tax rate effectively applied

After knowing how many “Accommodation, Restaurants and Similar” companies actually contributed to the expenses of the Portuguese State budget with Corporate Income Tax and also knowing the total monetary values of this contribution, it remains now to identify the effective average rate that represents this contribution in the overall calculation.

If we look at *Table 12*, below, we find out that the “general average rate” of all Taxable Persons in IRC and which results from the division of the total paid IRC and the income of those companies that were subject to Corporate Income Tax, was between 20.1% and 21.4%, however, from that same Table we learn that the companies dedicated to “Accommodation, Restaurants and Similar”, contributed with a weighted average rate lower than the general average, that is, for the companies engaged in this activity, the “*average effective rate*” varied between 20.5% and 20.8%, which means that they were below those between 0.4% and 0.6% in the years 2016 and 2018, however in the fiscal year 2017 these companies endured an “*average effective rate*” 0.4% higher than that which was the general average.

**Table 12.** Corporate Income Tax “Average” effectively supported by the taxable persons

Designation/Year/Percentage	2016	2017	2018
Accommodation, Restaurants and Similar	20,8%	20,5%	20,7%
<b>Global Average Tax</b>	21,4%	20,1%	21,1%

**Source:** Autoridade Tributária e Aduaneira – AT – Website [https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas\\_ir/Pages/Estatisticas\\_IRC.aspx](https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRC.aspx)

## 5. ANALYSIS OF VALUE ADDED TAX – VAT

In the Portuguese legal system, there is a general consumption tax (Jónatas E.M. Machado & Paulo Nogueira da Costa, 2016, p. 374), which is nothing more than an indirect taxation system, that is, it is a tax that intends to tax final consumption.

### 5.1. The importance of VAT in the Global State Budget

If we take into account the total final value of the VAT entered in the State Accounts (Autoridade Tributária e Aduaneira – <https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/IVA/Pages/default.aspx>) and that with it the State effectively met budgetary expenditures, we see in *Table 13* that VAT is the tax that contributes the most to the State budget, as it represented in 2011-2019 between 36.5% to 39.9% of the total of the tax revenue actually collected.

**Table 13.** VAT revenue that entered into the General State Account

Year	VAT / Millions of Euros	% of Total Tax Revenue	% of GDP
2011	13 051,6	38,0	7,4
2012	12 800,1	39,9	7,6
2013	13 249,1	36,5	7,8
2014	13 812,3	37,2	8,0
2015	14 844,3	38,2	8,3
2016	15 082,5	37,5	8,1
2017	16 001,4	37,9	8,2
2018	16 670,3	37,6	8,2
2019	17 843,1	38,8	8,4

Source: Autoridade Tributária e Aduaneira Website <https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/IVA/Pages/default.aspx>

### 5.2. The importance of “Accommodation, Restaurant and Similar activities” in VAT collection

Considering the fact that we mentioned above, the VAT that consumers pay when using “Accommodation, restaurants and similar services” is of greater importance, fitting here, par excellence, all tourist activity, whether internal or international.

**Table 14.**

Year	TOTAL of “Gross Revenue” of VAT / From VAT to national level		TOTAL of “Gross Revenue” of VAT “Accommodation, restaurants and similar”		
	Millions of Euros	Year-on-year of change in %	Millions of Euros	Year-on-year of change in %	% Concerning of the National Total
2011	17 499,8	5,5	299,8	-3,4	1,7%
2012	17 328,4	-1,0	591,2	97,2	3,4%
2013	17 471,8	0,8	618,2	4,6	3,5%
2014	17 931,7	2,6	676,3	9,4	3,8%
2015	18 494,4	3,1	764,0	13,0	4,1%
2016	19 228,8	4,0	639,3	-16,3	3,3%
2017	20 698,1	7,6	507,6	-20,6	2,5%
2018	22 579,1	9,1	564,6	11,2	2,5%
2019	23 939,2	6,0	636,8	12,8	2,7%

Source: Autoridade Tributária e Aduaneira Website <https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/IVA/Pages/default.aspx>

If we look at *Table 14*, we see that in the last nine years the tax revenue generated by VAT has ranged between 1.7% to 4.1% of the total VAT charged at the national level, representing monetary values ranging from 299.8 to 764,0 million Euros.

It should be noted, for example, that VAT revenue in this sector had a growth rate in the years 2018 and 2019 of 11.2% and 12.8%, respectively, which demonstrates the importance of tourism.

### 5.3. The weighted average VAT rate applied at the national level

Finally, here is one more statistic – “*Table 15*”, which, despite not being exclusively related to tourism, as it is related to all business activity, whether, in the primary, secondary or tertiary sectors, the weighted average rate VAT effectively applied to all activities, fluctuated in the years 2011 to 2018, between 16.4148% to 18.5932%.

**Table 15.**

Year	National weighted average rate
2011	16,4148%
2012	18,3625%
2013	18,5932%
2014	18,0073%
2015	17,6004%
2016	17,5835%
2017	17,0360%
2018	16,9947%
2019	It's not determinated yet.

**Source:** Autoridade Tributária e Aduaneira Website <https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/IVA/Pages/default.aspx>

## 6. CONCLUSION

The data collected from national statistical sources demonstrate beyond doubt that the Corporate Income Tax generated by tourism has been growing steadily, already representing a value of 4% of the national total.

On the other hand, the VAT generated by the “Tourism Industry” has also had equally sustained growth, and that growth in 2019 is already 12.8% compared to the previous year.

Faced with these data, the conclusion can only be one. Tourism, in addition to representing an important source of revenue in the Portuguese balance of exports and imports, is also a good source of tax collection for Portugal’s annual budget.

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# ARE THE MEDITERRANEAN COUNTRIES WITH TOURISM PRICE INDICES IN THE PURCHASING POWER PARITY ZONE?

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**Abstract:** *This chapter provides a detailed analysis of the validity of PPP for a cluster of 15 Mediterranean countries. The research has four original contributions. First, it uses two price indicators: a consumer price index for all items and a consumer price index for hotels and restaurants including catering and accommodation services. Second, it tests the exchange rate theory regarding two numeraire currencies. Third, due to the cyclicity of the tourism sector the study examines the significance of PPP by considering the impact of the Great Recession. Fourth, in order to test the mean reversion hypothesis, it uses a comprehensive set of panel unit root tests. The authors provide ample estimates in favour of PPP proposition. The evidence of mean reversion of real exchange rates is stronger (1) with price indices for hotels and restaurants, (2) in cases when the calculations are performed for EUR rates, and (3) for the post-Great Recession period.*

**Keywords:** *Price competitiveness, Tourism sector, Panel unit root tests, Consumer price indices for hotels and restaurants.*

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## 1. INTRODUCTION

One of the most important building blocks of open economy models is the theory of purchasing power parity (PPP). It is also one of the most intensively evaluated topics in empirical economics and the nature of the relationship between exchange rates and consumer prices are often subject of fierce theoretical discussions. The rigorous version of the PPP anticipates that the ratio of price levels of countries determines their exchange rate. In general, the absolute PPP therefore predicts that the price levels of observed countries should be equal when calculated in terms of the same currency. The relative PPP on the other side implies that shifts in the exchange rates are equal to the changes in the national price levels. Following this notion, changes in relative national price levels can serve as a fairly accurate approximation of exchange rate movements. The key driving force behind the PPP theory is international goods market arbitrage – the process of competition which eliminates significant price differences among markets. Because the arbitrage on goods markets takes time, the deviation of exchange rates from the PPP predicted levels can be substantial in the short run, although in the long run the convergence to the PPP determined levels is empirically documented. According to the latest estimates by Rabe and Waddle (2020), for example, for the past five decades, there is evidence of an increase in the speed of adjustment of international prices toward PPP levels. A study of commodity price data over seven centuries by Froot et al. (2019), however, reveals that goods markets can be frequently segregated and thus the process of arbitrage defective.

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There are several possible factors responsible for the violation of PPP. Among others, Taylor and Taylor (2004) stress the importance of high transport costs, taxes, tariffs and nontariff barriers, which can block an effective price arbitrage. The presence of differentiated, non-substitutable goods and the inclusion of non-tradable goods into price indices further complicate the PPP standard. The slow speed of adjustment of real exchange rates toward PPP equilibrium rates has been frequently attributed to a nonlinear adjustment of exchange rates. Taylor (2006) elaborates a diverse set of factors causing nonlinear dynamics of exchange rates; for example, market expectations about the appropriate exchange rate adjustment may trigger heterogeneous interactions of traders, and under fundamental exchange rate misalignments monetary policy actions can spur important coordination effects among the main traders. In addition to studies that examine the short-run factors causing a departure from equilibrium exchange rates and to those which investigate the process of mean reversion in itself, the possible variability of the long-run equilibrium real exchange rate remains a further research option in the PPP puzzle. Taylor and Taylor (2004), for example, examine scenarios, where shifts in the long-run equilibrium real exchange rate can be caused by productivity shocks, due to profound institutional and structural transformation of economies or due to the shocks in economic policy.

This study aims to extend the empirical evidence about PPP proposition by focusing on a sample of 15 Mediterranean countries. These countries have some interesting characteristics. First, they all belong to the group of open economies, strongly integrated in the global production and trade flows. The group's lowest trade to GDP ratios are in Egypt (48%), Algeria (52%) and Israel (58%), whereas in most open Mediterranean economies the share of exports and imports of goods and services in GDP amounts to 261% in Malta, 160% in Slovenia and 143% in Cyprus (The World Bank, 2020). Second, the aforementioned countries are well recognized on the world tourism market. The tourism sector can represent a significant portion of the countries' economic power as well as it can be an important driver of international trade in services. The relative strength of the country's tourism sector is determined by three factors: its geographical location, the development of infrastructure and the established price competitiveness. The tourism sector with its many growth enhancing effects and spillovers on productivity, employment, income and on the balance of payments is an important vehicle for economic development and prosperity in the Mediterranean countries. Consequently, the contribution of the travel and tourism industry to GDP of these countries is significant. At the bottom of the ladder are Israel (6%), Algeria (7%) and France (10%), whereas in Albania (27%), Croatia (25%), Cyprus (23%) and Greece (21%) the travel and tourism sector adds the largest chunk to country's GDP (Knoema, 2020). Third, the Mediterranean countries participate in economic integrations with various levels of complexity. Some of them nurture pure trade and commercial links with the European Union; Croatia, for example, is a member of the European Union but retains its monetary sovereignty, while some countries in our sample embraced even higher level of economic integration by officially adopting the single European currency. And finally, the Mediterranean group consists of countries with indicative institutional disparities as well as with pronounced differences in their levels of economic development.

Our research has four original contributions. First, it uses two price indicators: consumer price index for all items and consumer price index for hotels and restaurants including catering and accommodation services. Second, it tests the PPP proposition regarding two numeraire currencies (EUR, USD). Third, due to the cyclicity of the tourism sector and its influence on countries' economy the present study examines the validity of PPP by considering the impact of the Great Recession. Therefore, after testing the PPP theory for the whole period (February

1998-February 2020), the analysis is divided into the pre-crisis period (up to December 2007) and the post-crisis period (from July 2009 on). Fourth, in order to test the mean reversion hypothesis of real exchange rates we employ a comprehensive set of panel unit root tests: Im, Pesaran and Shin test, ADF-Fisher test, PP-Fisher test, Levin, Lin and Chu test, and Breitung test.

The study is divided into the following seven sections. After the introduction, the most relevant PPP studies for the targeted group of Mediterranean countries are reviewed in the second section. Besides a concise description of the PPP theory, the third section also presents the used econometric methodology. The description of the relevant data set is given in the fourth section, whereas the empirical results and possible extensions of the current research are discussed in separate sections. The main conclusions of the study are summarized in the final section.

## 2. OVERVIEW OF LITERATURE

A review of the recent empirical literature on PPP shows that analysts try to apply different research strategies for the verification of this exchange rate theory. Adoption of improved, alternative methodological approaches, development of new estimation techniques, testing of larger data sets, examining long-span data on exchange rates and prices, and extending the analysis on a large number of countries are all feasible options in search for the PPP. Despite comprehensive research work, the evidence on PPP remains inconclusive (Taylor, 2006). The strengthening globalization, increasing competition from developing countries and their consequent economic expansion, as well as the growing trade with services motivated the experts to evaluate this exchange rate concept not just for major developed countries but also for various groups of emerging economies. In this section, we briefly present those relevant PPP studies which either directly cover only the group of Mediterranean countries or at least include a significant number of these countries in the research procedure.

In one of the early attempts, without an explicit test of PPP, Laureti (2001) provided statistical evidence of the correlation between changes in the exchange rates (domestic currency/ecu) and inflation in 12 Mediterranean countries. The results imply that with the growing integration of Mediterranean economies with the European Union there is a circumstantial evidence of PPP-type adjustment of exchange rates. Camarero et al. (2006) scrutinized the real effective exchange rates of 10 Mediterranean countries with the European Union from 1979 to 2002. Only after allowing for structural breaks and nonlinearities in the specification, the PPP could be confirmed for 5 Mediterranean economies.

The exchange rate series of Mediterranean countries are frequently combined with data of other countries to examine the equilibrium parity conditions on a larger sample of countries. Bahmani-Oskooee and Hegerty (2010), for example, tested 123 countries' bilateral exchange rates against the US dollar. Although the nominal exchange rates and the relative price levels were found to be cointegrated for the majority of countries in the sample, only in few cases are the restrictions on coefficients for PPP achieved. Results from cointegration analysis coupled with testing of symmetry and proportionality conditions in Arize et al. (2015) offer substantially more support for the long-run relationship between nominal exchange rates, domestic and US price indices in 116 economies. Conclusive evidence about the empirical fulfillment of the PPP theory is additionally presented in Ramajo and Ferré (2010), and Bahmani-Oskooee et al. (2014). Both studies operate with data of members of the Organisation for Economic Co-operation and Development and adopt a battery of empirical techniques ranging from individual and

panel unit root tests, panel KSS unit root tests with a Fourier function to individual and panel cointegration tests. Not all studies with large-scale samples of countries have gained outcomes favourable to PPP. Su et al. (2014) examined monthly data on real effective exchange rates for 61 (including the Mediterranean) countries from 1994 to 2012. After considering heteroscedasticity and nonlinearity, the authors have proved that the real effective exchange rates for the majority of economies under observation are nonstationary.

Thorough investigation of the PPP dictum for the Middle East and North African countries is reported by Bahmani-Oskooee and Kandil (2007), and Kula et al. (2011). In Bahmani-Oskooee and Kandil (2007), the real effective exchange rate series for 14 the Middle East and North African economies are evaluated with the KPSS test and the parity conditions are accepted in around half of the cases observed. The authors' estimations also show that in many of these countries nominal depreciation of exchange rates spills into real depreciation in the short-run as well as in the long-run. On the other hand, Kula et al. (2011) apply the Lagrange Multiplier unit root test for official and black market exchange rates of 13 the Middle East and North African countries. After incorporating structural breaks in the data series from 1970 to 1998, the presence of mean reversion is established in 4 official exchange rates and in 5 black market exchange rates.

Koedijk et al. (2004) tested the characteristics of exchange rates of 10 euro area economies for the period 1973-2003 and found evidence in favour of PPP for the full panel of real exchange rates. For the period 1996-1999 Lopez and Papell (2007) can reject the unit root hypothesis within the euro area and between the euro area and other industries as well as other European Union countries. They report about stronger PPP links within the euro group than between the euro area and other European and Mediterranean countries. Giannellis and Papadopoulos (2010) also provided evidence that in 1980-2006 the majority of tested real exchange rates of 14 Eurozone countries followed an adjustment path consistent with PPP. Similar findings are reported in Emirmahmutoglu and Omay (2014). Using a sequential panel selection method in ESTAR tests for a sample of period 1988-2013, the authors proved the existence of nonlinear stationarity of quarterly real exchange rates for 8 out of 15 European Union members against the US dollar.

In Zhou and Kutan (2011) the results of stationarity of real exchange rates for European Union countries are sensitive to sample period changes and the readjustment of real exchange rates often followed a nonlinear path. The PPP hypothesis could not be corroborated for original members of the Eurozone neither between 1973-2009 nor in the subperiod after the official formation of the Eurozone area in the paper written by Christidou and Panagiotidis (2010). Very much in line with these results are also the findings of Wu and Lin (2011), and Huang and Yang (2015). The quoted authors verified the mean-reversion of real exchange rates against the US dollar before the adoption of the euro but failed to reject the hypothesis of a unit root after the introduction of the single European currency.

Among studies that focus exclusively on new members of the European Union and are relevant for our current research, we highlight the work of Koukouritakis (2009), Boršič et al. (2012) and Bekő et al. (2012). Koukouritakis (2009) analysed the theory of PPP determined exchange rates for twelve new European Union members using Johansen cointegration methodology, but he was able to confirm the long-run PPP concerning The Eurozone only for Bulgaria, Cyprus, Romania and Slovenia. From the sample of twelve new European Union countries, Boršič et al.



(2012) rejected the unit root hypothesis for five countries based on the SURADF test, whereas Bekő et al. (2012) utilizing nonlinear unit root tests based on the ESTAR model locate nine cases of real exchange rates vis-à-vis the euro with stationary properties.

Recently, Papell and Prodan (2020) introduced a methodology that is robust to small departures from the standard unit root model on the applicable data from 1870 to 2013 for 16 developed economies. Two main findings can be derived from the study that examines long-run co-variability between nominal exchange rate changes and differences in inflation rates. First, according to the results, the long-run PPP in reference to the US dollar cannot be rejected for 9 countries in the surveyed sample. And second, the PPP-type mechanism is stronger in countries with high inflation dynamics and high depreciation rates.

### 3. THE THEORY OF PPP AND ECONOMETRIC METHODOLOGY

According to Froot and Rogoff (1995) the PPP can be formally stated as:

$$e_t = \alpha_0 + \alpha_1 p_t + \alpha_2 p_t^* + \xi_t \quad (1)$$

where  $e_t$  denotes the logarithm of nominal exchange rates,  $p_t$  stands for the logarithm of domestic price index and  $p_t^*$  for the logarithm of foreign price index. The error term  $\xi_t$  represents deviations from PPP. The nominal exchange rates are defined as the price of foreign currency in the units of domestic currency.

This section assesses the characteristics of real exchange rates taking into account the strict version of PPP in Equation 1, where  $\alpha_0=0$ ,  $\alpha_1=1$  and  $\alpha_2=-1$ . The changes in relative prices should be eliminated by the changes in nominal exchange rates. Thus, the real exchange rates series are expected to be stationary, with no unit root, which indicates that the real exchange rates are constant over the long-run (Parikh & Wakerley, 2000).

Panel unit root procedures are tested in order to find evidence for validity of PPP. As described in Bekő and Boršič (2018) the model applies the following AR(1) process for panel data:

$$y_{i,t} = \rho_i y_{i,t-1} + X_{i,t} \delta_i + \varepsilon_{i,t} \quad (2)$$

where  $i$  denotes  $N$  cross-section units observed over periods  $t=1, 2, \dots, T_i$ ,  $X_{i,t}$  presents exogenous variables in the model (any fixed effects or individual trends),  $\rho_i$  stands for autoregressive coefficients, while  $\varepsilon_{i,t}$  symbolizes errors, which are assumed as mutually independent idiosyncratic disturbance. Panel of  $y_i$  is weakly stationary if the absolute value of  $\rho_i$  is less than one. On the other hand,  $y_i$  contains a unit root if the absolute value of  $\rho_i$  is 1. There are two assumptions about the  $\rho_i$  in panel unit root tests in our analysis. Im et al. (2003), Fisher ADF and Fisher PP tests' (Maddala & Wu, 1999; Choi, 2001) procedures assume individual unit root processes, meaning that  $\rho_i$  vary across cross-sections. Levin et al. (2002) and Breitung (2000) approaches deal with common unit root processes, where there are common autoregressive coefficients across cross-sections ( $\rho_i=\rho$ ) for all  $i$ . According to Boršič and Bekő (2018) the preceding subsections summarize the main specific attributes of individual panel unit tests used in this study.

### 3.1. Main attributes of Im, Pesaran and Shin test

Im et al. (2003) estimate individual ADF regression for each cross-section taking into account individual unit root processes:

$$\Delta y_{i,t} = \alpha y_{i,t-1} + \sum_{j=1}^{p_i} \beta_{i,j} \Delta y_{i,t-j} + X'_{i,t} \delta + \varepsilon_{i,t} \quad (3)$$

with the null hypothesis of

$$H_0 : \alpha_i = 0, \text{ for all } i \quad (4)$$

and the alternative hypothesis determined by:

$$H_1 : \begin{cases} \alpha_i = 0 & \text{for } i = 1, 2, \dots, N_1 \\ \alpha_i < 0 & \text{for } i = N_1 + 1, \dots, N \end{cases} \quad (5)$$

In Equation 6  $\bar{t}$  stands for the average of the t-statistics for  $\alpha_i$  from individual ADF regressions:

$$\bar{t} = \frac{1}{N} \sum_{i=1}^N t_i \quad (6)$$

Im et al. (2003) provide procedure to standardize the  $\bar{t}$ -statistic and empirically demonstrate that the new statistic W is asymptotically normally distributed.

### 3.2. Main attributes of Fisher ADF and Fisher PP tests

Based on the results of Fischer (1932), Maddala and Wu (1999) and Choi (2001) developed tests that integrate the individual p-values. In Equation 7  $\pi_i$  presents the p-value from individual unit root test for cross-section i. Taking into account the findings of Hurlin (2010) the corresponding p-values are uniform [0, 1] variables. Maddala and Wu (1999) determine their  $\chi^2$  test statistic:

$$\chi^2 = -2 \sum_{i=1}^N \log(\pi_i) \quad (7)$$

and show that it follows an asymptotic  $\chi^2$ -distribution with 2N degrees of freedom. Choi (2001) develops a similar Z statistic:

$$Z = - \frac{\sum_{i=1}^N \log(\pi_i) + N}{\sqrt{N}} \quad (8)$$

In both set of the tests the null hypothesis is the same as in Equation 4, while the alternative hypotheses are the same as in Equation 5. Under the null hypothesis, Z-statistic is normally distributed.

### 3.3. Main attributes of Levin, Lin and Chu test, and Breitung test

Levin, Lin and Chu test (Levin et al. 2002) utilizes the ADF regression defined as:

$$\Delta y_{i,t} = \alpha y_{i,t-1} + \sum_{j=1}^{p_i} \beta_{i,j} \Delta y_{i,t-j} + X'_{i,t} \delta + \varepsilon_{i,t} \quad (9)$$

where  $\alpha$  is assumed to be common and defined as  $\alpha = \rho - 1$ ,  $p_i$  stands for the lag order for different terms and it varies across cross-sections. The null hypothesis is stated as  $H_0: \alpha = 0$  and indicates a unit root. The alternative hypothesis is defined as  $H_1: \alpha < 0$  and it indicates stationarity. In Levin et al. (2002) approach auxiliary regressions of  $\Delta y_{i,t}$  and  $y_{i,t}$  on lagged terms  $\Delta y_{i,t-j}$  and on exogenous variables  $X_{it}$  are estimated. The estimates of  $\alpha$  are developed from the pooled equation:

$$\Delta \tilde{y}_{i,t} = \alpha \tilde{y}_{i,t-1} + \eta_{i,t} \quad (10)$$

where standardized proxies (denoted by  $\sim$ ) for  $\Delta y_{i,t}$  and  $y_{i,t}$  are used with autocorrelations and deterministic components removed. Since the standard t-statistic for testing the hypothesis  $\hat{\alpha} = 0$  diverges to negative infinity, Levin et al. (2002) developed the modified t statistics ( $t^*$ ):

$$t^* = \frac{1}{\sigma^*} \left( t - NT \cdot \hat{S}_N \hat{\sigma}^{-2} \hat{\sigma}_\alpha \mu^* \right) \quad (11)$$

where  $\mu^*$  and  $\sigma^*$  denote the adjustment terms for the mean and standard deviation as calculated by Levin et al. (2002),  $\hat{\sigma}_\alpha$  presents the standard error of  $\hat{\alpha}$ , and  $\hat{\sigma}^2$  stands for the estimated variance of the error term from equation (10).  $\hat{S}_N$  is the average of individual ratios of long-run to short-run standard deviations and it is estimated with kernel-based techniques. The authors prove that  $t^*$  is asymptotically normally distributed.

The Breitung test is similar to Lin, Levin and Chu test as it is based on the same ADF specification stated in Equation 9. However, it calculates auxiliary regressions of  $\Delta y_{i,t}$  and  $y_{i,t}$  on lagged terms  $\Delta y_{i,t-j}$  only, while proxies are transformed and detrended ( $\Delta y_{it}^*$ ). In order to estimate the persistence parameter  $\alpha$  panel proxy equation is applied:

$$\Delta y_{it}^* = \alpha y_{it-1}^* + v_{it} \quad (12)$$

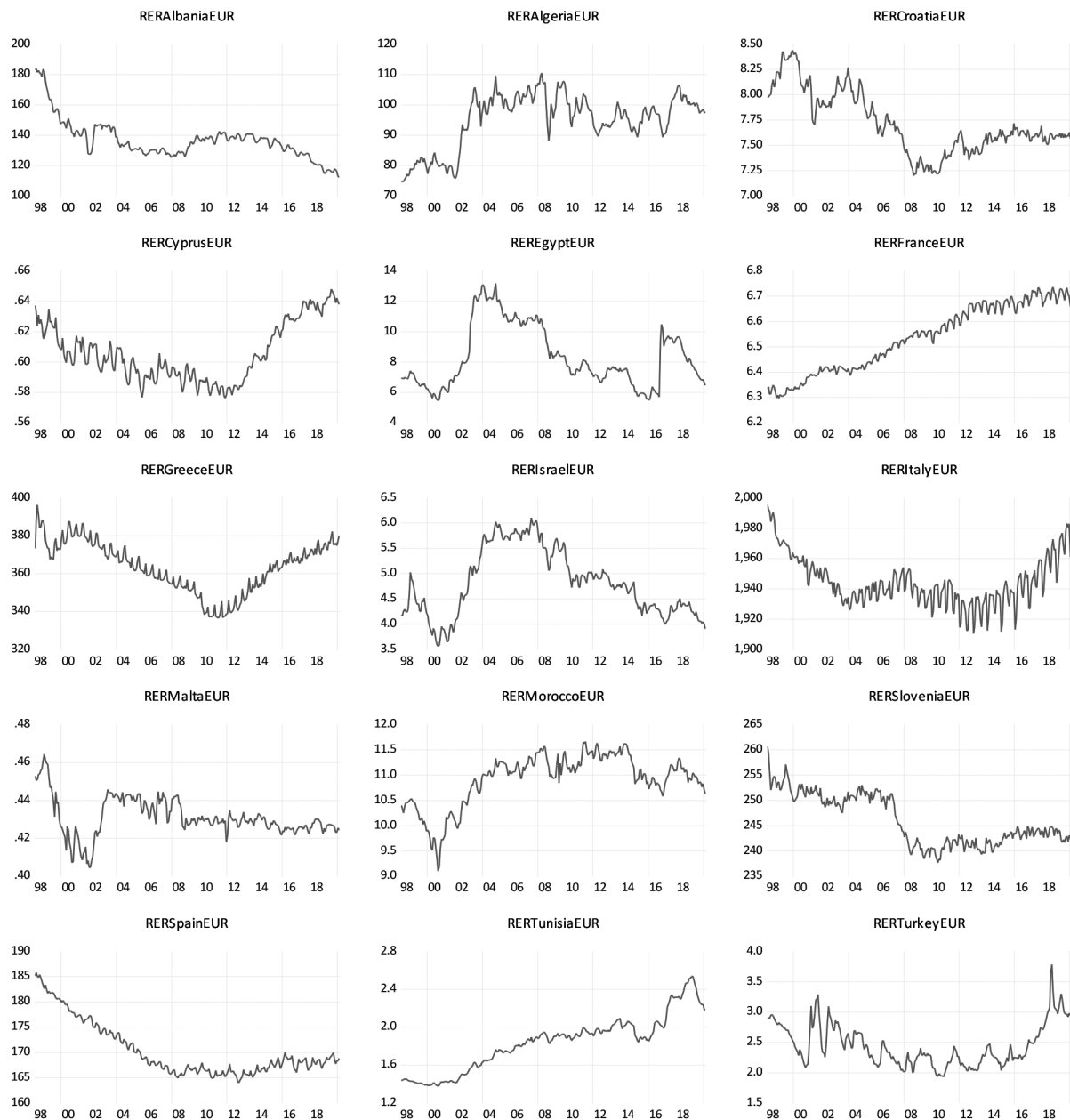
Breitung (2000) proves that the estimate of the persistence parameter  $\alpha$  is asymptotically normally distributed under the null hypothesis.

#### 4. PRESENTATION OF APPLIED DATA

The preceding empirical investigation of PPP validity is based on monthly data covering the period from February 1998 to February 2020 for 15 Mediterranean economies, including Albania, Algeria, Croatia, Cyprus, Egypt, France, Greece, Italy, Malta, Morocco, Slovenia, Spain, Israel, Tunisia and Turkey.

The consumer price indices (CPI) and the monthly averages of nominal exchange rates with reference currencies of Euro (EUR) and US dollar (USD) were gathered from International Monetary Fund (2020). In order to test the validity of PPP in the tourism sector, we assembled the CPI for hotels and restaurants (CPI C11) from Eurostat (2020) for Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia, Spain, Turkey, while CPI C11 data for Israel was taken from OECD (2020). Thus, due to the limited availability of data about CPI for tourism services the validity of PPP in tourism sector was scrutinized for 10 countries out of the whole dataset of 15 above stated economies. CPI C11 data for the USA is available at Eurostat since January 2002. In pursuance of applying the longest possible data span, we prolonged the Eurostat data series for USA CPI C11 by CPI data from the U.S. Bureau of Labor Statistics (2020). Thus, we calculated the proxy for CPI C11 data from February 1998 to December 2001 by taking the arithmetic average of data

series CPI for “full service meals and snacks” (BLS series code: CUUR0000SEFV01), and data series CPI for “other lodging away from home including hotels and motels” (BLS series code: CUUR0000SEHB02).



**Figure 1.** Real exchange rates among currencies of individual Mediterranean countries and EUR using CPI (All items) as deflator

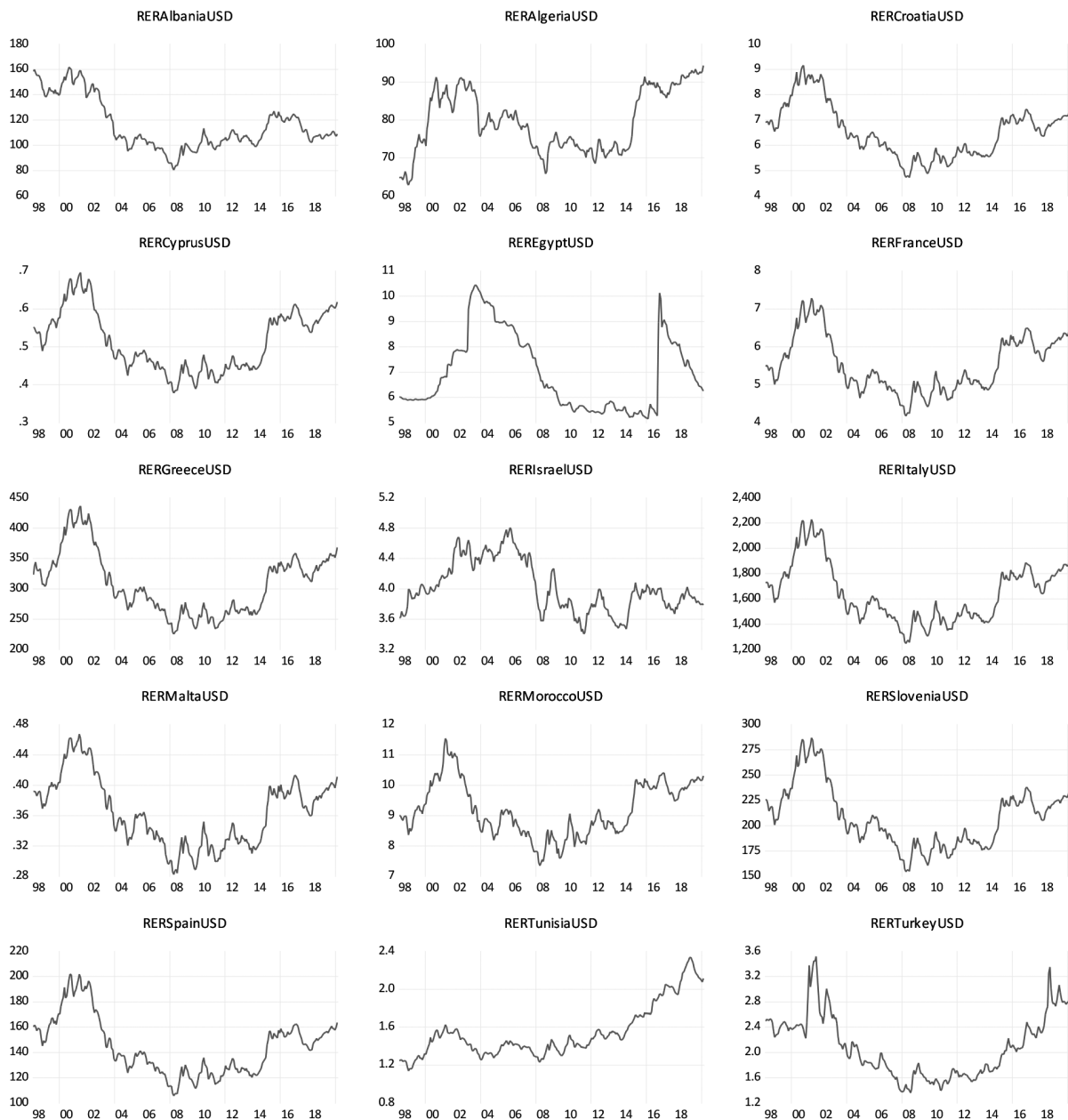
**Source:** Authors calculation

The first step in testing the strict version of PPP requires the calculation of real exchange rates:

$$RER = NER \frac{P^*}{P} \quad (13)$$

where RER stands for real exchange rate, NER is abbreviation for nominal exchange rate defined as a price of foreign currency in units of domestic currency, P\* is foreign price index and P is domestic price index. There are four sets of real exchange rates used in the empirical analysis.

Namely, the real exchange rates are calculated by two reference currencies (EUR and USD) and by using two different price deflators: CPI for the whole economy (CPI All items) and CPI for tourism services (CPI C11 Hotels and restaurants).



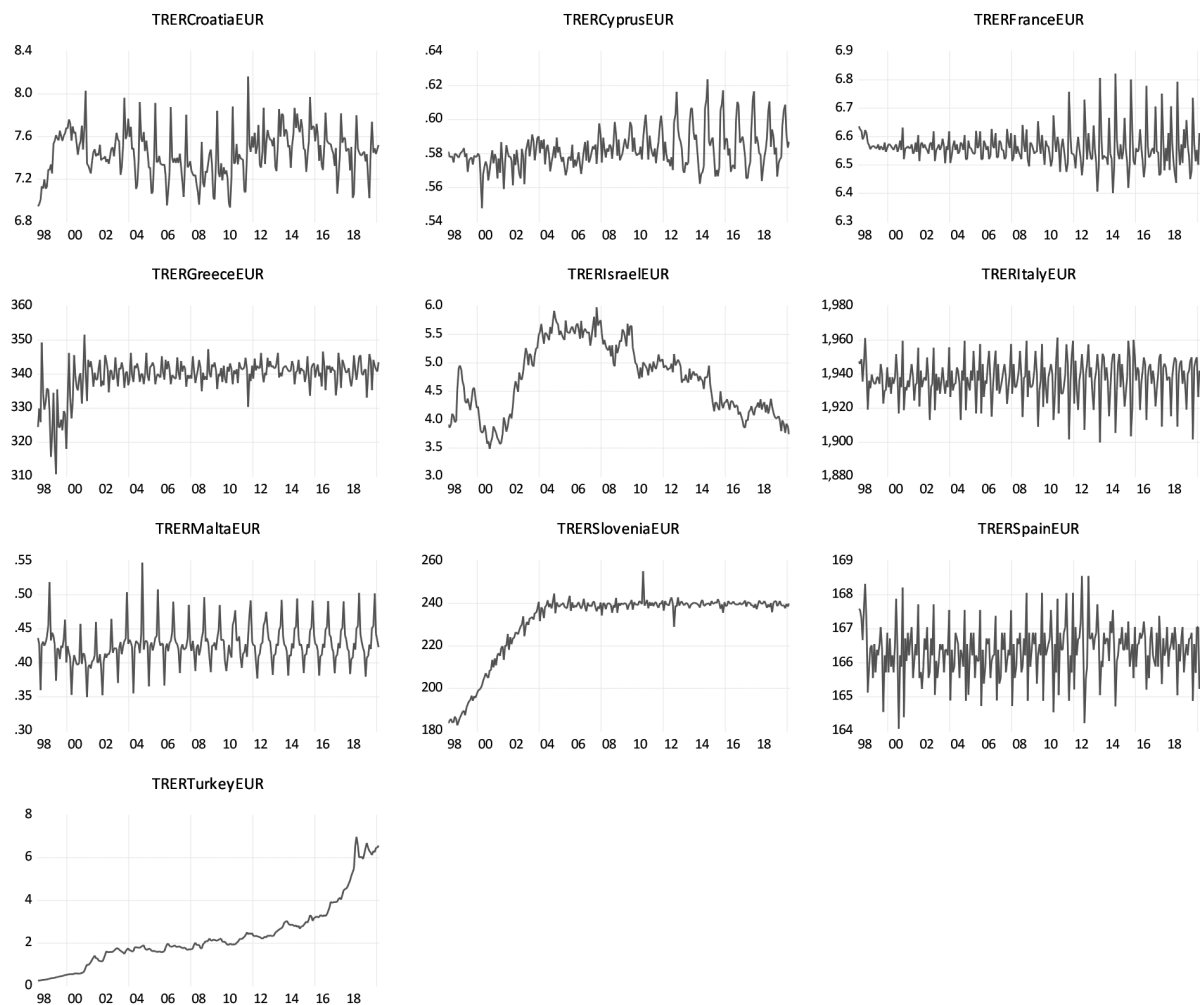
**Figure 2.** Real exchange rates among currencies of individual Mediterranean countries and USD using CPI (All items) as deflator

**Source:** Authors calculation

Data on the level of real exchange rates calculated by CPI (All items) are presented in Figures 1 and 2, while data on the level of real exchange rates based on CPI for tourism services are displayed in Figures 3 and 4. On the other hand, the empirical analysis is conducted by using logarithmic values of individual real exchange rates.

Figure 1 presents real exchange rates of national currencies with respect to EUR taking into account the general CPI indices (All items). In the first observed year, from February 1998 to

December 1998, ECU is used as the reference currency. Since the introduction of euro in January 1999 the official fixed euro conversion rates are taken into account for France, Greece, Italy and Spain, as well as for Slovenia since 2007 and for Malta and Cyprus since 2008. As stated in equation 13, the real exchange rates in euro area members differ in line with fluctuations of relative prices. Thus, despite the common currency, the real exchange rates are defined by relative prices in regard to euro area. Taking into account the whole observed period, Figure 1 shows real appreciation for Albanian lek and EUR in Malta, Slovenia and Spain. On the other hand, real depreciation is recorded for EUR in France, Algerian dinar and Tunisian dinar. In Croatia, Cyprus, Greece, Italy and Turkey real appreciation in the pre-crisis period was followed by real depreciation. The opposite development of real exchange rates is recorded in Egypt, Israel and Morocco, where real depreciation is followed by real appreciation in recent years.



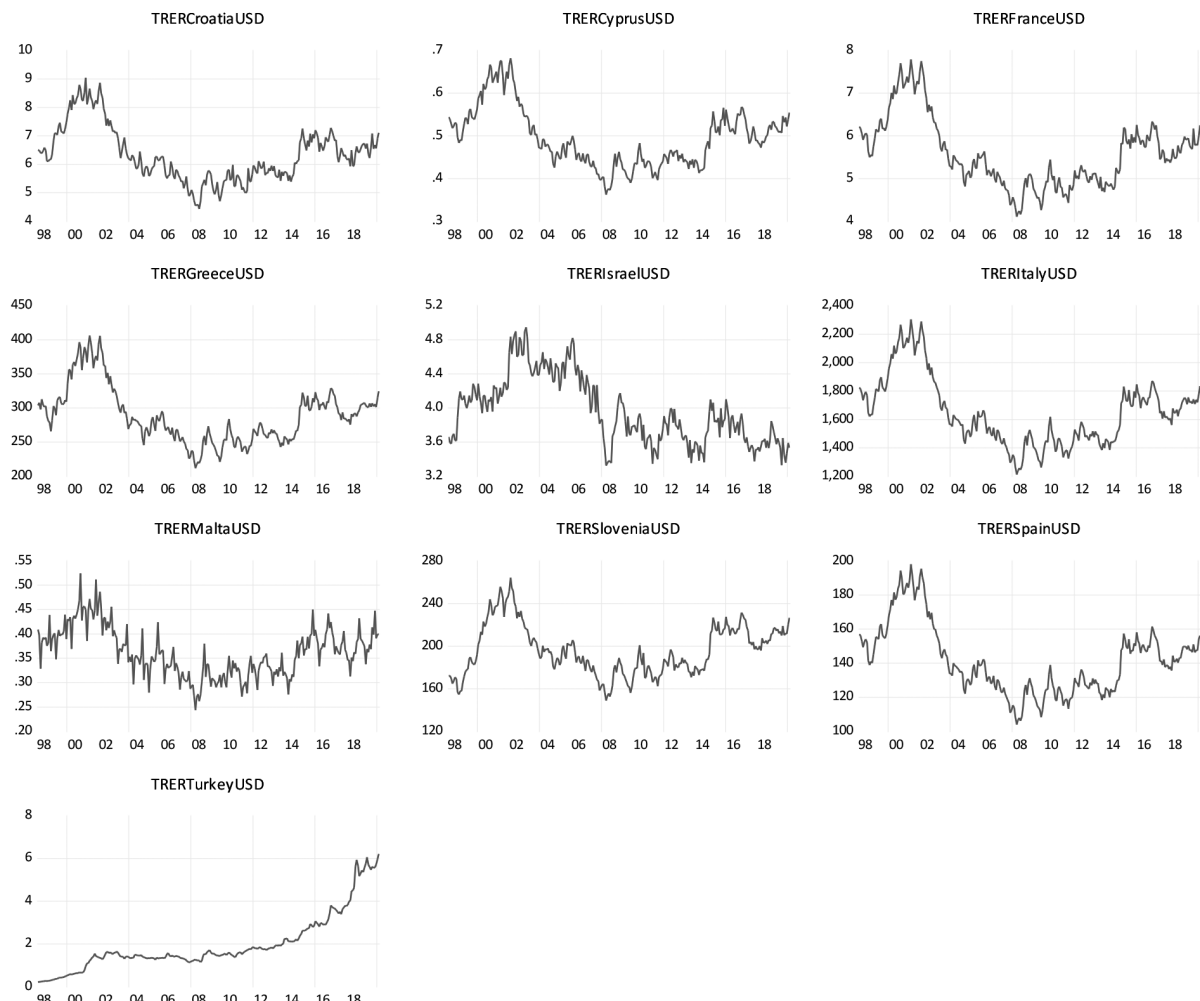
**Figure 3.** Real exchange rates among currencies of individual Mediterranean countries and EUR using CPI (Hotels and restaurants) as deflator

**Source:** Authors calculation

The real exchange rates of national currencies regarding USD, taking into account the general CPI (All items), are exhibited in Figure 2. Almost all national currencies (except Albanian lek, Egyptian pound and Turkish lira) recorded a real depreciation at the beginning of the first three to four years, which was followed by a sharp real appreciation in 2004. A relatively stable period with some short run fluctuations ended in 2014 when real depreciation is recorded.



Figure 3 and 4 exhibit real exchange rates regarding EUR and USD, respectively, taking into account the CPI for hotels and restaurants. In this case, most of the EUR real exchange rates (Figure 3) are relatively stable in the long run with short run fluctuations around the long-run average rates. As for Israeli pound there is real depreciation recorded in the first part of the observed period followed by real appreciation in the post-crisis period. The real exchange rate of EUR in Slovenia also exhibit stable long run values since its introduction, while Slovenian tolar has exhibited real depreciation before entering the ERMII mechanism in 2004. On the other hand, Turkish lira features real depreciation over the whole observed period, which has gathered momentum in the last 4 years.



**Figure 4.** Real exchange rates among currencies of individual Mediterranean countries and USD using CPI (Hotels and restaurants) as deflator

**Source:** Authors calculation

Real exchange rates, concerning USD taking into account the deflator of CPI for hotels and restaurants in Figure 4, show very similar developments to real exchange rates of USD taking into account the general CPI for all items presented in Figure 2, except for Turkish lira, which exhibits real depreciation over the whole observed period, and its fluctuation is similar to the EUR real exchange rates deflated by CPI for hotels and restaurants.

## 5. EMPIRICAL RESULTS

For both deflators, the empirical study was performed in three parts. First, we considered the whole observed period (February 1998-February 2020). Second, we took into account the pre-economic crisis period ranging from February 1998 to December 2007. And third, we examined the post-economic crisis period covering data from July 2009 to February 2020. In order to determine the sub-periods, the NBER (2012) methodology for defining the US business cycles was adapted. Thus, each table in the preceding section presents the results of individual panel unit root tests for all three periods. First, we examine the PPP validity by taking into account the general CPI deflator followed by the results when the CPI for tourism services was applied.

### 5.1. Results based on general consumer price indices

All of the conducted panel unit root tests examine the same null hypothesis that there is a unit root. Thus, results rejecting the null hypothesis provide evidence in favour of PPP for which the series and/or panel in question should be stationary. Table 1 presents results of Im, Pesaran and Shin test being conducted by three different information criteria to determine the lags (Schwarz, Akaike and Hannan-Quinn information criteria). For each case we took into account the individual effects as well as individual linear trends. Bearing in mind the 10% significance level, the results show that the PPP could be confirmed for the EUR reference rates in the whole observed period when only individual effects are allowed for.

**Table 1.** Results of Im, Pesaran and Shin test, deflator: CPI (All items)

Sample	Reference currency	Schwarz information criterion		Akaike information criterion		Hannan-Quinn information criterion	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]
1998M2-2020M2	EUR	-1.67343 (0.0471) [12]	1.43217 (0.9240) [13]	-1.71768 (0.0429) [12]	1.43777 (0.9248) [13]	-1.36632 (0.0859) [13]	1.66243 (0.9518) [13]
	USD	-0.42466 (0.3355) [2]	2.63574 (0.9958) [2]	-0.29975 (0.3822) [14]	2.77782 (0.9973) [14]	-0.36739 (0.3567) [2]	2.71066 (0.9966) [2]
1998M2-2007M12	EUR	-0.22079 (0.4126) [12]	-1.69023 (0.0455) [12]	1.37685 (0.9157) [12]	-0.62115 (0.2673) [12]	1.53114 (0.9371) [12]	-0.51669 (0.3027) [12]
	USD	3.18766 (0.9993) [2]	2.95500 (0.9984) [2]	3.47389 (0.9997) [2]	2.63045 (0.9957) [12]	3.22533 (0.9994) [2]	2.99857 (0.9986) [2]
2009M7-2020M2	EUR	0.12119 (0.5482) [12]	-2.44164 (0.0073) [12]	1.34685 (0.9110) [12]	-1.93355 (0.0266) [12]	0.43103 (0.6668) [12]	-2.08626 (0.0185) [12]
	USD	1.70367 (0.9558) [2]	-2.90886 (0.0018) [6]	1.61800 (0.9472) [11]	-4.30083 (0.0000) [7]	1.31767 (0.9062) [7]	-3.09895 (0.0010) [7]

Source: Authors calculation

It can also be confirmed for both, the EUR and USD reference rates, in the post crises period when individual effects and individual linear trends are tested for all three information criteria. In the pre-crisis period there is vague evidence in favour of PPP for EUR reference rates only in one type of methodological approach.

**Table 2.** Results of Fisher ADF tests (Maddala and Wu  $\chi^2$  statistic), deflator: CPI (All items)

Sample	Reference currency	Schwarz information criterion		Akaike information criterion		Hannan-Quinn information criterion	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]
1998M2-2020M2	EUR	45.3029 (0.0362) [12]	21.7964 (0.8613) [13]	45.0684 (0.0380) [13]	22.2688 (0.8441) [13]	39.8327 (0.1081) [13]	19.6316 (0.9258) [13]
	USD	24.9020 (0.7298) [2]	10.6820 (0.9996) [2]	23.6388 (0.7881) [14]	10.1051 (0.9997) [14]	24.5745 (0.7454) [2]	10.5821 (0.9996) [2]
1998M2-2007M12	EUR	33.9613 (0.2824) [12]	49.9642 (0.0125) [12]	22.6006 (0.8313) [12]	36.1885 (0.2020) [12]	20.6318 (0.8990) [12]	35.4953 (0.2251) [12]
	USD	11.7347 (0.9989) [2]	8.96620 (0.9999) [2]	11.2316 (0.9993) [2]	11.4221 (0.9991) [12]	11.4625 (0.9991) [2]	8.20071 (1.0000) [2]
2009M7-2020M2	EUR	41.6653 (0.0764) [12]	60.4744 (0.0008) [12]	23.7992 (0.7810) [12]	55.5832 (0.0030) [12]	40.0333 (0.1042) [12]	57.0130 (0.0021) [12]
	USD	15.6555 (0.9855) [2]	48.6985 (0.0169) [6]	19.5294 (0.9282) [11]	62.2413 (0.0005) [7]	19.7823 (0.9221) [7]	49.7205 (0.0133) [7]

Source: Authors calculation

The Fisher ADF tests result in two different test statistics. The Maddala and Wu  $\chi^2$  statistics are exhibited in Table 2, while the Choi Z statistics are presented in Table 3. Both sets of empirical estimates show very similar results. For the whole observed period, the PPP theory can be confirmed for EUR reference rates when individual effects are included for two out of three information criteria. In the pre-crisis period only one of the results supports the PPP for EUR reference rates. For the post-crisis period, EUR and USD reference rates gained support for PPP when the empirical test consists of individual effects and linear trends.

Both test statistics for Fisher PP tests (Table 4 and Table 5) result in the same conclusion for EUR reference rates: there is strong evidence in favour of PPP in the whole observed period and for the post-crises period since all results reject the null of a unit root. As for the pre-crisis period the PPP can be confirmed for EUR reference rates when individual effects and individual linear trends are included. While Maddala and Wu  $\chi^2$  statistic provides no evidence in favour of PPP in the case of the USD reference rates (Table 4), Choi Z statistic (Table 5) shows the validity of PPP in the case of USD rates for the post-crisis period when the individual effects and individual linear trends are incorporated.

**Table 3.** Results of Fisher ADF tests (Choi Z statistic), deflator: CPI (All items)

Sample	Reference currency	Schwarz information criterion		Akaike information criterion		Hannan-Quinn information criterion	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]
1998M2- 2020M2	EUR	-1.58339 (0.0567) [12]	1.67251 (0.9528) [13]	-1.55154 (0.0604) [13]	1.82242 (0.9658) [13]	-1.23349 (0.1087) [13]	1.93765 (0.9737) [13]
	USD	-0.33392 (0.3692) [2]	2.83401 (0.9977) [2]	-0.13575 (0.4460) [14]	3.08415 (0.9990) [14]	-0.26737 (0.3946) [2]	2.91147 (0.9982) [2]
1998M2- 2007M12	EUR	-0.16494 (0.4345) [12]	-1.61270 (0.0534) [12]	1.54444 (0.9388) [12]	-0.49544 (0.3101) [12]	1.70288 (0.9557) [12]	-0.39520 (0.3463) [12]
	USD	3.18795 (0.9993) [2]	3.07571 (0.9989) [2]	3.46531 (0.9997) [2]	2.83750 (0.9977) [12]	3.23543 (0.9994) [2]	3.15053 (0.9992) [2]
2009M7- 2020M2	EUR	0.18887 (0.5749) [12]	-2.29946 (0.0107) [12]	1.57691 (0.9426) [12]	-1.67012 (0.0474) [12]	0.53108 (0.7023) [12]	-1.90085 (0.0287) [12]
	USD	1.81983 (0.9656) [2]	-3.00930 (0.0013) [6]	1.90112 (0.9714) [11]	-4.30663 (0.0000) [7]	1.46297 (0.9283) [7]	-3.18327 (0.0007) [7]

Source: Authors calculation

**Table 4.** Results of Fisher PP tests (Maddala and Wu  $\chi^2$  statistic), deflator: CPI (All items)

Sample	Reference currency	Bartlett kernel		Parzen kernel		Quadratic spectral kernel	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)
1998M2- 2020M2	EUR	73.9525 (0.0000)	85.5627 (0.0000)	73.5883 (0.0000)	79.2642 (0.0000)	72.9475 (0.0000)	75.4382 (0.0000)
	USD	21.4680 (0.8727)	8.75730 (0.9999)	22.4144 (0.8385)	9.17347 (0.9999)	22.2296 (0.8456)	9.18427 (0.9999)
1998M2- 2007M12	EUR	35.1676 (0.2366)	67.4171 (0.0001)	33.8152 (0.2883)	69.7449 (0.0001)	33.7657 (0.2903)	70.6268 (0.0000)
	USD	10.3054 (0.9997)	5.61812 (1.0000)	10.8064 (0.9995)	6.27148 (1.0000)	10.7553 (0.9995)	6.32378 (1.0000)
2009M7- 2020M2	EUR	78.9056 (0.0000)	129.676 (0.0000)	77.4170 (0.0000)	135.297 (0.0000)	74.5540 (0.0000)	130.740 (0.0000)
	USD	15.6936 (0.9852)	37.2959 (0.1687)	16.4785 (0.9783)	40.0229 (0.1044)	16.2562 (0.9805)	39.9550 (0.1057)

Source: Authors calculation

**Table 5.** Results of Fisher PP tests (Choi Z statistic), deflator: CPI (All items)

Sample	Reference currency	Bartlett kernel		Parzen kernel		Quadratic spectral kernel	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		Z (p-value)	Z (p-value)	Z (p-value)	Z (p-value)	Z (p-value)	Z (p-value)
1998M2- 2020M2	EUR	-3.48665 (0.0002)	-2.34629 (0.0095)	-3.69304 (0.0001)	-2.54400 (0.0055)	-3.66546 (0.0001)	-2.45717 (0.0070)
	USD	0.19985 (0.5792)	3.46722 (0.9997)	0.03900 (0.5156)	3.31634 (0.9995)	0.07284 (0.5290)	3.33208 (0.9996)
1998M2- 2007M12	EUR	0.32438 (0.6272)	-3.45419 (0.0003)	0.42849 (0.6659)	-3.52678 (0.0002)	0.44531 (0.6720)	-3.59375 (0.0002)
	USD	4.10637 (1.0000)	4.06173 (1.0000)	3.82895 (0.9999)	3.81421 (0.9999)	3.85495 (0.9999)	3.81976 (0.9999)
2009M7- 2020M2	EUR	-2.56661 (0.0051)	-6.41359 (0.0000)	-2.69782 (0.0035)	-6.87621 (0.0000)	-2.37483 (0.0088)	-6.71499 (0.0000)
	USD	1.98790 (0.9766)	-1.97841 (0.0239)	1.91723 (0.9724)	-2.29807 (0.0108)	1.92923 (0.9731)	-2.27819 (0.0114)

Source: Authors calculation

**Table 6.** Results of Levin, Lin and Chu test, deflator: CPI (All items)

Sample	Reference currency	Bartlett kernel		Parzen kernel		Quadratic spectral kernel	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]
1998M2- 2020M2	EUR	-2.29486 (0.0109) [12]	-0.05973 (0.4762) [13]	-2.66657 (0.0038) [12]	-0.52582 (0.2995) [13]	-2.69816 (0.0035) [12]	-0.41396 (0.3395) [13]
	USD	-0.10730 (0.4573) [2]	0.79748 (0.7874) [2]	-0.02714 (0.4892) [2]	0.88572 (0.8121) [2]	-0.04750 (0.4811) [2]	0.85343 (0.8033) [2]
1998M2- 2007M12	EUR	-1.45797 (0.0724) [12]	-2.16598 (0.0152) [12]	-1.62001 (0.0526) [12]	-2.62196 (0.0044) [12]	-1.58540 (0.0564) [12]	-2.48300 (0.0065) [12]
	USD	1.71408 (0.9567) [2]	-0.08544 (0.4660) [2]	1.90866 (0.9718) [2]	0.02018 (0.5080) [2]	1.92027 (0.9726) [2]	0.03261 (0.5130) [2]
2009M7- 2020M2	EUR	0.68995 (0.7549) [12]	-2.19223 (0.0142) [12]	0.17725 (0.5703) [12]	-3.69549 (0.0001) [12]	0.12456 (0.5496) [12]	-3.69016 (0.0001) [12]
	USD	0.70696 (0.7602) [2]	-1.12697 (0.1299) [6]	0.77794 (0.7817) [2]	-0.88959 (0.1868) [6]	0.80470 (0.7895) [2]	-0.77585 (0.2189) [6]

Notes: The number of lags used in each cross-section ADF regression ( $p_i$ ) was defined by the Schwarz information criterion. Computation was conducted with Newey-West bandwidth selection.

Source: Authors calculation

Results of Levin, Lin and Chu test (Table 6) show evidence for PPP in EUR reference rates, which recorded very strong support for PPP in the pre-crisis period as all test results reject the null of a unit root. In the whole period, PPP can be confirmed for individual trends, while in the post-crises period the EUR reference rates behave according to PPP theory when individual effects and individual linear trends are considered. However, there is no confirmation of PPP in case of USD reference rates according to Levin, Lin and Chu test when using general CPI.

Breitung test outcomes are displayed in Table 7, where there is no evidence in favour of PPP in the case of EUR reference rates in none of the three periods. On the other hand, the PPP is supported in the case of USD reference rates in the whole observed period and the post-crisis period for all three information criteria applied in determining the lags.

**Table 7.** Results of Breitung test, deflator: CPI (All items)

Sample	Reference currency	Schwarz information criterion	Akaike information criterion	Hannan-Quinn information criterion
		Individual effects and individual linear trends	Individual effects and individual linear trends	Individual effects and individual linear trends
		t-stat (p-value) [no. of lags]	t-stat (p-value) [no. of lags]	t-stat (p-value) [no. of lags]
1998M2-2020M2	EUR	2.28370 (0.9888) [13]	1.97234 (0.9757) [13]	2.00796 (0.9777) [13]
	USD	-1.67624 (0.0468) [2]	-1.52433 (0.0637) [14]	-1.59180 (0.0557) [2]
1998M2-2007M12	EUR	-0.89316 (0.1859) [12]	-0.43944 (0.3302) [12]	-0.45941 (0.3230) [12]
	USD	1.11074 (0.8667) [2]	1.33842 (0.9096) [12]	1.12770 (0.8703) [2]
2009M7-2020M2	EUR	1.79643 (0.9638) [12]	2.00985 (0.9778) [12]	1.84508 (0.9675) [12]
	USD	-5.18220 (0.0000) [6]	-5.62182 (0.0000) [7]	-5.16327 (0.0000) [7]

Source: Authors calculation

## 5.2. Results based on consumer price indices for hotels and restaurants

When real exchange rates are calculated by nominal exchange rates of EUR and CPI for hotels and restaurants, there is very strong support in favour of PPP according to Im, Pesaran and Shin test (Table 8), as for all combinations of test parameters the null of a unit root is strongly rejected at a very high significance level. The same test shows some support for PPP in the whole period also for the USD reference rate, namely the null is rejected when Schwarz information criterion is taken into account along with the individual trends. In the pre-crisis period USD reference rates do not follow the PPP characteristics, while in the post-crises period the individual effects and individual linear trends result in rejecting the null for all information criteria providing evidence in favour of PPP, also in the case of USD rates.



**Table 8.** Results of Im, Pesaran and Shin test, deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Schwarz information criterion		Akaike information criterion		Hannan-Quinn information criterion	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]	W-stat (p-value) [no. of lags]
1998M2-2020M2	EUR	-7.78782 (0.0000) [15]	-8.11868 (0.0000) [15]	-7.11634 (0.0000) [15]	-7.57937 (0.0000) [15]	-7.86337 (0.0000) [15]	8.22296 (0.0000) [15]
	USD	-1.35315 (0.0880) [12]	0.71219 (0.7618) [12]	-0.88800 (0.1873) [14]	1.22082 (0.8889) [14]	-0.86521 (0.1935) [14]	1.11441 (0.8674) [13]
1998M2-2007M12	EUR	-6.96504 (0.0000) [12]	-4.60655 (0.0000) [12]	-4.88871 (0.0000) [12]	3.24592 (0.0006) [12]	-6.91165 (0.0000) [12]	-5.35154 (0.0000) [12]
	USD	2.57608 (0.9950) [12]	2.35964 (0.9909) [12]	2.62629 (0.9957) [12]	1.64659 (0.9502) [12]	2.53650 (0.9944) [12]	1.73435 (0.9586) [12]
2009M7-2020M2	EUR	-6.23387 (0.0000) [12]	-6.81942 (0.0000) [12]	-5.9635 (0.0000) [12]	-6.94900 (0.0000) [12]	-6.34530 (0.0000) [12]	-6.90124 (0.0000) [12]
	USD	0.04686 (0.5187) [12]	-3.67858 (0.0001) [12]	0.33968 (0.6330) [12]	-3.64845 (0.0001) [12]	-0.01562 (0.4938) [12]	-3.74196 (0.0001) [12]

Source: Authors calculation

**Table 9.** Results of Fisher ADF tests (Maddala and Wu  $\chi^2$  statistic), deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Schwarz information criterion		Akaike information criterion		Hannan-Quinn information criterion	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]	$\chi^2$ (p-value) [no. of lags]
1998M2-2020M2	EUR	140.945 (0.0000) [15]	133.944 (0.0000) [15]	120.335 (0.0000) [15]	118.068 (0.0000) [15]	141.841 (0.0000) [15]	134.776 (0.0000) [15]
	USD	21.7356 (0.3550) [12]	12.4383 (0.9002) [12]	18.4204 (0.5597) [14]	10.2246 (0.9639) [14]	18.1975 (0.5744) [14]	11.2069 (0.9407) [13]
1998M2-2007M12	EUR	114.169 (0.0000) [12]	88.7812 (0.0000) [12]	76.1966 (0.0000) [12]	59.9558 (0.0000) [12]	114.025 (0.0000) [12]	95.9216 (0.0000) [12]
	USD	13.2424 (0.8667) [12]	5.82109 (0.9991) [12]	11.2021 (0.9408) [12]	11.6864 (0.9264) [12]	11.0220 (0.9457) [12]	11.6413 (0.9279) [12]
2009M7-2020M2	EUR	124.322 (0.0000) [12]	116.373 (0.0000) [12]	120.467 (0.0000) [12]	117.455 (0.0000) [12]	124.334 (0.0000) [12]	116.858 (0.0000) [12]
	USD	20.0181 (0.4568) [12]	43.4665 (0.0018) [12]	17.7005 (0.6071) [12]	42.3566 (0.0025) [12]	20.2847 (0.4403) [12]	44.1448 (0.0014) [12]

Source: Authors calculation

Both Fisher ADF tests' statistics (Table 9 and Table 10) demonstrate similar results. There is again very strong evidence for PPP validity in case of EUR reference rates as the null is strongly rejected in all variations of the tests in estimating both test statistics. On the other hand, both Maddala and Wu  $\chi^2$  statistic and Choi Z statistic show evidence for PPP in USD rates in the post-crisis period when individual effects and individual linear trends are applied. However, the null is rejected for USD rates also by Choi Z statistic (Table 10) in the whole period when Schwarz information criteria is considered along with individual effects.

The PPP for EUR reference rates is also strongly supported by results of Fisher PP tests (Table 11 and Table 12) as the null of a unit root is decisively rejected in all combinations of tests' parameters for both test statistics and for all three periods under investigation. The Fisher PP tests provide some more support for PPP in case of USD reference rates. Maddala and Wu  $\chi^2$  statistics (Table 11) completely support the PPP for USD in the whole observed period and in the post-crises period. While Choi Z statistics (Table 12) show less strong support in the case of USD rate, since the null of a unit root is rejected in the whole period when individual effects are applied, and the post-crises period when individual effects and individual linear trends are included.

**Table 10.** Results of Fisher ADF tests (Choi Z statistic), deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Schwarz information criterion		Akaike information criterion		Hannan-Quinn information criterion	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]	Z (p-value) [no. of lags]
1998M2- 2020M2	EUR	-7.65036 (0.0000) [15]	-7.62678 (0.0000) [15]	-7.10807 (0.0000) [15]	-7.22082 (0.0000) [15]	-7.73424 (0.0000) [15]	-7.74131 (0.0000) [15]
	USD	-1.29961 (0.0969) [12]	0.92966 (0.8237) [12]	-0.63562 (0.2625) [14]	1.70002 (0.9554) [14]	-0.67625 (0.2494) [14]	1.48968 (0.9318) [13]
1998M2- 2007M12	EUR	-6.67968 (0.0000) [12]	-3.90957 (0.0000) [12]	-4.77008 (0.0000) [12]	-2.86049 (0.0021) [12]	-6.63377 (0.0000) [12]	-4.66610 (0.0000) [12]
	USD	2.53905 (0.8667) [12]	2.56702 (0.9949) [12]	2.70782 (0.9966) [12]	1.97028 (0.9756) [12]	2.61035 (0.9955) [12]	2.01479 (0.9780) [12]
2009M7- 2020M2	EUR	-5.30810 (0.0000) [12]	-5.41091 (0.0000) [12]	-5.02036 (0.0000) [12]	-5.55301 (0.0000) [12]	-5.40855 (0.0000) [12]	5.50803 (0.0000) [12]
	USD	0.11435 (0.5455) [12]	-3.69930 (0.0001) [12]	0.52249 (0.6993) [12]	-3.65597 (0.0001) [12]	0.07450 (0.5297) [12]	-3.75275 (0.0001) [12]

Source: Authors calculation

The two empirical approaches, which consider common unit root processes (Levin, Lin and Chu test, and Breitung test), provide less evidence for PPP when based on price indices of hotels and restaurants. According to the results of Levin, Lin and Chu test in Table 13, there is evidence in favour of PPP for EUR reference rates in the whole period in all variations of the test, except for the case when Barlett kernel with individual effects and individual linear trend are applied.

The EUR reference rates follow the features of PPP concept also in the pre-crisis period for all three kernel options when individual effects are incorporated. While in the post-crisis period the null of unit root can be rejected for EUR reference rates only in one version of Levin, Lin in Chu test taking into account quadratic spectral kernel with individual effects and individual linear trend. For USD reference rates the null hypothesis of a unit root is rejected for the whole observed period when individual effects are taken into account. There is no evidence in favour of PPP in USD reference rates in the pre-crisis and post-crisis period.

**Table 11.** Results of Fisher PP tests (Maddala and Wu  $\chi^2$  statistic), deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Bartlett kernel		Parzen kernel		Quadratic spectral kernel	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)	$\chi^2$ (p-value)
1998M2-2020M2	EUR	666.525 (0.0000)	676.753 (0.0000)	644.855 (0.0000)	642.268 (0.0000)	634.878 (0.0000)	630.893 (0.0000)
	USD	41.6876 (0.0030)	32.9949 (0.0338)	44.6124 (0.0012)	36.3537 (0.0140)	41.7713 (0.0030)	33.3856 (0.0306)
1998M2-2007M12	EUR	403.790 (0.0000)	373.877 (0.0000)	410.077 (0.0000)	378.845 (0.0000)	407.104 (0.0000)	376.335 (0.0000)
	USD	25.8521 (0.1708)	27.5348 (0.1209)	27.1071 (0.1323)	30.4934 (0.0622)	24.9912 (0.2018)	27.4475 (0.1231)
2009M7-2020M2	EUR	385.018 (0.0000)	372.312 (0.0000)	374.269 (0.0000)	355.989 (0.0000)	398.696 (0.0000)	378.941 (0.0000)
	USD	39.9205 (0.0051)	76.4172 (0.0000)	41.6533 (0.0031)	79.2599 (0.0000)	40.1241 (0.0048)	77.8274 (0.0000)

Source: Authors calculation

**Table 12.** Results of Fisher PP tests (Choi Z statistic), deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Bartlett kernel		Parzen kernel		Quadratic spectral kernel	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		Z (p-value)	Z (p-value)	Z (p-value)	Z (p-value)	Z (p-value)	Z (p-value)
1998M2-2020M2	EUR	-21.7726 (0.0000)	-20.8641 (0.0000)	-21.5662 (0.0000)	-20.3436 (0.0000)	-21.4848 (0.0000)	-20.2027 (0.0000)
	USD	-2.77483 (0.0028)	-0.74237 (0.2289)	-2.85483 (0.0022)	-0.83635 (0.2015)	-2.73610 (0.0031)	-0.70666 (0.2399)
1998M2-2007M12	EUR	-16.2529 (0.0000)	-13.8444 (0.0000)	-16.4123 (0.0000)	-13.9742 (0.0000)	-16.3664 (0.0000)	-13.8719 (0.0000)
	USD	0.93625 (0.1708)	1.08963 (0.8621)	1.00182 (0.8418)	1.12629 (0.8700)	1.23052 (0.8907)	1.33332 (0.9088)
2009M7-2020M2	EUR	-14.8505 (0.0000)	-16.0288 (0.0000)	-14.3970 (0.0000)	-15.4381 (0.0000)	-15.1032 (0.0000)	-16.1669 (0.0000)
	USD	-1.33929 (0.0902)	-5.73997 (0.0000)	-1.33952 (0.0902)	-5.89413 (0.0000)	-1.31725 (0.0939)	-5.87424 (0.0000)

Source: Authors calculation

**Table 13.** Results of Levin, Lin and Chu test, deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Bartlett kernel		Parzen kernel		Quadratic spectral kernel	
		Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends	Individual effects	Individual effects and individual linear trends
		t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]	t* (p-value) [no. of lags]
1998M2-2020M2	EUR	-1.88932 (0.0294) [15]	-0.32141 (0.3740) [15]	-3.40011 (0.0003) [15]	-3.95826 (0.0000) [15]	-3.51581 (0.0002) [15]	-4.39519 (0.0000) [15]
	USD	-1.39489 (0.0815) [12]	0.34137 (0.6373) [12]	-1.69979 (0.0446) [12]	-0.31363 (0.3769) [12]	-1.64118 (0.0504) [12]	-0.18610 (0.4262) [12]
1998M2-2007M12	EUR	-2.76193 (0.0029) [12]	2.052020 (0.9799) [12]	-3.75630 (0.0001) [12]	-0.26404 (0.3959) [12]	-3.80866 (0.0001) [12]	0.23213 (0.4082) [12]
	USD	-0.03910 (0.4844) [12]	0.27916 (0.6099) [12]	-0.26202 (0.3967) [12]	-0.44273 (0.3290) [12]	-0.36061 (0.3592) [12]	-0.47432 (0.3176) [12]
2009M7-2020M2	EUR	4.27647 (1.0000) [12]	9.20204 (1.0000) [12]	1.40161 (0.9195) [12]	-0.73209 (0.2321) [12]	0.99556 (0.8403) [12]	-2.10542 (0.0176) [12]
	USD	1.8852 (0.9712) [12]	0.72106 (0.7646) [12]	1.47561 (0.9300) [12]	-0.62936 (0.2646) [12]	1.60785 (0.9461) [12]	-0.17478 (0.4306) [12]

**Notes:** The number of lags used in each cross-section ADF regression ( $p_i$ ) was defined by the Schwarz information criterion. Computation was conducted with Newey-West bandwidth selection.

**Source:** Authors calculation

**Table 14.** Results of Breitung test, deflator: CPI (Hotels and restaurants)

Sample	Reference currency	Schwarz information criterion	Akaike information criterion	Hannan-Quinn information criterion
		Individual effects and individual linear trends	Individual effects and individual linear trends	Individual effects and individual linear trends
		t-stat (p-value) [no. of lags]	t-stat (p-value) [no. of lags]	t-stat (p-value) [no. of lags]
1998M2-2020M2	EUR	0.86251 (0.8054) [15]	0.60588 (0.7277) [15]	0.61908 (0.7321) [15]
	USD	-1.73196 (0.0416) [12]	-1.34780 (0.0889) [14]	-1.45936 (0.0722) [13]
1998M2-2007M12	EUR	-3.24075 (0.0006) [12]	-3.15809 (0.0008) [12]	-3.30601 (0.0005) [12]
	USD	2.72714 (0.9968) [12]	2.92384 (0.9983) [12]	2.73973 (0.9969) [12]
2009M7-2020M2	EUR	-0.08960 (0.4643) [12]	0.23644 (0.5935) [12]	-0.45412 (0.3249) [12]
	USD	-3.39440 (0.0003) [12]	-3.65332 (0.0001) [12]	-3.14114 (0.0008) [12]

**Source:** Authors calculation

Table 14 displays results of Breitung test when CPI for hotels and restaurants is used in the calculation of real exchange rates. For EUR reference rates the null hypothesis is strongly rejected in the pre-crisis period for all three alterations of the test. For USD reference rates there is indication for PPP validity in the whole period and the post-crisis period, in both cases for all three variations of the Breitung test.

## 6. FUTURE RESEARCH DIRECTIONS

The results discussed indicate several alternatives for our future research. Operating with real effective exchange rates instead of bilateral real exchange rates is the first step in extending our present knowledge about the PPP in the Mediterranean countries. Experimenting with different tradable and non-tradable price indices could further enrich the PPP discourse. New insights into the robustness of the mean reversion process can be also gained by implementing second-generation panel unit root tests, as well as taking into account possible nonlinearities in exchange rates.

## 7. CONCLUSION

This study provides a detailed analysis of the validity of PPP for a cluster of 15 Mediterranean countries. Besides using the conventional price level indicators to pinpoint the presence of equilibrium exchange rate parity, we further deepen our analysis as we search for the PPP by scrutinizing tourism price indices of the observed countries. In order to inspect the mean reversion of real exchange rates by relying on the dynamics of price levels in the tourism sector, we employ a wide range of different panel unit root tests, present estimates for euro rates and for US dollar rates simultaneously, and consider the importance of the PPP concept in subperiods, taking into account the possible structural shifts caused by the Great Recession.

Many important findings can be highlighted from the research. First, after evaluating the matrix of all the generated empirical outcomes from applying various consumer price indicators, numeraire currencies and panel stationary tests (84 outcomes in total), the hypothesis about the unit root process can be rejected in 58% of the cases. Furthermore, support for the PPP is documented in 67% of all the cases when the results are based on the consumer price indices for hotels and restaurants. Second, for the whole period, the results are in favour of PPP in 71% of the cases with tourism price indices and half of the cases when general consumer price indices are used. Third, irrespective of the chosen type of price indices, there is significantly more evidence for the PPP relation in the post-Great Recession period compared to the period 1998-2007. Consequently, in the post-crisis period, in 79% of cases analysed, the countries' real exchange rates have stationary properties. Fourth, with the sole exception of the Breitung test, all the panel unit root tests reject the null hypothesis on the non-stationarity of real exchange rates concerning EUR rates from 1998 to 2020. Similar results are discovered for the post-Great Recession period. Fifth, in case of US dollar-based real exchange rates the PPP theory holds for the post-crisis period, significantly weaker is the empirical evidence for the entire period from 1998 to 2020, whereas for subperiod 1998-2007 the hypothesis of non-stationarity of real exchange rates according to the US dollar could not be rejected with any of stationarity tests used in this study. The evidence of mean reversion is stronger for bilateral real exchange rates concerning the euro, especially under price indices for hotels and restaurants.

Eleftheriou and Müller-Platenberg (2018) argue that prices of traded and nontraded goods only marginally contribute to real exchange rate dynamics. Instead, movements in currency mar-



kets owing to the balance of payments flows and changes in real interest rates are the primary component in the fluctuation of real exchange rates. Insufficient flexibility of relative prices to induce adjustment of real exchange rate toward its constant equilibrium under the euro regime can also cause deviations from parity conditions (Huang & Yang, 2015). According to Bénassy-Quéré and Coulibaly (2014), the key forces behind the documented lack of price convergence and departures from PPP in euro area countries (Bergin & Glick, 2007; Berka & Devereux, 2013) are various product market regulations in non-tradable production and employment protection measures among these economies.

Despite numerous market imperfections which can cause long-run deviations from PPP levels, the presented results in our study deliver strong evidence in favour of this exchange rate theory. The evidence of mean reversion of real exchange rates in the group of Mediterranean countries is stronger (1) with price indices for hotels and restaurants, (2) in cases when the calculations are performed for EUR rates, and (3) for the post-Great Recession period. The growing tradability of services (Rabe & Waddle, 2020) and the prominent role of tourism in impacting international prices and income disparities among countries and geographical regions (Tubadji & Nijkamp, 2018) are in accord with the empirical outcomes in this study. Because under PPP the price competition in tourism services is an economic integrator of Mediterranean countries, the tourism sector acts as an important arbitrage element in international trade of services, goods and movements of people.

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# EUROPEAN TRAVEL AND TOURISM ICT READINESS: PCA/SWARA APPROACH

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**Abstract:** *The development of information and communication technology has led to the transformation of traditional business practices in all sectors of the economy. Information and communication technologies in the field of tourism represent a generator of change and drivers of development, by enabling the creation and retention of a large number of jobs, business opportunities and significant added value. Given the well-recognized value of the information and communication technologies in tourism, this chapter sought to identify the countries with the highest level of travel and tourism ICT readiness. Therefore, a two-step analysis was applied where in the first step the weights were determined using two approaches, PCA and SWARA. In the second step, using multicriteria analysis, the evaluation of ICT readiness of European countries was performed. The results indicate that the application of weight coefficients determined by different approaches in the same multicriteria method leads to moderate rank inversion.*

**Keywords:** *Tourism economics, PCA/SWARA approach, Tourism ICT readiness, Tourism business efficiency using ICT.*

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## 1. INTRODUCTION

It is evident that in modern conditions, information and communication technologies (ICTs) are an important factor in strengthening the competitiveness of tourism organizations, destinations and in shaping the market itself (Berne et al., 2012; Navío-Marco et al., 2018; Kontogianni & Alepis, 2020). One of the first sectors to successfully utilize and integrate ICTs into business processes was the tourism sector (Reinders & Baker, 1998), to adequately tailor supply to consumer needs (Bramwell & Lane, 1999). Thanks to digitalization, there have been significant changes in the industry, which are primarily reflected in the transformation of the industry structure by changing barriers to entry, reorganization of the channels of distribution, an increase of transparency, improvements of business efficiency and costs optimization (Assaf & Tsionas, 2018). The application of ICTs in tourism has led to the creation of new pathways for relationships through tourism distribution channels, increased competitiveness and efficiency in the sector, and improved business performance, and ICTs have become an indispensable element of business development (Berné et al., 2015). The reorganization of distribution channels implies that ICTs have enabled the development of new ways of cooperation among members of different channels of distribution (Law et al., 2011). The usefulness of ICTs in this area is primarily due to three main factors (Wang & Fesenmaier, 2007): the interdependency of an extensive assortment of services and goods, the large number of small individual operators, and the spatial separation between individuals' holiday destinations and their place of residence. The significance of ICTs for the tourism sector was recognized by the World Economic Forum by defining ICT readiness as one of the pillars in the Travel and Tourism Competitiveness Index (TTCI).

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Bearing in mind the great importance of ICTs for the tourism industry, this paper aims to indicate and evaluate the acceptance of ICTs in the tourism sector of European countries by applying statistical and multicriteria methods. In addition, the sub-goal is to point out the importance of adequately determining the importance of indicators based on which the evaluation of ICT readiness in the tourism sector is performed.

The paper is structured as follows: after the introduction, the second part of the paper points out the contribution of the tourism sector to the economy and the importance of ICTs for the tourism sector. The third part provides an overview of the methodology based on which it is possible to evaluate ICTs readiness in the travel and tourism sector, while the fourth part is dedicated to the analysis of results and discussion. The concluding remarks are offered in the fifth part.

## **2. IMPORTANCE OF ICT FOR THE TOURISM SECTOR**

The tourism sector, as one of the world's largest sectors, is a very important component of the economic and social activities of many countries, as it contributes to the creation of new jobs and business opportunities (Brandt et al., 2017). This sector is accounted for 10.3% of global GDP and 330 million jobs, or 10.4% of total employment in 2019 (WTTC, 2019). Tourism represents an important economic sector for all countries, developed and underdeveloped. Tourism contributes directly, on average, 4.4% of GDP, 6.9% of employment and 21.5% of service exports in OECD countries (OECD, 2020). In recent decades, the tourism sector has been defined as an information-intensive and IT-based industry, where most tour operators use ICTs to distribute their products, improve communication and create alternative distribution channels (Karanasios & Burgess, 2008). The speed and efficiency of ICTs infrastructure is a prerequisite for the development of tourism in modern conditions. The application of ICTs enables the integration of supply chain management and customer relations, thus facilitating operations and improving employee efficiency. The transformational effect of ICTs on the tourism industry has been particularly pronounced in recent decades and affects both sides of the tourism market, the demand and the supply side. On the demand side, there is a request for personalized tourist experiences. Through new technologies, users of tourist services have the opportunity to share information about the quality of service, destination, and other issues of their interest. The application of ICTs enables consumers to search, customize and exploit tourism products while supporting the globalization of the tourism industry by providing tools for the development, management and distribution of offerings around the world (Bethapudi, 2013). The usage of ICTs in the tourism sector leads to the emergence of new and transformation of conventional tourism experiences (Neuhofer et al., 2014). It is evident that in modern conditions, business competitiveness, among other things, implies the presence of companies in the virtual market. Insufficient adoption of ICTs prevents companies from reaping the benefits of e-services which could lead to gradual crowding out by global competition.

Sophistication and integration of ICTs in all spheres of life cause changes in market conditions, which is especially noticeable in the tourism sector, where there has been a significant increase in transparency in the offer of destinations while reducing the asymmetry of information between suppliers and consumers (Bradić-Martinović & Miletić, 2017). The development possibilities of ICTs in tourism are displayed in the globalization of the tourism industry and the transformation of the market from local to global. The impact of ICTs is primarily reflected in four different aspects (Aramendia Muneta & Ollo López, 2013): developing new business opportunities, improving productivity and efficiency, gaining a competitive advantage, and enabling new ways of managing tour operators. ICTs facilitates the business of tour operators by



enabling direct contact with clients and partners, increases management efficiency, facilitates market research, provides adequate ability to respond and manage crises, enables product differentiation and personalization, enables monitoring and evaluation of business performance. Among the main benefits of using ICT for tourism enterprises are (Januszevska et al., 2015): creating new business relationships among members of distribution channels to facilitate cooperation and increase efficiency; easy access to data and information; enabling joint value creation; gaining a competitive advantage; enabling the promotion and distribution of tourism products directly to consumers, reducing dependence on intermediaries; enabling sales analysis; speeding up management procedures and improving efficiency; enabling better use of resources available to the tourist company.

An increasing body of literature analyzes the impact of ICTs on the tourism industry (Bethapudi, 2013; Mihajlović, 2012; Law et al., 2014; Zeng & Gerritsen, 2014; Kladou & Mavragani, 2015; Narangajavana et al., 2017; Štetić et al., 2017; Mandić & Praničević, 2019; Patwary et al., 2020; Damnjanović, 2016; Petrovic & Milićević, 2020; Kumar & Kumar, 2020). An extensive overview of consumers' acceptance of e-tourism is given in Ukpabi and Karjaluoto (2017). However, the application of ICTs in the tourism sector faces certain difficulties. The diversity of the tourism sector, which is reflected in the fragmentation of the market, a large volume of personalized transactions and products, a large volume of structured and standardized data, as well as different types of customers places high demands on information systems (Werthner & Klein, 1999). Duffy (2010) identified the main factors that facilitate the application of ICTs in the tourism sector, but also the main obstacles. Factors that encourage the application of ICTs include the simplicity and usefulness of ICTs, management support, the possibility of user involvement, the availability of internal and external expertise. The main obstacles are security concerns, lack of training, lack of capital, maintenance of hardware and software, and fear of technology.

Nevertheless, the benefits and advantages that the application of ICTs in the tourism sector provides far outweigh the potential disadvantages and difficulties in the application of ICTs. Therefore, the aspiration of most developed and developing countries is to integrate ICTs into the tourism sector as much as possible, with different countries having different success rates. With this in mind, this paper seeks to evaluate the level of ICT readiness of European countries in the tourism sector by applying the methods of multicriteria analysis.

### 3. DATA AND METHODOLOGY

This research will analyze the information technology readiness of the tourism sector of selected European countries based on the values of ICT indicators for tourism formed by the World Economic Forum.<sup>3</sup> These indicators are an integral part of the TPCI, which serves to rank countries according to the degree of mutual competitiveness in the tourism sector. Table 1 presents descriptive statistics for the values of ICT indicators for selected European countries, from the Total Competitiveness Report for the year 2019 year (WEF, 2019). Selected ICT sub-indicators are:

- ICT use for business to business transactions (C1) – What extent do businesses, in a particular country, use ICTs for transactions with other businesses? – 1 to 7 score, where 1 = not at all, 7 = to a great extent,

<sup>3</sup> Selected European countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and United Kingdom.

- ICT use for business to customer transactions (C2) – What extent do businesses, in a particular country, use the Internet for selling their goods and services to consumers? – 1 to 7 score, where 1 = not at all, 7 = to a great extent,
- Percentage of the adult population of Internet users (C3) – Percentage of individuals who used the internet from any location and for any purpose, irrespective of the device and network used, in the last three months,
- Fixed broadband Internet subscriptions per 100 population (C4) – Number of fixed-broadband internet subscriptions per 100 population,
- Natural digital demand (C5) – Number of online searches index (0 –100 best),
- Quality of electricity supply (C6) – How reliable is the electricity supply in a particular country (lack of interruptions and lack of voltage fluctuations)? – 1 to 7 score, where 1 = extremely unreliable; 7 = extremely reliable,
- Mobile network coverage in the percentage of the population (C7) – Percentage of the total population covered by a mobile network signal,
- Mobile-cellular telephone subscriptions per 100 population (C8) – Number of mobile-cellular telephone subscriptions per 100 population.

**Table 1.** Descriptive statistics of travel and tourism ICT readiness indicators of selected European countries

	N	Minimum	Maximum	Mean	Std. Deviation
<b>C1</b>	38	4.01	6.10	5.1539	.62972
<b>C2</b>	38	3.83	6.25	5.1921	.66725
<b>C3</b>	38	.57	.98	.7955	.10983
<b>C4</b>	38	90.42	170.85	123.2947	18.50838
<b>C5</b>	38	41.66	154.12	87.7950	25.69770
<b>C6</b>	38	4.57	6.77	5.8524	.75387
<b>C7</b>	38	.27	91.95	26.7445	25.49666
<b>C8</b>	38	.91	1.00	.9954	.01474

Source: Author's calculation

The information-technology readiness of the tourism sector of the selected European countries will be analysed in the context of finding the alternative (country) that has the best-balanced values of the mentioned indicators. The optimal alternative will be assessed by ranking the countries using the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) method for multi-criteria decision-making. In order to apply the selected multi-criteria decision-making method, the criteria weights need to be determined. There are several methods for determining the weight coefficients of the criteria, and in this paper two methods, Principal Component Analysis (PCA) and Step-wise Weight Assessment Ratio Analysis (SWARA), will be applied, in order to determine the influence of the application of different methods for determining the weights of the criteria on the final order of alternatives. In the second step, the ranking of selected European countries according to their ICT readiness will be performed using the TOPSIS method. Accordingly, the main hypothesis of this research is that different techniques for determining the criteria weights lead to a different ranking of alternatives when applied in the same method of multi-criteria decision making.

#### 4. ANALYSIS OF THE OBTAINED RESULTS

The first part of the analysis is focused on determining the weight coefficients of the criteria using factor analysis. The basis of each factor analysis is the correlation matrix of the original variables. Namely, for the factor analysis to make sense, the original variables, of which there are 8 in the



given research, must be mutually correlated. Table 2 shows the correlation matrix for 8 perceived ICT indicators. As can be seen on the main diagonal there is number 1, and as the matrix is symmetrical, only one part of the table outside the diagonal is observed. In the given statistical model, the correlation coefficients will be observed in the lower left part of the upper triangle, while the results of the null hypothesis test are observed in the lower part of the table. Namely, the validity of the null hypothesis that the individual correlation coefficients are equal to zero is examined. According to the results of this test, for values of the realized level of the significance test greater than 0.05, we accept the null hypothesis that these correlation coefficients are equal to zero (Soldić-Aleksić & Chronos-Krasavac, 2009). Thus, for example, we see that the correlation coefficients of variable C1 and variables C4, C7 and C8 can be accepted by the null hypothesis.

**Table 2.** Correlation coefficients between variables

		C1	C2	C3	C4	C5	C6	C7	C8
<b>Correlation</b>	C1	1.000	.828	.819	.240	.560	.823	.140	.096
	C2	.828	1.000	.648	.242	.510	.681	.054	-.104
	C3	.819	.648	1.000	.105	.527	.760	-.039	.009
	C4	.240*	.242	.105	1.000	.261	.106	.038	-.345
	C5	.560	.510	.527	.261	1.000	.492	.013	.055
	C6	.823	.681	.760	.106	.492	1.000	.283	.065
	C7	.140	.054	-.039	.038	.013	.283	1.000	.063*
	C8	.096	-.104	.009	-.345	.055	.065	.063	1.000
<b>Sig. (1-tailed)</b>	C1		.000	.000	.073	.000	.000	.201	.283
	C2	.000		.000	.072	.001	.000	.373	.268
	C3	.000	.000		.265	.000	.000	.407	.479
	C4	.073	.072	.265		.057	.264	.410	.017
	C5	.000	.001	.000	.057		.001	.470	.372
	C6	.000	.000	.000	.264	.001		.043	.350
	C7	.201	.373	.407	.410	.470	.043		.353
	C8	.283	.268	.479	.017	.372	.350	.353	

\* Level of significance is 0.05.

**Source:** Author’s calculation

Formal tests to justify factor analysis are Bartlett’s test and KMO statistics (Kaiser-Meyer-Olkin sample adequacy measure). The first test is used to test the null hypothesis that there is no significant correlation between the original variables and is based on Chi-square statistics. If these statistics are higher, it is more likely that the null hypothesis will be rejected. The results in Table 3 indicate that the null hypothesis can be rejected (Sig. = 0.000). Regarding KMO statistics (which compares the values of the observed correlation coefficients with partial coefficients), the application of factor analysis is recommended if its value is higher than 0.5 (Soldić-Aleksić & Chronos-Krasavac, 2009). The value of KMO statistics is 0.700, which justifies the application of the factor analysis.

**Table 3.** KMO and Bartlett’s Test

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		.700
<b>Bartlett’s Test of Sphericity</b>	Approx. Chi-Square	157.484
	df	28
	Sig.	.000

**Source:** Author’s calculation

When conducting factor analysis on the mentioned variables, it is necessary to indicate the method of factor analysis. In the observed model, the principal components procedure was chosen as

the method of factor extraction. For the criteria of factor selection, eigenvalues associated with factors greater than 1 were taken. Table 4 shows that the first 3 factors have a value greater than 1, and the percentage of explained variance is 77.88%, which supports the validity of the model.

**Table 4.** Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.771	47.134	47.134	3.771	47.134	47.134	3.708	46.344	46.344
2	1.362	17.022	64.156	1.362	17.022	64.156	1.377	17.212	63.555
3	1.052	13.148	77.304	1.052	13.148	77.304	1.100	13.749	77.304
4	.728	9.095	86.399						
5	.489	6.116	92.515						
6	.347	4.338	96.854						
7	.173	2.162	99.016						
8	.079	.984	100.000						

\* Extraction Method: Principal Component Analysis.

**Source:** Author's calculation

After defining the most important factors, the next step in the factor analysis refers to the rotation of factors with certain factor weights. In the specific model, factor weights greater than 0.3 were chosen. For these reasons, the orthogonal factor rotation procedure (Varimax) was applied. After multiple factor rotation, a factor matrix was obtained, where high values of factor weights can be distinguished for each factor (Table 5).

**Table 5.** Rotated component matrix

	Component		
	1	2	3
C1	.946		
C3	.891		
C6	.866		
C2	.848		
C5	.706		
C8		-.828	
C4		.801	
C7			.987

\* Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 4 iterations.

**Source:** Author's calculation

Thus, the variables C1, C2, C3, C5 and C6 have high weight coefficients with the first factor. The squares of the weight coefficients of the variables for the given factors represent the proportions of the variance of certain variables that are attributed to the action of the given factors (Soldić-Aleksić & Chronos-Krasavac, 2009). Consequently, in a stated model for the first factor the following relations can be derived:

- $0.946^2=0,89=89\%$
- $0.891^2=0,79=79\%$
- $0.866^2=0,75=75\%$

- $0.848^2=0.72=72\%$ .
- $0.706^2=0.50=50\%$

Therefore, it is concluded that the first factor explains 89% of the variance of variable C1, 79% of variable C3, 75% of variable C6, 72% of variable C2 and 50% of variable C5. The factor weight plot of three factors is shown in Figure 1.

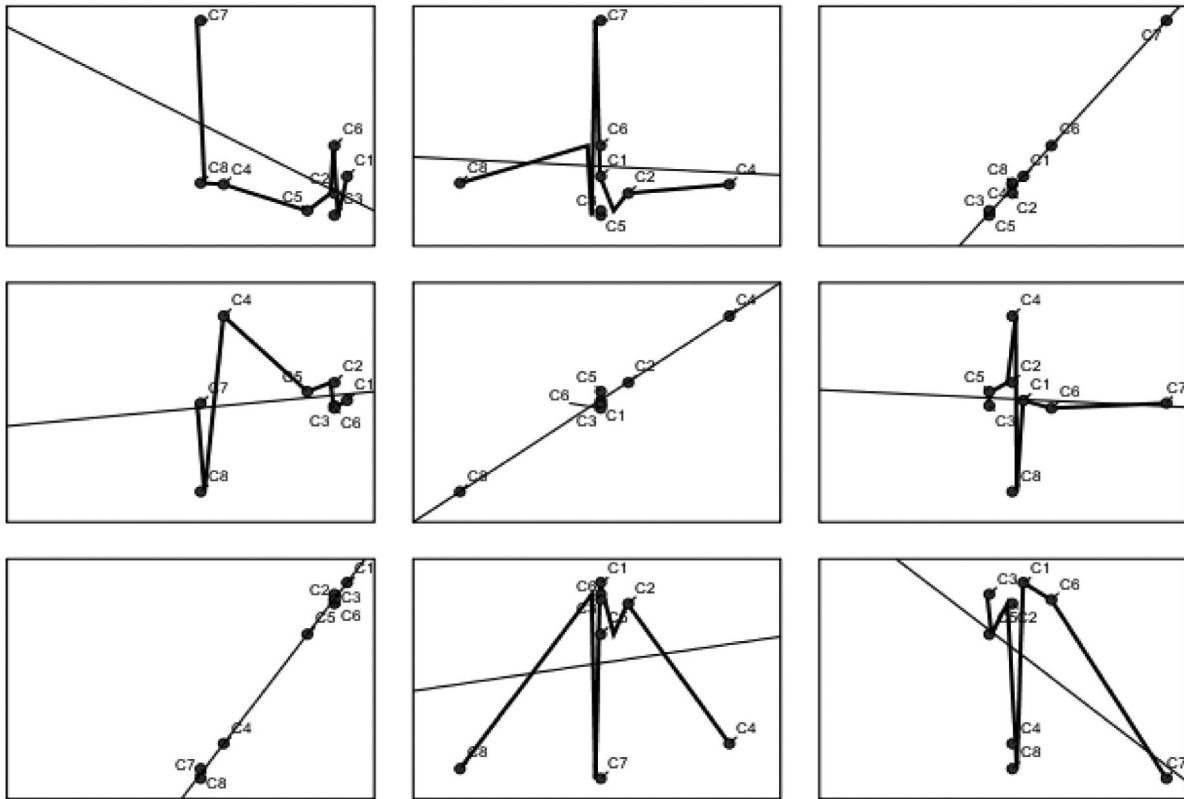


Figure 1. Component matrix plot

Source: Author’s calculation

The results in the factor scores matrix confirm the high values of individual coefficients related to the variables that make up the factors (Table 6).

Table 6. Component score coefficient matrix

	Component		
	1	2	3
C1	.255	-.034	.036
C2	.226	.090	-.037
C3	.259	-.075	-.164
C4	.006	.583	.082
C5	.198	.034	-.120
C6	.222	-.078	.199
C7	-.068	.027	.917
C8	.062	-.612	.041

\* Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Component Scores.

Source: Author’s calculation

Based on the given coefficients that are multiplied by the values of the variables, the values of the factors are shown in the form of the following relations:

$$F_1 = 0.255 * C1 + 0.226 * C2 + 0.259 * C3 + 0.198 * C5 + 0.222 * C6 \quad (1)$$

$$F_2 = 0.583 * C4 - 0.612 * C8 \quad (2)$$

$$F_3 = 0.917 * C7 \quad (3)$$

Weight assessment approaches have an important role in solving multi-criteria decision-making problems. So, the next step of the analysis in this paper is dedicated to the construction of the weights from the matrix of factor loadings after rotation, given that the square of factor loadings represents the proportion of the total unit variance of the indicator which is explained by the factor. The estimates of rotated loadings will be used for weights calculation. Weights are normalized squared factor loading, e.g.  $0.244 = (0.946^2)/2.64$  which is the portion of the variance of the first factor explained by the variable C1 (Nardo et al.,2005). The variance of calculated variables' weights within components and individual weights of Components, in this last step of PCA, will be used for the calculation of weights of variables according to the results from Table 7.

**Table 7.** Factor loading and weights of selected indicators

Variables	Component 1		Component 2		Component 3	
	Loadings	Weights of variables within Component 1	Loadings	Weights of variables within Component 2	Loadings	Weights of variables within Component 3
C1	0.946	0.244				
C2	0.848	0.196				
C3	0.891	0.217				
C4			0.801	0.486		
C5	0.706	0.136				
C6	0.866	0.205				
C7					0.987	1.000
C8			-0.828	0.519		
Expl.VAR		3.656	1.32		0.974	

**Source:** Author's calculation

Another method that will be applied to determine the weight coefficients of the criteria is the SWARA method. The main feature of SWARA method is the possibility to use experts' estimations about significance ratio of the attributes in the process of weights determination. SWARA method represents one of the newest methods for criteria weights determination. The main advantage compared to others methods of weights determination is the straightforwardness of weights calculation where each expert has to choose the importance of each criterion (Zolfani & Sapauskas, 2013). Next, each expert ranks all the criteria from the first to the last one. The ability to estimate experts' opinions about the importance ratio of the criteria in the process of their weight's determination is the main element of this method (Zolfani & Sapauskas, 2013). The computational procedure of the SWARA method has few specific steps in determining the relative weights of criteria (Stanujkić et al., 2015):

Step 1. The criteria are sorted in descending order based on their expected significances.

Step 2. Starting from the second criterion, the respondent expresses the relative importance of criterion  $j$  in relation to the previous ( $j-1$ ) criterion, for each particular criterion. According to (Kersulienė et al. 2010), this ratio is called the Comparative importance of average value ( $s_j$ ).

Step 3. Determine the coefficient  $k_j$  using the following relation:

$$k_j = \begin{cases} 1 & j = 1 \\ s_j + 1 & j > 1 \end{cases} \tag{4}$$

Step 4. Determine the recalculated weight  $q_j$  as follows:

$$q_j = \begin{cases} 1 & j = 1 \\ \frac{k_{j-1}}{k_j} & j = 1 \end{cases} \tag{5}$$

Step 5. The relative weights of the evaluation criteria are determined as follows:

$$w_j = \frac{q_j}{\sum_{k=1}^n q_k} \tag{6}$$

where  $w_j$  denotes the relative weight of criterion  $j$ .

In the second step of the analysis the TOPSIS method as a multi-criteria decision-making method will be used for the evaluation of alternatives. TOPSIS method performs prioritization of alternatives based on their geometric distance from the positive-ideal and negative-ideal solution. Accordingly, it can be concluded that the best alternative will be the one with the shortest distance to the positive-ideal solution, and with the greatest distance from the negative-ideal solution (Rađenović & Veselinović, 2017). TOPSIS method involves the use of specific steps (Yoon & Hwang, 1995):

Step 1: Determination of normalized decision matrix R with coefficients  $r_{ij}$  obtained by vector normalization:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^m x_{ij}^2}} \quad i=1, 2, \dots, m, j = 1, 2, \dots, n. \tag{7}$$

Step 2: Determination of weight normalized decision matrix V with coefficients  $v_{ij}$  which are calculated by multiplying each element of each column of the normalized decision matrix by the adequate weights:

$$v_{ij} = r_{ij}w_j \tag{8}$$

In this paper weights were obtained using PCA and SWARA techniques to quantify the relative importance of the selected ICT readiness criteria.

**Table 8.** Weighted coefficients of PCA and SWARA method

Method	Weighted coefficients							
	C1	C2	C3	C4	C5	C6	C7	C8
PCA	0,035	0,222	0,027	0,138	0,011	0,025	0,568	0,157
SWARA	0,184	0,153	0,138	0,123	0,085	0,113	0,074	0,131

Source: Author’s calculation

Step 3: Determination of positive ideal and negative ideal solution. The values which describe positive ideal solution and negative ideal solution are defined as:

$$A^* = \{v_1^*, v_2^*, \dots, v_j^*, \dots, v_n^*\} = \left\{ \left( \max_i v_{ij} \mid j \in J_1 \right) \wedge \left( \min_i v_{ij} \mid j \in J_2 \right), i = 1, 2, \dots, m \right\} \quad (9)$$

$$A^- = \{v_1^-, v_2^-, \dots, v_j^-, \dots, v_n^-\} = \left\{ \left( \min_i v_{ij} \mid j \in J_1 \right) \wedge \left( \max_i v_{ij} \mid j \in J_2 \right), i = 1, 2, \dots, m \right\} \quad (10)$$

Where  $J_1$  represents the set of revenue criteria and  $J_2$  the set of expenditure criteria.

Step 4: Calculation of the distance (Euclidean distance) of each alternative from the positive ideal and negative ideal solution. The distance from the positive ideal solution is calculated as:

$$S_i^* = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^*)^2}, \quad i = 1, 2, \dots, m \quad (11)$$

Similarly, the distance of alternative from the negative ideal solution is calculated as:

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2}, \quad i = 1, 2, \dots, m \quad (12)$$

Step 5: Calculation of the proximity index ( $C_i^*$ ), which represents relative proximity of alternative to the positive ideal solution. The index is calculated as:

$$C_i^* = \frac{S_i^-}{S_i^* + S_i^-}, \quad i = 1, 2, \dots, m \quad (13)$$

Proximity index takes values in range  $0 \leq C_i^* \leq 1$ . If  $C_i^* = 0$  the alternative represents a negative ideal solution, and if  $C_i^* = 1$  the observed alternative corresponds with the positive ideal solution.

Step 6: Ranking of the alternatives according to their proximity index. The optimum alternative is the one with the highest proximity index.

## 5. COMPARATIVE ANALYSIS OF THE RESULTS

The results of the conducted multi-criteria analysis are shown in Table 9. The results obtained using the integrated SWARA-TOPSIS approach indicate that Italy is the best-ranked country. On the other hand, the results obtained using the integrated PCA-TOPSIS approach indicate that the best-ranked country is Belgium.

**Table 9.** Rankings of European countries according to different techniques

Country	PCA-TOPSIS		SWARA-TOPSIS	
	Proximity index	Rank	Proximity index	Rank
Albania	0,35860	27	0,19129	32
Austria	0,60256	7	0,33539	22
Belgium	0,78671	1	0,41080	15
Bosnia and Herzegovina	0,31936	30	0,45007	13
Bulgaria	0,48676	13	0,28980	26
Croatia	0,47111	16	0,61522	3



Cyprus	0,66131	5	0,45300	11
Czech Republic	0,54369	9	0,45630	9
Denmark	0,30559	32	0,32517	23
Estonia	0,76741	4	0,34774	20
Finland	0,78670	2	0,41080	16
France	0,41104	24	0,59242	6
Germany	0,43707	23	0,34344	21
Greece	0,31936	31	0,45007	14
Hungary	0,29385	35	0,15383	34
Ireland	0,47600	15	0,38780	17
Italy	0,51622	11	0,71535	1
Luxembourg	0,48676	14	0,28980	27
Malta	0,48867	12	0,52208	8
Moldova	0,25460	37	0,11454	36
Montenegro	0,46252	20	0,21676	30
Netherlands	0,46904	18	0,35649	19
North Macedonia	0,25853	36	0,10819	37
Norway	0,54964	8	0,54120	7
Poland	0,78186	3	0,38721	18
Portugal	0,34829	28	0,65987	2
Romania	0,39946	25	0,19561	31
Russian Federation	0,46633	19	0,29041	25
Serbia	0,39433	26	0,16466	33
Slovak Republic	0,44749	22	0,24621	29
Slovenia	0,34746	29	0,25237	28
Spain	0,47111	17	0,61522	4
Sweden	0,66131	6	0,45300	12
Switzerland	0,54369	10	0,45630	10
Turkey	0,30559	33	0,32517	24
Ukraine	0,30100	34	0,13134	35
United Kingdom	0,45741	21	0,61043	5

Source: Author's calculation

The differences that exist in the ranking of the selected European countries using the TOPSIS method are primarily due to the different approaches in determining the weighting coefficients. The application of PCA is a kind of sublimation of ICT readiness tourism indicators by factors based on the value of loadings, where later, using variance, weights are calculated for each variable separately, first within the Component that they make and later for each individually. On the other hand, the SWARA method, as a still new concept of weight determination, is based on the simplicity of the model and individual expert assessment of the criteria importance. In this method, experts and researchers have a significant role in the evaluation and calculation of the value of the criteria, where they primarily use their implicit knowledge, information and experiences.

In order to check the relationship between the obtained ranking results, using both approaches, a correlation analysis was performed by Spearman's rank order correlation. Spearman's rank-order correlation is used to examine the strength of the relationship and the direction of the association between the obtained rank values for both methods (Marjanović et al., 2019). The analysis is performed in the SPSS statistical software and indicates that there is a moderate positive statistically significant relationship between the two variables (PCA\_TOPSIS and SWARA\_TOPSIS) with the Spearman's rho value of 0.494 (Table 10). This indicates that there is a moderate rank inversion when different methods for determining weights are applied.

**Table 10.** Spearman's rank-order correlation for PCA\_TOPSIS and SWARA\_TOPSIS ranking values

Correlations		PCA_TOPSIS	SWARA_TOPSIS	
Spearman's rho	PCA_TOPSIS	Correlation Coefficient	1.000	.494**
		Sig. (2-tailed)	.	.000
		N	37	37
	SWARA_TOPSIS	Correlation Coefficient	.494**	1.000
		Sig. (2-tailed)	.000	.
		N	37	37

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Source:** Author's calculation

Hence, the research hypothesis is confirmed, the application of different techniques for determining the criteria weights leads to a different ranking of alternatives when applied in the same method of multi-criteria decision-making.

## 6. FUTURE RESEARCH DIRECTIONS

Further research in this area can be directed towards identifying the trend of ICT readiness in the tourism sector of European countries by extending the period of analysis. Also, it is possible to identify the basic determinants of ICT readiness in the tourism sector by applying panel data regression analysis.

## 7. CONCLUSION

The competitiveness of tourist organizations and destinations is increasingly conditioned by the application of ICTs. In modern conditions, ICTs are becoming a powerful tool that can be used to achieve advantages in promoting and strengthening the strategy and business of the tourism industry (Bethapudi, 2013). The success of the implementation of ICTs in the tourism sector is a prerequisite for the development of contemporary tourism. The application of ICT provides many benefits to the tourism sector, primarily reflected in facilitating business and improving efficiency and productivity.

Therefore, the main goal of this paper was to offer a possible approach to assess the ICT readiness of the tourism sector in European countries using the technique of multi-criteria decision-making. In addition, the sub-goal was to present a comparative analysis of the results obtained by applying different methods for determining weight coefficients. The assessment of ICT readiness of European countries was conducted using a two-step analysis. In the first step, weight coefficients were determined by applying factor analysis and SWARA method to the selected set of criteria. In the second step, using the TOPSIS method, the ranking results were obtained, after which a comparative analysis of the results was performed to determine whether the application of different methods for determining the weight coefficients of the criteria led to the inversion of the rank. The results indicate that the application of different methods for determining weight coefficients on the same data set leads to moderate rank inversion.

The conducted research faces certain limitations. The obtained results are largely determined by the selected indicators, where the application of some other indicators can lead to different results. In addition, it is possible that the results of the analysis are influenced by the selected multicriteria method, and the application of another multicriteria method may lead to different results.

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# EQUITY MANAGEMENT OF THE TOURISM SECTOR ENTERPRISES IN THE SLOVAK REPUBLIC

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**Abstract:** *Since its expansion at the beginning of the 20th century, tourism has shown its strength and importance. Tourism is a link between several economic sectors, thanks to its accumulated development potential. One of the main goals of business entities from the financial point of view is to achieve profit. The second is to maximize the value of the company, which can be affected by the achievement of profit. Companies operating in the field of tourism in the Slovak Republic are no exception. The chapter deals with the analysis of their equity, including its individual items with an emphasis on the going concern. Using Pearson's correlation coefficient, we identify the relationship between equity and its individual items. The aim of the chapter is, based on indebtedness indicators, specifically total indebtedness and the degree of self-financing to assess the adequacy of own resources needed to finance its activities in this sector in the Slovak Republic, while marginally analyzing the impact of COVID-19 on the tourism sector in Slovakia.*

**Keywords:** *Share capital, Retained earnings, Profit, Loss.*

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## 1. INTRODUCTION

Upon entering the market, each company must be financed by capital, while it must own such forms of assets through which its business activities will be carried out. At the beginning of the business, the capital structure is always dominated by the own resources of the assets invested in the company by the partners as equity. However, this state of financing the company's activities is unsustainable in the long run and does not reflect the normal situation of its operation on the market. Companies usually do not have a sufficient amount of their own resources, so they have to raise capital from the external environment in the form of extraneous resources. Raising capital to finance the operation of a company is considered to be one of the biggest problems. For a company, the selection of its sources of financing is a lengthy process that costs it a lot of effort. Resources of financing can come from the internal environment of the company, i.e. they are created directly in the company or they are obtained in various forms from the external environment. It is the right setting of the ratio of own and extraneous resources of financing that is the biggest challenge in the business sphere. It can be assumed to a large extent that it depends on the subject of business and the industrial segment. This chapter aims to analyze the capital structure of entrepreneurs in the tourism industry in the Slovak Republic in terms of its impact on financing the company's activities. Using Pearson's correlation coefficient, the authors identify the relationship between equity and its individual items. In the chapter, the authors will also present aspects related to the current situation of the impact of Covid-19 and measures of the Government of the Slovak Republic on the situation of entrepreneurs in the tourism industry in the Slovak Republic.

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## **2. RESOURCES OF ASSETS FROM ECONOMIC AND ACCOUNTING PERSPECTIVES**

The resources of assets can be viewed in two ways, while the first method examines the resources of assets in terms of the origin of assets, where we are interested in the perspective of the entity, based on which the resources of assets are divided into own and extraneous. By own resources of the company, authors mean its equity, which is created in some companies at the moment of launching the business. Extraneous resources include liabilities, loans, and borrowings. The second method is the legal aspect, according to which the resources of assets represent the claims of third parties (suppliers, the state, banks, owners, etc.) against the entity. Equity is an abstract concept and does not apply to specific types of assets. The reason is the fact that at every moment of the asset cycle, we would have to assign different assets to our equity, which is practically impossible. Because of the above, equity is quantified as a whole, specifically as the difference between assets and liabilities, which we refer to as the modified extended balance sheet equation. This relationship is an indirect definition of equity, as equity is defined in this case as the difference between two other specifically defined components of the balance sheet, namely assets and liabilities (Šlosárová, 2018).

In section 2(2) of Act no. 431/2002 Coll. on Accounting, as amended in the Slovak Republic (hereinafter referred to as the „Accounting Act“), it is stated in general that the subject of accounting is the accounting of facts, including the difference between assets and liabilities, a specification of this term can be found in section 59(1) of the Measures of the Ministry of Finance of the Slovak Republic 23054/2002-92, which lays down details on accounting procedures and general chart of accounts for entrepreneurs accounting in the double-entry bookkeeping system as amended (hereinafter referred to as accounting procedures), in which it is precisely defined that equity represents the difference between assets and liabilities. By equity, we mean the own resources existing in the company throughout the implementation of business activities, which should be available to the company at all times, as they are long-term resources. The volume of equity is crucial for determining the long-term survival of the company (Valaskova et al., 2019).

In terms of the time of entry into the company, equity can be divided into two basic parts (Máziková et al., 2016). The first part includes the part invested in the company at its establishment, where the initially invested capital of individual owners can be included in the business. The second part relates to the very period of existence and includes internal resources, external resources, and resources acquired in another form. By internal resources, we mean resources created by the entrepreneur's own activity, when he tries to make a profit, which leads to an increase or decrease in equity. External resources are resources that the company has obtained through other owners' contributions to equity, for example in the form of gifts from shareholders. Resources acquired by the company in another form may include valuation differences arising from the revaluation of certain types of assets and liabilities following the Accounting Act, share premium representing the difference between the nominal value of shares and the issue price, and others (Šlosárová, 2016). The process of creating own resources in the course of business activity is referred to as self-financing.

The most important component of equity is considered to be the share capital defined in section 58(1) of Act no. 513/1991 Coll. Commercial Code in the Slovak Republic (Commercial Code, 2020) as amended as a monetary expression of the sum of monetary and non-monetary deposits of all partners in the company. The shareholder's contribution (Commercial Code, 2020) means

the sum of funds and other money-valued assets that the shareholder invests in the company and shareholders contribute to the company's business results. The share capital must be created by limited liability companies, joint-stock companies, and simple stock companies, and its amount is entered in the Commercial Register of the Slovak Republic (Section 58 (2) of the Commercial Code). We account for individual items of equity (Table 1) on accounts of account class 4 – Capital accounts and long-term liabilities containing account groups 41 – 43 of the General Chart of Accounts for Entrepreneurs in the Slovak Republic (Accounting Procedures, 2020)

**Table 1.** Account groups and equity accounts

Account group number and name	Account number and name
41 – Share capital and capital funds	<ul style="list-style-type: none"> <li>• 411 – Share capital</li> <li>• 412 – Share premium</li> <li>• 413 – Other capital funds</li> <li>• 414 – Valuation differences from a revaluation of assets and liabilities</li> <li>• 415 – Valuation differences from equity investments</li> <li>• 416 – Valuation differences on mergers, acquisitions, and divisions</li> <li>• 417 – Legal reserve fund from capital deposits</li> <li>• 418 – Indivisible fund from capital deposits</li> <li>• 419 – Changes in share capital</li> </ul>
42 – Funds created from profit and transferred economic results	<ul style="list-style-type: none"> <li>• 421 – Legal reserve fund</li> <li>• 422 – Indivisible fund</li> <li>• 423 – Statutory funds</li> <li>• 427 – Other funds</li> <li>• 428 – Retained earnings</li> <li>• 429 – Unrecovered loss</li> </ul>
43 – Profit/loss	<ul style="list-style-type: none"> <li>• 431 – Management result in approval</li> </ul>

**Source:** own processing according to the General Chart of accounts in the Slovak Republic (Accounting Procedures, 2020)

All components of an entity's equity are recognized in the financial statements in the balance sheet on the liabilities side. Explanations of changes in equity are included in the financial statements compiled according to the national accounting legislation in Slovakia in the notes as part of the financial statements. In the case of IFRS's financial statements, the information of equity is published in the statement of changes in equity, which is a part of the financial statements. Accounting entities in the Slovak Republic publish financial statements in the Register of Financial Statements of the Slovak Republic.

### 3. TOURISM

In general, tourism is considered to be one of the largest industries in the world (Wallace & Russel, 2004; Saarinen, 2006). Tourism, as an important industrial sector, has undergone several changes in its development, including a change in structure and properties as well as the acquisition of some new functions (Šapić et al., 2018). Tourism is an essential part of each country's national economy from an economic point of view (Štefko et al., 2018). Tourism is a link between several economic sectors, thanks to its accumulated development potential (Beránek, 2013). Gligorijević & Stefanović (2012) define tourism as a type of consumer movement that is aimed at meeting the specific needs of people, while they understand specific needs as tourist needs. Tourism is a spatial phenomenon with a major impact on society and various sectors of the national economy, such as construction, transport, and trade (Zarebski et al., 2019). Tourism,

by Šambronská (2017), means a complex industry, including everything that goes with it in addition to fierce competition, i.e. product, promotion, specific models, sales, partnerships, technologies. Tourism can contribute to regional economic growth by providing favorable conditions for tourism development in regions where the prospects for other sectors of the economy are quite unfavorable (Neumeier & Pollermann, 2014). According to Brida et al. (2010) tourism in some way supports and leads to long-term economic growth, which is referred to as the tourism-oriented growth hypothesis Claveria & Datzira (2009) consider it necessary to identify the factors determining demand at the tourist level, as according to them tourism is generated by demand. Regardless of the level of economic development, each country is interested in tourism due to various positive impacts, such as developing economic growth, promoting international understanding and peace, improving living standards, stimulating local trade and industry, protecting cultural heritage, and so on (Goeldner et al., 2000; MacGregor Pelikánová, 2019; Turečková & Nevima, 2019). According to Čačić (2013) tourism belongs to the modern socio-economic phenomenon with significant economic, political, cultural or other influences, thanks to which it plays an important role in the overall economic and social development worldwide.

Seasonality, which is one of the most undesirable companions due to the significant negative effects it causes, can be considered a general feature of tourism (Petrevska & Nikolovski, 2018). There are several ways to measure seasonality in tourism, most often using estimates of seasonal factors in time series, proportional deviations from moving averages over fictitious variables in several linear regressions, or using more advanced econometric models (Fernández-Moralez, 2003; Ashworth & Thomas, 1999). According to Lundberga et al. (1995), seasonality can occur as systematic changes not only during the year but also within a month, a week, even in one day.

The main difficulty in measuring the economic impact of tourism is the multisectoral nature of tourism activity, which brings quantifiable benefits and which somehow reduce the true contribution of tourism to economic development (Meyer, 2004). Brida (2008) emphasizes the lack of a sectoral statistical tool at a transnational level that could provide a sufficiently structured database to allow further research integrating data from the satellite tourism accounts of different countries, which represents a more realistic approach to the tourism sector.

Several authors have dealt with the classification of tourists in their scientific studies, and Plog (2001) divides tourists into three groups according to their preferences. The first group includes cautious tourists who prefer shorter trips, who like safety and do not travel often. Careful tourists choose well-planned tours, buy lots of souvenirs and stay in cheaper hotels or motels. If in the past they were satisfied with the choice of destination, they often return there. The second group is represented by brave tourists who avoid the crowd who prefer traveling and exploring, go on longer trips (independent trips, active holidays, adventure activities), they like to get to know the customs and habits in the destinations they visit. The last group includes tourists with similar habits as in the previous two groups, depending on which group they are closer to.

Modern tourism has several interconnected functions forming an indivisible whole with a strong impact on the economic life of the country, while Dobre (2005) divides them into two groups (Table 2).

According to Steck (2010), the wider economy is affected by the direct effects of tourism, which it has divided into six categories. The first category is the creation of jobs that arise as a result of the development of tourism, such as the position of hotel staff, chefs, travel agency staff, and the

like. The second category is the supply of goods and services that local or national businesses can offer to tourist businesses (food, furniture, etc.), and these items may be imported if local provisions fail to meet the demand for costs, quality or quantity. The third category includes the sale of goods and services by retailers in tourist destinations, such as the sale of souvenirs or food, which directly captures the cash flows from tourist activities. The fourth category concerns the establishment of tourism companies due to the high or increasing level of tourism activities. The penultimate category refers to taxes and levies where tourism companies contribute (national indirect taxes). The last category is an investment in infrastructure, the increase in which is conditioned by the growing demand in the field of tourism to increase local infrastructure, either by private actors or the public sector.

**Table 2.** Basic functions of tourism

<b>Economic functions of tourism</b>	<b>Direct impact on:</b>
	<ul style="list-style-type: none"> <li>• social product and national income</li> <li>• faster development of underdeveloped areas</li> <li>• balance of payments</li> <li>• employment</li> </ul>
	<b>Indirect impact on:</b>
	<ul style="list-style-type: none"> <li>• industry</li> <li>• construction</li> <li>• agriculture</li> </ul>
<b>Non-economic functions of tourism</b>	<b>Multiplicative impact:</b>
	<ul style="list-style-type: none"> <li>• export</li> </ul>
	<b>Other impacts</b>
	<ul style="list-style-type: none"> <li>• health function</li> <li>• entertainment function</li> <li>• cultural function</li> <li>• social function</li> <li>• political function</li> <li>• function in relation to the defense of the country</li> </ul>

Source: Dobre, 2005

#### 4. THE POSITION OF THE TOURISM INDUSTRY IN THE SLOVAK REPUBLIC AS AN EU MEMBER

The European Union is a unique economic and political partnership between the 27 countries ensuring peace, stability, and prosperity on the European continent, contributing to the rising standard of living of its citizens, establishing a single European currency, and continuing to build a single European market in which the free movement of people, goods, services and capital between member countries is as self-evident as within countries (Staničková & Melecký, 2018; Cvik & MacGregor Pelikánová, 2015).

Santos & Cincera (2018) state that tourism is one of the three largest socio-economic activities in the European Union and makes a significant contribution to the European Union's gross national product and employment. Europe is one of the number one tourist destinations (Roman et al., 2020). However, Europe is not one of the fastest-growing regions in the global industry and its market share is declining, taking into account international arrivals and tourist revenues (Juul, 2015). Research in the field of tourism needs to take into account the dynamics of the sector, such as various aspects such as eradicating poverty and hunger, ensuring sustainable economic growth, decent work, improving the quality of education, increasing health and well-being, promoting a sustainable ecosystem, maintaining inclusive, safe and sustainable places, including infrastruc-



tures to support industrialization and the like (Moreno & Tovar, 2015). The Member States of the European Union have competitive interests in the development of tourism (MacGregor Pelikánová, 2019). Tourism is not a contracted competence; it is one of the components of regional policies of individual member states. The European Union carries out support, coordination or complementary activities in tourism (Gúčík, 2011). Pay attention to the tourism sector in the institutions of the European Union, while ensuring greater coordination of activities and analysis of the impact of the various European Union directives in its policies on the sustainable development of tourism in Europe (Kučerová et al, 2010; MacGregor Pelikánová & MacGregor, 2017).

The Slovak Republic, with the capital city Bratislava, joined the European Union on May 1, 2004. The country is divided into 8 regions, each named after its site (Figure 1). According to the information on the website of the European Union (2020), the most important sectors of the Slovak economy in 2018 were industry (26.2%), wholesale, retail trade, transport, accommodation and food services (20.2%), public administration, defense, education, health and social work (14.8%).



**Figure 1.** Slovak regions  
**Source:** CDB SK, 2020

In terms of the possibilities provided by the territory of the Slovak Republic, in the range of altitude from 94.3 m above sea level to 2,655 m above sea level, according to the strategy of tourism development in 2020, the cultural, historical, and natural potential of tourism in Slovakia, in the long run, predetermines the main types of tourism, which include (Ministry of Transport and Construction of the Slovak Republic, 2020):

- **summer tourism** – the motive for tourists is mainly to stay by the water, they visit swimming pools, aqua parks or various water areas. Other motives include rest, relaxation, hiking in mountain resorts, but also the effort to gain new knowledge, get to know new regions and areas. Last but not least, the need for exercise as part of a healthy lifestyle should be mentioned, which from a territorial point of view means that the development of tourism can also take place in areas where they have been underused so far, provided there is sufficiently strong demand;
- **winter tourism** – in recent years, Slovakia has had a competitive offer for the Central European market, except for Austria, after extensive investments in mountain tourism resorts. Competitiveness is based on geographical conditions and built capacities. As part of the development of winter tourism, it is necessary to increasingly respect the requirements for nature protection, as many resorts are located nearby or directly in protected landscape areas. The High Tatras are considered a special part, where it is



necessary to complete the planned zoning. Climate change must be respected in the development of mountain tourism resorts, while ski resorts must be built at a minimum valley station altitude of 700-800 meters above sea level;

- **spa and health tourism** – after socio-political changes in 1989, the Slovak spa industry had the presumption to be the so-called the “flagship” of tourism. Natural healing baths and thermal baths have an irreplaceable role in disease prevention, which at the same time helps to prevent diseases of civilization. Many Slovak spas have included wellness services, weekend beauty stays, stress relief stays, and the like in their programs, even under medical supervision. At the same time, a relatively wide network of thermal baths and aqua parks was built in Slovakia. For the purposes of health tourism, other natural conditions are also used, among which caves can be included, among other things, while in Slovakia there are 12 caves;
- **cultural and urban tourism** – Slovakia has a relatively large but little-used potential in this area, while the construction and technical condition of historical monuments can be considered an obstacle. Insufficiently developed products include organized events (calendar of events – cultural, sports, and business), which are carried out by cities and municipalities (planning and implementation level). Obstacles may include a weak and insufficient presentation and promotional activity at home or abroad, which is referred to as the marketing of tourism organization;
- **congress tourism** is one of the most promising and economically lucrative tourism, as it requires not only services directly related to the organization of congresses, conferences, and similar events, but also services of a complementary nature. Slovakia has suitable material preconditions for the development of congress tourism in hotels (modernization of hotels already carried out), which should offer the mentioned services especially in the off-season period, provided that the quality of services is high, together with the accompanying programs;
- **rural tourism and agrotourism** – rural tourism is associated mainly with simpler forms of accommodation, such as private accommodation, in guesthouses, and the like in the countryside with the possibility of learning about rural life. Part of rural tourism is agrotourism, which is associated with a stay at the farm. In the conditions of Slovakia, it is a relatively undeveloped type of tourism, which is a consequence of previous periods, which are associated with the existence of the state and cooperative farming on the land and the interruption of the tradition of private business in the agricultural sector. Because of the above, it is necessary to use the experience and knowledge from the surrounding countries, as rural tourism is used quite often in the world;
- **geoparks and geotourism** are one of the possibilities of tourism, due to the geographical diversity and richness of Slovakia. The UNESCO International Organization defines a geopark as an area that contains phenomena of special geological significance, a certain peculiarity or beauty presented depending on the region, geological history, origin, and processes that shaped it. With the use of specific tourism and the so-called geotourism geoparks can be an important aspect for local economic development, which contributes to increased employment and new economic activities of a particular region.

## 5. DATA AND METHODOLOGY

The aim of quantitative research carried out on a sample of financial information of companies operating in the Slovak Republic in the field of tourism for the period 2014-2018, is based on the development of total equity to identify items that resulted in a change in equity with an em-

phasis on assessing the development in Slovakia. The sources of data relevant for research are mainly the financial statements of individual companies for the period from 2014 to 2018, which are publicly available on the website of the register of financial statements maintained by the Ministry of Finance (Register FS, 2020) as a database of financial information on accounting entities in the Slovak Republic, which is freely available to external users. An additional source of information is Finstat ([www.finstat.sk](http://www.finstat.sk)), which provides information on a commercial basis. In addition to the financial statements, it contains more extensive and detailed structured data. In the research, the authors use statistical methods, specifically descriptive statistics of sample indicators such as minimum value, maximum value, median, arithmetic mean, and Pearson's correlation coefficient, based on which the authors identify the relationship between equity and its individual items. The authors use selected indicators to determine the minimum, maximum and average value of equity, profit after tax, total indebtedness, and degree of self-financing. Using the median, we identify the mean value within equity, profit after tax, total indebtedness, and degree of self-financing.

### 5.1. Descriptive statistics of the examined sample

The research is carried out on a sample created from all companies operating in the Slovak Republic selected in the field of tourism, which have published financial statements for the examined periods 2014-2018 and their subject of business is from two divisions of the classification of economic activities, namely 55 – Accommodation and 56 – Activities restaurants and inns. In terms of the structure of the legal form of companies, the largest group consisted of limited liability companies, therefore only limited liability companies are included in the further analysis in the sample. Data on the number of limited liability companies in individual years according to the statistical classification of economic activities in Slovakia– SK NACE, which were included in the analyzed sample, are given in Table 3.

**Table 3.** Number of limited liability companies according to SK NACE for the period 2014-2018

SK NACE	2014	2015	2016	2017	2018
55100 Hotel and similar accommodation	820	828	837	863	876
55200 Tourist and other short-stay accommodation	428	442	502	562	639
55300 Caravans, camps and caravan sites	22	21	21	20	22
55901 Accommodation in dormitories	5	5	5	4	4
55909 Accommodation in hostels and other temporary accommodation	243	247	261	274	311
56100 Restaurants and mobile food service activities	2	2	0	0	0
56101 Canteens	619	675	743	844	975
56102 School catering facilities	5	6	6	6	8
56109 Other food service activities	762	783	826	881	910
56210 Food delivery services	163	170	183	208	221
56290 Other food service activities	608	652	681	731	791
56300 Hospitality services	3247	3322	3451	3658	3916
<b>Total</b>	<b>6924</b>	<b>7153</b>	<b>7516</b>	<b>8051</b>	<b>8673</b>

**Source:** own calculations based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

Selected statistical indicators (minimum value, maximum value, median, and average) of the equity of the analyzed sample of companies in Slovakia for the examined period 2014-2018 are shown in Table 4.

**Table 4.** Selected statistical indicators of the sample of companies in the period 2014-2018 in €

Statistical indicator of equity	2014	2015	2016	2017	2018
Min	-13,833,541	-13,915,455	-13,947,195	-13,954,397	-13,960,569
Max	32,378,400	101,276,000	106,091,000	115,349,000	122,922,000
Median	2,358	3,041	3,548	4,040	3,961
Average	10,931	55,420	65,428	71,224	73,139

**Source:** own calculations based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

Based on the information from the financial statements of limited liability companies, the authors analyzed the development of equity for the period 2014-2018. It is clear from Table 4 that the minimum equity value during the monitored period is negative, which means, that the business finances its activities, especially through extraneous resources, not automatically facing bankruptcy if it is not a long-term state. Hendl (2015) states that the calculation of the Pearson correlation coefficient is performed from  $n$  pair values  $(x_i, y_i)$ , while the estimate of its theoretical value is the selected Pearson correlation coefficient  $r(X, Y)$  (1).

$$r(X, Y) = \frac{s(X,Y)}{s(X)s(Y)} \quad (1)$$

The correlation coefficient can take a value from the interval  $-1 < r(X,Y) < +1$ , and if it is equal to zero, then there is no relationship between the investigated quantities. The individual levels of the correlation coefficient values are interpreted in Table 5.

**Table 5.** Interpretation of Pearson correlation coefficient values

The value of the correlation coefficient	Interpretation
0.90 – 1.00 (-1.00 to -0.90)	very high correlation
0.70 – 0.90 (-0.90 to -0.70)	high correlation
0.50 – 0.70 (-0.70 to -0.50)	medium correlation
0.30 – 0.50 (-0.50 to -0.30)	low correlation
0.00 – 0.30 (-0.30 to 0.00)	very low or no correlation

**Source:** Hinkle et al., 2003

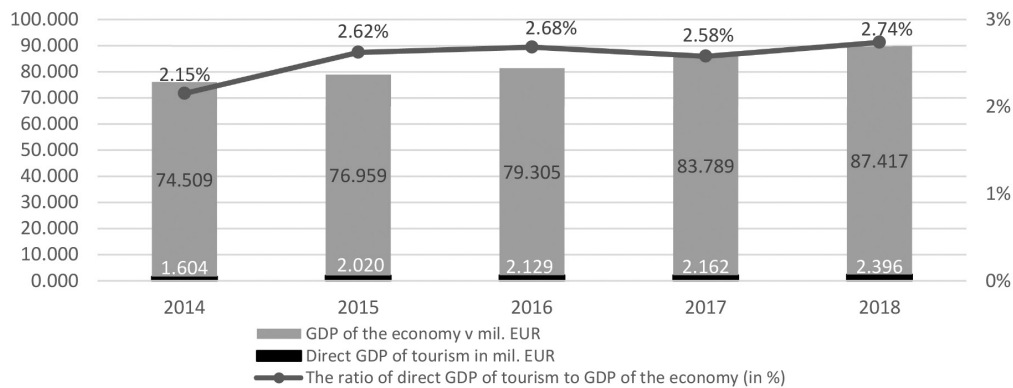
In the research, the authors used debt ratios, specifically the authors examined the total indebtedness and the degree of self-financing, based on which the authors assess whether limited liability companies have enough own resources to finance their activities.

Due to the onset of the COVID-19 pandemics at the beginning of 2020, entrepreneurs had the opportunity to postpone the filing of income tax returns and the publication of financial statements, which a large number of companies used, so data for 2019 were not included in the analyzed sample. Therefore, the impact of the pandemics was not reflected in the analyzed data but expresses the peak of the development of the tourism industry in the Slovak Republic.

## 6. RESULTS

In terms of assessing the impact of the segment on the country's economy, it can be based on the share of the sector in GDP in individual years. The average value of the direct gross domestic product of tourism (GDP of tourism) in the Slovak Republic, representing the sum of direct gross value added of tourism and net taxes on tourism products in the period from 2014 to 2018

reached on average 2.55% of GDP of the Slovak economy per year (Figure 2), while the largest share was in the last analyzed year 2018.



**Figure 2.** The share of direct GDP of tourism in the GDP of the Slovak economy

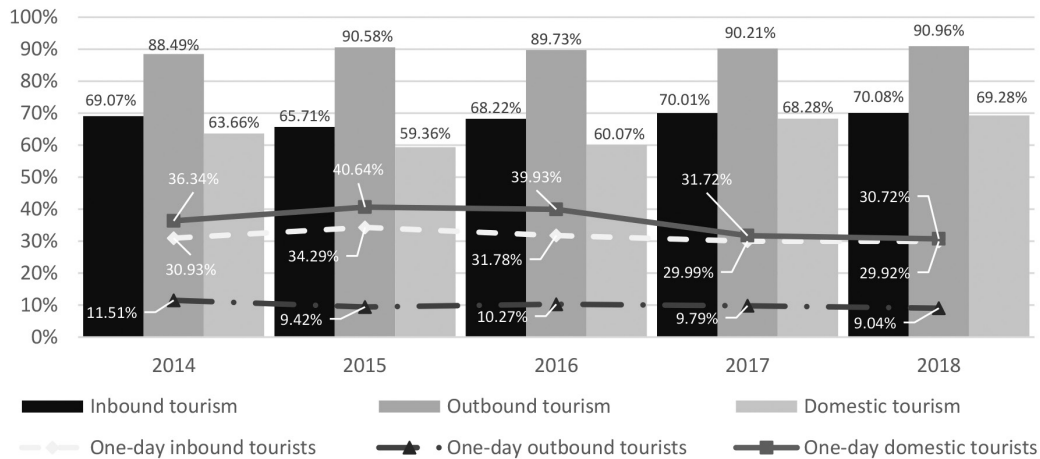
**Source:** Statistical Office of the Slovak Republic, 2020

During the period under review, visitors spent an average of around € 5.058 billion on domestic, outbound, and inbound tourism (Statistical office of the Slovak Republic, 2020), with visitors spending the most in 2018 (on average around € 5.856 billion). In the Slovak Republic, several comprehensive visitor consumption indicators are distinguished for different forms of tourism (Šenková & Šambronská, 2014):

- home tourism, respectively domestic tourism consumption is the consumption of resident visitors in the monitored country and may include products or services produced in a foreign or produced by non-residents, but sold in the country under review (imported products and services),
- inbound tourism, respectively inbound tourism consumption is the consumption of non-resident visitors in the economic territory of the country pursued (Slovakia), while the products and services purchased in the monitored country may be imported,
- outbound tourism, respectively outbound tourism consumption is the consumption of resident visitors outside the economic territory of the monitored country and does not include products and services purchased on the journey or by journey in the monitored country,
- internal tourism, respectively internal tourism consumption consists of the overall consumption of resident and non-resident visitors on the economic territory of the monitored country. It is the sum of domestic tourism consumption and inbound tourism consumption. It may include products and services imported into a monitored country and sold to visitors,
- national tourism, respectively national tourism consumption consists of the total consumption of resident visitors on the economic territory of the monitored country and outside this territory. It is the sum of domestic tourism consumption and outbound tourism consumption. These purchases may relate to products and services made in the monitored country or products and services imported from non-resident producers,
- total visitors' consumption is understood as the amount of total consumer expenses incurred by visitors or on behalf of the visitor to the journey or during his journey and stay in a given destination. All product and service categories are included in this consumption.

In all forms of tourism, i.e. in domestic, outbound, and inbound tourism, the majority of expenditures for the examined period were tourists representing overnight visitors; specifically in inbound tourism, tourists represented overnight stays on average for 69% of total expenditures,

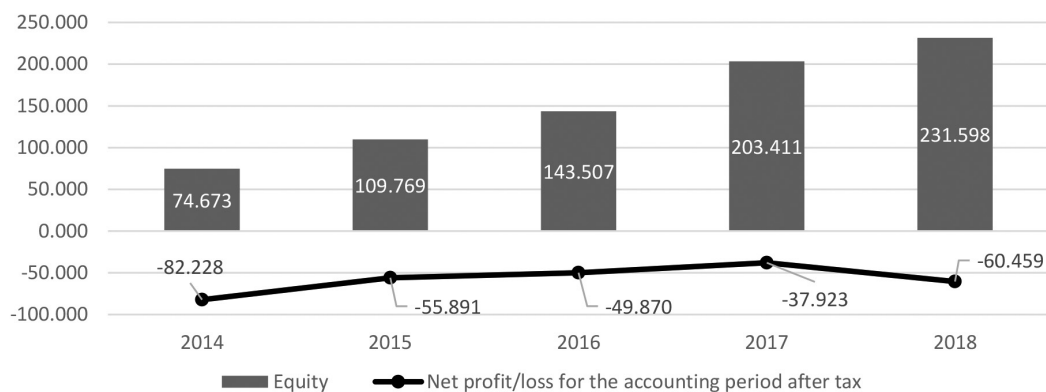
in outbound tourism, the share of expenditures of these tourists corresponded to an average of about 90%, and in domestic tourism, the share of expenditures represented an average of about 64% of total expenditures. The remaining part was represented by one-day tourists representing visitors without an overnight stay, whose share in total expenditures in inbound tourism averaged about 31%, in outbound tourism the average amount of one-day tourists was about 10%, and in domestic tourism, the share of expenditures of these tourists averaged 36 % (Figure 3).



**Figure 3.** Expenditures in tourism by category of visitors (tourists/day trips)

**Source:** own processing based on data from the Statistical Office of the Slovak Republic, 2020

The main goals of any business entity from the financial point of view are to make a profit and to maximize the value of the business for a long period. Profit is a positive result of management, which arises when revenues for the accounting period are higher than costs. The result of management represents according to section 2(4)h) of the Accounting Act (2020), the effect of the accounting entity's activities achieved in the accounting period. Profit or loss is the accounting entity's own resource, distinguishing between profit or loss for previous years and profit or loss for the accounting period after tax. In the years 2014-2018, the analyzed sample of companies achieved a cumulative economic result in the form of a loss, which reduced the amount of equity, while from 2014 to 2017 the loss gradually leveled off. In 2018, the loss increased again (Figure 4).



**Figure 4.** Profit after tax and equity in limited liability companies (in thousands of €)

**Source:** own calculations based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

It follows from figure 4 that in 2018 the analyzed limited liability companies reached the highest value of the loss, namely 60,459 thousand €.



The highest value of the profit after tax was achieved by limited liability companies in 2016, specifically in the amount of € 43,652,770. In terms of average values of the economic result, it can be assessed that the loss decreased from 2015 to 2017. In 2018, it increased by almost € 5,000 (Table. 6).

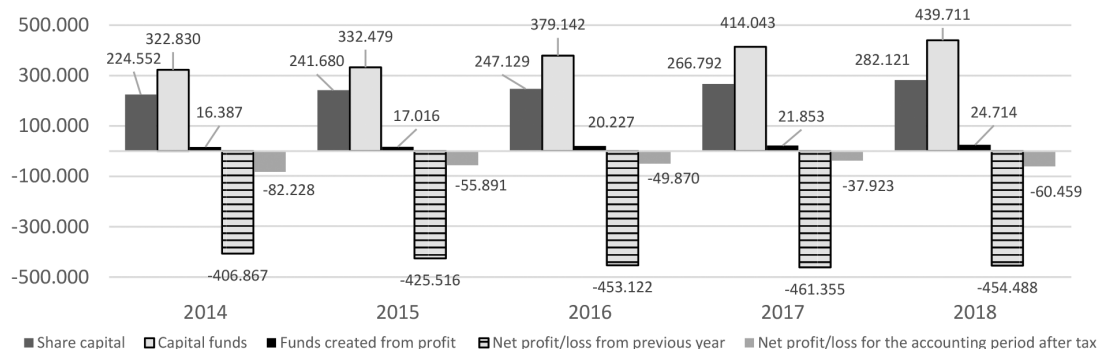
**Table 6.** Selected statistical indicators of profit after tax in € of the sample of companies

	2014	2015	2016	2017	2018
Min	-12,819,135	-24,829,389	-9,302,515	-5,187,658	-3,164,843
Max	2,387,339	2,113,150	43,652,770	11,318,699	7,573,000
Median	-503	-503	-480	-480	-335
Average	-12,361	-12,377	-6,582	-2,753	-7,218

**Source:** own calculations based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

Given that the profit after tax is only one of the items of equity, its negative value may not have the most significant impact on the total amount of equity, which also follows from Figure 4, when the loss did not have a significant effect on the total amount of equity. In addition to the aforementioned profit or loss, own resources also include share capital, capital funds, funds created from profit, and profit or loss from previous years. In the analyzed sample of companies, the largest part of equity was formed by capital funds, the amount of which in the examined period reached a value in the range from 322,830 thousand € to 439,711 thousand € and increased every year, which means that the value of equity was positively affected mainly by the contributions of owners, other than share capital, which is mandatory in the legal form of limited liability companies. The increase in capital funds means that investors in the examined sector believed in the future and were willing to take a business risk.

The value of equity in the examined period is negatively affected due to the economic result of previous years (cumulated unpaid losses) and the economic result for the actual accounting period after-tax (loss of the current period), the accumulated value of which is negative in the examined companies (Figure 5).



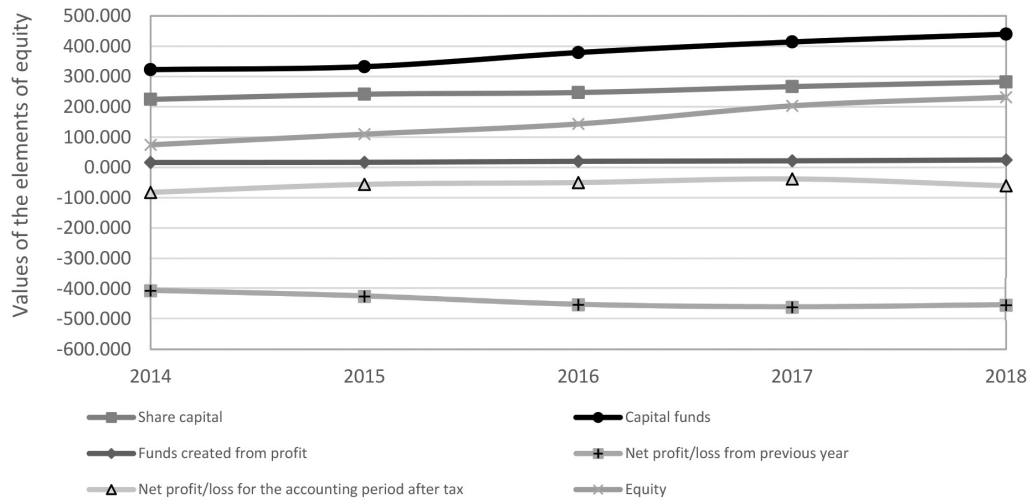
**Figure 5.** Development of individual equity items in limited liability companies (in thousands of €)

**Source:** own processing based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

Based on the results of a correlation analysis performed on a sample of companies operating in the field of tourism, a very high correlation can be identified between equity and share capital (0.99), both between equity and capital funds (0.99), and last but not least between equity and funds created from profit (0.99), where the value of correlation coefficient reached the same val-



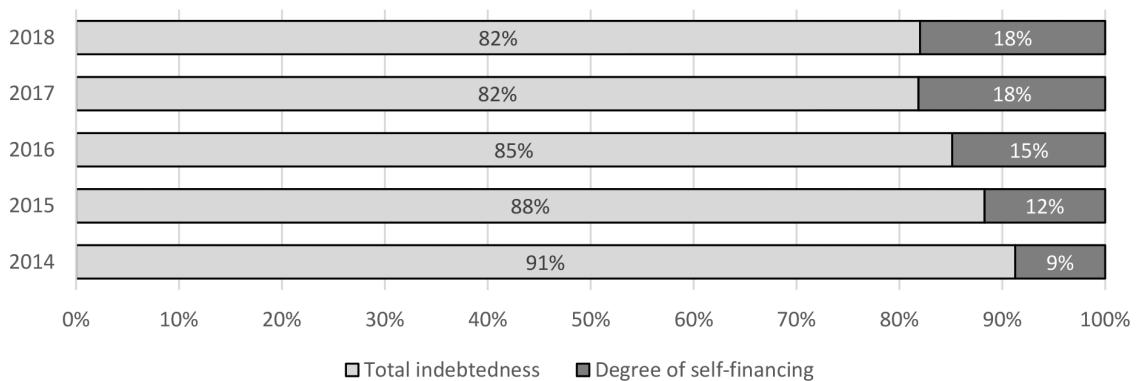
ue. Furthermore, it can be stated that there is a high dependence (-0.88) between equity and the result of previous years. The value of the correlation coefficient in the case of equity and profit for the accounting period after tax reached the amount of 0.60, based on which it is possible to state a medium dependence between the mentioned elements. The above facts also confirmed the graphical dependence, where we can see a parallel linear course of changes in individual components of equity and opposite to net profit/loss from the previous year (Figure 6).



**Figure 6.** Dependence of equity and its individual items (in thousands of €)

**Source:** own processing based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

In connection with the financing of the individual needs of the company, it is important to analyze the total indebtedness and the degree of self-financing of the company. Total indebtedness expresses the financing of the company's assets through external resources, i.e. liabilities. The opposite indicator is the degree of self-financing expressing the degree of financing of the company's assets through its own resources, i.e. equity. The sum of both mentioned indicators is equal to 100%. In the examined companies, they cumulatively exceed their liabilities over equity, which means that they do not have enough of their own resources to finance their activities. The value of total indebtedness in the examined period 2014-2018 has a decreasing tendency, and on the contrary, the degree of self-financing increases, while in 2018 own resources account for 13% of total resources, which is also the highest value of this indicator in the examined period (Figure 7).



**Figure 7.** Total indebtedness and degree of self-financing in limited liability companies

**Source:** own processing based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

In the statistical examination of indebtedness indicators, it can be assessed that based on average values of equity and liabilities, companies are in debt during the examined period, while the average value of total indebtedness ranges from 79% to 95%. Based on the minimum values, it is clear that the total indebtedness is decreasing, the value of which has reached 1% since 2017. Statistical indicators of the sample of companies are shown in Table 7.

**Table 7.** Selected statistical indicators of the total indebtedness of the sample of companies

	2014	2015	2016	2017	2018
Min	2%	2%	2%	1%	1%
Max	42%	80%	71%	72%	75%
Median	93%	91%	90%	89%	90%
Average	95%	85%	81%	79%	79%

**Source:** own processing based on data from the register of FS for the accounting period 2014-2018 (Finstat, 2020)

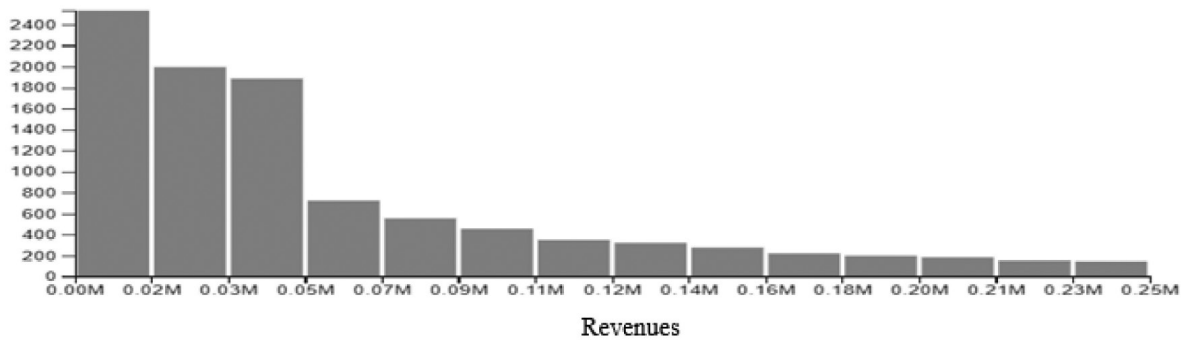
In the case of the degree of self-financing calculated based on the median values, it follows that in the examined period the degree of self-financing of half of the companies was equal to or higher than 7 to 11%, and in the case of the other half of companies, the degree of self-financing was equal to or lower than 7 to 11% (Fig.7).

As mentioned above, at the end of 2019, the first reports from China about coronavirus appeared, which negatively affected business not only in Slovakia but also around the world, which so far has largely affected the tourism industry in particular.

## 7. PRESENT TOURISM INDUSTRY IN THE SLOVAK REPUBLIC DURING THE COVID-19 PANDEMICS

The pandemics of the COVID-19 disease in the Slovak Republic, as well as in other countries (Grmelová, 2020) affected the tourism industry the most due to restrictions on movement, either due to restrictive measures of the Slovak government or due to natural fear of people. There has been a radical halt to the global movement of people, essentially overnight, and it is still unclear when and whether this movement will reach pre-pandemic levels at all. The basic feature of tourism is traveling, visiting, getting to know new areas, cultures, and customs on the spot, which is associated with the movement of people. Before the pandemics, such travel became affordable for an ever-increasing group of Slovaks, who also made extensive use of it (Štrba et al., 2020; Onuferová et al., 2020; Matijová, 2019). This applied not only to travel within the country but also to travel abroad, where the price of air tickets was often so low that anyone could travel. The tourism industry grew rapidly and this was also evident from the growing number of accounting entities in the examined industry segments.

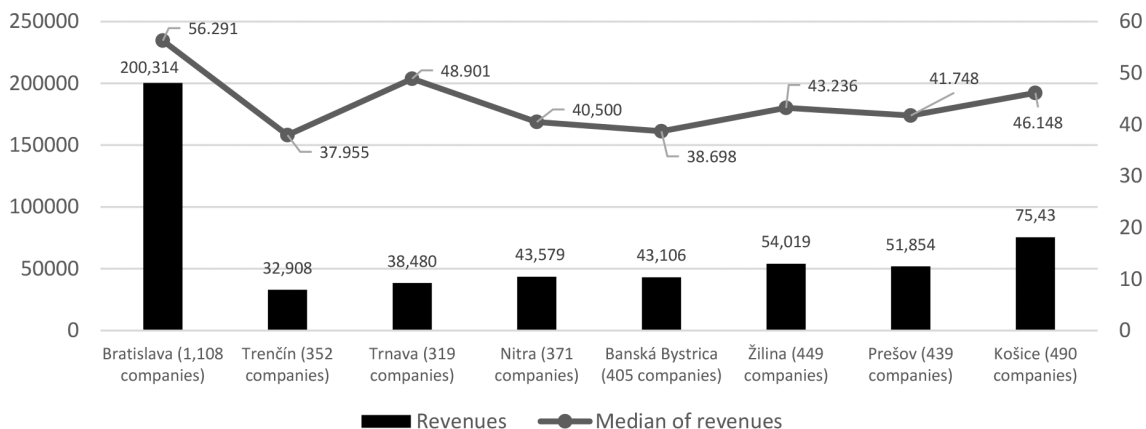
At the time of the pandemics, the sectors examined are among the most affected by the restrictions. A total of 15,660 companies directly endangered by the coronavirus operate in Slovakia, with annual revenues of € 8.7 billion. Most companies are engaged in hospitality services (3,933 companies), all of which are affected by restrictions. Of the 3,933 companies, 3,315 companies were active, with sales of € 539,690,759, with a median of revenues € 45,184 (Finstat, 2020). The histogram of sales of companies operating in the area of SK NACE 56300 Hospitality services (included in our examined sample) as of March 26, 2020 is shown in Figure 8.



**Figure 8.** Histogram of revenues of companies providing hospitality services

**Source:** Finstat, 2020

As of the date of the analysis (Finstat, 2020), most companies providing hospitality services that are affected by coronavirus operate in the Bratislava region (1,108). These companies achieve revenues in the region in the amount of 200,314 thousand €, with the median of 56,391 thousand €. On the contrary, the smallest representation is held by companies in the Trnava region, where there are 319 companies providing hospitality services. The smallest revenues are achieved by companies in the Trenčín region, specifically in the amount of 32,908 thousand €, while the median of revenues is 37,955 thousand € (Figure 9).



**Figure 9.** Revenues and median of revenues of companies providing hospitality service in thousands €

**Source:** own processing based on information from Finstat, 2020

Currently, since October 2020, the Slovak government has adopted stricter measures related to restrictions in some business sectors, but also in the cultural and sports sectors, due to the deteriorating epidemiological situation and the onset of the second wave of the COVID-19 pandemics. Since mid-October, the measures have been the most restrictive to business operating restaurants, bars, cafes. Public catering establishments are not closed, but food and drinks can only be served outdoors if they have such a space (for example, on a terrace where at least one wall must be open, which is not realistic in the winter months), respectively food and drinks can be released hygienically wrapped with them through the window as during the first wave of the pandemics. They cannot serve food indoors and customers cannot consume it there either. The outdoor terraces are completely closed from mid-December. There is also a reduction in the gathering of people in one place, which has also affected mass caterers, various event agencies, conference services, cultural facilities, sporting and tourism events.

## 8. FUTURE RESEARCH DIRECTIONS

The subject of future research is the analysis of equity and its individual items of companies providing accommodation, restaurant and hospitality services in 2020 when 2 waves of coronavirus pandemics broke out in Slovakia. The first wave appeared in early March, with a state of emergency declared in mid-March, which resulted in the closure of accommodation, restaurant and hospitality businesses, as well as in several related sectors of the tourism industry, in particular the operation of travel agencies and guide services, which will also be the subject of future analysis. At the beginning of June, the situation began to calm down, measures were gradually relaxed and many companies restarted their operations. The second wave occurred in mid-September when new measures were introduced and travel was restricted, which again harms many businesses. During the pandemics, the Government of the Slovak Republic tries to provide various support for entrepreneurs, which can alleviate the manifestations in the financial situation. All these effects will be possible to evaluate based only on financial data for the accounting period of 2020, so the future analysis will be beneficial mainly due to the evaluation of the effects of both restrictive and supporting measures of the Slovak government on the tourism industry.

## 9. CONCLUSION

Equity is the company's own resources, which it has at its disposal for a long time. The most important component of equity is considered to be the share capital, which according to the Commercial Code valid in the Slovak Republic is a monetary expression of the sum of monetary and non-monetary contributions of all shareholders to the company. All components of equity are reported in the financial statements in the financial statements Balance sheet on the liabilities side. Accounting entities in the Slovak Republic publish financial statements via the Internet on the Register of Financial Statements website (<https://www.registeruz.sk/>).

The aim of this chapter was based on the development of the total value of equity of a selected sample of companies operating in the Slovak Republic in the tourism sector in the period 2014-2018, to identify equity items that caused a change in equity with an emphasis on assessing the development of tourism industry in Slovakia to assess the adequacy of the number of own resources needed to finance the activities in the sector in the Slovak Republic based on indebtedness indicators.

The analysis shows that the value of the direct gross domestic product of tourism (GDP tourism) in 2018 reached 2.74% of the GDP of the Slovak economy (Statistical Office of the Slovak Republic, 2020), while in all forms of tourism, i.e. domestic, outbound and inbound tourism accounted for the predominant part of expenditures for the examined period by overnight tourists and the remaining part was represented by overnight tourists without overnight stays.

Based on the analysis performed on a sample of companies for the period 2014-2018, it can also be stated that the total amount of equity for the entire sample reached positive values. Although the examined companies made a cumulative loss in the period under review, the cumulative development of equity did not decrease, on the contrary, the value of equity increased every year. Loss is only one of the items of equity, so further analysis of individual items of equity is needed, as a result of which it increases. Such an item may include capital funds in the examined companies, which accounted for the largest share of equity in the period under review.

Capital funds and their growth mean the replenishment of equity by additional contributions from shareholders, which means that investors in the examined sector believed in the future and were willing to take a business risk.

The results of the correlation analysis confirmed the existence of very high dependence of equity and share capital, capital funds, and funds created from profit, where the value of the correlation coefficient reached a value equal to 0.99. At the same time, the correlation analysis identified the existence of high dependence on equity and profit or loss from previous years (-0.88) and a medium dependence between equity and profit for the accounting period after tax (0.60).

At the same time, it can be stated from the performed analysis that the liabilities in the examined companies significantly exceed the equity. It follows that the analyzed companies do not have sufficient own resources to finance their business activities, although the degree of self-financing tended to increase during the period under review, mainly due to additional contributions from owners. In 2018, own resources accounted for only 18% of total resources.

Because at the turn of 2019 and 2020 the coronavirus spread from China to the whole world, it is not possible to predict further future effects respectively impacts on the activities of the examined companies, as the situation is constantly changing. It was confirmed that the tourism industry is currently one of the most endangered sectors of industry in the Slovak Republic. It can be assumed that a large number of entrepreneurs in this sector will close down due to the bad financial situation and especially due to the pandemics and the sociological consequences resulting from the concern of tourists and customers. Nevertheless, if entrepreneurs want to continue their activities, they should try to increase the volume of their own resources, for example through additional contributions from shareholders. Another possibility to increase own resources is to acquire a silent partner (Hrinková & Manová, 2017).

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# OPPORTUNITIES, CHALLENGES AND CITIZEN'S VIEWPOINT OF ECOTOURISM IN AZERBAIJAN: CASE STUDY OF SHAHDAG NATIONAL PARK

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**Abstract:** *Growing dissatisfaction with mass tourism, ecotourism had become a major tool for achieving conservation and sustainable development goals by many developing countries by the mid. 1980s. Today, it is a major source of income for many developing countries across the world with being less destructive in the usage of natural resources than alternative economic sectors such as agriculture and logging. This study is concentrated on investigating and researching ecotourism within the context of national parks, more precisely within Shahdag National Park (SNP) of Azerbaijan. This study aims to find the existing gaps, disadvantages and challenges in the ecotourism system of SNP, identify the opinion and level of education of people of Azerbaijan about ecotourism and sustainability in general. To identify these, data were collected, and both quantitative and qualitative methods were implemented. Primary research included a questionnaire survey and interview. As the main result, it can be concluded that Shahdag National Park of Azerbaijan has immense ecotourism potential but this potential is not utilized to its fullest capacity.*

**Keywords:** *Azerbaijan, Ecotourism, Protected area, Shahdag National Park.*

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## 1. INTRODUCTION

The environmental revolution of the 1960s and '70s triggered the emergence of environmental awareness and immediate actions. Mass tourism has negative ecological and social effects. Governments and organizations started to make their first steps in the process of transformation from traditional mass tourism into more sustainable ways of tourism. As a result, a new, sustainable type of tourism, ecotourism, came into the light. Practitioners of ecotourism are environmentally conscious people, who are eager to get more information about the local ecosystem and ecoculture. Ecotourists are mainly ecologically educated and responsible individuals, who are always ready to pay more than average tourists for their trips. The development of ecotourism is included in the national development plan of the Republic of Azerbaijan, either. The year 2011 was declared as a year of tourism by the government of Azerbaijan. Ecotourism has significant perspectives and opportunities in Azerbaijan. However, the potential of ecotourism in Azerbaijan is not utilized to its maximum capacity. Under the detailed and strategic ecotourism development strategy, Azerbaijan can develop its ecotourism system and achieve one of its national development goals.

National Parks are II category protected areas among 6 protected area categories accredited by the International Union for Conservation of Nature (IUCN). They are large natural or near natural areas designated to protect ecological processes of a large scale, together with biological species and area specific ecosystems, which also provide environmentally and culturally compatible opportunities for scientific, educational, visitor, spiritual, and recreational purposes.

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There are eight National Parks in Azerbaijan. The biggest and the most diverse NP - Shahdag National Park was opened on 8th December of 2006. It is located across the Greater Caucasus mountain range. The area of the park is 130,508 ha, (The Ministry of Ecology and Natural Resources of Azerbaijan, 2005-2020). The hypothesis of this research is that SNP has great ecotourism potential, however, this potential is not utilized to its maximum capacity.

The aims and objectives of this study include unleashing the ecotourism potential of Shahdag National Park once again; identifying challenges of the park depriving it of successful ecotourism development; identifying and showing the local population's viewpoint about ecotourism. Research questions of this project included: What are the existing challenges in the ecotourism system of SNP? What are the further development opportunities in the ecotourism of SNP? What are Azerbaijani people viewpoints of ecotourism? The research hypothesis is that higher investment in SNP will lead to more visitors, hence more profit. It is possible to achieve it because the national park has immense ecotourism potential but this potential is not utilized to its fullest capacity.

## 2. LITERATURE REVIEW

'Mother nature' has always astonished humans with her mesmerizing beauty, mysteries and rich ecosystem. Even before Thomas Cook established the first ever travel agency in the world in 1841 (Gartner, 1996) or young, rich Europeans undertook once in a life time "Grand Tour", people have always travelled and wondered about nature. The purposes and needs behind it were different such as self-exploration, fulfillment, social interaction, authenticity, self-actualization, education, relaxation or just plain curiosity. Known mainly as Ecotourism, this phenomenon of sustainable tourism has been widely discussed among many researchers, practitioners and proponents in literature. It has been referred interchangeably to terms such as nature tourism, ecological tourism, sustainable tourism, alternative tourism, cultural tourism and heritage tourism. S. Wheat in 1994 defined ecotourism as a niche market for a special category of tourists who are interested in observing nature and have environmental awareness (Wheat, 1994). According to Steel (1993) it is an economic process where rare and attractive ecosystems are marketed in an international level to attract tourists (Steel, 1993). It is travelling to the unique, undisturbed and uncontaminated destinations all across the planet earth for admiring or studying the mesmerizing nature, enjoying its wild animals and plants as well as existing past or present cultural and traditional manifestations found in those areas (Ceballos-Lascurain, 1987). "Ecotourism is a travel to fragile, pristine and usually protected areas that strives to be low impact and usually small scale. It helps educate the traveller, provides funds for conservation, directly benefits the economic development and political empowerment of local communities and fosters respect for different cultures and human rights" (Honey, 1999) (Honey(ed), 2002).

The United Nations World Tourism Organization (UNWTO) defined ecotourism, its' definition, principles and characteristics. According to them, ecotourism is all forms of nature-based tourism activities where the visitors' main aim is to observe, appreciate natural attractions and traditional cultures prevailing in them (WTO, 2001). According to The International Ecotourism Society (TIES), Ecotourism is "responsible travel to natural areas that conserves the environment and improves the well-being of local people" (TIES, 2015). Principles and characteristics identified by UNWTO dictate that the ecotourism experience should contain the following principles: It should include educational or interpretational features; the tours are organized generally but not exclusively by specialized tour operators for small groups and service providers in the destinations, that are locally owned small businesses; ecotourism minimizes the negative impacts

on the natural and socio-cultural environment and supports the maintenance of natural areas or attractions by generating economic benefits for host community, authorities and organizations managing and preserving natural areas, providing extra income and employment opportunities for the local community and increasing awareness among locals and visitors about the conservation of the natural and cultural resources or assets (WTO, 2001).

## **2.1 Protected Areas and National Parks**

According to the definition proposed by The International Union for Conservation of Nature (IUCN) in 2008, a protected area (PA) is a specifically defined natural area, acknowledged, devoted and maintained by means of legal or other efficient means to ensure long-term nature conservation with related ecological services and cultural values. Protected areas are a cornerstone of the conservation of natural resources, while still benefiting the living standards of people, especially at the community scale. Protected areas are at the forefront of initiatives to preserve nature and the resources it offers us with – nutrition, safe water supplies, medications, and defense from natural disaster outcomes. The global community widely acknowledges their involvement in reducing and addressing the climate change problems as well; it is considered that PAs reserve more than 15 percent of terrestrial carbon of the world within their worldwide network (IUCN, 2020). IUCN groups protected areas into six categories; one of them is National Park.

National Parks are large natural or near natural areas designated to protect ecological processes of a large scale, together with biological species and area specific ecosystems, which also provide environmentally and culturally compatible opportunities for scientific, educational, visitor, spiritual, and recreational purposes. The primary objective of NPs is the protection of natural biodiversity which includes its underlying ecological structure, supporting environmental processes, promoting education and recreation. Areas of NPs should be more strictly protected where ecological processes and the distribution of indigenous species remain reasonably untouched. Local landscape may have differing degrees of consumptive or non-consumptive applications but should ideally operate as defences to the protected region (IUCN, 2020).

## **3. RESEARCH METHODOLOGY**

In this study, quantitative and qualitative methods of data collection were both applied. The survey with 19 questions covering all the aspects of the research questions and issues were delivered through online distribution channels to the Azerbaijani respondents of various age groups, occupations, background, nationality, etc. The number of the respondents in the research survey outreached 125 people, travellers of the country. The respondents were able to answer the questions with multiple-choice, rating scales, or add their comments. Analysing the causal relationship between variables and interpreting them helped to answer the research questions, identifying the viewpoint of Azerbaijani people about ecotourism. Quantitative methods are not sufficient to accurately simulate real-life situations and behaviours. Therefore, the implementation of qualitative methods, such as interviews were of as much as importance. The answers of some research questions came into the light after the interviews with the representative of the SNP and ecotourism specialists.

The methodology of the secondary research aims to find the existing gaps and disadvantages or challenges in the ecotourism system of SNP. Identifying opinions and level of education of the people of Azerbaijan about ecotourism and sustainability in general combined with the



analysed literature will showcase future immense development opportunities in the field of ecotourism in SNP and help to answer main investigated issues of the research, and prove the hypotheses. Nevertheless, it is as much as important to coordinate the interests of local, regional, and national levels (Boo, 1990). However, we should not neglect the role of the private sector in the ecotourism development process. In this regard, Holder (1992: 159) emphasizes the dependence of the private sector on the government. Governments regulate the business environment of the countries, and they should create a favourable environment or conditions for the private businesses to thrive within certain limits in the ecotourism destinations. The government is responsible for the whole country as an ecotourism product in the broadest sense (Holder, 1992).

#### 4. RESEARCH RESULTS AND FINDINGS

First, the ecotourism potential of Azerbaijan is summarised, protected areas of the country, focusing on Shahdag National Park.

*“We have to admit regretfully that despite having such a colourful natural environment and resources, fertile lands, extremely precious climate and waters we have not valued them as they really are worth. We have never used them with conscious, strategic thinking and somehow impoverished our beautiful nature”* (Müseyibov, 1998)

The Republic of Azerbaijan is a country with an ancient history located in the south-east of Caucasus region and north-west of Iranian plateau, where European and Asian continents meet. According to the calculations of R.X.Piriyev Azerbaijan has physical surface area of 88,278 square kilometres and with more than 10 million population Azerbaijan is the biggest country in the Caucasus region. The geographical location of Azerbaijan Republic is beneficial in terms of the natural and geopolitical environment. This was the main reason behind the interest of the big powers of ancient times in ruling these lands. The main natural-geographical benefits of Azerbaijan include its location in sub-tropical climatic zone (in the transition zone to temperate climatic zone), abundant natural resources of its lands, highly fertile soils of endless hills, wide sub-mountain and mountain systems with an extremely rich natural environment and resources and finally the biggest and the richest lake in the world – Caspian “sea” (Müseyibov, 1998).

**Table 1.** General information about National Parks in Azerbaijan

No	Name	Date of establishment	Area (ha)	Location
1	Absheron National Park	08.02.2005	783	Khazar city
2	Shirvan National Park	05.07.2003	54,373	Salyan, Neftchala cities
3	Aghgol National Park	05.07.2003	17,924	Aghjabadi, Beylagan cities
4	Hirkan National Park	09.02.2004	21,435	Lankaran, Astara cities
5	Altiaghac National Park	31.11.2004	11,035	Khizi, Siyazan cities
6	Shahdag National Park	08.12.2006	130,508	Guba, Gusar, Oghuz cities
7	Goygol National Park	01.04.2008	12,755	Dashkasan, Goygol cities
8	Ordubad National Park	16.06.2003	12,131	Ordubad city

*Total: 246,331 ha (2,40 % of country area)*

**Source:** table derived from (T.O.Ibrahimov, 2011), page 11.

There are currently 11 State Reserves, 8 National Parks and 24 State Game Reserves in Azerbaijan with an area of 3,6 % of total area of the republic. These protected areas were created during the year 30s of the last century with an aim to protect the mesmerizing nature of Azerbaijan and are



still loyal to their initial vision and aim. The main goal for establishing the protecting areas was to develop ecotourism, to promote ecological awareness, increase the level of education, chant the richness of the nature of the region and boost the economic progress while maintaining the ecological balance and preserving the environment and natural attractions (Ə.T.Əsgərov, 2011). Table 1 provides general information about the National Parks in Azerbaijan (T.O.Ibrahimov, 2011).

Shahdag National Park was founded on 8<sup>th</sup> December of 2006 in Azerbaijan. It is located across the Greater Caucasus mountain range. Which includes major regions such as Guba, Gusar, Ismayilli, Gabala, Oghuz and Shamakhi. The area of the park is 130,508 ha (The Ministry of Ecology and Natural Resources of Azerbaijan, 2005-2020). The aim of establishing SNP was protection, increasing and enrichment of numerous area specific endemic species (including trans-border migrating animal species), re-establishment, conservation and effective management of endemic rare species of flora and fauna which are already included into the “Red book”, as well as mountain forests and high mountainous pastures ecosystem of global importance, conservation of the highly rich fertile layer of the soil, regulation of the stability of the NP, establishment of the favourable environment for scientific researches, monitoring of the local environment, ecologically educating the local population, development of ecotourism in the areas with high natural and touristic potential (Ə.T.Əsgərov, 2011) (Ministry of Ecology and Natural Resources, 2020). The locational altitude of the Shahdag National Park resulted forming a big variety within its climate, the richness of flora and fauna, and massive amount of highly fertile layer of soil. The forests of these areas are famous for their different, beautiful and majestic sceneries (Ə.T.Əsgərov, 2011)

Shahdag National Park is under the full management and control of the Ministry of Ecology and Natural Resources of Azerbaijan Republic (MENR). It also determines its rules, regulations, protection, prices, etc. (Ministry of Ecology and Natural Resources, 2020). MENR of Azerbaijan determined the rules that must be followed by visitors inside the national parks. According to them: Ecotourism activities can only be realized on the designated trails set by NP management; visitors cannot go off the official trails set by the NP authority and must follow the instructions of the guides, special maps and signs for safety purposes; throwing cigarette buds or burnt matches on the ground is prohibited; throwing any kind of trash, littering the territory, writing the surfaces of stones or trees and making any activity that will cause a high noise are highly prohibited; bonfires can be made only in designated fire places and it must be completely turned off upon leaving; it is highly advised to have an insurance for any sudden, unexpected event that can occur during the ecotourism experience; visitors can use the leisure, catering, accommodation and shopping services inside the NPs; visitors can collect information from the information centres of NPs; hunting and fishing inside the NPs are allowed only at the designated spots with an official permission of NP authority; Video and photo shootings are allowed inside NP; using observing devices, mobile phones and voice recording devices are allowed inside NPs; it is prohibited to use any flammable matters near the transportation vehicles or transportation stops of NPs (Ministry of Ecology and Natural Resources, 2020)

#### **4.1. Ecotourism attractions and activities in Shahdag National Park**

Development of the tourism sector is the priority and one of the development goals of the Republic of Azerbaijan, as mentioned earlier. Therefore, diversifying and creating various tourism products is also the priority for the central government. At the moment, tourism products of Azerbaijan include but are not limited to City breaks, sun-sea-sand tourism, eco/natural tourism, cultural tourism, health/wellness tourism, winter/ski tourism, gastronomy and wines

tourism, MICE tourism (Meetings, Incentives, Conferences and Exhibitions), etc., (JICA, 2017). Being one of the most diverse in all means of this world and the biggest national park in Azerbaijan, Shahdag National Park offers to immerse opportunities for ecotourism and nature tourism. The uniqueness of SNP is that it offers these diverse opportunities for all seasons from cold winter and hot summer months. Skiing, snowboarding, snow-tubing, zip lining, snowmobile riding, hot thermal waters, resort complexes in cold seasons are perfect examples of some winter activities. Typical summer activities include hiking, mountain climbing, camping, wellness opportunities, and horseback riding, zip lining, cycling, visits to authentic villages, cultural activities, scientific research tours, other mountain adventures and so on. Skiing enthusiasts who are eager to try different slopes with beautiful scenery rather than traditional slopes can use the services of the 2 ski resorts located on Shahdag Mountains – Shahdag and Tufandagh Mountain Resort Complexes. These luxury resorts offer ski lovers world-class amenities, 14 high standard slopes, professional and friendly instructors and staff. World-class snow guns, ski lifts and cable cars are provided across the heights, throughout the ski area (Azerbaijan Travel, 2020), (Ski Azerbaijan, 2020). Both the territory of SNP and surrounding areas of the park include small and authentic Caucasus villages with their small population of ethnic minorities. These settlements include Laza, Lahij and Khinalig villages. These villages are popular and mostly visited by national visitors and some international tourists. Some tour companies organize one day tours to these villages. Visitors can self-organize multiple day tours to these villages if they manage to find accommodation in the villages, as ethnic population of these villages sometimes rent their houses to the visitors. While walking the narrow and authentic streets of these villages and enjoying the mesmerizing beauty of Caucasian mountains, tourists can also purchase locally produced spices, food, clothing, souvenirs and so on (AZERTAG, 2020).

Laza village is located in the Gusar region on the altitudes of 4,242 meters above sea level, making it one of the highest human settlements in Azerbaijan (Municipality Information System, 2020). It has more than 10 astonishingly beautiful waterfalls in the entire country. The village has approximately 170 inhabitants, living in 28 houses. The village is the favourite destination for tourists in all seasons. The village preserves its culture and traditions and is famous for its carpet making culture. In the year 2013, the municipality built the entrance post of Shahdag National Park inside the village (Yusifli, 2015). Khinalig village is located near the SNP, in the centre of Guba region, on the altitude of 2350 meters above sea level. The village also has a long history dating back to the times before our century of Caucasian Albania (Geography Association of Azerbaijan, 2013). The weather fluctuates between (-20) and (+18) degrees Celsius from winter to summer seasons. The population of the village is about 2000 people, which is related to Shahdag ethnic group. As a national minority, they have their own language, the unique character of architecture, culture and traditions. In 2008, Khinalig was included inside the World Monuments Funds' (WMF) list of 100 most endangered sites. Native people say legends that links this land with Prophet Noah. According to them Noah's Ark has thrown the anchor and settled in these areas because of its flat highland. The village is very famous among the national visitors (Mehmandarova, 1998), (Connor, 2001).

The village of Lahij is another prominent authentic village on the southern slopes of the Greater Caucasian Mountains. It is located inside the Ismailli region with a population of approximately 860 people. Minority people of Lahij speak Tat language (Miller, 1929). The village is very authentic and famous for their special handicrafts, particularly made from copper. Carpet and rug crafts of the village is also very famous in Azerbaijan. The village was an important centre of craftsmanship in Azerbaijan during the medieval times (G.A. Guliyev, 1968). Some local people of the village sell these crafts to the visitors and earn a living. The houses of Lahij village was

built with authentic and sophisticated technics due to frequent earthquakes. The sewage system in the entire village dates back 1000-1500 years ago. (Alizadeh, 1986), (Bretanitskiy L.S., 1964). Although the village has high priority of cultural and historical importance the tourism, particularly ecotourism infrastructure of the village is underdeveloped, especially during winter months (Yahya, 2006). Shahdag National Park has six main eco-touristic trails (Ministry of Ecology and Natural Resources, 2020):

1. Laza waterfalls or frozen waterfalls,
2. Laza – mountain waterfalls,
3. Laza – Sudur,
4. Qeleyxudat – “Haydar” peak,
5. Khinalig village – Tufan mount or Chingiz Mustafayev,
6. Bazarduzu height.

#### 4.2. Ecotourism development plan

For building an effective ecotourism system in one particular area, there should be a detailed ecotourism development plan. Ecotourism development plan are built based on three pillars of sustainability or sustainable tourism development (Nelson, 2016) (A. Barnett, 2015):

*The socio-cultural pillar* is important for gaining the support from the local people for implementing the ecotourism project as well as this aspect identifies major social and ecological problems. The socio-cultural aspect needs to be handled and considered before any other aspects because nothing can be implemented without the support of the local people. Foreign expertise cannot be directly implemented into one society without a deep analysis of the local culture, traditions, mind-set of people, and society. Understanding the ownership and occupancy of natural resources is also important to avoid conflicts. There is a need to establish new social and cultural norms in order to fully adapt to tourism.

*The environmental pillar*, being the second and important aspect of ecotourism implementation, can only be addressed after the local people are supporting the plan. At this pillar, it is important to manage the resources and implement mandatory research about their biology and ecology. The importance of this pillar derives from its main goal to sustain, preserve, and protect the environment. Another important factor in the process of development of ecotourism is to give local people benefits from it.

*The economic aspect* or pillar is the final step in the process of ecotourism development. The ideal implementation of this aspect is when the previous two pillars are going smoothly. Considering all the pillars, as mentioned earlier, we have to include that ecotourism development in certain areas of the earth must also offer economic benefits to that community and locals in particular. Local people should actively participate in this process and be employed by the employers directly, such as guides, hosts, mechanics, etc. If they lack certain knowledge about the roles or positions, they should be allowed to learn and develop themselves. Economic development often comes with costs despite its opportunities. In order to avoid these costs, there is a need to negotiate access rights, follow cultural protocols, and ensure protection against environmental damage.

The above-mentioned three pillars of sustainability are very important in the process of ecotourism development and allow us to build an effective ecotourism plan. However, in the real

process of ecotourism development, many challenges can occur, and something can go wrong. The ecotourism development plan can be modified and changed along the realization process. It is a must for ecotourism models to have short-term coping mechanisms and long-term capacity building. After meeting all of these requirements, ecotourism can build a sustainable model for a particular destination benefitting society, economy, and environment.

### **4.3. Interview results**

The interview has been conducted with the director of the Ismayilli region part of Shahdag National Park – Mr. Rafael Musayev. The interview was conducted online, through email, as the internet in Azerbaijan was limited because of the war situation. However, the interview was very productive and was vital in answering the research questions of this project. Mr. Rafael Musayev answered in a total of 6 important questions. These questions covered all the aspects and objectives of this research project. They were also vital in proving the hypothesis of the project. Director Musayev was very knowledgeable and very informative by describing his opinions and questions in a wide range. According to the interview Ismayilli region, part of SNP is 44 thousand ha. of the area. The area is covered with dense forests and has a rich ecosystem. Although Mr. Musayev is the director of this part, in particular, he answered the interview questions regarding whole SNP. According to him, 73,000 ha of land area of SNP is Strict Nature Reserve, which means that all kinds of human and other activities are prohibited in these areas except scientific researches. 4,500 ha of the area is reserved for agricultural purposes only. Nevertheless, the areas dedicated to ecotourism inside SNP consist of 51,000 hectares.

When it comes to the challenges of the ecotourism system of SNP, Mr. Musayev continued as follows. The first problem SNP faces from time to time is legal land issues with bordering private properties. When SNP was created, the territory of the park included some of the territories of 6 consecutive regions. Therefore, SNP borders with various lands with property rights along its borders. Doesn't matter what is the function of the particular land of SNP, but from time to time they face legal issues with other private lands. These problems arise when large and small horned animals of nearby animal farms migrate for grazing during the summer and winter months. Hence, it's creating the problem over the legal issues of the lands and property. Another challenge is related to trespassing or illegal anthropogenic impact. As we know, inside the big territory of SNP, there are some small villages of indigenous Caucasus people. Some of these villages are located on high altitudes over the mountains. They are not provided with natural gas, heating and with other infrastructure systems. Therefore, those people interfere and illegally consume some of the park's resources illegally from time to time. Nevertheless, Mr. Musayev also emphasized that the terms such as ecotourism and national or nature parks are relatively new and modern phenomena in Azerbaijan which are still underdeveloped.

The idea of ecotourism needs to be fully formalized by an Azerbaijani citizen and there is a lack of ecotourism or environmental education among many visitors. There is also a lack of experienced personnel, professionals in these fields. The current workers in these areas are less experienced as well comparing to the countries with foreign best ecotourism expertise. Promotion and marketing, especially online promotion of SNP and ecotourism are not at the desired level, which creates another big challenge. Lack of investment and support of different kinds from foreign organizations is also not desirable. General infrastructure is not at a good level inside SNP, and it has to be maintained properly. This includes, first of all, road systems, electricity, accommodation, lodging and so on. Lack of competition among very few accommodations and



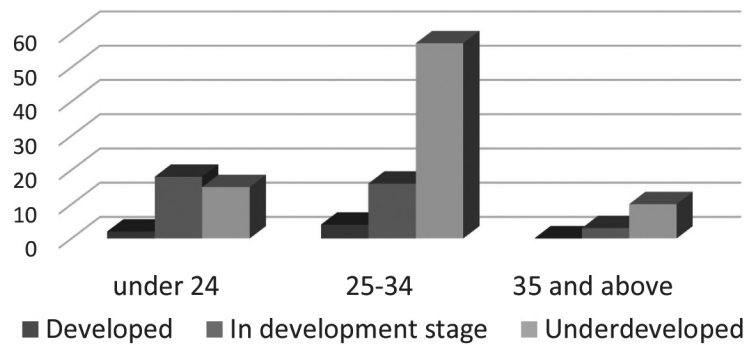
lodging service providers creates an unfair and expensive pricing strategy. He explained some of the above-mentioned challenges as the main reasons preventing SNP from fast development and being at the same level as some of the national parks with highly developed ecotourism systems around the world.

Mr. Musayev also emphasized the great ecotourism potential of SNP. This great potential is closely bounded to the size, immense natural, geographical, climatic variety. He mentioned some of the possible ideas or ecotourism activities that could be developed in SNP. The high-altitude Mountain Rivers of SNP create the perfect opportunity for developing extreme water sports, especially rafting. The high mountainous topography of the park is a great spot for more extreme hiking tours. The mesmerizing natural attractions, wildlife and green life of the park is great destination for organizing thematic tours for photography lovers. Seasonal natural phenomena such as fall of autumn leaves, migration of birds, mating season and spring migration of animals to natural salt rocks create once in a while natural events that could be observed and which can be of high interest for the visitors. Hunting tourism and bird watching can also be developed accordingly. Mr. Musayev mentioned that SNP is currently using just 10 percent of its ecotourism potential. The rest 90 percent of this potential is not implemented, and this is a very big room for development and opportunity in the future. Those undiscovered areas are less known among visitors. According to him, Azerbaijan has to develop rural tourism first for developing effective ecotourism in its national parks, developing the main ecotourism brand of the park and sub-brands of its different regions. Ecotourism products and other types of tourism have to be developed inside the park. The main visitors of the park are local, Azerbaijani visitors. One of the reasons is less international promotion and marketing. Another reason is the lack of accommodation and lodging choices inside the park and the unfair pricing strategy of these service providers. For the majority of ecotourists and backpackers, these services are not affordable, which is the result of the lack of competition among service providers as there are very few of them in the territory.

SNP is financially and technically supported and fully managed by the central government of Azerbaijan. There is a lack of funding and support for ecotourism development from foreign ecological, nature protection organizations, international development funds, etc. Generally, there very few national parks in Azerbaijan that are being funded by international organizations. Mr. Musayev has mentioned the benefits as well, and efficiency of self-governance and self-financing of national parks all around the world. It is tested with famous management method. He emphasized that by developing ecotourism inside SNP, we can also benefit from this world famous and effective method in the future.

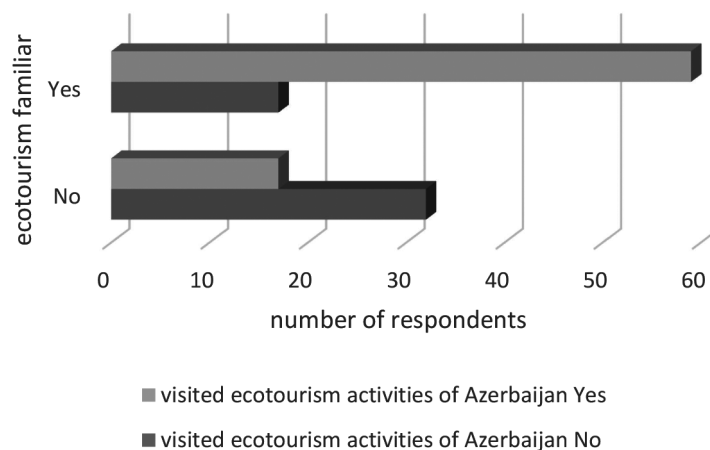
#### **4.4. Survey results**

The data collecting phase of the research also included a survey which was used for data collection. The vast majority of the participants are from Azerbaijan. 61,9 % of the participants belong to 25-34 years old age group. The second largest group belongs to 18-24 years old participants with 25,4 %. Age groups of 35 and above and less than 18 have 10,3 % and 2,4 % respectively. So, the majority of the participants were young people. The gender proportion of the participants were almost identical being 50,8 % for females and 49,2 % for males. Almost half of the respondents were male and female. However, their answers don't depend on gender according to data correlation analysis. 0,272 say they are ecotourists, 0,184 say they are not and the others are not sure. 110 participants (89,4 %) don't live in the territory of SNP or surrounding areas which means only 10,6 % of the participants live either inside or surrounding areas of SNP.



**Figure 1.** Opinion about Azerbaijan ecotourism depends on age group, youngest are optimistic  
**Source:** based on own data processing and calculations

One of the main aims of this survey was to identify the ecotourism education level of participants, especially Azerbaijani population and showcase their viewpoint about ecotourism. The survey indicated that 60,3 % (76 people) of participants were familiar with ecotourism and its principles. Whereas, 39,7 % (50 people) were not familiar with it. The result is not satisfying and shows a big percentage of people not having enough knowledge and appropriate ecotourism education. Amongst the total 126 participants, only 18,3 % (23 people) considered themselves as a true ecotourists. 27,8 % (35 people) indicated that they are not ecotourists and as expected majority of the participants – 54 % (68 people) claimed to be mixed practitioners (both ecotourism and regular tourists). Most of the respondents who said they are familiar with ecotourism and its’ practices said they are ecotourists. According to the data, ecotourists also do not depend on the age group. The majority of the participants (65,9 % - 83 people) said that ecotourism in Azerbaijan is underdeveloped. Whereas, 29,4 % (37 people) said it’s in the stage of development and it’s going to be developed soon. Only 4,8 %, or just 6 people said that ecotourism in Azerbaijan is developed. There is a correlation between age and opinion about ecotourism of Azerbaijan according to the data analyses. Younger people are more optimistic about ecotourism in the country (Figure 1).



**Figure 2.** Visited ecotourism activities

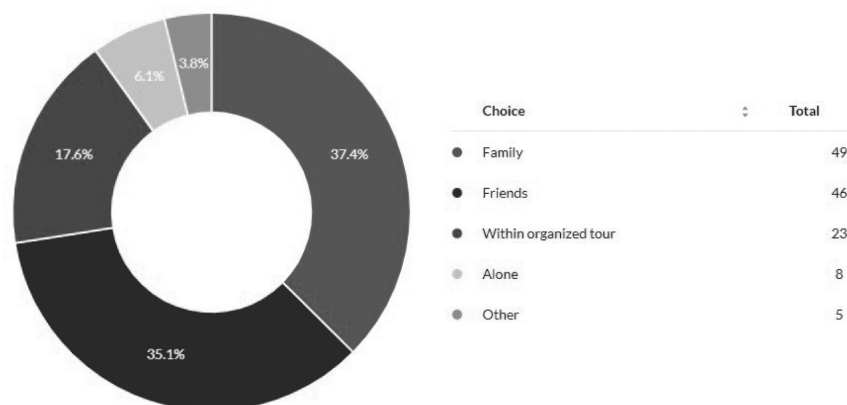
**Source:** based on own data processing and calculations

The vast majority of the participants (78,4 %, 98 people) strongly agreed to research hypothesis of this project which implies that „Azerbaijan has great ecotourism potential, but this potential is not utilized to its fullest capacity”. 19 people (15,2 %) just agreed to this hypothesis, while 8 people (6,4 %) preferred to stay neutral by neither agreeing nor disagreeing. None of the participants disagreed or strongly disagreed to this hypothesis. Every age group of the survey agreed



to this statement. 77 people, 61,1 % of the participants took part in some ecotourism activity somehow, while 38,9 % of the participants (49 people) have never participated in any ecotourism activity in Azerbaijan. From here we can see that nature tourism and ecotourism are popular by the majority of the population; however, there are still big numbers of local tourists who don't prefer nature or ecotourism. 2/3 of ecotourist respondents took part in ecotourism activities in Azerbaijan and Azerbaijani National Parks, including SNP. Almost half of the respondents who are not familiar with ecotourism have visited SNP (Figure 2).

The following questions were intended to determine to what degree national parks are being visited by nature loving population and which national parks are popular among them. The results showed that the majority of the participants have never visited national parks in Azerbaijan with the number of 66,7 % or 84 people. 33,3 % (42 people) visited national parks. Goygol NP and Shahdag NP were the most visited national parks. 30,2 % of participants (38 people) indicated that they visit NPs 1-2 times per year, while just 4,8 % (6 people) said they visit 3-4 times per year; 3,1 % (4 people) answered "5 times and more" per year. The rest majority of 61,9 % of participants (78 people) have not visited NPs in recent years. However, Shahdag region, in general, is a very popular touristic destination. According to survey 56,3 % of participants (71 people) have visited SNP or Shahdag region in general, out of which 11 people visited it multiple times. 43,7 % of participants have never been in Shahdag region in general or SNP in particular. These figures indicate that national parks are not preferred travel options among the nature-loving tourists or general Azerbaijani population. However, almost every participant of the survey (120 people out of 126, or 95,2 %) said that they know Shahdag NP and they have heard of it. Only 6 people (4,8 %) have never heard of SNP from out of which 3 are foreign citizens. Although most of the respondents (0,952) have heard about SNP, less than half of them have not visited National Parks at all not depending on the age group. 50 % of the total foreign citizens who participated in the survey have heard of Shahdag National Park from social media, 14,3 % have heard about it from tourism agencies, 7,1 % from website ads, and 28,6 % have heard about it from other sources.

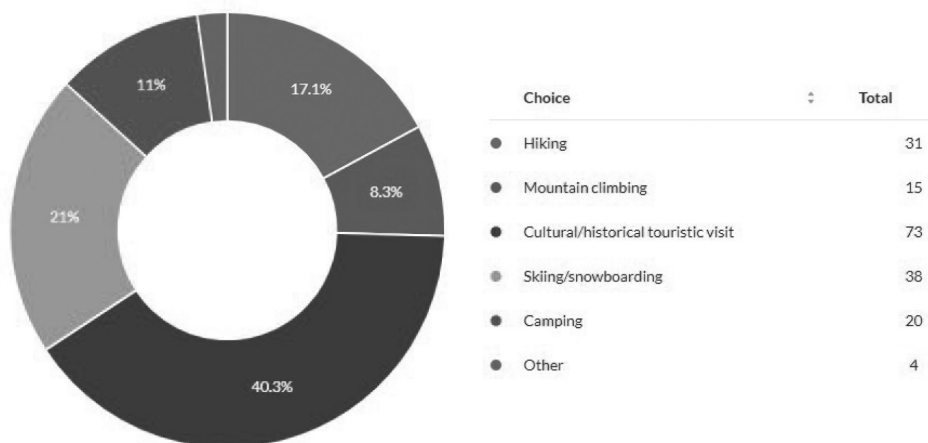


**Figure 3.** Visiting patterns - With whom did you visit Shahdag National Park?

**Source:** based on own data processing and calculations

The survey indicated that generally, people of Azerbaijan love to visit national parks or natural destinations with family and friends. 37,4 % of participants (49 people) of those people who visited NPs or would like to visit said they visited with family, and 35,1 % (46 people) with friends. The ones who visited with organized tour were 17,6 % (23 people), 6,1 % (8 people) said they visited alone and 3,8 % (5 people) chose other. This is the clear indication of preference of people being surrounded by family and friends which is, in turn, have been influenced by Azerbaijani culture as well (Figure 3).

Those ecotourists who visited SNP were 72 participants. Further analyses showed the following pattern. 38 % of those participants visited with family, 36 % with friends, 18 % with organized tour, 7 % visited alone. The transportation method used or preferred to be used in the future by the visitors are mainly personal cars. 53,8 % or 57 travelled by car to SNP. 35,8 % of people used bus. Bicycle was also preferred transportation choice of some visitors with 6,6 %. Just one person preferred taxi and 3 people said other transport methods. According to analysis 72 participants (ecotourists) who visited SNP or Shahdag region in general used personal cars as the main method of transportation (49 %), 33 % reached it with a bus, 7 % with bicycle and 11 % with taxi and other methods. Visitors of SNP engaged or want to engage in varied ecotourism activities while their visit to the park. Considering that inside SNP and in surrounding areas of the park there are numerous indigenous settlements and historical places, it was expected that the majority of the visits will have cultural and historical motives. The prediction was correct and the survey indicated that 40,3 % of visitors visited SNP for cultural and historical tours. The second biggest activity with 21 % was skiing and snowboarding which can be explained also by Winter Ski Resort Complex inside the national park area. Hiking was 3<sup>rd</sup> most famous activity with 17,1 % of participants engaging in that. After that, camping with 11 % and mountain climbing with 8,3 %. Only 4 people said they engaged in other activities (Figure 4). Participation in ecotourism activities doesn't depend on the age group significantly, but it is the least characteristic of the youngest age group according to the data analysis.

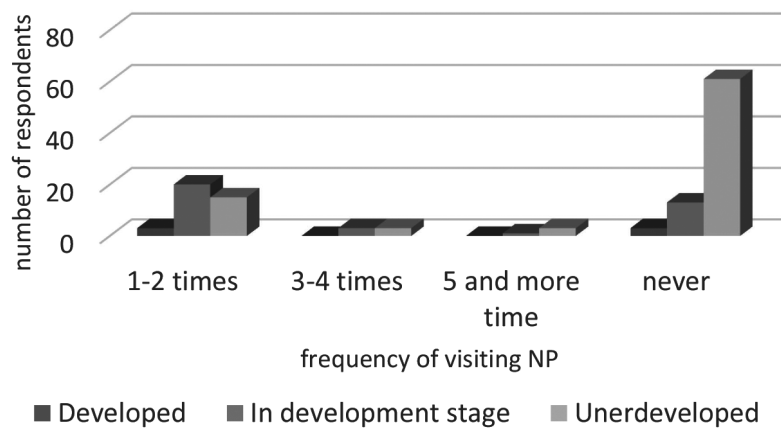


**Figure 4.** The most popular activities inside the Shahdag National Park area

**Source:** based on own data processing and calculations

The overall 72 people who really visited SNP or Shahdag region in general said they mainly engaged in cultural/historical touristic visit (36%), 21 % engaged in skiing or snowboarding, 17 % enjoyed hiking, 11 % did camping, 8 % did mountain climbing, 7 % enjoyed hunting and other activities. The overall satisfaction level of visitors of SNP are high. 42,1 % of visitors rated their experience as very satisfied. 34,7 % said they are just satisfied from their visit. 8,4 % preferred to stay neutral and chose neither satisfied nor dissatisfied for their experience. 12,6 % of people were dissatisfied. Only 2 people said they are very dissatisfied from their visit to SNP. However, the next question showed another pattern. Although people of Azerbaijan were satisfied with their time spent inside SNP, mainly with their family and friends, but majority of participants did not rate the ecotourism infrastructure of SNP as favourable. Ecotourism infrastructure of the park also included general infrastructure elements such as transportation systems, roads, communication networks, electric systems, safety measures or management facilities.

The majority of the respondents (47,3 %) rated the ecotourism infrastructure of SNP as bad, viewing it as of low quality, 30 % of respondents said it neither high nor low quality, 13,6 % of respondents said it's very low quality and only 7,3 % of respondents said it is high quality. 2 of the respondents indicated that it is very high quality. It is obvious from these numbers that the ecotourism infrastructure and general infrastructure of Shahdag National Park is in a bad situation and there is a very big need for renovation and reconstruction in this field. The bad infrastructure of the park affects its ecotourism system and overall experience of the visitors negatively. According to data, we can conclude a new pattern, that people do not visit national parks in Azerbaijan mainly because it is underdeveloped. It is shown that the majority of respondents who have never visited SNP or Shahdag region think that ecotourism in Azerbaijan is underdeveloped (Figure 5).



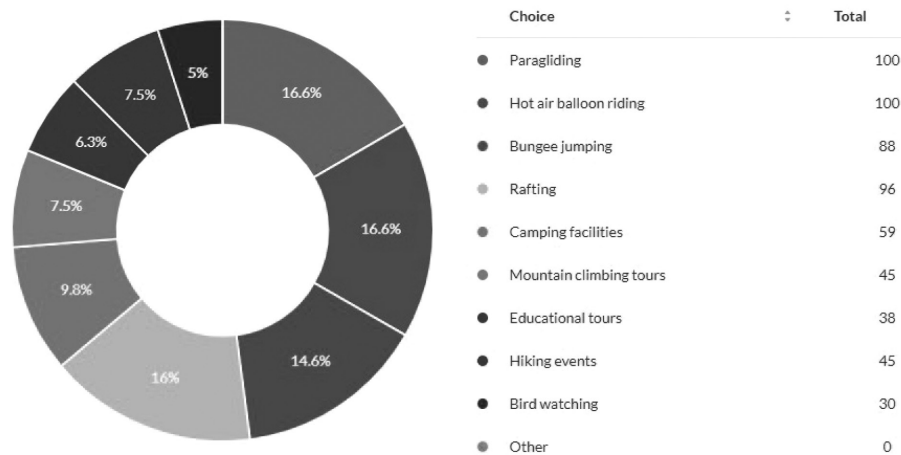
**Figure 5.** Visitors of NPs and their opinion

**Source:** based on own data processing and calculations

Another pattern shows that even the ones who have never visited NPs in Azerbaijan believe that Azerbaijan has great ecotourism potential and those who visited it also believe in this statement. The vast majority of the participants of the survey were very enthusiastic about the future ecotourism perspectives of SNP and 80,16 % of them said they want to see more tourists come to the park in the future. 11,11 % were neutral and 8,73 % of participants did not want the number of visitors to grow in the future. However, together with respondents' optimism in the growing number of tourists, visitors to SNP, the following graph shows their opinion about the consequences of this increase that might happen. The results were also mainly optimistic as 25,3 % of the survey participants said that this increase will attract more investment, thus more and better development to the park. 24,2 % of participants agreed that this inflow of tourists will increase the living standards of indigenous people by allowing them to benefit from this inflow mainly financially. 13,7 % said that nature will be preserved and conserved even better with new, better rules and regulations.

The following graph shows the main disadvantages or challenges of ecotourism inside SNP. Respondents were asked multiple choice questions with a list of detailed possible challenges. The services and activities offered to ecotourists in SNP are limited and there exist a big room and opportunity for improvements, innovations and new possibilities. There are not enough strict and precise rules and regulations in the park policy, safety measures are not appropriate enough. Participants were also asked to choose between offered activities or services. Some of these services already exist at SNP. However, some of them are new for SNP, as well as generally for Azerbaijan such as paragliding, hot air balloon riding, rafting, etc. Surprisingly, participants showed a great interest in such new and extreme activities. These votes show us possible oppor-

tunities or activities to develop inside the SNP to attract not only local visitors but also foreign visitors. The magnificent natural beauty, high altitude rivers, lakes, highly mountainous landscape and many other natural attributes of SNP not only allows us to develop these activities but also promises a highly successful future of ecotourism system inside its territory. The following chart shows the most common or preferred options chosen by the survey participants (Figure 6).



**Figure 6.** Future development possibilities inside the Shahdag National Park

**Source:** based on own data processing and calculations

## 5. CONCLUSION AND RECOMMENDATIONS

Well-known American researcher and writer in the field of ecotourism Elizabeth Boo developed a framework for developing countries with appropriate ecotourism potential to achieve successful development of sustainable ecotourism system. This framework includes strategies and recommendations for the following steps: Planning, development, and management. However, before the planning, there should be the first preplanning process (Boo, 1990; Whelan, 1991). The preplanning stage comes before the actual planning stage begins. This is the stage where the various government ministries of the country (tourism, finance, agriculture, environment, forestry, parks, planning, public works, and education) have to come together at a round table and discuss the main questions and issues such as: Does ecotourism correspond to the short or long term development goals of the country? This scenario is relevant to the countries with abundant or enough ecotourism products such as beautiful, unusual, and varied natural attractions, appropriate carrying capacities, and demand for ecotourism. It is crucial to include the points and opinions of the private sector, park managers, international funding agencies, local conservation groups, and native communities in the decision-making process.

If the government officials decide to include ecotourism into the development goals of the country, then an Ecotourism Board should be created for further investigation, potential, and development of ecotourism. Members of the board should consist of government representatives, park managers, tour operators, local conservation organizations, the private sector, and native communities. Financial and technological assistance might be gathered from international development and conservation organizations. The main functions of the board are creating a strategy for ecotourism growth. They will oversee the planning, development, and management functions. Sustainable and environmentally sound ecotourism development is a long-term activity. The destinations need to have a documented strategy of promotion and control of tourism in the natural area. In this framework, a key component to success is native communities.

This research project implemented deep research into the ecotourism system of Azerbaijan, more precisely Shahdag National Park of Azerbaijan. Finally, research questions have been answered, research hypothesis have been accepted, and showcased in the research results and findings section of this paper. Data collection and interviews allowed us to address the main problems of this research. One of the main challenges of ecotourism system of Shahdag National Park is poor ecotourism infrastructure. This includes condition of the roads, electricity system in some parts of the park, water, sewage, heating problems, and some problems related to the communication system, accommodation, lodging and lack of some management facilities. Another challenge is the hard accessibility of the park, also related to poor infrastructure of the SNP. Because of the bad roads or fewer transportation options, it is hard for visitors to reach the park. The next big challenge of SNP and the ecotourism system of Azerbaijan as a whole is the lack of environmental responsibility or ecotourism knowledge among visitors. As mentioned by the director of the Ismayilli region part of Shahdag National Park – Mr. Rafael Musayev, ecotourism is a relatively new phenomenon in Azerbaijan, as well as national parks. There are big problems with littering and abiding by rules within Shahdag National Park. However, the future is promising and people are getting more educated and responsible over time. Lack of ecotourism activities and organized services create another challenge for SNP. If we look to the world practice of successful national park management, we can see varied ecotourism activities and services offered to visitors. These activities include rafting, hot air balloon riding, zip lining, paragliding, bungee jumping, bird watching, varied thematic hiking or camping tours and events, etc. According to the survey, Azerbaijani people are more enthusiastic about these nature extreme and leisure activities, especially hot air balloon riding, rafting, bungee jumping and paragliding. According to the interview, Azerbaijan has lack of experienced workers in the fields of ecotourism and national parks and current specialists are few or some of them are lacking expertise or professional knowledge about these fields. These problems create another challenge for SNP in the management and controlling authority. There might arise some management or controlling problems inside the park management regarding rules, regulations, safety measures and natural preservation and conservation. Although SNP has a good promotion and marketing, this is not at the desired level to boost the popularity of the park and attract more foreign and internal visitors into the park. This is another identified challenge – the lack of promotion and marketing of ecotourism inside SNP.

Director, Mr. Rafael Musayev agreed that SNP has great ecotourism potential. He mentioned that they are currently using just 10 % of the ecotourism potential of SNP. The rest of 90 % is still not used and underdeveloped for ecotourism. The vast majority of the survey participants (78,4%, 98 people) strongly agreed to research hypothesis of this project which implies that „Azerbaijan has great ecotourism potential, but this potential is not used to its fullest capacity”. Survey results proved the hypothesis by numbers which showed that they are generally more optimistic about future ecotourism development inside SNP, and they want to increase the numbers of visitors to SNP. The future of ecotourism in the National Parks of Azerbaijan is bright. We can see this from the example of Shahdag National Park and it's future and present perspectives, which were identified by this research and data analyses.

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# CROATIA AND TURKEY – COMPARISON OF TWO MEDITERRANEAN TOURIST DESTINATIONS

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**Abstract:** *The paper evaluates tourism sector dynamics and tourism development strategies of two Mediterranean countries, Croatia and Turkey. In order to identify key supply and demand characteristics of this sector various indicators are graphically presented, elaborated and explained, from accommodation facilities available to physical and financial tourism indicators, their contribution to real activity and employment, as well as price competitiveness determinants. The goal of the paper is to outline similarities and differences in tourism sector indicators, as well as the way Turkey and Croatia see their tourism activity (preferably) developing in the future. Paper is of value added to academic scholars, tourist/business specialists, macroeconomic analysts and broad domestic and international readers interested in this field of research.*

**Keywords:** *Croatia's tourism developments, Turkey's tourism developments, Physical tourist indicators, Financial tourist indicators, Price competitiveness, Tourism development strategy.*

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## 1. INTRODUCTION

This paper aims to evaluate and compare tourism sector dynamics and development strategies of two Mediterranean countries, Croatia and Turkey. To grasp the key defining characteristics of supply and demand, various indicators in this segment of real activity are graphically presented, elaborated and explained, from assets available and employed, to physical and financial indicators, as well as factors that affect price competitiveness. The paper also presents the defining characteristics of tourism development strategies of two respective countries. The paper aims to outline similarities and differences in tourism sector indicators (positive aspect), as well the way Turkey and Croatia see the industry (preferably) developing in the future (normative aspect). As such, the paper is of value added to academic scholars, tourism/business specialists, macroeconomic analysts and broad domestic and international readers interested in this topic.

The paper encompasses eight parts. Part 1 pertains to introductory statements and is followed by part 2 that outlines key geographic characteristics of analysed countries, their tourism origins and dominant tourism approaches. Part 3 covers Croatia's and Turkey's tourism supply side indicators pertaining to standard accommodation establishments, number of available beds in them, as well as numbers of airports, marinas and golf courses. Part 4 covers respective countries' supply side indicators: yearly and intra-year distribution of arrivals and nights spent by foreign tourists, as well as the country of residence, means of transportation and type of accommodation distributions. Part 5 covers the tourism sector contribution to real and labour market indicators in Turkey and Croatia. Part 6 deals with competitiveness issues related to movements

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in nominal exchange rates (EUR/HRK and EUR/TRY), inflation (measured by consumer price index, CPI) and real effective exchange rates of respective countries (deflated by CPI). Part 7 is oriented towards the future and elaborates on countries' main tourism development strategies goals. Part 8 concludes by summarising the main findings of the paper.

## 2. KEY GEOGRAPHIC CHARACTERISTICS OF CROATIA AND TURKEY AND THEIR TOURISM ORIGINS

Both Mediterranean countries, Croatia and Turkey differ in geographic location and size, their historic and cultural identity. In the next few sentences, the geographic characteristics of both countries will be briefly outlined, as well as respective countries' tourism origins and dominant tourism approaches.

### 2.1. Croatia at a Glance

Croatia is both Mediterranean and continental Central and South-East European country. To the west, it shares borders with Slovenia and (maritime border with) Italy, Hungary in the north, Serbia and Bosnia and Herzegovina in the east, and Montenegro in the south. Croatia is a relatively small country covering around 56,000 square kilometres. Its coastline is long and dotted with more than thousand islands, islets, stacks and reefs.



Picture 1. Map of Croatia

Source: britannica.com

The country boasts with ten cultural and natural sites inscribed in the UNESCO World Heritage Sites list (the cultural sites consist of the Episcopal Complex of the Euphrasian Basilica in the Historic Centre of Poreč, Historic City of Trogir, Historical Complex of Split with the Palace of Diocletian, Old City of Dubrovnik, Stari Grad Plain, Medieval Tombstone Graveyards in Stećci, The Cathedral of St James in Šibenik, Venetian Works of Defence between the 16th and 17th Centuries, while the two natural sites inscribed in the UNESCO World Heritage list are Plitvice Lakes National Park and Ancient and Primeval Beech Forests of the Carpathians and



Other Regions of Europe). The capital of Croatia and its largest city, Zagreb, a growing tourism destination itself in recent years, is located in the northwest part of Croatia with a population of about 800,000 people.

The beginnings of Croatian tourism date back to the beginning of the 19<sup>th</sup> century when coastal towns, notably Opatija, (then part of the Austro-Hungarian Empire), became destinations for health tourism. In the '60s and '70s of the last century, Croatia saw a big increase in (mass) tourism infrastructure with hotels, resorts and marinas being built along the coastline, whose construction was initialised and supported by central and/or local socialist government (Orsini and Ostojić, 2018). During the early '90s, tourism in Croatia was affected by the War for Independence, after which the country positioned itself as an established and esteemed tourism destination on the Mediterranean market (Orsini and Ostojić, 2018). Croatia's membership in the European Union brought new (foreign and domestic) investment in the tourism sector expanding both the quantity and quality of its supply.

Along the Adriatic Sea littoral, the main form of tourism is the classical sun-and-sea format, with health, congressional and golf tourism shares lagging behind some other Mediterranean competitors.

## 2.2. Turkey at a Glance

Turkey is a country that binds together Europe and Asia, with three percent of the country's landmass situated in Europe. The dominant, Asia located part of the country can be seen as a big peninsula, surrounded by the Black Sea in the north, by the Sea of Marmara and the Aegean Sea in the west, and by the Mediterranean Sea in the south. The country borders Greece and Bulgaria on the west, Georgia, Armenia, Azerbaijan and Iran on the east, Syria and Iraq on the south. Total area of the country is approximately 780,000 square kilometres with more than eight thousand kilometres of coastline.



Picture 2. Map of Turkey

Source: britannica.com

Turkey is proud of 18 cultural and mixed natural places inscribed on the UNESCO World Heritage Sites list (Aphrodisias, archaeological site of Ani, archaeological site of Troy, Bursa and Cumalıkızık: the birth of the Ottoman Empire, City of Safranbolu, Diyarbakır Fortress and Hevsel Gardens Cultural Landscape, Ephesus, Göbekli Tepe, Great Mosque and Hospital of Divriği, Hattusha: the Hittite Capital, Historic Areas of Istanbul, Nemrut Dağ, Neolithic Site of Çatalhöyük, Pergamon and its Multi-Layered Cultural Landscape, Selimiye Mosque and its Social Complex, Xanthos-Letoon as well as, Göreme National Park and the Rock Sites of Cappadocia and Hierapolis-Pamukkale). Its capital city is Ankara, with a population of 5.1 million, though Istanbul (15.2 million inhabitants) is globally renowned as Turkey's historic, commercial, (air) travel and tourist hub.

The tourism sector of Turkey was not developed extensively until the 1980s. With “January 1980 Decisions”, liberalisation steps were undertaken, and ensuing structural reforms and neo-liberal policies encouraged foreign investment (Esen and Uyar, 2016). In 1982 “Law for the Encouragement of Tourism” was implemented, regulating and further promoting the tourism sector of the country (lawsturkey.com; 1982). A year later, “Turkish Civil Aviation Law” fostered development of the air travel industry and allowed the private sector to operate in the aviation field (lawsturkey.com; 1982), which had a positive boost on the country's tourism sector (Gerede, 2010).

The biggest portion of Turkey's proceeds from tourism comes from travel related establishments along the Aegean and the Mediterranean Sea and the city of Istanbul. The dominant share of activity also relies on sun-and-sea approach, though, when compared to Croatia, the travel offer of Turkey is more diversified (conference and golf tourism, health and thermal tourism, winter sports).

### **3. SUPPLY SIDE TOURISM INDICATORS**

#### **3.1. Tourist Accommodation Establishments**

Table 1 indicates that Croatia had altogether 759 (two to five-star rated) hotels and 330 similar accommodation facilities in 2019. Looking just at the hotels, dominant share pertains to four star-hotels (44.9%) and three-star hotels (42.6%), while five-star and two-star hotels participate both with around 6,2% share in total. Croatia also has a strong supply of holiday and other short-stay accommodation (111,820 units in 2019), of which 92.8% is owned by households. Croatia also has at disposal a significant number of camping grounds (notably along the Adriatic Sea littoral) and 322 hostels (spread along the coast but also mainland Croatia).

Looking dynamically (comparing 2019 with the base 2010), the three-star hotel establishment's share is stagnant, while the strong increase in capacity was observed in the segment of four-star (113.1%) and five-star hotels (88%). At the same time, a pronounced drop in share of low quality, two-star hotels was recorded (-52.5%). Big increase in capacity Croatia also recorded in terms of hostels (544.0%) and camping grounds (261.0%).<sup>4</sup> Increased capacity reflects investment in new establishments, as well as expanding and refurbishing the existing ones (which explains the drop in two-star hotels). An increase in tourism physical indicators (see chapter 4) also had an impact on expanding Croatia's tourism accommodation capacity.

<sup>4</sup> Due to non-available data for household holiday and short stay accommodation in 2010, static comparison in this segment is not possible.

**Table 1.** Number of tourist accommodation establishments in Croatia

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Hotels and similar accommodation</i>	841	857	878	897	909	938	1,011	1,037	1,065	1,089
- o/w: Two-star hotels	101	96	91	7	79	76	72	69	57	48
- o/w: Three-star hotels	314	321	320	328	317	316	316	313	322	323
- o/w: Four-star hotels	160	172	190	206	227	245	273	300	322	341
- o/w: Five-star hotels	25	29	30	31	34	38	38	42	42	47
- o/w: Other <sup>1)</sup>	241	239	247	325	252	263	312	313	322	330
<i>Holiday and other short-stay accommodation<sup>2) 3)</sup></i>	1,040	1,089	56,418	60,585	66,244	71,894	81,569	96,578	106,326	111,820
- o/w: Households								89,446	98,621	103,727
- o/w: Hostels	50	56	81	126	168	201	283	313	332	322
<i>Camping grounds, recreational vehicle parks and trailer parks</i>	236	243	512	544	571	607	653	726	821	852
<b>Total<sup>3)</sup></b>	<b>2,117</b>	<b>2,189</b>	<b>57,808</b>	<b>62,026</b>	<b>67,724</b>	<b>73,439</b>	<b>83,233</b>	<b>98,341</b>	<b>108,212</b>	<b>113,761</b>

- 1) heritage hotels, all-suite hotels, diffuse hotels, integral hotels, spa-hotels, special standard hotels, resorts, tourist apartments, boarding houses, spa boarding houses and guest houses
- 2) rooms, apartments, studio-type suits, summer houses, hostels, spas, overnight accommodation, vacation establishments for children, inns, mountain and hunting lodges, pupils and students home
- 3) households' accommodation included after 2011

**Source:** Croatian Bureau of Statistics

Foreign tourists travelling to Turkey opt predominantly for hotel accommodation, mainly because of the all-inclusive hotel packages offered on the market. Accordingly, Table 2 reveals that in 2019 Turkey had altogether 2950 (two to five-star rated) hotels, of which the highest share pertains to three-star hotels (36.1%), followed by four-star (28.1%) and five-star hotels (22.7%). The smallest share of hotels pertains to two-star hotels (13.1%). Turkey, when compared to Croatia, has almost 2,200 more hotel establishments, but with a marginal offer in terms of camping grounds and household owned holiday, and other short-stay accommodation.

Looking dynamically (comparing 2019 with the base 2010) the biggest increase in capacity was observed in the five-star hotel segment (109.7%), followed by three-star hotels (66.1%) and four-star hotels (58.5%). As in the case of Croatia, the decline in numbers was recorded in low quality segment (number of two-star hotels declined by 174 units or 31.0%). Vast domestic and foreign investments also played a crucial role in expanding the country's tourism capacity, thus emphasizing the importance of tourism for Turkey's overall real activity.

**Table 2.** Number of tourist accommodation establishments in Turkey

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Hotels and similar accommodation</i>	2,296	2,409	2,490	2,582	2,687	2,830	3,087	3,202	3,327	3,397
- o/w: Two-star hotels	561	532	484	453	414	400	405	407	401	387
- o/w: Three-star hotels	641	691	728	773	823	877	960	1,008	1,045	1,065
- o/w: Four-star hotels	523	554	596	624	657	700	751	781	810	829
- o/w: Five-star hotels	319	366	398	442	485	523	570	595	633	669
- o/w: Other <sup>1)</sup>	252	266	284	290	308	330	401	411	438	447
<i>Camping grounds</i>	4	4	5	5	6	6	7	7	7	7
<i>Other<sup>2)</sup></i>	347	370	375	395	438	473	547	562	591	634
<b>Total</b>	<b>2,647</b>	<b>2,783</b>	<b>2,870</b>	<b>2,982</b>	<b>3,131</b>	<b>3,309</b>	<b>3,641</b>	<b>3,771</b>	<b>3,925</b>	<b>4,038</b>

- 1) one star hotels, motels, all-suite hotels, boutique hotels, thermal hotels, thermal all-suite hotels
- 2) holiday villages, thermal holiday villages, inns, golf facilities with accommodation, tourism complex, mountain house, boarding house, village house, hostels, B type holiday site and private establishments

**Source:** Turkish Ministry of Culture and Tourism

When it comes to the number of beds available, Table 3 reveals that in (two to five-star rated) hotels Croatia had 127,987 beds available in 2019. As in the case of the number of hotel units, the biggest share of beds pertains to four-star hotels (49.6% with the average number of beds in such hotel amounting to 186 in 2019), followed by share of beds in three-star hotels (34.3% with

on average 136 beds per hotel), share of beds in five-star hotels (9.7% with on average 264 beds per hotel) and, finally, share of beds in two-star hotels (6.4% with on average 171 bed per hotel).<sup>5</sup>

The total number of beds available in household owned holiday and short-stay accommodation in Croatia equalled 674,428 beds in 2019. These are micro accommodation units with on average only 7 beds. In the same year, hostels provided 17,700 beds or on average 55 beds per unit, and camping grounds 277,214 beds or on average 325 beds (camping spaces/lots per person).

**Table 3.** Number of bed places in tourist accommodation establishments offered in Croatia

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Hotels and similar accommodation</i>	151,681	154,733	156,792	161,957	161,875	164,675	167,380	166,485	169,108	171,005
- o/w: Two-star hotels	17,463	18,638	18,244	18,667	16,847	15,955	15,042	13,755	10,433	8,195
- o/w: Three-star hotels	55,559	55,396	55,076	56,831	52,651	52,669	47,874	44,008	46,025	43,849
- o/w: Four-star hotels	39,085	41,292	43,688	47,537	52,450	55,239	59,395	62,023	63,345	63,518
- o/w: Five-star hotels	9,209	10,334	10,461	10,544	11,100	11,939	12,014	13,024	12,244	12,425
- o/w: Other <sup>1)</sup>	30,365	29,073	29,323	28,378	28,827	28,873	33,055	33,675	37,061	43,018
<i>Holiday and other short-stay accommodation<sup>2) 3)</sup></i>			417,358	460,857	496,276	529,286	569,436	636,542	684,160	709,651
- o/w: Households	393,505	414,675	366,766	374,881	414,416	490,518	538,280	604,813	650,437	674,428
- o/w: Hostels	5,790	5,996	6,973	8,922	10,546	12,163	15,758	16,742	18,139	17,700
<i>Camping grounds, recreational vehicle parks and trailer parks</i>	219,538	216,347	224,778	244,296	235,676	244,652	250,456	256,965	262,391	277,214
<b>Total<sup>3)</sup></b>	<b>439,613</b>	<b>437,768</b>	<b>798,928</b>	<b>867,110</b>	<b>893,827</b>	<b>938,613</b>	<b>987,272</b>	<b>1,059,992</b>	<b>1,116,659</b>	<b>1,167,870</b>

- 1) heritage hotels, all-suite hotels, diffuse hotels, integral hotels, spa-hotels, special standard hotels, resorts, tourist apartments, boarding houses, spa boarding houses and guest houses
- 2) rooms, apartments, studio-type suits, summer houses, hostels, spas, overnight accommodation, vacation establishments for children, inns, mountain and hunting lodges, pupils and students home
- 3) households' accommodation included after 2011

**Source:** Croatian Bureau of Statistics

Table 4 reveals that in (two to five-star rated) hotels Turkey had 834,757 beds available in 2019, or 6.5 times bigger amount than Croatia. The biggest share of beds in Turkey pertains to five-star hotels (54.6% with the average number of beds in such hotel amounting to 682 in 2019), followed by share of beds in four-star hotels (28.0% with on average 282 beds per hotel), share of beds in three-star hotels (14.3% with on average 112 beds per hotel) and, finally, share of two-star hotels (3.1% with on average 68 beds per hotel).<sup>6</sup>

**Table 4.** Number of bed places in tourist accommodation establishments offered in Turkey

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Hotels and similar accommodation</i>	549,735	585,684	622,548	662,820	711,990	751,847	799,798	836,107	873,355	894,309
- o/w: Two-star hotels	43,711	40,734	36,673	33,943	30,801	29,494	28,602	28,471	27,682	26,268
- o/w: Three-star hotels	86,316	92,363	94,134	97,579	106,437	107,236	108,586	115,919	118,996	119,070
- o/w: Four-star hotels	168,812	167,359	179,585	189,400	200,662	214,504	220,440	228,901	232,463	233,410
- o/w: Five-star hotels	220,474	251,103	272,777	301,406	329,725	354,641	390,576	409,064	436,075	456,009
- o/w: Other <sup>1)</sup>	30,422	34,125	39,379	40,492	44,365	45,972	51,594	53,752	58,139	59,552
<i>Camping grounds</i>	587	660	750	705	2,005	2,005	2,425	2,425	2,425	2,425
<i>Other<sup>2)</sup></i>	79,143	82,485	82,721	85,774	93,321	96,237	97,658	96,754	98,794	95,607
<b>Total</b>	<b>629,465</b>	<b>668,829</b>	<b>706,019</b>	<b>749,299</b>	<b>807,316</b>	<b>850,089</b>	<b>899,881</b>	<b>935,286</b>	<b>974,574</b>	<b>992,341</b>

- 1) one-star hotels, motels, all-suite hotels, boutique hotels, thermal hotels, thermal all-suite hotels
- 2) holiday villages, thermal holiday villages, inns, golf facilities with accommodation, tourism complex, mountain house, boarding house, village house, hostels, B type holiday site and private establishments

**Source:** Turkish Ministry of Culture and Tourism

<sup>5</sup> The shares do not add to 100% since other category includes, among other accommodation facilities, also one-star hotels.

<sup>6</sup> The shares do not add to 100% since other category includes, among other accommodation facilities, also one-star hotels.



At the same year, other accommodation facilities in Turkey (holiday villages, thermal holiday villages, inns, golf facilities with accommodation, tourism complex, mountain house, boarding house, village house, hostels, B type holiday site and private establishments) offered in 2019 95,607 beds or, on average, 151 bed per such facility. The number of beds offered by Turkish camping grounds in the same year amounted to 2,425 or, on average, 346 beds (camping spaces/lots per person).

Table 5 and Table 6 reveal other selected tourism facilities in Croatia and Turkey that pertain to marinas, airports and golf facilities. They reveal that nautical tourism is much more important for Croatia compared to Turkey, as seen in the number of available marinas in 2019 (78 in Croatia versus 41 in Turkey). On the other hand, due to its geographical location and smaller share of drive-in foreign guests, Turkey has a significantly bigger share of airport facilities (56 compared to only 7 in Croatia). Golf tourism is also much more developed in Turkey than it is in Croatia (14 and 5, respectively), though the number of terrains has been on the decline in Turkey since 2010 due to high maintenance costs.

**Table 5.** Number of other selected tourism facilities in Croatia

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Marinas</i> <sup>1)</sup>		54	53	53	56	57	58	57	58	78
<i>Airports</i> <sup>2)</sup>	9	9	9	9	9	9	9	9	9	9
<i>Golf facilities</i> <sup>3)</sup>									5	5

1) Tourism in numbers 2011-2019

2) Data relate to the airports in Zagreb, Split, Dubrovnik, Pula, Rijeka, Zadar, Osijek, Brač and the air landing place in Mali Lošinj.

3) Data relate to the golf courses: Riverside Golf Zagreb, Golf igralište Adriatic, Brijuni Old Golf Course, Golf igralište Sv. Martin Međimurje and Golf centar Novi Dvori.

**Sources:** Croatian National Tourist Board, Croatian Bureau of Statistics, Croatian Golf Association

**Table 6.** Number of other selected tourism facilities in Turkey

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Marinas</i> <sup>1)</sup>		42	42	42	42	43	44	41	43	41
- o/w: <i>Yacht ports</i>		17	17	17	17	23	26	26	27	28
<i>Airports</i> <sup>2)</sup>	46	47	49	52	53	55	55	55	56	56
<i>Golf facilities</i> <sup>1)</sup>	22	21	19	15	12	15	15	15	15	14

1) Maritime Sector Reports (2011-2015)

2) Included airports supervised by the State Airports Authority of Turkey.

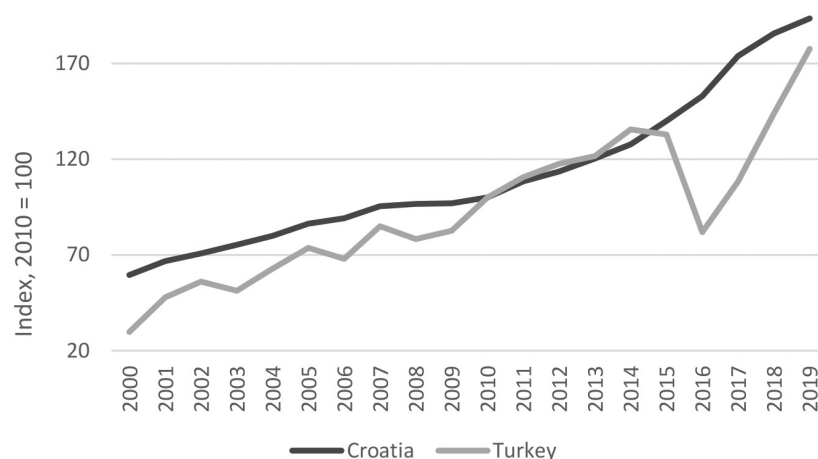
**Sources:** Turkey's Ministry of Culture and Tourism, Turkish Chamber of Shipping, State Airports Authority of Turkey

#### 4. DEMAND SIDE TOURISM INDICATORS

This section of the paper focuses on the comparison of physical indicators in tourism for Croatia and Turkey, gathered from official sources.

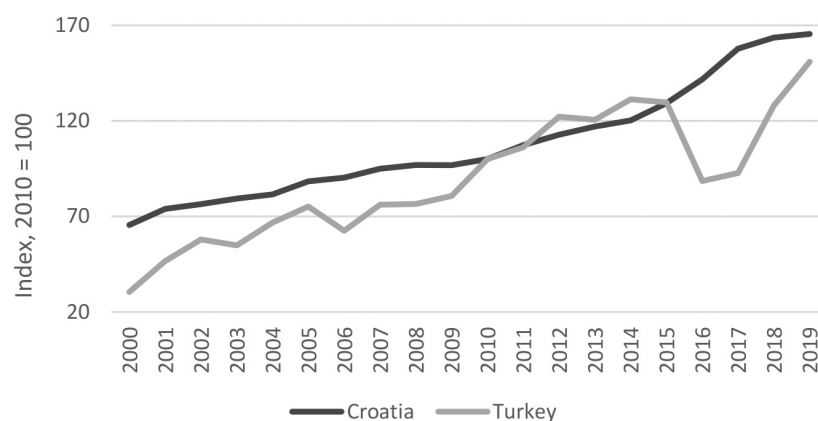
##### 4.1. Arrivals and Nights Spent by Foreign Tourists

Figure 1 and Figure 2 represent the yearly changes in foreign tourist arrivals and foreign tourist nights spent at tourist accommodation facilities in Croatia and Turkey in the past two decades (from the year 2000 to the year 2019).



**Figure 1.** Foreign tourist arrivals (yearly changes, 2000-2019)

**Sources:** Croatian Bureau of Statistics, Turkish Ministry of Culture and Tourism



**Figure 2.** Foreign tourist nights spent (yearly changes, 2000-2019)

**Sources:** Croatian Bureau of Statistics, Turkish Ministry of Culture and Tourism

Croatia, in the period before the great financial crisis, saw a sustained increase in both foreign tourist arrivals and nights spent (in the period from 2000 to, including 2008, the average yearly growth rate in number of arrivals amounted to 5.9%, and number of nights spent to 4.8%). In 2009 and the aftermath of the global financial crisis, a slowdown in physical indicators has been recorded, which can be attributed to high economic uncertainty and, in some emitting countries, decline in disposable incomes. After Croatia entered European Union, a significant rebound in physical indicator growth rates was recorded (in the period from 2016 till 2019 the average annual growth rate of number of arrivals amounted to 8.4%, and nights spent to 6.4%) that was propped up by further infrastructural developments by both private and corporate (domestic and international) investors.

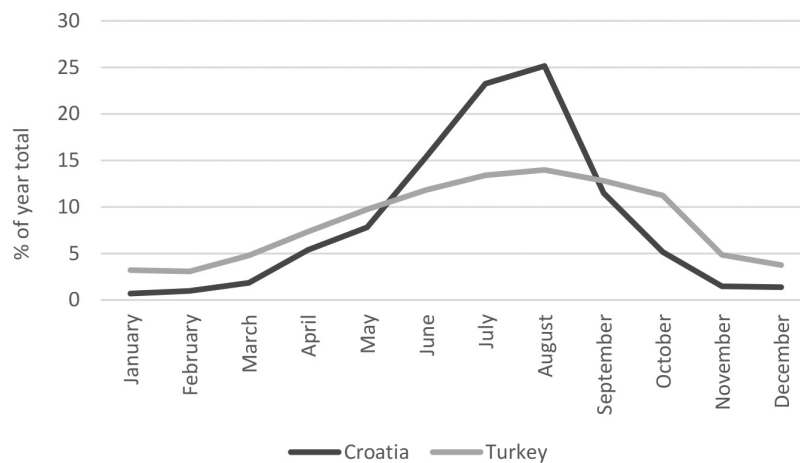
In the period before the crises Turkey recorded a similar, sustained increase in physical indicators in tourism, though its dynamics were somewhat more volatile compared to Croatia (the average yearly increase in foreign tourist arrivals from 2000 to 2008 amounted to 7.8%, and nights spent 9.6%). In years following the crises, the number of foreign tourists arriving in Turkey continued to increase and they spent more nights in Turkey as well. The sharp decline in the tourism industry occurred in 2016 caused by terrorist attacks that hit big cities in 2015 and 2016. Since 2017, and especially after the normalization of Turkey-Russia relations, foreign tourist arrivals and nights spent started to increase again. The significant depreciation of the



Turkish lira in 2018 and ensuing increase in purchasing power of foreign tourists (Genç, 2018) also helped in boosting the physical indicators at the very end of analysed interval (in the period from 2017 till 2019 the average annual growth rate of number of arrivals in Turkey amounted to 15%, and nights spent to 12.6%).

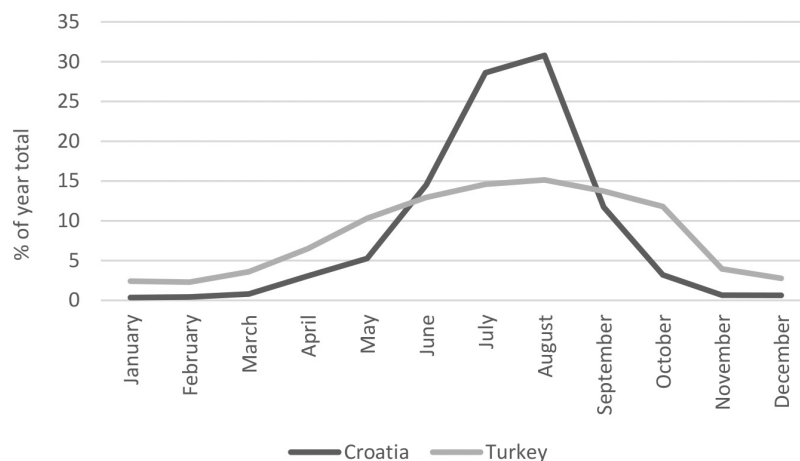
#### 4.2. Intra-Year Distribution of Arrivals and Nights Spent by Foreign Tourists

As Figure 3 and Figure 4 show, climate factors play a key role in intra-year distribution of physical indicators, with both countries' peak of the tourism season coinciding with warm and dry weather. The mentioned figures also show that for Croatia seasonality is more pronounced, July and August being the months with high and concentrated tourism business. On the other hand, Turkey's season is wider and encompasses the interval from May to October.



**Figure 3.** Distribution of foreign tourist arrivals by months (2019)

**Sources:** Croatian Bureau of Statistics, Turkish Ministry of Culture and Tourism

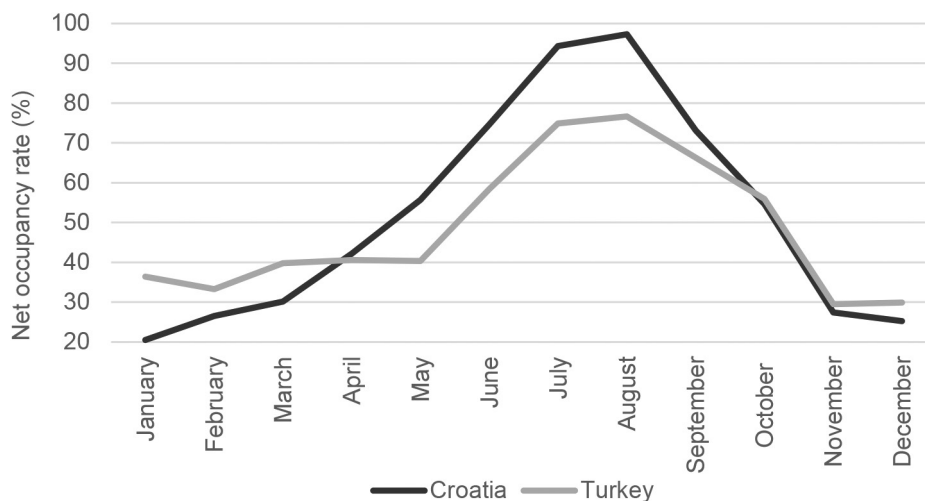


**Figure 4.** Distribution of foreign tourist nights spent by month (2019)

**Sources:** Croatian Bureau of Statistics, Turkish Ministry of Culture and Tourism

When it comes to occupancy rates of rooms in hotels and similar accommodation facilities (the data in the Figure 5 refer to year 2018), for Croatia they range between 20% and 50% in low season (from October to April, with the weakest rate in January), while at the peak of the season (August-September) they surpass 90%. Occupancy rates in Turkey follow similar seasonal pattern, with somewhat higher shares during autumn and winter months, partly due to

country's geographic position and climate characteristics, but somewhat lower occupancy rates during spring and summer months. These findings corroborate higher seasonality of Croatian compared to the Turkish tourism sector. However, one should recall that in Turkey hotels and similar accommodation facilities cover more than 85% of the entire market for tourism related rentals, while in Croatia they account for just one-fifth of total nights spent.



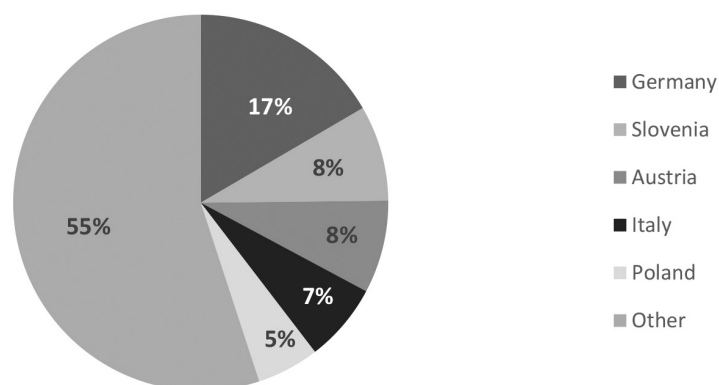
**Figure 5.** Occupancy rates of hotels and similar accommodation facilities (monthly)

Source: Eurostat

#### 4.3. Country of Residence Distribution of Foreign Tourists

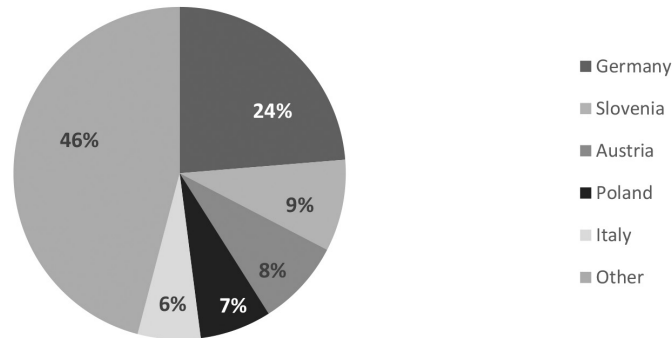
Figure 6 and Figure 7 show the distribution of foreign tourist arrivals and nights spent by the country of foreign visitor residence for Croatia. In 2019, German tourists constituted the biggest share of foreign arrivals and nights spent, followed by tourists from Slovenia, Austria, Italy and Poland.

Figure 8 and Figure 9 point to the dominance of Russian and German tourists in the number of arrivals and nights spent in Turkey. In the case of guests from Russia, the fact mirrors the visa exemption regime between two countries and bilateral cooperation in the fields of economy and trade. The number of visitors from Germany is additionally boosted by the fact that a significant number of people of Turkish origin live there and prefer to spend their vacations in Turkey. In 2019, these two countries were followed by guests from the United Kingdom, Poland and China.

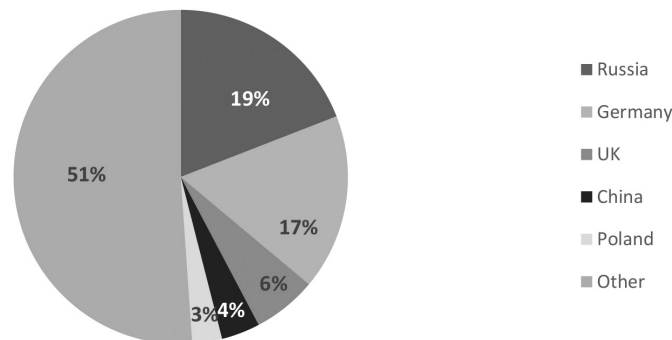


**Figure 6.** Foreign tourist arrivals to Croatia by country of residence (2019)

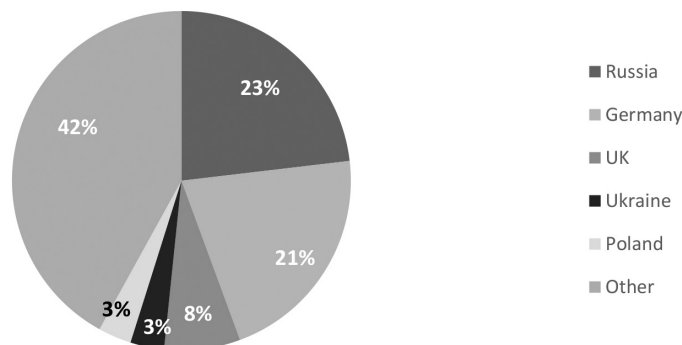
Source: Croatian Bureau of Statistics



**Figure 7.** Foreign tourist nights spent in Croatia by country of residence (2019)  
**Source:** Croatian Bureau of Statistics



**Figure 8.** Foreign tourist arrivals to Turkey by country of residence (2019)  
**Source:** Turkish Ministry of Culture and Tourism

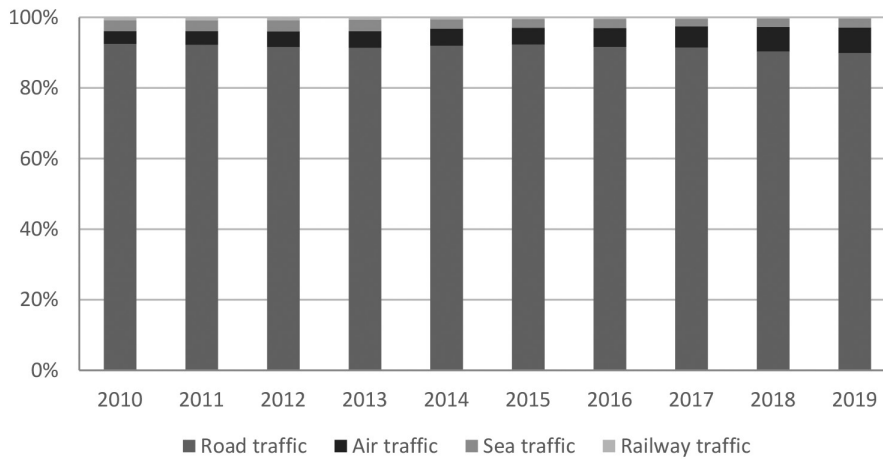


**Figure 9.** Foreign tourist nights spent in Turkey by country of residence (2019)  
**Source:** Turkish Ministry of Culture and Tourism

#### 4.4. Means of Transportation Distribution of Foreign Tourists

Figure 10 and Figure 11 can be used for comparison of Croatia and Turkey in terms of means of transportation of international tourists arriving to respective countries, covering intervals from 2010 to the most recent 2019.

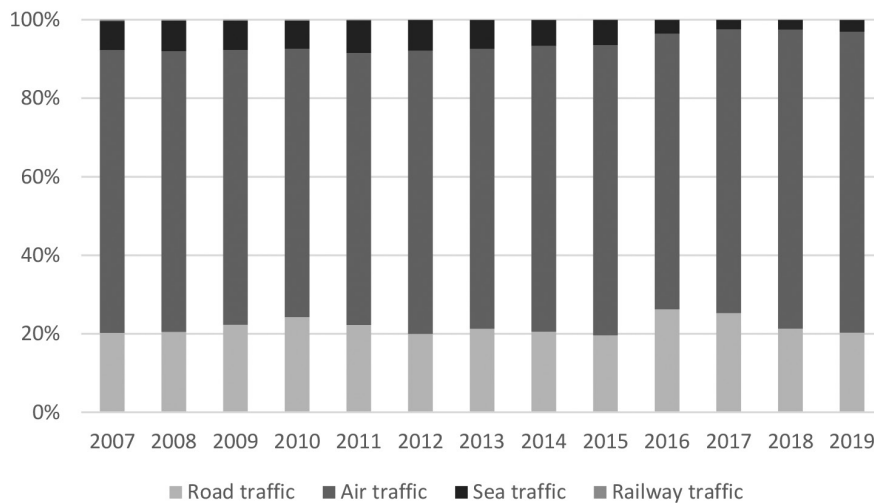
Figure 10, about Croatia, clearly points to the dominance of drive-in guests, followed by increasing air-borne and relatively constant share of ferry-carried passengers. This distribution reflects the highly-developed highway network in Croatia, cruise ship visits and, to less extent, domestic international ferry transport systems. Air-borne tourists arrive in Croatia mostly from the United Kingdom, the United States and South Korea.



**Figure 10.** Distribution of cross-border entry of foreign travellers to Croatia (2010-2019)

**Source:** Croatian Bureau of Statistics

Figure 11, about Turkey, shows that due to its geographical location, but also highly developed and globally strong national air carrier (Turkish Airlines) and many seasonal (low-costs and charter) air connections, most of Turkey’s visitors arrive by plane (in last two years the share of this segment slightly surpasses 75%). When it comes to this segment, most of the visitors who use plane transportation come from Russia, Germany, the UK and Ukraine. On the second place are road arrivals, followed by sea arrivals of foreign visitors to Turkey.



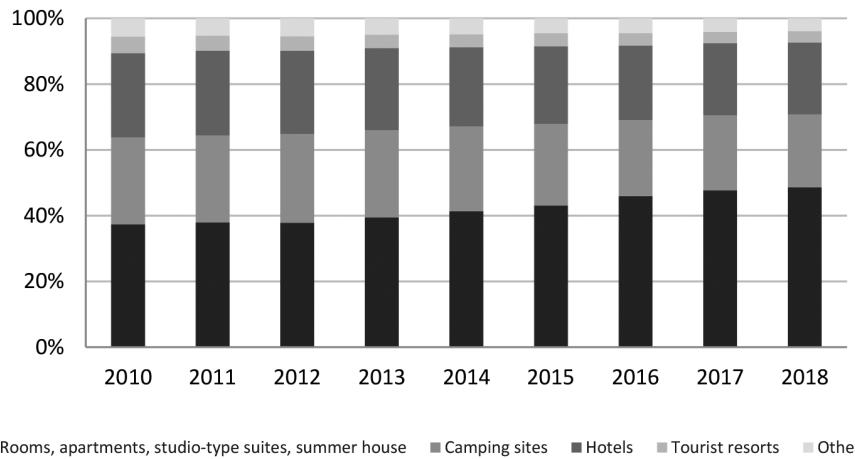
**Figure 11.** Distribution of cross-border entry of foreign travellers to Turkey (2010-2019)

**Source:** Turkish Ministry of Culture and Tourism

#### 4.5. Type of Accommodation Distribution of Foreign Tourists

Figure 12 and Figure 13 show the distribution of foreign tourist nights spent by type of accommodation in Croatia and Turkey, from 2010 to the last available and comparable 2018.

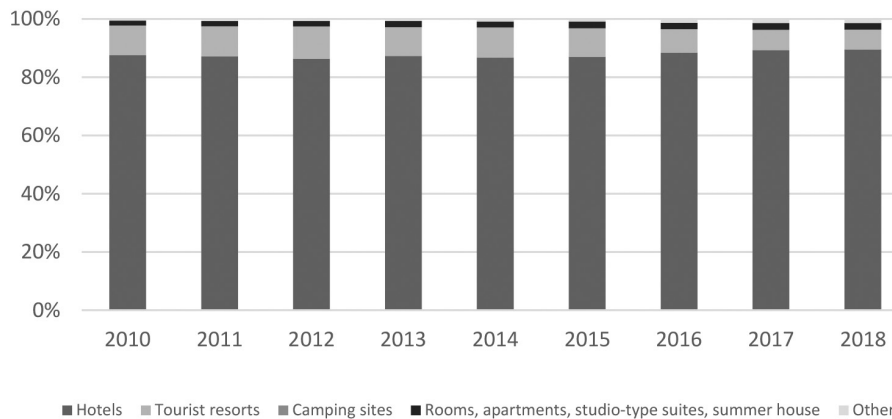
In Croatia, the majority of tourists prefer to spend their vacation in rooms, apartments, studio-type suites and/or summer houses and other types of accommodation. Some foreign visitors also own property on the coast (mostly from Slovenia). This type of accommodation is followed by the share of camping sites and, in the third place, hotels.



**Figure 12.** Distribution of foreign tourist nights spent by type of accommodation in Croatia (2010-2018)

**Source:** Croatian Bureau of Statistics

International visitors travelling to Turkey usually opt for hotel accommodation, with the share of this segment over 80% and in most recent years rising. While tourist resorts appear only with a marginal share in Croatia's distribution, they show up with a significant share in Turkey's distribution by type of accommodation. Only a small percentage of the international travellers spend their vacations at rooms, apartments, studio-type suites and/or summer houses.

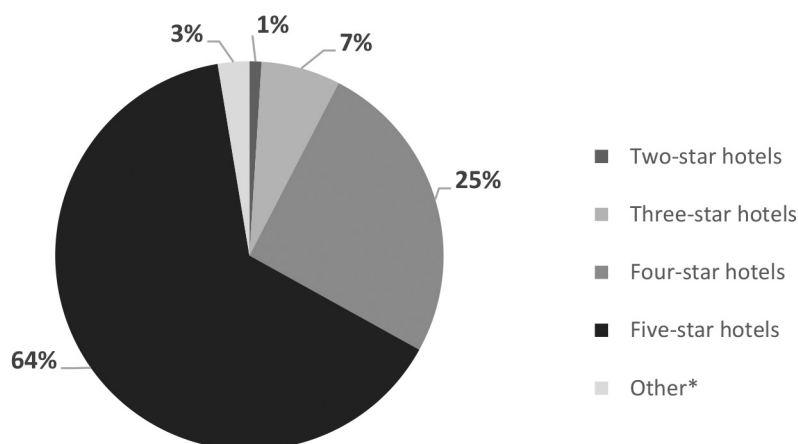


**Figure 13.** Distribution of foreign tourist nights spent by type of accommodation in Turkey (2010-2018)

**Source:** Turkish Ministry of Culture and Tourism

Taking into account the fact that the dominant share of foreign tourists in Turkey opt for hotel accommodation, Figure 14 and Figure 15 reveal the star rating distribution of that particular segment. The pie chart pertaining to Turkey (Figure 14) shows that two thirds of foreign tourists stayed at five-star hotels in 2018, followed by a quarter of them who stayed in four-star hotels and only 7% of them spent their holidays in three-star hotels. Foreign tourists' high demand for five-star or four-star hotels in Turkey can be explained by all-inclusive hotel packages, as well as the fact that they have a competitive price.

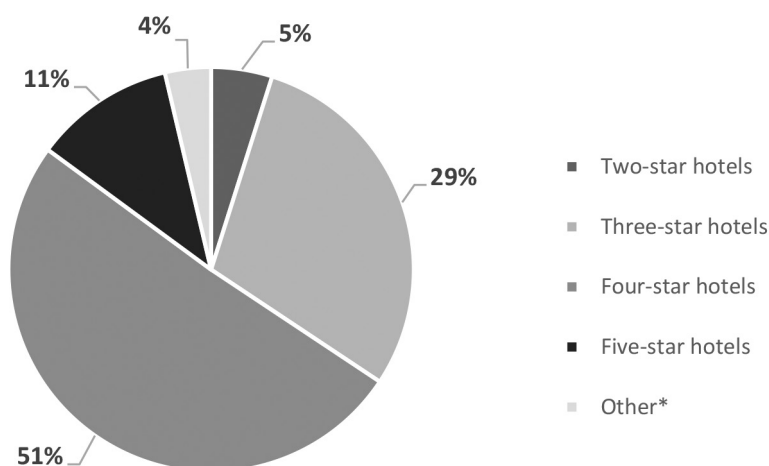




**Figure 14.** Distribution of foreign tourist nights spent in hotels establishments in Turkey (2018)

**Source:** Turkish Ministry of Culture and Tourism

In the case of Croatia, half of the foreign visitors who opt to stay in hotels do so in four-star rated establishments, and 29% of them in three-star rated hotels. Only one-tenth of foreign visitors stay in Croatia's five-star rated hotels. Such distribution mirrors the supply of hotel establishments but also their price level, as well as the fact that the share of all-inclusive packages plays much smaller importance in Croatia's tourist offer.



**Figure 15.** Distribution of foreign tourist nights spent in hotel establishments in Croatia (2018)

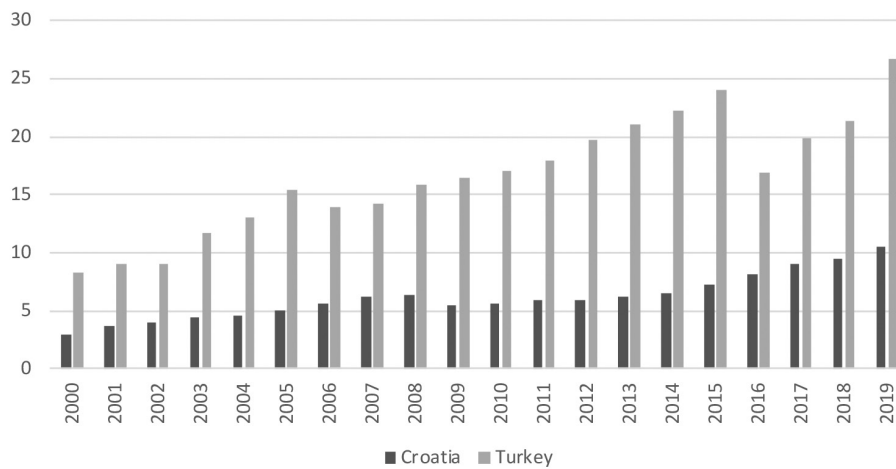
**Source:** Croatian Bureau of Statistics

#### 4.6. Tourism Financial Indicators

Figure 16 and Figure 17 show the travel revenues of Croatia and Turkey in absolute terms (billion EUR) and as the percent of gross domestic product. Travel revenues mirror dynamics of physical indicators and average personal consumption per foreign visitor dynamics. In the period before the global financial crisis tourism revenues in Croatia, on average, amounted to around 4,3 billion EUR or 13% of its GDP. During 2009 and 2010, the mentioned share slightly decreased and since 2011 has been continuously increasing. Accordingly, in the past four years, the relative financial proceeds from travel increased from 16% of GDP to close to 20% of Croatia's GDP.

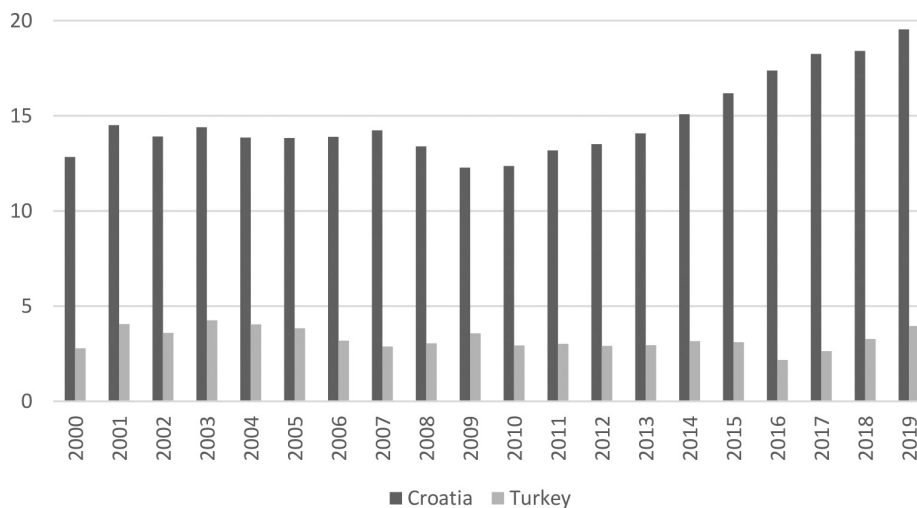
Though Turkey also relies on tourism revenues as a source of foreign currency and for improving its current account balance of payments position (Cihangir, Erkan and Harbalioğlu, 2014),

Figure 16 reveals that Turkey is less dependent on tourism when compared to Croatia. In the entire analysed period its travel revenues on average amounted to 16,7 billion EUR or around 3% of GDP with an increasing trend observed in the last three years.



**Figure 16.** Travel revenues (in billion EUR, 2000-2019)

Sources: Central Bank of Turkey, Croatian National Bank



**Figure 17.** Travel revenues (in percent of GDP, 2000-2019)

Sources: Central Bank of Turkey, Croatian National Bank

## 5. TOURISM CONTRIBUTION TO REAL AND LABOUR MARKET DYNAMICS

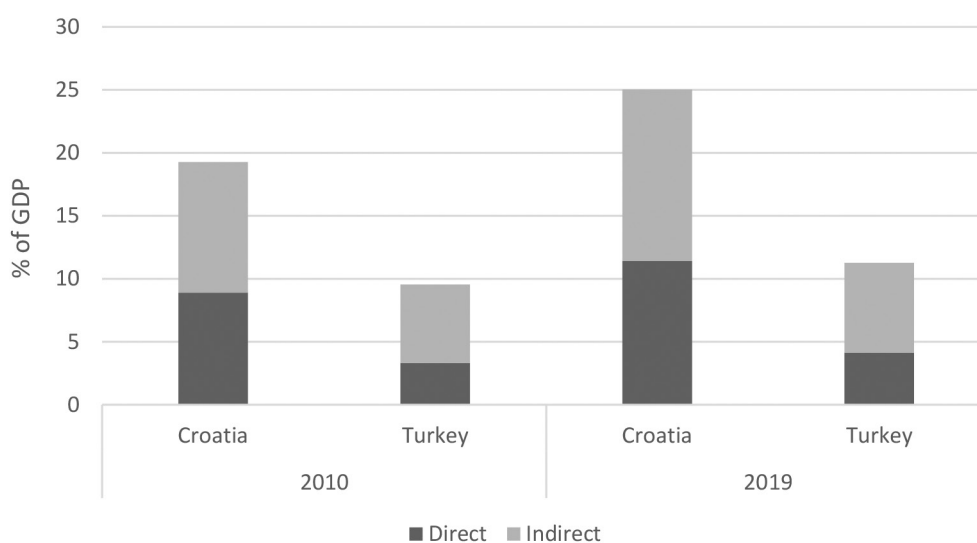
The tourism sector has an important potential to increase gross domestic product and gross value added of countries, their employment opportunities, thus contributing to balance of payments and propping up the foreign currency and capital inflows (Bozgeyik and Yoloğlu, 2015).

### 4.1. Tourism Contribution to Gross Domestic Product

The tourism sector contribution to gross domestic product (GDP) formation can be divided into two categories: direct and indirect contribution. The direct contribution represents GDP generated by industries that deal directly with tourists, including hotels, travel agents, airlines and other passenger transport services, as well as the activities of restaurant and leisure industries that again deal directly with tourists. It is equivalent to total internal travel and tourism

spending within a country less the purchases made by those industries (including imports). On the other hand, total contribution represents GDP generated directly by the travel and tourism sector plus its indirect and induced impacts. Indirect impacts encompass the other sectors that contribute to the tourism sector through the supply chain.

Taking into consideration two points in time (values for 2010 and 2019), Figure 18 shows that the total contribution of GDP in Croatia is approximately double the amount of Turkey's contribution to GDP (in other words, Turkey's GDP formation is more diversified and more reliant on merchandise exports in comparison to Croatia). In both countries, the total contribution of the tourism sector to GDP formation increased over time, with pronounced direct and indirect contributions (though Turkey has a slightly more pronounced share of direct contribution when compared to Croatia).



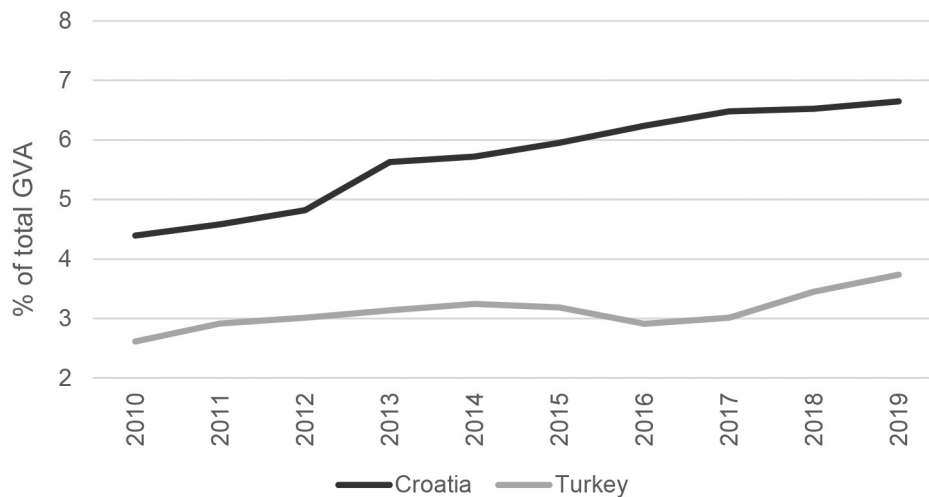
**Figure 18.** Direct and indirect contribution of tourism to GDP

**Sources:** World Travel and Tourism Council, Croatian National Bank, Eurostat

#### 4.2. Tourism Contribution to Gross Value Added

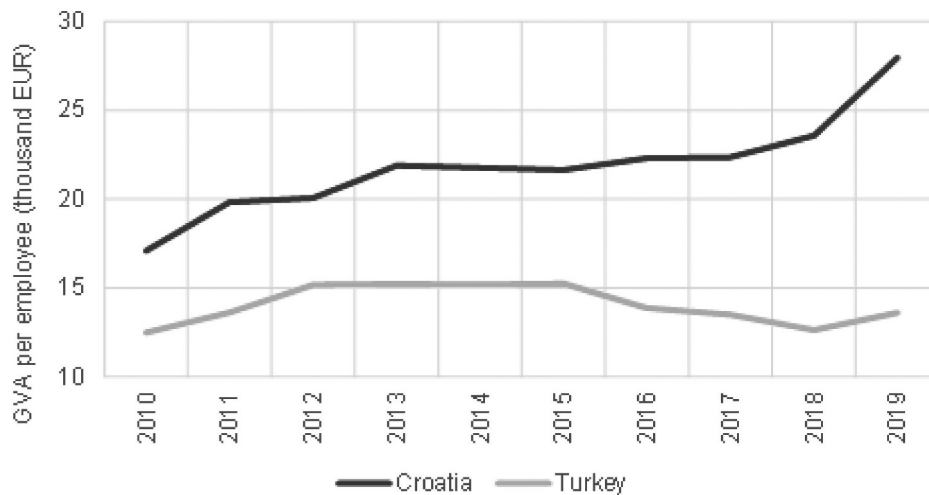
Though important for both countries, Figure 19 shows that contribution of tourism (measured by accommodation and food service activities) to total gross value added (GVA) is again higher in Croatia than in Turkey, thus confirming Croatia's higher concentration and reliance on tourism. Before the global financial crisis, the direct contribution of tourism services in Croatia amounted to around 4% of GVA, with an increasing trend after Croatia became the EU Member State (since 2016 the direct contribution of tourism related services surpassed 6% of GVA). In the entire analysed period share of tourism services in Turkey's total GVA saw smaller changes and fluctuated between 2.6% and 3.7%, with a rising trend after the global financial crises, followed by a decline in 2016 and 2017, mostly due to the shock tourism sector was exposed to.

Figure 20 reveals that gross value added per employee in accommodation and food service activities in the entire observed period in Croatia is significantly higher than in Turkey, which indicates higher labour productivity in the tourism sector in Croatia compared to Turkey.



**Figure 19.** Gross value added in accommodation and food service activities

Source: Eurostat

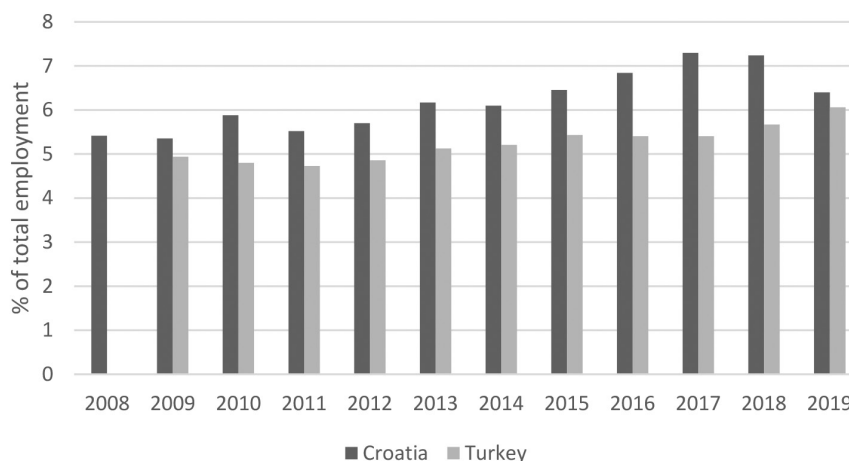


**Figure 20.** Gross value added per employee in accommodation and food service activities

Source: Eurostat

### 4.3. Tourism Contribution to Employment

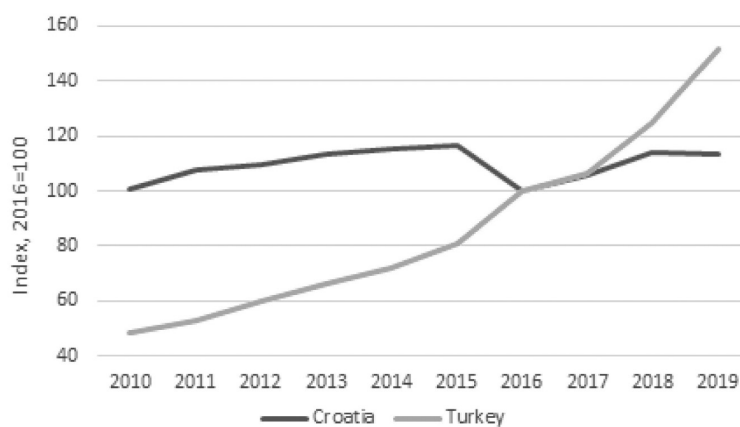
The tourism sector offers significant employment opportunities to both developed and developing countries. Figure 21 thus shows the share of the employed person in accommodation and food services in the total number of employed in both analysed countries. Even though Turkey and Croatia differ in terms of tourism's share in the gross domestic product, they are quite similar when compared in terms of the share of the employed person in this segment of activity. The average number of employed in Turkey in this segment amounts to slightly over 5% of the total number of employed persons, while in Croatia the average for 2008-2019 is only 1 percentage point higher. Since 2014, and reflecting dynamics of physical and financial proceeds in/from tourism, Croatia experienced a sustained increase in the number of employed in this sector. After Croatia joined the EU, the ensuing net emigration of Croats had a negative impact on the possibility to find an adequate workforce in this sector and work permits for foreigners were issued to address this bottleneck (especially seen in 2019). Starting from 2012, the number of employed in accommodation and food service activities has also been increasing in Turkey, with a noticeable surge in 2019.



**Figure 21.** Employment in accommodation and food service activities (2008-2019)

**Source:** Eurostat

In Figure 22 labour cost index (LCI) was used to show the total hourly cost of labour employed in accommodation and food services. In the interval between 2010 and 2019 pronounced increase characterized LCI for Turkey. Such dynamics were propped up by wage increases, bonuses paid, spending for staff training (especially for new, unskilled and/or semi-skilled employees), inflation developments and, after 2016, strong depreciation of the Turkish lira. In Croatia, the increases in LCI realized since 2010 were offset by the decline recorded in 2016, after which LCI slowly continued to grow. Cumulatively, in the entire period, the LCI in Croatia augmented by less than 20%, while in Turkey the positive cumulative change was significantly higher.



**Figure 22.** Labour cost index in accommodation and food service activities

**Source:** Eurostat

## 5. COMPETITIVENESS DETERMINANTS

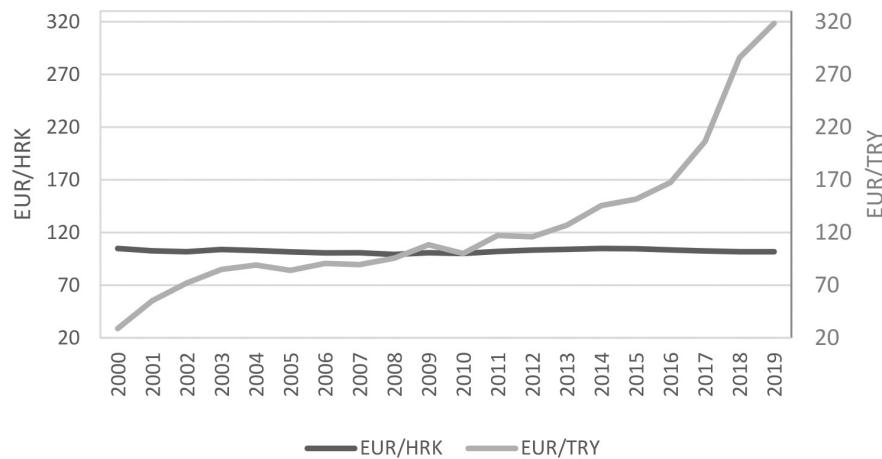
### 5.1. Nominal Exchange Rate

Figure 23 shows the movements in EUR/HRK (euro versus Croatian kuna) and EUR/TRY (euro versus Turkish lira) nominal (bilateral) exchange rates (between respective countries and Euro Area integration).

Croatia is a small, open and import dependent economy, affected by two-sided euroisation and high level of foreign debt (predominantly denominated in euro). As a result, its central bank

implements a tightly managed exchange rate regime and intervenes on the foreign exchange market when it deems that movements in exchange rate do not reflect changes in economic fundamentals in a relatively short time interval. As a result, Figure 23 reveals striking fixity of Croatia's nominal exchange rate.

The central bank of Turkey implements a floating exchange regime. Though foreign exchange market supply and demand determine predominantly the EUR/TRY exchange rate, in the event of excessive appreciation or depreciation of the Turkish lira monetary authority takes measures and/or intervenes on the market. Figure 23 reveals that the Turkish lira depreciated significantly concerning euro since 2015 with a combination of factors influencing such dynamics. Since 2012 Turkey recorded balance of payments deficits financed by foreign savings. As a result, Turkey's gross external debt swelled prompting fears that the country might encounter problems in servicing its external obligations. At the same time, some analysts questioned the adequacy of its international reserves and the reference interest rate policy of the central bank.



**Figure 23.** Nominal exchange rates of Turkish lira and Croatian Kuna against euro (yearly averages)

Sources: Croatian National Bank, Eurostat

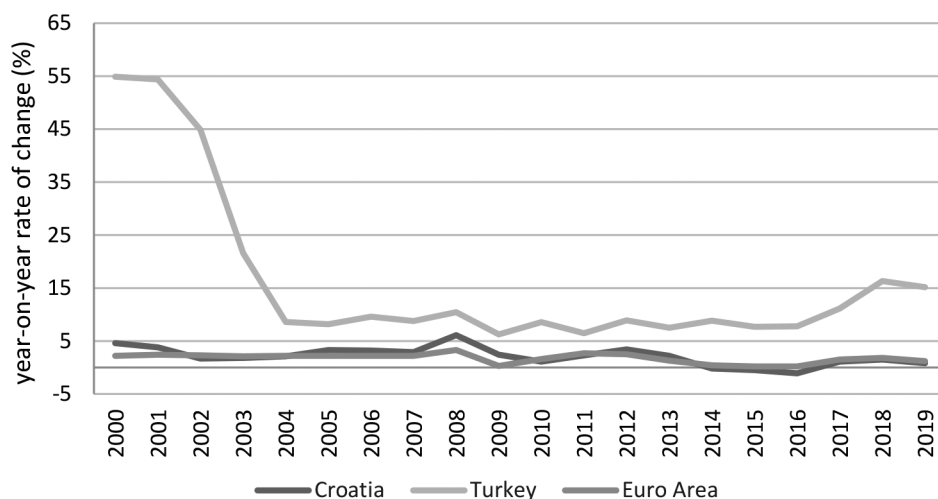
## 5.2. Inflation Measured by Consumer Price Index

The consumer price index (CPI) represents the weighted average of prices of a basket of consumer goods and services consumed/used by an average urban consumer. Since CPI is used as one of deflators of nominal effective exchange rates to obtain real effective exchange rate, a measure of cost competitiveness that also affects tourism indicators, Figure 24 shows inflation developments in Croatia, Turkey and Euro Area.

What is easily seen is that throughout the analysed period Turkey recorded higher rate of sustained increase in general level of prices in comparison to Euro Area, where significant share of its visitors come from. Rise in CPI inflation in recent years in Turkey reflects nominal exchange rate pass through (due to import dependence of its economy), but also political context and elevated risks.

On the other hand, Croatia experienced relatively stable and low inflation, with the period average in the interval 2000-2019 amounting to 2.1%. Both countries' (as well as Euro Area) rise in inflation in 2008 reflect exogenous shock deriving from increased prices of commodities on the global market, notably crude oil prices.





**Figure 24.** Consumer price index (2000-2019)

Sources: Turkish Statistical Institute, Croatian Bureau of Statistics, Eurostat

### 5.3. Real Effective Exchange Rates

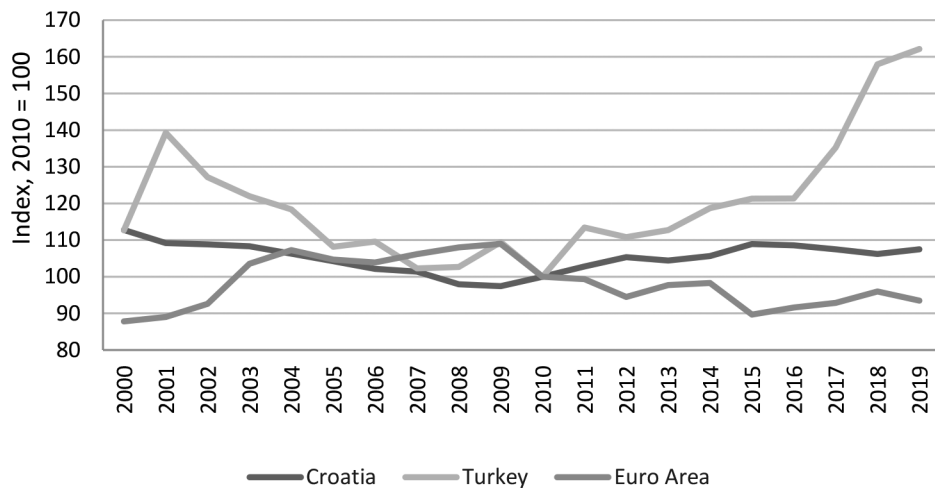
The real effective exchange rate adjusts the nominal effective exchange rate for the effects of relative prices (foreign partners and domestic, in the paper deflated by CPI<sup>7</sup>). A fall in the real effective exchange index indicates real appreciation (foreign basket of goods and services buys less of the domestic basket of goods and services, indicative of a loss in price competitiveness), while the increase in real effective exchange rate points to real depreciation (foreign basket of goods and services buys more of the domestic basket of goods and services, indicative of an increase in price competitiveness). Since real exchange rates affect the purchasing power of foreign visitors they weigh on their willingness and drive to visit certain countries.

Figure 25 reveals that the real effective exchange rate in Croatia appreciated (strengthened) before the eruption of global financial crises, while in the period following the crises to 2015 it depreciated (weakened). Since 2016, the real effective exchange rate for Croatia remained broadly stable or marginally appreciated, which mirrored both inflation differentials and nominal exchange rates dynamics. Despite unfavourable recent movements in real effective exchange rates, during the past few years, Croatia recorded an increase in numbers of arrivals and nights spent by foreign tourists, as well as an increase in financial proceeds from tourism.<sup>8</sup>

When it comes to Turkey, the real effective exchange rate showed a pattern similar to Croatia's until 2015. In the interval from 2001 to 2005, Turkey's real effective exchange rate significantly appreciated thus pointing to erosion of price competitiveness. From 2005 to 2012, though volatile, the real effective exchange rate was relatively stable. Sustained depreciation of real effective exchange rate in Turkey has been observed since 2011 and was especially pronounced in 2017 and 2018, its dynamics influenced in the mentioned period by nominal depreciation of Turkish lira (Figure 23) and CPI movements (Figure 24). The ensuing increase in purchasing power of foreign visitors had a positive impact on foreign tourist arrivals and foreign tourist nights spent in Turkey (see Figure 1 and Figure 2).

<sup>7</sup> In order to get indicators of price competitiveness, nominal effective exchange rates can be deflated either with consumer (CPI) or producer price index (PPI). In order to get an indicator of cost competitiveness, nominal effective exchange rates are usually deflated by unit labour costs (ULC).

<sup>8</sup> Thus indicating the importance of security perception and non-price competitiveness.



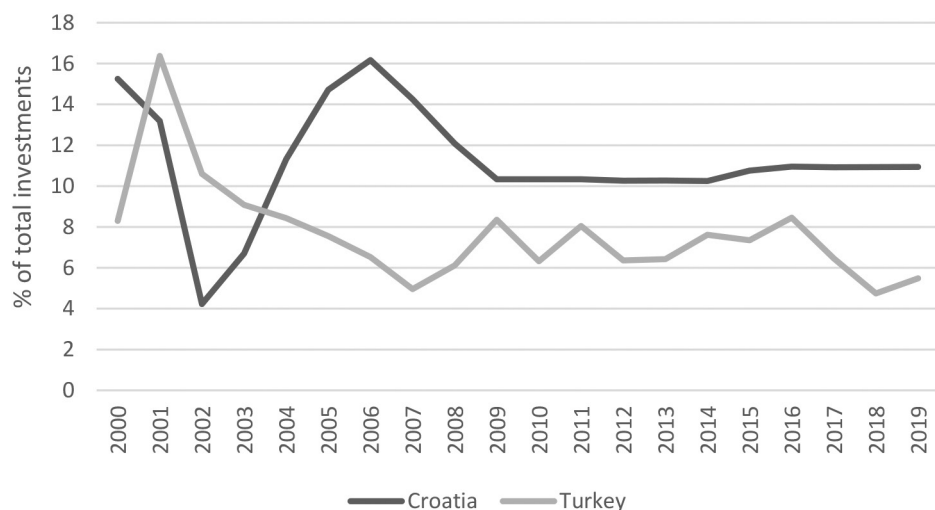
**Figure 25.** Real effective exchange rates deflated by CPI (2000-2019)

Sources: Central Bank of Turkey, Croatian National Bank, Eurostat

#### 5.4. Capital Investments In Travel and Tourism Sectors

Capital investments in travel and tourism industries include capital investment spending by all industries directly involved in the travel and tourism sectors. Capital investments and sound development strategies (next chapter) boost the development and future prospects of the sectors and thus contribute to the overall real economic growth in the medium-run (Khan et al., 2020).

Figure 26 shows that both Croatia's and Turkey's investments in travel and tourism sectors constitute a significant part of total investments. After the volatile period before the global financial crisis, in Croatia, the mentioned share amounted to around 10% of total investment. Turkey recorded higher shares of two sectors' investments in the period before the escalation of global financial crisis (peak in 2001) and in the aftermath of the crises the very share stabilised at around 7%, with a slight drop observed in recent years.



**Figure 26.** Capital investments in travel and tourism sectors

Sources: World Travel and Tourism Council, Croatian National Bank, Eurostat

## 6. FUTURE PROSPECTS: TOURISM DEVELOPMENT STRATEGIES

### 6.1. Tourism Development Strategy of Croatia

According to Croatia's Ministry of Tourism, the official tourism development strategy's goals<sup>9</sup> are to elevate the competitiveness and make Croatia recognisable as an international tourist destination, mainly by improving the quality and the content of activities on offer and establishing Croatia on the global tourism market through successful promotion and marketing campaigns. According to the Ministry of Tourism, this goal will be achieved through the "development of tourism content and quality on offer" and through "successful promotion". By increasing and diversifying the contents of tourism activities offered the aim is to attract a wider array of people with different interests. The strategy also states that Croatia has the potential to achieve 24% more nights spent by 2025 compared to 2020. The expected annual growth in average expenditures per foreign visitor is estimated at 11%. As for the accommodation facilities, the prediction is that in 2025 there would be approximately 1,1 million beds available of which 22% would be in hotels, 26% in camps, 39% in family accommodation facilities while the remaining 13% pertain to the rest of the commercial accommodation facilities (Croatia's Tourism Development Strategy, 2013).

To achieve the mentioned goals, the Ministry of Tourism needs to create a more diverse supply of activities and adjust the current operating approach (from current sun-and-sea to future all-year approach) to remain competitive on the tourism market. This can be achieved by stimulating investments in recreational and health tourism in the interior of Croatia, which is starting to gain more popularity over the past years while also promoting unique local culture and traditions which are different in every region of Croatia. The inclusion of small local wine and food producers into the mix will also prop up the development of tourism activities on offer and emphasize the aspect of authenticity (Christou, 2012).

One activity that Croatia is behind concerning some of its Mediterranean competitors is the golf segment. In this respect, Croatia's Ministry of Tourism (Action Plan for Golf Development, 2017) states that country aims to build 30 new and high-quality golf courses that will attract golf players and create additional interest for visiting Croatia.

Although Croatia's Ministry of Tourism is the most responsible and influential actor when it comes to overall tourism strategy and management, other tourist organizations should also participate and add value in activities whose aim is to promote and popularize Croatia on the international tourism map. "Tourist organizations significantly contribute to society promoting national beauty, cultural and historical heritage as well as broad geographical and national diversity" (Barišić and Marić, 2012). Croatian Tourism Association thus aims to increase "competitiveness, employment and overall positive contribution to the Croatian economy" by communicating with decision makers and partnering with investors (Croatian Tourism Association Website, 2019). Travel agencies also play a crucial role in promoting famous Croatian destinations by providing organized tours and travel arrangements for tourists.

An indispensable element of a good long-term development strategy is risk managing, and mitigating models and plans. Mikulić et al. (2016) suggest that Croatia should focus on the "risk of

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<sup>9</sup> Tourism Development Strategy of the Republic of Croatia published in 2013 applicable till 2020, and Strategic Plan of the Ministry of Tourism published in 2019 applicable till 2022. Both documents contain longer term projections.

bad tourist experience”, “the risk of terrorist attacks” and “the risk of bad weather”. The authors claim that these risks “are not unlikely to occur, and, at the same time, they might exhibit a significant influence on inbound tourist flows“.

## 6.2. Tourism Development Strategy of Turkey

Turkey’s Ministry of Culture and Tourism is responsible to maintain, develop, protect, evaluate and promote the tourism sector of Turkey. Besides, in 2019, Turkey Tourism Promotion and Development Agency (TGA) was founded to promote Turkey as a brand with its tangible and intangible cultural, biological, or human-made heritage assets in the domestic and international markets. As the tourism sector contributes significantly to Turkey’s real GDP, the Ministry of Culture and Tourism developed strategies and policies to increase the tourism revenues of the country. On the national level, the tourism sector is repeatedly highlighted as one of the main sectors to be developed both in the New Economy Programme of Turkey and the 11th Development Plan which encompasses the 2019-2023 period (OECD Tourism Trends and Policies, 2020). The country will try as well to increase the average spending of an international tourist and to raise the number of average nights spent.

Tourism Strategy for 2023 also envisages a total utilization of Turkey’s historic, geographic, natural and cultural assets to leverage various tourism activity segments within the country. Accordingly, in addition to sea-sand-sun tourism, Tourism Strategy for 2023 aims to further develop golf tourism, health and thermal tourism, winter sports, ecotourism, cruise ship and yacht tourism, rural and conference tourism, thus addressing behavioural changes and traveling demands of modern domestic and foreign tourists. Moreover, Turkey’s Tourism Strategy for 2023 emphasizes drawing the “Taste Map of Turkey” in order to create a gastronomy route for the visitors. The same strategy also targets to reach emerging markets in the Far East and Pacific regions, in order to welcome more international tourists from China, Japan, South Korea and India. As a result, intense and diversified marketing activities are planned to be conducted on TV, magazine and outdoor as well as on digital and social media.

The provision of the Tourism Strategy of Turkey 2023 is to implement strategic efforts by enhancing the cooperation between public and private sector governance. Tourism Strategy of Turkey 2023 also emphasizes terminating inequalities of the regions as well as developing additional employment opportunities in near future.

## 7. CONCLUSION

Both Mediterranean tourist destinations, Croatia and Turkey differ in geographic location and size, their historic and cultural identity. Croatia is a European Union member state near its major emitting tourist markets (Germany, Slovenia, Italy, Austria, Poland), with the big share of its foreign visitors relying on the country’s (and neighbouring countries’) modern highway and road connections. Only several tourist areas on the Adriatic littoral attract a higher share of air-borne international tourists (notably the city of Dubrovnik and Island of Hvar), and, in the continental part, capital Zagreb. Due to its location and excellent domestic (notably Turkish Airlines, world-renowned flagship carrier) and international (all year or seasonal, regular or chartered) air connections, the amount of air-borne passengers to Turkey is much bigger compared to drive-in foreign guests. Most visited destinations are dispersed along the Aegean and the Mediterranean Sea, as well as the city of Istanbul.

Supply side tourism indicators included in the paper show that both countries rely heavily on hotel accommodation facilities, though Turkey more so when compared to Croatia. Turkish hotels in five and four-star rated categories, measured by the average number of beds offered, are also bigger than comparable Croatian hotel facilities. Another defining characteristic of Turkey's offer is hotel and resort all-inclusive packages, often sold at competitive prices. Both countries recorded a decline in low quality (notably two-star rated) hotel establishments which is corroborated by take-overs and significant domestic and foreign direct or portfolio investments in this industry. Besides hotels, Croatia relies on supply of holiday and other short-stay micro accommodation facilities owned predominantly by households, which are of much less importance in Turkey. Along the Adriatic coast Croatia offers a sizable number of camping grounds and, more recently, the country expanded its capacity in hostel facilities. Other physical indicators reveal that golf tourism is much more established and developed in Turkey, while the same is true for Croatia in terms of nautical tourism.

Demand side indicators point to sustained increase in number of arrivals and nights spent in both countries since 2010. Indicators for Turkey in this segment are more volatile and temporary drop in 2016 and 2017 is mostly attributable to shocks that ultimately affected security perceptions. On the other hand, Croatia's physical indicators gained a significant boost once the country joined the EU. Intra-year distribution of nights spent and number of arrivals shows that both countries rely heavily on the sun-and-sea concept of tourism, though Turkey's summer season seems to be less concentrated and of longer duration.

When it comes to the country of residence, Croatia's dominant foreign visitors in 2019 arrived from neighbouring or close-by countries - Germany, Slovenia, Austria, Italy and Poland. At the same time, the biggest share of Turkey's visitors in 2019 came from Russia, followed by visitors from Germany, the United Kingdom, Ukraine and Poland. Country of origin distribution is also mirrored in cross-border entry distribution. The share of drive-in foreign visitors dominates in Croatia (on average 90% compared to 20% in Turkey), while share of fly-in guests dominates in distribution for Turkey (on average 77% compared to 6% in Croatia).

Both countries have comparative advantages in tourism, but Croatia relies on it in terms of gross domestic product formation more than Turkey. Accordingly, travel revenues in Croatia amounted to 19% of GDP in 2019, whereas only to around 4% of GDP in Turkey. Differences in the number of employed persons are not pronounced, with both countries' share of employment in accommodation and food service activities of around 6% of totally employed in 2019.

Selected competitiveness indicators point to much less volatile nominal exchange rate and subdued inflation dynamics in Croatia compared to Turkey. Fixity of Croatian kuna reflects macro but also idiosyncratic characteristics of small and open Croatia (notably ingrained and pervasive two-sided euroisation and high foreign currency denominated external debt). Depreciation of Turkish lira against euro (and other major currencies) and ensuing pass-through on domestic prices, which was especially pronounced in 2017 and 2018, mirrors the domestic political, economic and security-related issues. As determinants of the real effective exchange rate, nominal exchange rates and general level of domestic and foreign prices affect price competitiveness, dynamics of which have an impact on foreign visitors' purchasing power and ultimately travel decision making. Both Turkey and Croatia lost price competitiveness before the global financial crisis, while their effective exchange rate depreciated since the crises. Due to the nominal exchange rate movements of the Turkish lira, foreign visitors' purchasing power raised significantly, which helped the surge in physical indicators in recent years. On the other hand, though Croatia's real effective exchange rate slightly strengthened (appreciated), in the last four



years the country recorded on average 10% yearly increases in financial proceeds from tourism, thus corroborating, in general, the value of marketing, non-price competitiveness and the importance of security perceptions.

Though Turkey's and Croatia's absolute and relative to GDP investments in travel and tourism sectors are impressive (on average 7% and 10% of the total investments, respectively), there are clear bottlenecks and areas for improvements in the mentioned sectors. Tourism development strategies of both countries indicate there is sizeable room for improvement in the approach, scope and scale of the industry. Croatia thus aims to build up in the future its higher value added tourism content and offer, as well as to prolong the duration of its high season. Turkey's tourism strategy similarly emphasizes the goals of further strengthening yacht and ecotourism, health and thermal tourism, and its winter sports offer.

The Mediterranean and global tourism competition are tough and realisation of such gains in Turkey and Croatia will require focus, determination and financial support, but, looking long-term, even more so the sense for sustainability and respect for green development. Accordingly, both countries should aim to expand and revise existing strategies and adapt them to the changing market conditions, paying even more attention to ecology, security and health issues.

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# GASTRONOMY TOURISM AND DESTINATION BRANDING: THE STUDY OF MICHELIN-STARRED RESTAURANTS IN CROATIA

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**Abstract:** *This paper explores the role of Michelin-starred restaurants and their chefs as change-makers and advocates of successful gastronomy tourism destination branding in Croatia. In this qualitative research, in-depth surveys were conducted with all of the seven chefs of Michelin-starred restaurants in Croatia. These restaurants are: Draga di Lovrana, Boškinac, Monte, Pelegrini, LD Restaurant and 360° located in Zagreb, Lovran, Novalja, Rovinj, Šibenik, Korčula and Dubrovnik. Results of research uncover whether and which are the significant forms of activities that Croatian Michelin-starred restaurants implement in order to enhance destination attractiveness and by that influence placing Croatia on the world gastronomy map, creating stronger gastronomy destination brands.*

**Keywords:** *Gastronomy, Tourism, Destination branding, Food, Luxury gastronomy, Michelin-starred restaurants, Croatia, Gastronomy tourism.*

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## 1. INTRODUCTION

Food is often one of the most important elements in discovering cultures and attracting gastronomy tourists to destinations (Batat, 2020). Gastronomy tourism includes eating and drinking experiences that occur during visiting destinations. Therefore, tourists expect to experience diverse food cultures through trying different specialties that are known to be a part of the culture they visited. There is much scientific literature that has focused on the demand side of gastronomy tourism (Henderson, 2009), exploring the way that tourists experience cultures through food experiences (Ellis, Park, Kim, & Yeoman, 2018). What they explore is the connection between food experience and tourism destination attractiveness through feelings and memories tourists take home with them (Henderson, 2009). Despite revealing an important knowledge of positive food experiences enhancing destination attractiveness, these studies do not look at the supply side of gastronomy tourism. They lack knowledge about the role of restaurants and chefs in building positive tourism destination brands through luxury gastronomy tourism. Hence, gastronomy tourism, as being an integral part of the food and cultural tourism activities, is a growing market attracting not only the luxury niche but many different segments of tourists (Batat, 2020). Only few scientific articles have shown the importance of luxury gastronomy tourism as being an important area of research (Batat, 2020; Barrere et al., 2014) implying that this area of research can inform other tourism scholars of different strategies of marketing activities that can be used in promoting destinations. Their research is however mostly referenced to France and French gastronomy tourism. In the context of gastronomy tourism research in Croatia, a little attention has been given, mostly focusing on the quality of food produced in Croatia and its potential for Croatian tourism (Šimundić & Krešić, 2002); health benefits of Croatian national cuisine (Šimundić, 2000); and reinventing of gastronomy tourism in Croatia (Milotić et al., 2002; Fox, 2007); however, none of these look at the supply side, i.e. an insider's perspectives from the chefs of Michelin-starred restaurants in Croatia.

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The luxury gastronomy tourism trends resulted in the growth of demand for visiting destinations that are in the Michelin guide. Michelin guide restaurants have, according to research by Barrere et al. (2009), increased tourist frequentation by 25% with a number of more than 15000 restaurants in Michelin guide, in more than 30 countries, out of which 2673 are Michelin starred restaurants (Michelin Guide, 2021). Therefore, Michelin guide can be considered as a strong competitive advantage for destinations with their restaurants on the list. Despite the relationships between gastronomy and tourism have been acknowledged in the anthropology of food and social sciences literature for many years (Bessiere , 1998), very few of them explored gastronomy from the tourism and hospitality management side. Therefore, this research aims at filling this gap which could be used in destination branding strategies to enhance visits to both Michelin guide restaurants and consequently positively affect building stronger destination brands. Finally, this research aims at exploring (1) the relationships between luxury gastronomy and tourism; and (2) to understand the role that Michelin-starred restaurants and their chefs have in enhancing tourism destination branding through attracting both domestic and international tourists.

The paper is divided into five parts. It starts with a literature review that helps the reader better understand what is meant by gastronomy tourism, luxury gastronomy and its connection to luxury tourism destination branding. The review section also emphasizes the importance of the holistic approach to gastronomy tourism, Croatia's place in the Michelin-restaurant world, and the value of its gastronomy tourism. Secondly, the paper focuses on research methodology and provides a rationale for a survey used on a sample of all the seven chefs of Michelin-starred restaurants in Croatia. The research results are outlined in the third part and are presented through the common themes that emerged during the research. Conclusion and future potential research directions are two final parts of the paper.

## **2. LITERATURE REVIEW**

### **2.1. Gastronomy Tourism**

The concept of gastronomy tourism incorporates an integrated process from food production, food preparation and finally food consumption (Long, 2004). The concept of gastronomy tourism has a lot of different definitions but is mostly defined as the journey for authentic, distinctive, unique and enduring experiences in the destinations (Ellis et al., 2018; Henderson, 2009). This process additionally includes tourists' discovering the history and culture of a destination through food heritage and traditions (Long, 2004). For example, Hall and Mitchell (2005) defined culinary tourism as visiting primary or secondary food producers, food festivals, restaurants, and specific locations for which food tasting and experiencing the food of attributes of creating region are the primary reason for visiting destination. Culinary tourism, in addition to experiencing food in destination, incorporates learning about new cultures of destinations that tourists visit (Hall, 2006). More so, research on Croatian wine tourism showed that gastronomy tourists seek to find a combination of wine tasting of the region to be connected with gastronomy experience of the same region (Hanžek & Sušić, 2019).

According to Hall and Mitchell (2005) there are three segments of gastronomy tourists. Firstly, gourmet tourists whose primary purpose of traveling to destination is visiting a limited number of internationally renowned restaurants. Secondly, culinary tourists focus on authenticity and embeddedness in the local culture and plan their visit to the destination based both on cultural

and culinary experiences. Finally, occasional culinary tourists who do not visit destinations primary because of gastronomy, however, can be involved in culinary activities. All these segments are important for destinations and knowing the values and purpose of travel for each of the segments helps destinations to create unique culinary products and experiences that each segment will seek to find in the destination. Despite the evident strong connection between the destinations and local food culture and promotion, this still stays an under researched field of study, especially in the context of luxury gastronomy tourism, as well as in the context of Croatian tourism destination brand.

## 2.2. Luxury Gastronomy

Luxury consumption is not only connected to products and brands but is directly connected to extraordinary lived experiences. Batat (2020:3) defines it as a search for emotions, pleasure, consideration, uniqueness, and greatest services through lived experiences. More so, luxury gastronomy such as visiting and experiencing Michelin-starred restaurants presents a highly exceptional domain where “experience is a central component of the offer” (Batat, 2019:24). Therefore, luxury gastronomy is an interesting field for luxury tourism and its stakeholders as promotion of luxury gastronomy can be interesting for destination branding. Gastronomy comes from the Greek word *gastronomia* which means “the art of the good food” (Batat and De Kerviler, 2020). Gastronomy has been conceptualized for the first time in 1825 by the French gastronomist Brillat-Savarin who defined it as “systematic understanding of all that relates to individuals, as they eat” (Batat, 2020). More so, gastronomy aims to preserve humankind through the finest likely food (Batat et al., 2019). Another definition of gastronomy has been offered by Batat (2020:3) as a continuous search for the highest quality, a hedonistic desire, a pleasure, a set of knowledge and culture. Therefore, gastronomy incorporates the cultural heritage of a country and should constitute one’s heritage regardless to the social position (Staiff & Bushell, 2013). Unfortunately, only few countries have pushed gastronomy on the global map. For example, French gastronomy and chefs are perceived as the art makers with food and are the benchmark for the art of food and fine dining. Similar to any luxury product where the designer is the most important part for the branding, in the gastronomy world it is a chef with a Michelin stars.

Chefs need to have a story to tell through their art in cuisine in order to be able to immerse visitors with unique dining experiences. Batat (2020:3) argues that luxury gastronomy gives a competitive advantage to destinations as it helps to retain and attracting local and international visitors making them want to re-visit the destination to live a unique and highly creative food experience delivered by the renowned Michelin-starred chef. With regards to existing research, most focus on tourism and gastronomy without being aware of segmentation, meaning they are not looking at different ways that each segment brings to destination branding strategies. Surely, luxury gastronomy plays an important role in attracting tourists to visit destinations. Mostly, it is done through TV culinary shows that feature Michelin-starred chefs, as well as through different magazines. Finally, what gastronomy tourists seek is a unique living experience through exploring the Michelin-starred chefs’ creative cuisine (Batat, 2020).

## 2.3. Gastronomy Tourism and Destination Branding

As already mentioned in the paragraphs above, gastronomy is becoming increasingly important and central to experiencing tourism destinations. With the rise of the experience economy (Pine & Gilmore, 2011) food has become one of the central elements for successful destination

branding strategies. Therefore, food has transformed its role from being fundamental support to tourism to becoming an essential reason to visit many destinations. Food is important for tourism destination branding because it gives a sense of place allowing tourists to directly emerge with local culture through “tasting” the destination. It is doing through the following ways (Richards, 1996):

- 1) Gastronomy presents the culture that tourists come into contact with most often during their visit to destinations;
- 2) Gastronomy provokes a direct bodily confrontation with culture;
- 3) Eating habits directly show destinations differentiation through time people eat, why people eat, what they eat and who they eat with; and
- 4) Food is directly connected with the landscape as we can see directly where the food we eat comes from.

Gastronomy, therefore, provides great support for tourism destination branding strategies. Food can thus be used as the main ingredient in destination branding because it covers many important elements of branding. These elements are products (food and beverages); practices (eating and meals); customs and arts of food preparations and eating (gastronomy); all of the four reals of experiences (look, smell, touch, taste); food origins (knowing where ingredients come from); food preparation (the different ways of cooking); forms of serving (slow food, fast food, street food, etc.); and finally the context in which the food has been served and consumed (markets, streets, restaurants, bars). As much as it seems straightforward in implementing these elements into the destination branding strategy it is far more complex as it seems. The research by the OCTA (2014) suggest the existence of ten criteria for developing successful destination and by that compelling local “taste of place” (see figure 1 below).



**Figure 1.** Criteria for developing successful gastronomy destination brand

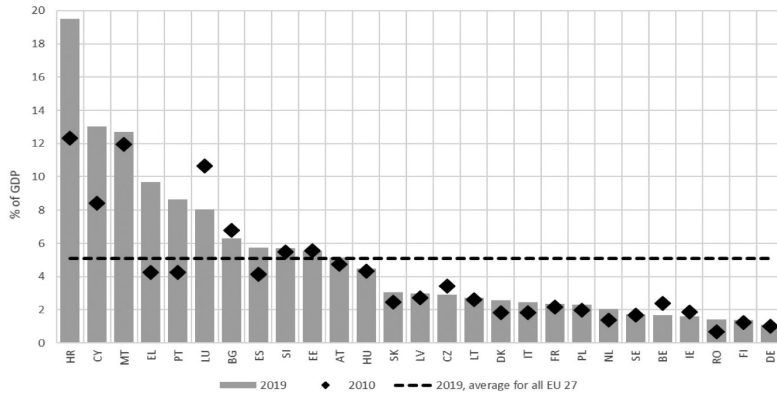
Source: Adapted from OCTA (2014)

Adding to the above criteria Berg and Sevón (2014) argue that there are three basic functions of gastronomy branding and these are: (1) to support the food industry; (2) to protect and amplify identities and places; and (3) to change the place. Therefore, this research looks at how Croatia is currently implementing gastronomy in destination branding strategy as well as it looks as where Croatia is currently located at the world map of gastronomy tourism by focusing on the Michelin-starred restaurants in Croatia. More so, it looks at their role in developing stronger destination brands.

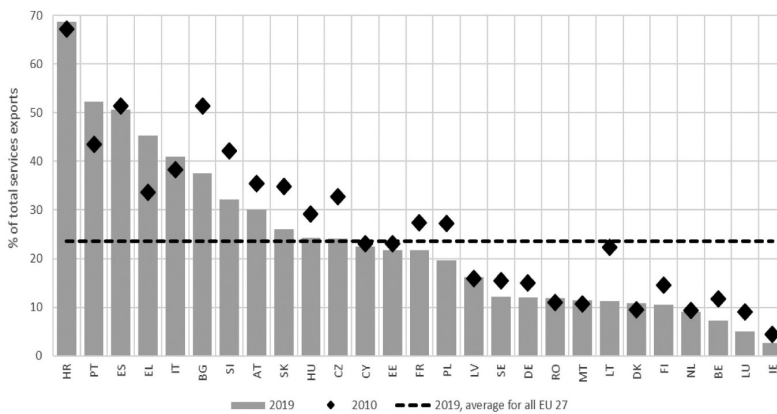
#### 2.4. Gastronomy Tourism in Croatia

In 2019, Croatia achieved record tourist results since its independence. In absolute terms, Croatia’s revenues from tourism amounted to EUR 10.5bn or 19.5% of its GDP. In terms of physical indicators, the country recorded 17.4 million arrivals of foreign guests and 84.1 million nights spent. These good achievements are not a recent phenomenon. After the global financial crisis, which had only a short-term negative impact on tourist turnover and consumption by foreign tourists in Croatia, tourism revenues on average grew annually by 6.7% and foreign tourist ar-

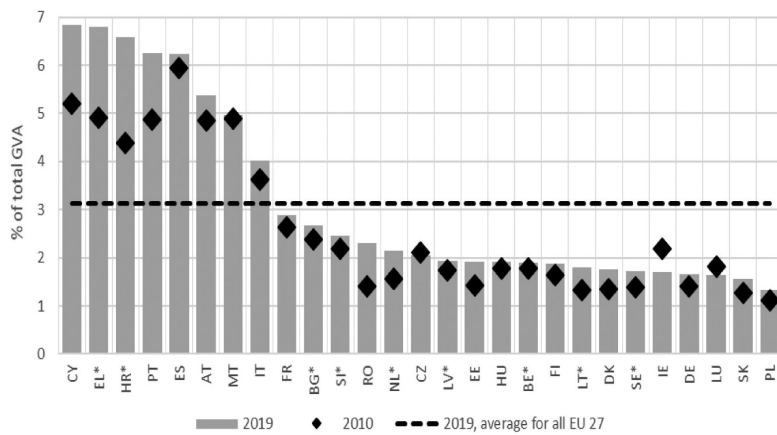
rivals by 7.2%. Compared to the other EU Member States, Croatia's economy relies significantly on the tourism sector, expressed either in relative (GDP) terms, shares in total services exports, gross value added or employment (figures 2-5). Nevertheless, Croatia still has a lot of space to expand its comparative advantage in tourism and to deepen the quality of services offered, notably to higher spending visitors. In this respect, gastronomy plays and will continue to play an important part and role.



**Figure 2.** Tourism revenues in Croatia and other EU 27 member states (% of GDP)  
**Sources:** HNB, Eurostat



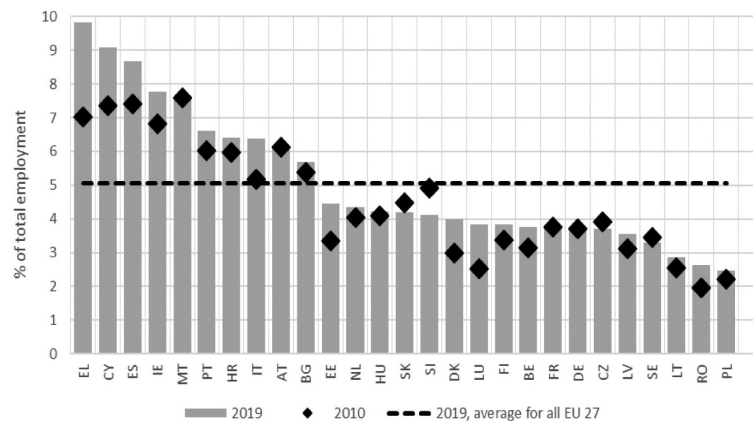
**Figure 3.** Tourism revenues in Croatia and other EU 27 member states (% total services export)  
**Sources:** HNB, Eurostat



\* Data for 2019 refers to 2018.

**Figure 4.** GVA in accommodation and food service activities (% of total GVA)  
**Source:** Eurostat





**Figure 5.** Employment in accommodation and food service activities (% of total employment) – labor force survey

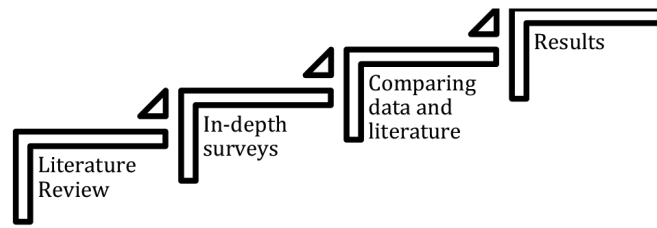
**Source:** Eurostat

Therefore, from the branding point of view, it is one of the rare channels that has a role in creating positive images of Croatia on a global scale. For a long time, Croatia has been basing its destination competitiveness on the sun and sea, i.e. natural resources. This strategy resulted in removing characteristics that differentiate Croatia from other Mediterranean countries and has resulted in problems of high seasonality and low returns on investments (ROI) (Šimić & Pap, 2016). Nevertheless, the food industry in Croatia both in terms of natural and human resources quality has an existing strong quality foundation that is needed for becoming internationally recognized as a world gastronomy destination. More so, Croatia is both geographically and culturally divided into the three basic regions: (1) Pannonian, (2) Dinaric, and (3) Adriatic, which is also reflected in cuisine differences (Žamper, 2004). Such a variety in a relatively small area can empower the creation of a rich gastronomic offer, through presenting its own gastronomy identity and create an image of Croatia as a high-quality gastronomy destination brand. This research especially focuses on the luxury gastronomy segment.

Unlike French and Italian gastronomy tourism destinations, Croatian destinations do not find their gastronomy offer on local cuisine. Food that is typically being served in Croatian tourism destinations restaurants is still pizza, pasta, ćevapi, Wiener schnitzel, all referenced to Italian, Bosnian and Austrian national cuisines. This does not mean that Croatia lacks quality restaurants and chefs upon where it can brand itself as a luxury gastronomy destination. On the contrary, Croatia has altogether 70 restaurants listed in the Michelin Guide. 53 of them are on the Plate Michelin list; 10 on the Bib Gourmand list and 7 are on the 1\* Michelin list (Michelin Guide, 2020). These restaurants with their offer, design and cuisine can compete with the best restaurants in the world. This research, therefore, concentrates on these seven restaurants in Croatia that have 1 Michelin star to examine how they interpret Croatia’s rich gastronomic heritage and analyses their role in placing Croatia on the world gastronomy map.

### 3. RESEARCH METHODOLOGY AND METHOD

Given the exploratory nature of the research question, this study is grounded in social constructivism applying a qualitative research approach (Denzin & Lincoln, 2018). This methodology is suitable for the research aims and objectives as the field of luxury gastronomy tourism is emergent due to a noticeable lack of prior studies on the role of such gastronomy in promoting tourism destinations (Batat, 2020). Figure 6 below shows the methodological approach that researchers followed while conducting this study.



**Figure 6.** Qualitative method approach for data collection

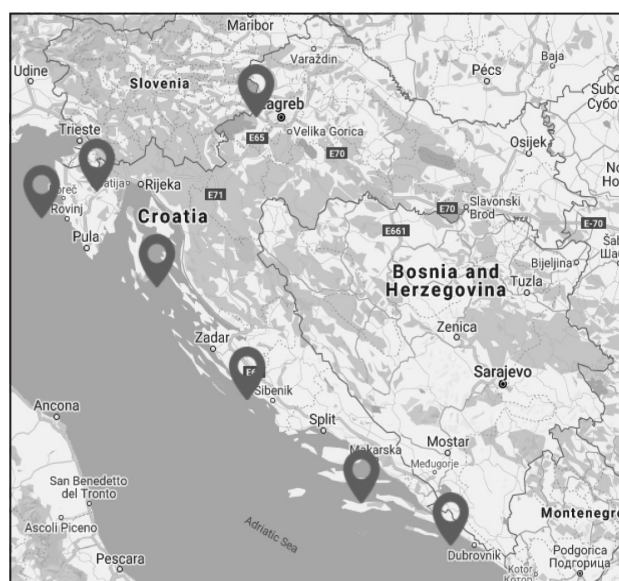
**Source:** Authors

In order to examine the role of luxury gastronomic restaurants in tourism destination branding and promotion, in-depth surveys were conducted with all of the seven Michelin-starred restaurants in Croatia. The aim was to develop an understanding of how Michelin-starred restaurants can become promoters and building bricks of gastronomy tourism of a destination. This research additionally aimed at understanding the luxury restaurants' perspective shaped by both socio-cultural and economic environments in which they operate. In doing so, qualitative research has been undertaken. According to the Michelin Guide (2020), there are seven Michelin-starred restaurants in Croatia. In order to generate sufficiently strong results, the sample included all of the seven Michelin-starred restaurants. Table 1 below provides a brief description of the luxury gastronomic restaurants explored in this research, whereas figure 7 shows their location on the map.

**Table 1.** Description of the Croatian Michelin-starred restaurants in 2020

Restaurant	Michelin stars	Chef	City
Noel	1*	Goran Kočiš	Zagreb
Draga di Lovrana	1*	Deni Srdoč	Lovran
Boškinac	1*	Matija Bregeš	Novalja
Monte	1*	Danijel Đekić	Rovinj
Pelegrini	1*	Rudolf Štefan	Šibenik
LD Restaurant	1*	Marko Gajski	Korčula
360°	1*	Marijo Curić	Dubrovnik

**Source:** Adapted from Michelin Guide (2020)



**Figure 7.** Geographical location of Croatian Michelin-starred restaurants in 2020

**Source:** Adapted from Michelin Guide (2020)

After a thorough literature review, in-depth surveys with Michelin-starred chefs were conducted. The survey was divided into four sections, each focusing on a certain topic relevant to the research. These topics were as follows: knowledge about the chefs, knowledge about the restaurant, restaurant and destination promotion, concluding questions. These primary sections were further sub-divided, allowing for the collection of more detailed and categorized data that were based on the themes around tourism, tourism destination branding, economic development, local producers and food festivals in relation to the luxury gastronomy tourism sector that they are all a part of. Each section opened with a more general question and then was followed with a certain number of sub-questions addressing the general one in more detail.

The in-depth survey questions are outlined in the Table 2 below.

**Table 2.** Questionnaire sections and the rationale of their inclusion in the research

Survey Sections	Questions
Introduction	<ul style="list-style-type: none"> <li>• Tell us more (few sentences) about you.</li> <li>• What is your career journey?</li> <li>• What is your work approach and philosophy?</li> </ul>
About the Restaurant	<ul style="list-style-type: none"> <li>• Can you define your cuisine? What is unique about it?</li> <li>• When did you (together with your team/restaurant) receive the Michelin Star?</li> <li>• What do you offer in your restaurant? Describe us your signature dish?</li> <li>• Where does your inspiration come from?</li> <li>• How do you design a unique food experience?</li> <li>• What do your customers think about your cuisine and restaurant?</li> <li>• Are they locals or mostly tourists?</li> </ul>
Restaurant and Destination Promotion	<ul style="list-style-type: none"> <li>• Where do you see Croatia on the world gastronomy map today?</li> <li>• How would you define your relationship with the destination (city/region/country)?</li> <li>• Do you think that your restaurant plays a role in promoting the destination and attracting tourists?</li> <li>• How would you describe your connection to gastronomy tourism?</li> <li>• How are you promoting to achieve this connection?</li> <li>• How do customers and tourists perceive your activities?</li> <li>• How does this differ from the way that traditional and other popular restaurants are promoting gastronomy tourism activities?</li> </ul>
Concluding Questions	<ul style="list-style-type: none"> <li>• What do you think the next steps in luxury gastronomy tourism will be?</li> <li>• What are the key challenges?</li> <li>• How could local, regional and national tourism boards help you in achieving your future goals?</li> <li>• Who would be other stakeholders that you see as an important partner?</li> <li>• Where do you see your restaurant and Croatia on gastronomy tourism map in the next 10 years?</li> </ul>

**Source:** Authors

The survey questionnaire was sent out via e-mail to all of the seven Michelin-star chefs. While analyzing data, each of the seven surveys were looked independently, and then compared and analyzed in order to create meaningful and properly organized data. The analysis of surveys revealed coding categories associated with the role of the Michelin-starred restaurants in promoting gastronomy tourism and the role it has in destination branding. This data was then used to compare the results of the survey taking into account the previously conducted literature review. Finally, comprehensive conclusions were made, presented in research results and discussion that follows.

## 4. RESEARCH RESULTS AND DISCUSSION

The findings of the research confirmed the existence of a strong relationship between luxury gastronomy tourism and Michelin-starred restaurants. More so, research surveys revealed several common themes that often mirrored the literature review and secondary data collection with regards to the importance and the role that Michelin-starred restaurants have in creating stronger gastronomy tourism destination brands. Research results are divided into the four main themes: (1) four realms of experiences in Michelin-starred restaurants; (2) experiences inside Michelin-starred restaurant becoming experiences in the destination; (3) Michelin-starred restaurants and their relationship with tourism stakeholders; and (4) promoting destination through promoting Michelin-starred restaurants. Each is discussed separately in the text that follows.

### 4.1. The four realms of experiences in Michelin-starred restaurants in Croatia

Findings revealed the use of experience economy in creating experiences in each of the seven Michelin-starred restaurants in Croatia. In order to create an exceptional gastronomy experience, restaurants combine education, entertainment, aesthetics and escapism in a variety of ways that makes a distinctive difference between food tourism and luxury tourism products.

#### *Education*

As many sociocultural factors are directly connected to gastronomy, this research has shown that Michelin-starred restaurants play an important role in promoting local food culture and heritage and at the same time educate guests about it. They do so through attracting tourists with their offer that is always based on the local culture and heritage, emphasizing culinary traditions of the local terroir<sup>3</sup>. What chefs further suggested is that tourists that visit their restaurants do not come there only to eat, they come to educate themselves and to discover the local culture. As one of the chefs said:

*“My guests talk to me about the heritage of food I serve. They want to know entire process from where the food comes from to why it was served the way it was. I like to answer such questions because I feel like my job is to educate people about my culture and heritage from media of food. This kind of guests travel around the world and compare culture through gastronomy experiences. You can learn a lot this way, and it is entertaining, it is education through pleasure”.*

More so, in 2013 Mediterranean Diet<sup>4</sup>, specific for Mediterranean countries, was inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity, where Croatian gastronomy can base its gastronomy offer as a lot of tourists seek to understand and learn secrets of the Mediterranean diet (UNESCO, 2013).

<sup>3</sup> Terroir presents the complete natural environment in which a particular food and wine is produced, including factors such as the soil, topography, and climate. As Batat and De Kerviler (2019) state, it is a strong connection with the identity of the region/territory associated with.

<sup>4</sup> The Mediterranean diet involves a set of skills, knowledge, rituals, symbols and traditions concerning crops, harvesting, fishing, animal husbandry, conservation, processing, cooking, and particularly the sharing and consumption of food. Countries on the list with Mediterranean Diet are Croatia, Cyprus, Spain, Greece, Italy, Morocco and Portugal (UNESCO, 2013).

### ***Entertainment***

Research revealed that visiting Michelin-starred restaurants produces entertainment for tourists through looking at food, tasting it and matching it to a different kind of wine. As one of the chefs stated:

*“It is like an entertainment for our guests. They get entertained through different courses that come to table during their dinner, through design on plate to different tastes of our cuisine”.*

An entertainment part of the realms of experiences means that each of the Michelin-starred restaurants tries to make an experience that encompasses elements of hedonism, identity, experientialism, and symbolism making altogether a unique luxury gastronomy product (Batat, 2010).

### ***Aesthetics***

The main point of difference between the popular and traditional restaurants and Michelin-starred restaurants in Croatia is an appeal that they leave on individual's perceptions taking into account smell, taste, vision, sound and touch in order to create an exceptional experience (Batat, 2019). As one of the chefs mentioned:

*“I use aesthetics as one of the main guidelines while thinking about the dish... Every meal needs to be like art, where each of the guests will experience it on their own way. It is like an art gallery with different exhibits that need to evoke variety of feelings to one that tastes them”.*

What sets these restaurants apart is the creation of emotions and pleasure while at the same time dishes they eat promote the cultural heritage of the destination, as well as memories that tourists share after their visit.

### ***Escapism***

For Michelin-starred restaurants escapism is one of the main ingredients while thinking about offering a unique luxury gastronomy experience. As chefs have agreed, they all focus on the experiential pleasure of food knowing that tourist's basic motif for travel is to escape from everyday life and try something different that they cannot find at home or near home. One of the chefs added:

*“You can escape your everyday life through gastronomy, experiencing both aesthetics of our food and restaurant itself. It is all one big experience where you feel different than usual. Going to Michelin-starred restaurant is not an everyday thing. It is rather a special thing; it is an occasional escapism”.*

Therefore, in order to create a unique experience and to allow tourists to co-create the experience, owners of the luxury restaurants need to recognize different expectations that various tourists might have, operating on a number of different social scales and scopes (Dean et al., 2010). Combining all four realms of experience offers a formula to creating a successful unique luxury gastronomy experience.



#### 4.2. Experiences inside Michelin-starred restaurant become experiences in destination

Findings of the research showed that there is a strong connection between the luxury gastronomy tourism destination and Michelin-starred restaurants. All surveyed Michelin-starred chefs state that experiences that tourists gain are pleasure and food well-being and that as such the offer that they have becomes destination offer. What they offer is the highest quality of ingredients, creativity of recipes, the aesthetics of dishes and through combining all four realms of experience they stage unique luxury gastronomy experience that is attractive for domestic and international tourists that makes luxury offer in the destination stronger. What tourists seek for while experiencing luxury gastronomy is not only food tasting, but interaction with local producers and chefs in restaurants. One of the chefs mentioned that:

*“Tourists in my restaurant wait for me to come out of the kitchen and to have a conversation with me. We talk about Croatia and then about food from Croatia. It is like promoting tourism destination, it’s culture and heritage. I like to say that we are terroir promoters”.*

Another chef said:

*“People who experience cuisine in my restaurant often talk about it for example not saying that restaurant had great food, but that Croatia has amazing kitchen”.*

As discussed in the previous chapter, there is a strong connection between Michelin-starred restaurants and destination. Unfortunately, research has shown that in the case of Croatia, Michelin-starred chefs are more aware of it than Croatian tourism boards and other important stakeholders. This will be in more detail be discussed in the discussion that follows.

#### 4.3. Michelin-starred restaurants and their relationship with tourism stakeholders

Relationship with stakeholders in destination is important both for Michelin-starred restaurants as well for destination itself. Surveyed chefs outlined the relationships they argue about are the most important for them, and they are: (1) local farmers, (2) local wine producers, (3) local designers, (4) local hoteliers, (5) local florists, and (6) local ceramists. More so, research on Croatian premium small to medium-sized wine producers showed strong dependence of wine makers on luxury tourism segment in Croatia (Hanžek & Sušić, 2019), which can be seen in the food segment too. This research has shown that 20% of the Michelin-starred restaurants in Croatia are a part of the small luxury private hotels, while other 80% argued that they heavily rely on luxury hotels and accommodation that is located around the restaurants. They all agreed that local relationships are something they build their strategy on. All of the seven Michelin-starred restaurants use terroir products in their branding strategies both domestically and internationally because it indicates authenticity, quality, and local culture and heritage. For example, one of the chefs argued:

*“My restaurant collaborates with many local businesses. Local family producers are something I rely on daily basis and it is why these relationships have to be strong. What I especially like is the collaboration with young artist who works with ceramics. I love his design for plates and kitchenware that he designs for my restaurant, it makes it even more special. Many tourists ask where these ceramics come from, and they end up ordering it from his website as memorabilia for eating in my restaurant and consequently as memorabilia of their stay in Croatia. I am happy we helped this young artist grow his business”.*



Another one added:

*“Everything you can find in my restaurants is from island, we find here everything we need, it is then local, traditional, authentic, it is an island identity”.*

On the other side, research has shown that there is lack of cooperation with tourism boards, as one of the chefs mentioned:

*“I feel they really do have that strength to go and build Croatia as a luxury gastronomy destination, but somehow they don’t”. Another chef added “we would like this relationship with tourism boards to be stronger, they need to place more attention to luxury gastronomy and move away from emphasizing sun and sea, there is so much more to offer”.*

What luxury gastronomic experiences do is building and emphasizing strong relationships with restaurant and culture of the destination, through collaboration with other stakeholders in the destination together presenting the history and identity of the place. Consequently, strong relationships in the destination helps local family businesses grow and sustain their businesses. Overall, development of luxury gastronomy offer positively effects local businesses to become more creative, it creates new jobs and through keeping it local it gains global reputation. This allows destinations to keep traditional know-how within the territory and preserve it for future generations.

#### **4.4. Promoting destination through promoting Michelin-starred restaurants**

Research has shown that Michelin-starred restaurants play an important role in building luxury gastronomy destination brands. They are doing so in many different ways. Firstly, chefs are promoters not only of themselves but as well as of restaurants and consequently of destinations. Michelin-starred chefs have a role as gastronomy influencers, they are the restaurant brand creators. One of the chefs said:

*“I use social media to promote my restaurant and cuisine. Instagram is my favorite one, there I also communicate with my guests. When I publish some of the shows that I had privilege to be in, it immediately gets a huge impact on visibility, not only of restaurant but destination as well”.*

As Batat (2010) argues, chefs are more and more becoming celebrities and have a significant media capital through which they can build brand awareness both through on-line and off-line media presence, mostly through their charisma that attracts audiences and then enhances attractiveness of restaurant and consequently destination. The media exposure of chefs and their accessibility on social media is still very weak in Croatia comparing to other successful luxury gastronomy destinations such as France and Italy. There is still a lot of space to build this presence and by that increase visibility of Croatia as a gastronomy destination.

## **5. CONCLUSION**

This research has investigated the role of Michelin-starred restaurants and their chefs as a change-makers and advocates of successful gastronomy tourism destination development. It has done so through qualitative research capturing an insider’s perspectives from the chefs of all of the seven Michelin-starred restaurants in Croatia. Firstly, research has revealed that Miche-

lin-starred restaurants have two ways of attracting tourists. They serve as both an individual attraction (more for local visitors) and as a destination attraction, where through their unique cuisine they present the identity and heritage of the destination (attracting international visitors). More so, research has revealed the existence of a strong relationship between luxury gastronomy tourism and Michelin-starred restaurants through several common themes that appeared during the research. Firstly, all seven Michelin-starred restaurants use a different combination of the four realms of experiences (Pine & Gilmore, 2011) in order to create unique gastronomy experiences. Secondly, through creating these unique experiences for their restaurant, they create experiences that become a destination experience. Thirdly, they build strong relationships with local tourism stakeholders and by that impact on promoting sustainable and authentic tourism product which is contrary to what restaurants are in general connected to. Finally, Michelin-starred restaurants play an important role in building luxury gastronomy destination brands as they are promoting destinations through promoting their cuisine that is always connected to culture, heritage and identity of a destination.

Furthermore, this research has confirmed that Michelin-restaurants, along with their chefs, are change-makers and advocates of successful gastronomy tourism product development focusing on the individual as well as societal well-being of tourists. This research offers a managerial perspective, i.e. supply side of gastronomy tourism destination branding story. By that it contributes to the existing research on this topic which focuses mostly on demand side and neglects understanding motivations and visions that drive Michelin-starred chefs and restaurants to promote luxury gastronomy tourism destination. Michelin-starred restaurants have a strength to act as a tourism destination itself because they operate as ambassadors of local culinary traditions. More so Michelin-starred chefs feel as they need to promote, preserve and value identity and heritage beyond restaurant using their personality, media, prestige and creativity adding this luxury element into gastronomy destination promotion and by that attracting more tourists in luxury segment (Batat, 2020). Tourists visit Michelin-starred restaurants not only to have a local food luxury dining experience, but to consume gastronomy through unique and staged experiences that these restaurants offer through above mentioned different realms of experiences. All Michelin-starred chefs pointed out that they collaborate and work only with local suppliers and buy that positively impact revitalization of areas where restaurants are located.

The results of this study show that despite the enormous efforts that Michelin-starred restaurants and chefs put into creating a unique experience, Croatia as a gastronomy destination is far from the renowned destinations such as France, Spain, Italy and Mexico. These countries see gastronomy tourism as a special segment of the demand and are investing a huge amount of time and effort into gastronomy destination branding. Despite having a great potential for developing gastronomy tourism and specifically luxury gastronomy tourism, Croatia still neglects this segment in destination branding strategies. Should this be included in new branding strategies, it would have a positive effect on overall destination image such as expanding tourist season, increase tourist expenditure, enrich tourist offer, and consequently develop a strong luxury gastronomy destination brand. Finally, examining the role that luxury gastronomy has in developing stronger destination brands brings an important contribution in giving an insight as to how more adequately approach destination branding through gastronomy, and how to implement these into more effective marketing strategies in the future.

## 6. FUTURE RESEARCH DIRECTIONS

Research based on a larger sample of Michelin-guide restaurants would be of value added, as this research examined only Croatian Michelin-starred restaurants. Also, as this research focused on the supply side of the gastronomy tourism market (Michelin-starred restaurant chefs), this research should be extended to the demand side of the luxury gastronomy tourism market (Michelin-starred restaurant guests) in Croatia. Also, this research revealed an interesting fact that 20% of the Michelin-starred restaurants are a part of the small luxury hotels in Croatia, and this could also be further researched as a business model. More so, future research projects could attempt to highlight differences between Croatian and similar gastronomy tourism destinations in other parts of the world.

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# ANALYSIS OF HEALTH TOURISM IN THE REPUBLIC OF SERBIA AND THE CZECH REPUBLIC

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**Abstract:** *Tourism is one of the most dynamic economic sectors, which is constantly evolving and differentiating. As a result of changing economic conditions and current social trends, the behavior of tourism participants who are looking for a more targeted and diverse offer is changing, which leads to the emergence of new and specific forms of tourism. One of these specific forms of tourism is health tourism.*

*This paper aims to analyze tourism in Serbia and the Czech Republic with a special focus on health tourism. The Czech Republic has become one of the top health tourism destinations in Europe. On the other side in Serbia, health tourism has been in the process of development and internationalization in the past few years. In order to successfully develop health tourism, Serbia should follow the example and learn from developed countries in this field, and that is why this paper will describe good examples from the Czech Republic.*

**Keywords:** *Tourism, Health tourism, Serbia, Czech Republic.*

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## 1. INTRODUCTION

Health is very important for our well-being and nowadays there are more and more people who are willing to travel to receive health care or to enjoy wellness/spa programs. The most frequent reasons why tourists decide to travel for health care or wellness/spa include lower costs, getting treatment that is not available in their home country, advanced technologies or medical equipment, shorter waiting times, better quality, doctor's expertise and attitude to patients and also a lack of insurance.

According to a report issued by VISA in collaboration with Oxford Economics, the health tourism industry is estimated at a staggering \$439 billion. The growth rate is projected to be up to 25% per year for the next decade, as it is estimated that 3-4% of the world's population will travel abroad in search of health care and medical treatments, and about 11 million medical tourists are expected each year. Although the medical travel industry has been undervalued for years, this report points to growth factors - that the health tourism market will reach an astronomical figure of \$3 trillion by 2025. The Medical Tourism Index (MTI) in its report lists the top health tourism destinations worldwide. Examining cross-border spending on medical services in more than 176 countries, the report showed that the United States has the largest share in the health tourism market in terms of consumption, while countries such as Thailand, Singapore, South Korea and in Europe Spain, Germany, Hungary and the Czech Republic are increasingly attracting tourists from around the world.<sup>3</sup> The Czech Republic is one of the most popular health tourism destinations in Europe. The country offers modern spas, highly trained

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<sup>3</sup> More information: <https://www.turistickisvet.com/> retrieved on 02.11.2020



medical specialists, an excellent level of medical care, affordable prices, and a perfect place to recover after surgery.

Considering the importance of health tourism in the world the Tourism development strategy of the Republic of Serbia for the period from 2016 to 2025 highlights health tourism (together with its subcategories medical and spa/wellness tourism) as one of the key types of tourism in the country which has serious potential for attracting local and international tourists.

The capacities of health tourism in Serbia are significant. On the one hand, the main resources and opportunities are based on rich thermal-geological resources and springs of mineral water, as well as on the long-lasting tradition of using those resources for therapeutic purposes. On the other hand, this opportunity is also based on the existence of high standards of medical education and the accessibility of a certain type of high-quality medical services, for a significantly lower price than in other countries, which is suitable for the further development of health tourism in Serbia.

## **2. HEALTH TOURISM**

Before the global Covid-19 pandemic situation, tourism was one of the most prosperous industries, which moved unstoppably forward with a rapidly improving economic situation and a higher standard of living. At the same time, it is perceived by most people in today's modern society as a part of life that is inseparable. People have more and more free time, they live at a higher level and they have a greater desire to get to know different forms of tourism and destinations. Demand for tourism is rising as the living standards of the population rise, the economy thrives, wages rise and technological development moves forward. At the same time, narrower segments of tourism participants are emerging, which have different wishes and requirements and travel for specific purposes. Špačková (2019) found that "some people may seek tourism for recreation, others may find activities related to movement and cognition in tourism, and others may perceive travel and tourism as their lifestyle and content". There are many types of tourism according to the motives. Authors Foret and Foretová (2001) divide tourism into: recreational, performed in an environment that is suitable for rest and improvement of physical and mental condition, cultural - cognitive, which is focused mainly on learning about history, culture, but also traditions and customs, religious (pilgrimage tourism), connected with the visit of sacred and pilgrimage sites, religious monuments, educational, the aim of which is to learn new things (languages, sports, etc.), social, focused on finding relatives or creating new friendly ties with people with the same interests, medical (spa-therapeutic), includes medical prevention, rehabilitation, convalescence, or also treatment of the consequences of diseases or injuries in health-friendly environments, sports, focused not only on their own sports activities, but also passive spectators at sports events, exploring nature (flora, fauna), when it comes mainly to visiting nature reserves or national parks, includes ecotourism adventurous (adrenaline sports), associated with dangerous activities, testing of mental and physical characteristics and skills of participants, professional, which includes various business trips, congress tourism, participation in exhibitions, political, focuses on meetings of political parties, shopping, includes shopping trips.

Even though people include tourism into their lives for many reasons (business, congress, ecology, visiting friends, cultural and/or spiritual enrichment, etc.), the most common and oldest reason to travel as a tourist is medical i.e. intending to improve health.

Health tourism has a very long history. The concept of travelling for health care has been frequent since the Roman Empire. The purposes of the first forms of travelling were directly associated with well-being and better health. It can be confirmed by a large number of spas that are situated in Europe and other places.

Many authors who researched health tourism point out the fact that this is the “border area of medicine and tourism” or “shared field of healthcare and tourism”.

Dunn (1959) stated, more than fifty years ago, the need for developing a new health paradigm in line with demographic, social, economic and policy changes. More recently, the widening of the “travel motivation basis”, as well as higher living standards, which generate new health challenges and, consequently, the need for improved physical, mental and psychological states/conditions, led to the multiplication or branching of tourism forms namely health tourism.

There are many different reasons for travelling for health care. According to Guy et al. (2015), “the most frequent arguments to travel for health care are lower costs, getting treatment that is not available in the home country, shorter waiting times, better quality and attractiveness of combination of vacation and medical treatment abroad”. Tseng (2013) adds shortage of insurance, non-affordability as a result of high prices.

Today the resource base of health tourism consists of natural healing factors (medicinal thermo-mineral waters, medicinal clay, crude oil, healing climate), medical infrastructure, professional staff, etc. Table 1 shows the main factors of health travel decisions. The content of the stays is often supplemented with local monuments and cultural and gastronomic programs.

**Table 1.** The main factors of health travel decision

Medical factors	Touristic factors
<ul style="list-style-type: none"> <li>• Reputation and skills of doctors</li> <li>• Results of medical treatments</li> <li>• Price of treatment</li> <li>• Insurance and guarantee</li> <li>• Follow-up and supporting services</li> <li>• Foreign language skills</li> </ul>	<ul style="list-style-type: none"> <li>• Reputation as a tourist destination</li> <li>• Price of a trip</li> <li>• Developed infrastructure</li> <li>• Cultural closeness</li> <li>• Safety and stability</li> </ul>

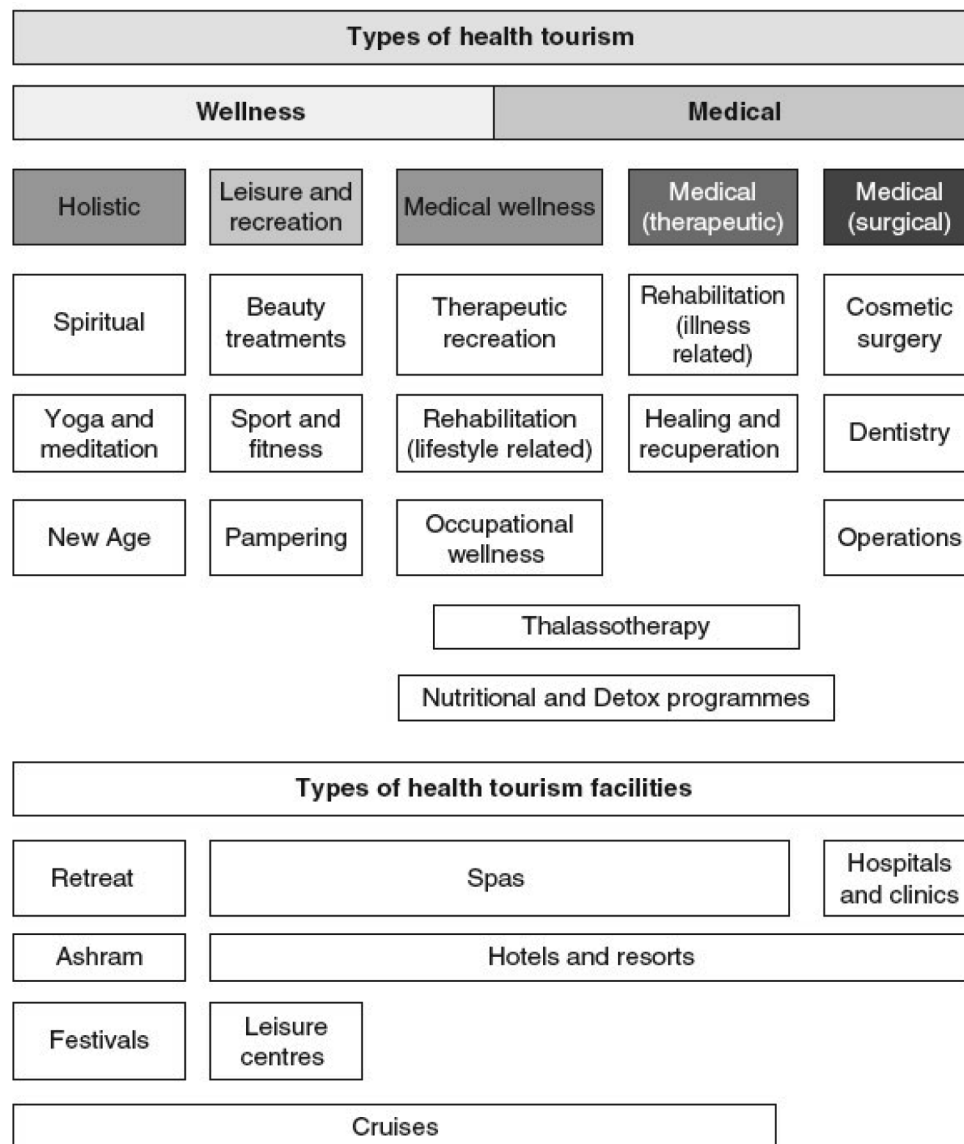
**Source:** Milićević, S., Milovanović, V. & Mandarić, M. (2013). Potentials of Serbia as medical tourism destination at the international tourism market, *Actual Problems of Economics* 142(4), pp. 401., Sziva, I. (2010). Gulliver: in the land of giants? The opportunities of the Hungarian initiations in the surgical medical touristic market, *Annual Conference, Travel and Tourism Research Association Europe, Budapest, Hungary*, pp. 338.

While following modern trends in health tourism, it is also important to mention the emerging term that is wellness tourism. Wellness is, above all, a lifestyle that leans towards optimal health and well-being<sup>4</sup> where the body and mind become one. Wellness can be considered a state of well-being that combines the harmony of body, mind, and soul with self-responsibility, physical activity, cosmetic care, healthy eating, relaxation, meditation, mental activity, education and social contacts as its fundamental elements. Wellness tourism is treated as a subcategory of health tourism by some authors. Mueller (2001) defines wellness tourism as “the sum of all the relationships and phenomena resulting from a journey to a different place to proactively pursue activities that preserve or promote personal health and wellbeing”. According to Miller (2005), wellness tourism can be defined as the “type of travel where tourists go on vacation to reach higher levels of wellness”.

<sup>4</sup> The term wellness is coined by blending two terms - *well-being* and *fitness*.

One of the subcategories of health tourism is medical tourism. The combination of medicine and tourism is a relatively new type of tourism that is reaching a high rate of growth worldwide. Connell (2008) considers that “medical tourism, although being linked to direct medical treatments or interventions, should be the major concept to the detriment of health tourism.” According to him, medical tourism is “where people travel, often long distances, to overseas destinations to obtain medical, dental and surgical care while simultaneously being holiday-makers, in a more conventional sense”.

Smith and Puczko (2009) have defined medical tourism as “traveling to destinations to undergo medical treatments such as surgery or other specialist interventions”. Therefore, medical tourism is described as the travel to a distinct place to achieve a specific cure for a disease, ailment, or condition, taken by patients who are looking for lower costs, higher quality, better access and/or different health care. This definition highlights the ‘requisite’ to travel for medical purposes, i.e., being illness-oriented because the primary travel motivation is related to the cure or treatment of a particular illness or medical condition.



**Figure 1.** Types and facilities of health tourism

**Source:** Smith, M. & Puczko, L. (2009). *Health and Wellness Tourism*, Oxford: Elsevier, pp. 7.

Medical tourism can have two major forms: surgical and therapeutic. There is a clear distinction between the two. Surgical certainly involves certain operation(s), whereas therapeutic means participating in healing treatments.

An increasingly frequent reason for travel is medical services and the reason behind that is the price of medical services in receptive countries that are often lower when compared to the countries where tourists come from.

Complex medical treatments require the services of specialized medical institutions and expert medical staff. So, it is a matter of trips that have the goal to offer different, often serious medical services such as surgery, organ transplants, plastic surgery, dental interventions, etc.

Besides the price, the key factor in the medical tourism destination offer is the standard of the medical services, the expertise of the medical staff and the technological equipment of the hospitals and offices which offer such services, as well as the attractiveness of the destination itself. The concentration of medical institutions is usually higher in larger urban environments. Aside from medical services, medical tourism arrangements also include accommodation (mainly in hotels of higher quality), excursions, tours, etc.

Package deals of health and medical services in the form of organized travel are a modern trend in the tourism market. Globalization of the world's economy has led to the globalization of the health and medical market. Several specialized travel agencies around the world organize package deals for traveling abroad where health programs or surgeries are combined with a pleasant vacation. Figure 1 shows the types and facilities of health tourism.

### 3. HEALTH TOURISM IN SERBIA

Serbia, as a country with a rich cultural and historical heritage and preserved natural resources, has comparative advantages for the development of tourism. In addition to prehistoric archaeological sites, ancient heritage, numerous monuments and fortresses, Serbia also has medieval churches and monasteries, some of which are UNESCO World Heritage Sites. Serbia has several mountains, rivers, lakes, mineral springs, national parks, etc. Although it is continental, it also has connections with distant seas across the Danube. It connects Western Europe and the Middle East and therefore has geopolitical significance, and it is no wonder that it has been the target of invaders for centuries.

According to Milovanović and Miličević (2014) “despite many attractions, Serbian tourism is not sufficiently developed or commercialized in the international tourism market, because tourism as an industry has never had strategic importance in Serbia's development policy.” Despite that, in recent years the numbers of tourists are increasing, especially foreign ones. Major destinations for foreign tourists are Belgrade and Novi Sad, while domestic tourists prefer spas and mountain resorts.

The origin of tourism in Serbia is connected to the abundance of thermal and mineral springs, so much, that history of Serbian tourism is sometimes equated to the history of Serbian spas (Serbian word for spa, banja, became part of numerous toponyms). Some of them had a wider historical and evolutionary impact as remains of the prehistoric habitats have been discovered around them. Serbia has over 1000 cold and warm mineral water springs, and a great wealth

of natural mineral gases and medicinal mud. In over 53 thermal locations, where even ancient Romans had enjoyed, spa therapies have been adapted to treat a wide range of health ailments and diseases. Besides the rich medicinal water spas, Serbia has “climatic spas”, which have been designated health resorts thanks to their favorable climate and geographical location.

Milićević (2013) considers that “only in recent years, the spas of Serbia are starting to develop wellness tourism“. The beginning is related to 2005 when the Special Hospital “Mercur” in Vrnjačka Banja opened the first wellness center in the spas of Serbia, called “Fons Romanus”. Next year, “Mercur” opens the aqua center “Water Fall”, then the peloid center “Limus Romanus”, and others. This concept of health tourism is slowly beginning to be accepted by other spa centers in Serbia through the opening of modern wellness centers in Banja Koviljača, Soko Banja, Banja Kanjiža, Ribarska Banja, Prolom Banja, Niška Banja, etc. This greatly contributes to the change of the old-fashioned image of Serbian spas - they are visited not only by the old and the sick but also by healthy people of different ages.

Hrabovski-Tomić, E. (2007) divide spas in Serbia into two basic categories: 1) Spa hospitals, which receive patients whose costs are covered by social insurance. Those hospitals are under the jurisdiction of the health authorities, although they can receive individuals with personal payment, they are not market and tourist-oriented (e.g. Jodna Banja in Novi Sad). 2) Tourist spas that, in addition to treatment and rehabilitation, offer other forms of restoring and maintaining good health and psychophysical ability with thermo-mineral water, air, healing mud, etc. These treatments are designed as tourist services and offered in the tourism market. These services-treatments can be partially paid through social security if such contracts are concluded (e.g. Banja Kanjiža).

**Table 2.** Influx of Tourists in Leading Spas in the Republic of Serbia from 2013 to 2015

Resort	Arrivals			Overnights		
	2013	2014	2015	2013	2014	2015
Vrnjačka Banja	135,162	123,155	146,208	531,574	431,455	481,150
Sokobanja	49,041	39,682	37,154	301,179	209,058	184,022
Bukovička Banja	20,755	22,640	23,248	55,499	53,824	54,998
Mataruška Banja	4,496	2,509	1,161	44,760	23,883	12,712
Banja Koviljača	16,591	11,581	11,387	150,677	113,259	83,476
Prolom Banja	10,963	9,552	11,284	55,428	51,998	64,921
Gornja Trepča	8,528	8,486	8,323	87,623	85,514	84,429
Vranjska Banja	4,424	3,887	2,366	31,532	22,691	19,872
Banja Kanjiža	7,411	8,095	8,082	38,941	39,108	42,065
Banja Junaković	5,385	5,388	6,011	37,477	45,396	45,725
Banja Vrdnik	15,095	12,210	15,404	72,869	52,911	57,410
Banja Rusanda	3,473	2,238	1,992	27,111	20,286	18,714
Banja Palić	12,764	14,005	14,557	25,700	28,099	25,427
Selters Banja	6,710	6,844	5,771	145,879	139,163	122,943
Lukovska Banja	10,719	10,380	11,108	69,516	72,760	77,534
Gamzigradska Banja	4,160	2,946	2,171	58,871	32,594	23,511
Ribarska Banja	7,074	6,578	6,772	49,864	49,197	47,134
Sijarinska Banja	5,269	5,250	5,626	49,653	46,648	46,049
Banja Vrujci	8,639	6,995	8,767	37,238	26,874	36,446
Niška Banja	-	3,260	3,178	-	29,511	29,991

**Source:** Tourism development strategy of the Republic of Serbia for the period from 2016 to 2025 and Statistical Yearbook of the Republic of Serbia, 2011 - 2016, Statistical Release - Catering and Tourism Statistics



Newer data on the number of spa visits is difficult to find, but older data can be useful also. The traffic of tourists in spas in Serbia for the period 2013-2015 (Table 2) shows certain oscillations, but growth is noticeable in several, such as Bukovička spa, Vrnjačka Banja, Prolom Banja, etc. and their offer is significantly enriched with the wellness facilities and have become centers of spa and wellness tourism in Serbia. Vrnjačka Banja is on the leading position for years. In 2015 Vrnjačka Banja registered 146,208 visitors and had 481,150 overnight stays and is also the second most visited tourist destination in Serbia, right after Belgrade. Spa tourism in Serbia is characterized by the extraordinary domination of domestic tourists, while visits of foreign tourists are on an extremely low level.

Analyzing the data in Table 2, we can see that the traffic of tourists in spas in Serbia grew every year. According to Perić et al. (2018), this result is related to “the beginning of the modernization of traditional spa and health resorts in Serbia, which in addition to basic health resort features introduced spa and wellness programs in their offer. With the opening of wellness centers in the spas, the tourist offer of spas has been expanded and enriched, which attracted many tourists. With this in mind, the further development of spas in Serbia should go precisely in this direction, and work on the modernization of traditional spas so that they can become, not only destinations for treatment and rehabilitation but also a place for rest and relaxation”.

Medical tourism has been in the process of development and internationalization in the past few years in Serbia. Even though organized health and medical tourism is still developing, our medical and health facilities have offered for years various health services to foreigners. They come in individually, without the mediation of specialized agencies. Stomatology has the biggest interest among foreigners, as well as surgeries from the field of laparoscopy, plastic surgery, artificial insemination, but also the services of rehabilitation in spas. Besides professional staff, other reasons for the arrival of foreigners are the prices as well, which are significantly lower than in their native countries. Domestic and local health organizations have exceptional medical staff, which is potentially a foundation for gaining an advantage over the competition in providing services of health tourism, especially medical tourism.

**Table 3.** Comparative review of the price of medical services in Serbia and abroad

Medical services	Serbia	Foreign countries
Colonoscopy	200€	2.000€ (England)
Dialysis	120€	150€ (Slovenia)
Cataract surgery	1.200€	2.300-4.000€ (France and England)
Lip augmentation	400€	800€ (Europe)
Nose correction	2.500€	10.000€ (Europe)
Implants	2.500-3.000€	15.000€ (Germany)
Teeth whitening	200-270€	1.400-2.300€ (England)
Tooth extraction	20€	100€ (Europe)
Fixed prosthesis	600-1.000€	3.000€ (Europe)

**Source:** Ignjatijević, S., & Čavlin, M. (2016). The analysis of the offers of medical tourism in Serbia. TISC - Tourism International Scientific Conference Vrnjačka Banja, 1(1), pp. 75., based on: <http://www.belmedic.rs/General-hospital/107/pricelist.shtm>

According to data from the National Association of Tourist Agencies of Serbia (YUTA), our country is much less expensive when it comes to dental tourism as the prices are up to 50% lower than in other European countries. In terms of plastic surgery, the prices are lower by 35



to 40%, in orthopedics by 30%, while the quality of services in many segments is even better than the services on the rest of the continent. It is estimated that all of the expenses, including the treatment, post-operational medical care, transport, and accommodation, cost the same as a third of the surgery expenses in Western Europe. Table 4 shows the comparative review of the price of medical services in Serbia and some foreign countries.

According to data from YUTA, the number of health tourists in our country increases by 10 to 15% annually, and on an annual basis, there are currently between 40,000 and 60,000 visitors.

At the end of 2016, the Ministry of Health has called a competition for choosing private practice dental offices and offices for cosmetic surgery that will deal with health tourism, and which will be promoted by the country. A special board has been formed, including members of the Dental Chamber, Association of Aesthetic Plastic Surgery and ministry inspectors, that is going to control whether the offices are meeting the criteria.

The Ministry of Health, in cooperation with the Ministry of Tourism, has started to award certificates for health tourism to dental offices and offices for cosmetic surgery. In 2017, the first certificates have been awarded to private healthcare institutions which satisfied the terms of participation in the Project of Development and Promotion of Health Tourism in Serbia. The call for participation is always open, and by now, more than 130 healthcare institutions have applied, 60 of which received their certificates. It is believed that these certificates awarded by the state represent a certain guarantee for international patients that they will receive a quality and efficient service, not only a cheap one.

At the International Tourism Fair in Berlin and Moscow, in 2017, Serbia has promoted its health tourism for the first time. Contacts with tour-operators and insurance companies that deal with health insurance have been made.

#### **4. HEALTH TOURISM IN THE CZECH REPUBLIC**

The Czech Republic attracts millions of tourists annually, who come here to visit and admire some of the finest Cubist, Art Nouveau and Baroque buildings in Europe. The country has rich traditions, history and culture, as well as amazing sightseeing. The Czech Republic has a lot to offer, from chateaux and castles reminding of the powerful families, to hilltop ruins, spa towns, green forests, and good food.<sup>5</sup>

For the last 30 years, the Czech Republic has become one of the major tourist destinations in Europe, receiving 10,6 million foreign visitors' arrivals in 2018, equal to the local population. The country ranks 10th on the list of outbound tourism destinations in the European Union (EU), with Spain, Italy, and France on the top.

The most important types of tourism in the Czech Republic are recreational tourism, especially supported are forms of active holidays (e.g. cycling, winter sports) and sightseeing tourism. Spa tourism and congress tourism have a traditionally important place. From the point of view of the place of implementation, urban tourism is developing significantly, as well as rural tourism within the support of rural development. According to Jarolímková (2018) "under the influence

<sup>5</sup> More information: <https://www.placidway.com/country/59/Czech-Republic-Medical-Tourism>, retrieved on 13.11.2020

of campaigns, the demand for specific topics in tourism, such as film tourism, gastronomic tourism, ecotourism, medical tourism, adventure tourism, beer or even dark tourism and others, is increasing in fashion waves.”

The Czech Republic has become one of the top health tourism destinations in Europe. The country offers highly-trained specialists, an excellent level of medical care, affordable prices, and a perfect place to recover after surgery.

The Czech Republic has a long history of medical and pharmaceutical education, many Czech scientists have won international awards for their achievements. The Czech Republic has been a pioneer in many medical discoveries and developments. The soft contact lens and the discovery of the polarographic methods of analysis have been accomplished by two Czech professors. All the clinics and hospitals in the country know how important it is to offer high-quality medical care and experienced surgeons. After joining the European Union in 2004, the Czech Republic took important steps towards Western medical standards. The Czech Republic has the largest share of doctors per 1,000 inhabitants among all newer EU members.

The country is renowned for its excellent results in oncology, cardiology, infertility and eye surgery and procedures. Patients coming here have access to state-of-the-art robotic surgery, which implies faster recovery time, shorter hospital stay and significantly decreased possibility of complications.

According to Kotíková (2013) “The Czech Republic has very good conditions for the development of health tourism. These are not only favorable prices, perfect diagnostics, a high level of treatment processes, highly qualified staff and modern equipment. Other reasons are the long tradition of spa treatment, which persists in the awareness of potential patients, as well as the number of attractions of tourism and, last but not least, the good transport accessibility and location in the middle of Europe. Many medical facilities offer treatment to patients from abroad. The basic prerequisite for the development of health tourism is not dominantly top medical technology, but especially medical teams, helpful staff and language skills.“

As in Serbia, spa tourism has a famous and long history in the Czech Republic. Havránková (2019) stated that “spa tourism has become very popular; the profits of spa companies are rising and the number of guests is growing every year. Spa treatment is of preventive, curative and relaxing importance, while it is focused on the restoration of the physical and mental strength of using healing natural resources, such as treatment of the consequences of diseases. Natural healing resources, which include natural waters, peloids, hot spring gases and climatic conditions, are a prerequisite for the existence of natural healing spas.“

The most important spas in the Czech Republic include Karlovy Vary, Františkovy Lázně and Mariánské Lázně. Thanks to its own deposits of healing peat, Lázně Bohdaneč, Lázně Bělohrad or Bečyně are also frequently visited. The famous spas in Jeseník and Lázně Kynžvart are famous for their climatic conditions.

According to Speier (2011), a Czech spa resembles traditional “watering places” that have sources of mineral or thermal springs. The term *lázně*, or spa, in the Czech Republic, denotes a place that administers balneotherapy, or treatments that use natural sources like mineral waters, the gas that comes from the earth, mud, or peat bogs. People visit Czech spas for an average of three

weeks and undergo various treatments that are prescribed by the spa doctor. Balneotherapy is a traditional Czech healing technique, which involves complex drinking and bathing therapies, as it is increasingly being incorporated into the development of a Czech health tourism industry. In the post-socialist period, the Czech economy relies heavily on tourism as a source of revenue, and spa towns are the second most popular attraction after Prague.

According to Vystouil (2017) “spas have always been attractive tourism centers with significant economic benefits in the Czech Republic. The privatization and transformation of the spa sector after 1989 brought several fundamental changes. The transformation in 1992 contributed to the formation of more than 50 new spa organizations from originally 12 state spa organizations. Despite some negative aspects (e.g., the temporary extinction of some smaller spas), there was a significant increase in the standard range of treatment stays for new forms of relaxation and regeneration stays (health tourism).“

There are currently 36 spa resorts in the Czech Republic that are grouped under the headquarters of the Association of Spa Resorts of the Czech Republic. Table 4 shows spa resorts in the Czech Republic (bed capacity and attendance). The spa resorts use natural resources, which are divided into the categories of thermal, muddy, radon, mud, climatic and mineral baths. The visitor can choose not only the type of bath but also the way of accommodation or meals, the length of stay, relaxation and wellness procedures. Guests can also take part in many cultural activities or take excursions into the surroundings of the spa. The spa towns have not only the unmistakable charm of architecture, but they also allow the visitor to enjoy the comfort combined with ancient healing procedures. The modern trend includes fitness, preventive health and the so-called wellness stays in the spa. Thanks to the traditions and reputation of the Czech spa resorts and clientele from upper middle classes with above-average expenditures, the spa is one of the key forms of active tourism.

The government of the Czech Republic is investing heavily in health and medical infrastructure and marketing campaigns to promote health tourism. The country has already become very popular among the British, but now the government is focusing on other regions, such as Russia, Germany, Switzerland, etc.

**Table 4.** Spa resorts in the Czech Republic – bed capacity and attendance 2015

number of beds	number of guests	number of overnights stays	% overnight stays of foreigners	average overnight stays
51,960	1,309	8,104	40	6,2

**Source:** Vystouil, J., Šauer, M., & Bobková, M. (2017). Spa, Spa Tourism and Wellness Tourism in the Czech Republic. *Czech Journal of Tourism*, 6(1), pp. 14.

## 5. DISCUSSION

High medical costs and large waiting lists for medical services in developed countries, as well as affordable prices of traveling, altogether with high-quality medical services in developing countries, have contributed to health tourism development in Serbia and the Czech Republic also.

Increasing interest for health tourism destinations in Serbia and the Czech Republic is connected with potential savings due to high medical costs and long waiting lists in developed countries, global trend of the population aging, high-quality surgeries at affordable prices with skilled personnel, high level of care, the accessibility of international air travel and high-quality accommodation.

Serbia and the Czech Republic have great potential for the development of health tourism. The capacities of health tourism are based on rich thermal-geological resources and springs of mineral water, also on the existence of high standards of medical services, for a significantly lower price than in other countries.

The most frequent reasons why tourists decide to travel to Serbia for health care or wellness/spa include lower costs, getting treatment that is not available in their home country, advanced technologies or medical equipment, shorter waiting times, etc. Stomatology has the biggest interest among foreigners, as well as surgeries from the field of laparoscopy, plastic surgery, artificial insemination, but also the services of rehabilitation in spas.

Unfortunately, compared to Eastern and Middle European countries, health tourism in Serbia has not been sufficiently developed. While countries from the region have earlier recognized the opportunity for health tourism development, Serbia still lacks agencies specialized in health/medical tourism whose task would be to attract foreign patients and organize their stay. So far, medical services were provided to the Serbs who are temporarily employed abroad and visit their home country during the summertime, as well as to the citizens of other ex-Yugoslavian Republics.

According to Ignjatijević and Čavlin (2016) the reasons for the health tourism in Serbia being underdeveloped are the following:

- System of state health insurance prevents foreigners to use medical services in Serbia in large numbers. The reform of the health insurance system would create better conditions for the usage of medical tourism, although individual macroeconomists argue that it is easier to control costs of health when there is one source of funding (e.g. taxes and contributions), than in cases where funding is fragmented, from multiple sources;
- Disorderly and inefficient regulatory system that hampers the operations of government health institutions in terms of providing additional medical services. At the same time, the focus of management of state hospitals is mostly on the provision of additional funds that is the critical point of the managing process. Namely, when managers believe that everything can be fixed with money, it often happens that providing additional funding becomes their only mission;
- Poor transport infrastructure is another limiting factor in the development of medical tourism. The choice of hotels is poor and patients generally have expensive hotels or hostels, which often do not have adequate apartments;
- The big problem is the poor advertising and promotion of medical tourism and a lack of private-public partnerships in the field of health;
- The problem that we have been facing for many years is the departure of key medical personnel abroad, which results in a deficit of both specialists and managers.

The Ministry of Health of the Republic of Serbia in 2018 started the health tourism project. According to the information received by the Ministry of Health, before the project was established, 30,000 foreign patients arrived, and by recent estimates, in 2019 we had more than 100,000 patients who used health tourism services. The opinion of the Ministry of Health is that the quality of services within health tourism should be prioritized and that the best way to promote services is to produce patients satisfied with the received service. In its last report from December 2019, the Ministry of Health stated that ten new dental offices received certification and that there are currently more than 100 offices that belong to the program of Ministry of Health. It was reported that the national airline also joined the program and provided certain benefits when it comes to plane tickets. It is important

to mention the fact that the Ministry of Health favors dental services and plastic and reconstructive surgery services. Still, the available database does not include all service providers.

As well as in the Czech Republic huge potential for health tourism belongs to Serbian spas and their rehabilitation centers. Serbia has over 1000 cold and warm mineral water springs, and a great wealth of natural mineral gases and medicinal mud. In over 53 thermal locations, where even ancient Romans had enjoyed, spa therapies have been adapted to treat a wide range of health ailments and diseases and involve drinking medicinal water or taking medicinal baths. Serbian spas have all the preconditions to be positioned as health tourism destinations due to: natural curative factor, medical indications, skilled medical personnel, equipped special hospitals, different types of accommodation, affordable prices, spa&wellness supply, sport and recreation, culture and entertainment. Basic comparative advantages of Serbian spa tourism, according to Milićević (2013), are reflected in an “exceptionally rich natural medicinal resources, rich cultural and historical heritage, long balneological tradition, quality medical staff, skilled techniques of treatment, relatively low prices of accommodation and treatment as much as a variety of events that complement the stay of visitors.” On the other side Ignjatijević and Čavlin (2016) found that “the factors that are slowing Serbia on the way to the international market are inadequate transport and municipal infrastructure, large representation outdated supply, an inadequate health-tourism product, lack of awareness of health tourism in line with modern trends in the market positioning of health tourism.”

The Czech Republic has seized this opportunity by joining the EU. The Czech Republic has become one of the top health tourism destinations in Europe. The country offers highly-trained specialists, an excellent level of medical care, affordable prices, and a perfect place to recover after surgery. Wellness/spa tourism is also very popular, the profits of spa companies are rising and the number of guests is growing every year. Spa destinations offer preventive, curative and relaxing treatments. Natural healing resources, which include natural waters, peloids, hot spring gases and climatic conditions, are a prerequisite for the existence of natural healing spas.

As was done in the Czech Republic, modernization of spa capacities is needed in Serbia, as well as the introduction of new services and contents adapted for the tourism industry and healthcare service. On a global scale, there is a permanent increase in demand for specialized health and recreational centers and spas that offer a combination of medical treatment, rehabilitation, and recreation. The notion of traditional spas is changing all over the world and they are incorporating newer, more attractive activities and programs that follow modern trends. More precisely, the existing offer of spas, based on using natural healing resources and the basic services of boarding houses, has been abandoned a long time ago. These kinds of offers have been substituted with modern concepts of development, based on an offer of all kinds of attractive programs with different purposes because these modern variations are more attractive to a greater number of potential users. Such programs include sports recreation, programs for a natural and balanced diet, health checkups, health education and similar. These health and recreational programs are a part of a global offer of spas, intended for big groups of users such as healthy people who are experiencing high levels of stress, psycho-physical burden and other inconvenient factors of the environment; people suffering from obesity, milder forms of hypertension, diabetes, hyperlipidemia and other regulatory, metabolic and functional disorders; seniors, patients in the phase of convalescence, after suffering from severe diseases or surgeries, individuals with psycho traumas; athletes in phases of preparation and recovery, and so on.

By modernization of spa capacities in Serbia, as well as the introduction of new services and contents more domestic and foreign tourists could be attracted to visit.



## 6. CONCLUSION

Today, programs of health tourism are one of the fastest-growing segments of the world's tourism offers. That is so not only because of the demographic changes, especially the aging of the baby boomer generation that is the biggest consumer of today's health tourism but also because of some general changes in social values that put more emphasis on a healthy lifestyle.

Health tourism of today generates a significant number of travelers and significant financial traffic on the international level, and their development affects the development of national health-care systems. Thus, health tourism also has a strong economic significance for the destinations where such a type of tourist activity can be organized. The significance includes direct financial effects (paying for services) and indirect effects (increase in existing accommodation capacities, the consummation of different hospitality services, etc.)

In today's climate, healthcare has become a global market, with emerging, developing and developed nations competing for health tourists. Through the last few decades, health tourism destinations have appeared worldwide. Millions of tourists from all over the world travel for health reasons and visit different destinations each year. Both Serbia and the Czech Republic are looking for their place in the market. Having seen the huge potential market, both countries are investing in the promotion of the country as a health tourism destination. The capacities of health tourism in Serbia are significant; following the good practices of developed countries in the field of health tourism, such as the Czech Republic, Serbia could become a regional leader in health tourism.

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# THE IMPORTANCE OF DIGITAL MARKETING FOR WINERIES AND DEVELOPMENT OF WINE TOURISM: CASE STUDY OF SERBIA

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**Abstract:** *The wineries recognized the increasingly important role of digital marketing as a valuable and appropriate tool to reach consumers. Wineries owners need to learn to use and apply social media in their marketing activities, as well as which activities are most effective for their needs. This paper intends to provide a brief analysis of digital wine marketing and social media marketing contributions for the wineries to increase brand awareness, sales, and development. The purpose of this research is to investigate social media adoption and engagement amongst wineries and more importantly to understand the activities they use to interact with consumers on social media platforms.*

*For the purpose of this paper, a structured questionnaire was created. The authors wanted to examine to what extent the wineries are familiar with digital marketing and how much they use it in their own business. The study included 50 wineries across Serbia. Serbian wineries need to be more competitive on the tourist market and understand better the mode of functioning of different systems. The results show that Facebook and Instagram are the main platforms that wineries use to engage with consumers.*

**Keywords:** *Wineries, Digital marketing, Wine tourism, Serbia*

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## 1. INTRODUCTION

Wine plays an important part in people's lifestyles, and in the last twenty years, an increased interest in visiting the places of production has been witnessed, resulting in rapid growth in the popularity of wine regions around the world and also in Serbia (Molina et al, 2015; Pivac, 2012). As a consequence, numerous wine regions – from Napa Valley in the USA, Barossa Valley in Australia, Tuscany in Italy, Douro Valley in Portugal, Bordeaux, or Provence in France – use their Eno gastronomic riches to promote their territory and develop as a wine tourism destination. Wine is considered the main element in the development and promotion of tourism and is likely to contribute to the creation of wealth at all levels. Wine tourism is a lucrative industry (O'Neill and Charters, 2000), and the success of wine tourism, particularly at the local level, largely depends on how effective marketing and promotion strategies are used and implemented (Galloway et al, 2008; Rasch and Gretzel, 2008). Digital marketing has become an important advertising and information tool, as interactive communication between producer and consumer can be generated. The wineries recognized the increasingly important role of digital marketing as a valuable and appropriate tool to reach consumers, wine lovers, and wine tourists. Since the introduction of Facebook, social media have been put in the spotlight as a new channel for promotion (CBI, 2016).

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The phenomenon of social media platforms and increasing customer adoption of these platforms has significantly transformed the way how customers communicate and interact with each other and with businesses (Siamagka et al, 2015; Szolnoki et al, 2018). Social media have transformed consumers from passive observers of content to active participants (Szolnoki et al, 2018). Digital media or social media has become a comprehensive name for all types of communication through various channels such as social networks or mobile applications (Kokić, 2015). Social media usage has been found to contribute positively to brand performance and consumer loyalty (Rapp et al, 2013).

The importance of the internet is high, which is witnessed by the research of Viana (2016) who states that of 7 billion people in the world 42% of them actively use the Internet and 1,75 billion people use social networks through mobile phones. This shows us the importance of wineries having an online presence and responsive sites which allow proper navigation through access from mobile devices.

There are several studies about the use of social media in the wine industry (Strickland, 2013; Szolnoki et al, 2014; Thach, 2009; Wilson and Quinton, 2012; Dean and Forbes, 2016) but in Serbia, this is the first one. Therefore, the purpose of this research is to investigate social media adoption and engagement amongst wineries, and more importantly to understand the activities they use to interact with consumers on social media platforms.

## **2. LITERATURE REVIEW**

Social media are a phenomenon that swiftly positioned itself in the world of marketing. Various profit and non-profit companies, governmental and non-governmental organizations, universities, and individuals were quick to recognize the vast potential of social media (Kokić, 2015). The emergence and spread of the Internet paved the way for the subsequent development of social media.

The rapid rise of social media channels has attracted interest from both academia and industry, keen to understand its nuances and how to strategically adopt, implement and manage for desired results. Social media has grown drastically over the past decade with estimates of more than 32% of the global population using social media platforms in 2016 (Emarketer, 2016). The highest usage is in China, followed by the USA, Europe, and Asia-Pacific countries (Chaffey, 2016). How Xiang and Gretzel (2010) cite while there is a lack of a formal definition, „social media” can be generally understood as Internet-based applications that carry consumer-generated content which encompasses „media impressions created by consumers, typically informed by relevant experience, and archived or shared online for easy access by other impressionable consumers” (Blackshaw, 2006). This includes a variety of applications in the technical sense which allow consumers to „post”, „tag”, „digg”, or „blog”, and so forth, on the Internet. Social media representing various forms of consumer-generated content such as blogs, virtual communities, wikis, social networks, collaborative tagging, and media files shared on sites like YouTube and Flickr, have gained substantial popularity on the Internet (Xiang and Gretzel, 2010; Gretzel, 2006; Pan et al, 2007). Many of these social media Websites help consumers in posting and sharing their travel-related comments, opinions, and personal experiences, which then serve as information for others.

Social media allows for the sharing of different experiences in the form of photos, videos, and stories (Schaffer, 2015; Canovi and Pucciarelli, 2019). Social media thus represents – or at least should represent – an efficient strategic tool to manage, engage and collaborate with travellers,

providing tourism suppliers with unprecedented opportunities to gain fast, rich, and unmediated consumer insights (Hudson et al, 2015), develop long-term relationships (Ayeh et al, 2012), build brand loyalty (Chan and Guillet, 2011; Laverie et al, 2011) and increase reliability (Dijkmans et al, 2015).

Social media sites are increasingly popular for wine consumers, with the viral and social capabilities of online networks creating a new forum for customer interaction with wine brands (Barber et al, 2008; Bulearca and Bulearca, 2010; Keller, 2009; Leigon, 2011; Aurich, 2019). Also, social media allows consumers to exchange information and encourage others to try different wines (Wilson and Quinton, 2012), so it is a key channel for influencing and affecting wine purchase.

The recent studies show a significant increase in the popularity of social media platforms. Alonso et al. (2013) conducted a study of Italian, Spanish as well as New World wineries that were involved in wine tourism and discovered that 35% reported using social media. One of the reasons for using it was to communicate with customers about events at the winery. The second main reason was to promote and market wines (Laverie et al, 2011; Aurich, 2019). Wine consumers are frequent users of social media platforms, such as Facebook (Breslin, 2013; Bouquet, 2012). Higgins et al. (2016) showed that 30% of millennials in the USA use Facebook as a source of information on wine. These millennials were more likely to drink wine on social occasions, buy more wine and spend more on wine each month. Social media plays a crucial role in selling wine since word-of-mouth is more effective than any other manner of selling wine (Leigon, 2011). Small wine producers oftentimes have a limited budget and for them, social media platforms and other free digital marketing tools allow being competitive and building upon the potential digital has to offer (Begalli, 2008).

### **3. METHODOLOGY**

For the purpose of this paper, a questionnaire was created based on the methodology used by Szolnoki et al. (2014) was adopted. As basis authors used the questionnaire of the above-mentioned survey. The questionnaire consisted of 7 questions. The second question was open-ended, others were closed. The items, in the fourth question, were measured using a five-point Likert-type scale with the following values: 1 – strongly disagree, 5 – strongly agree.

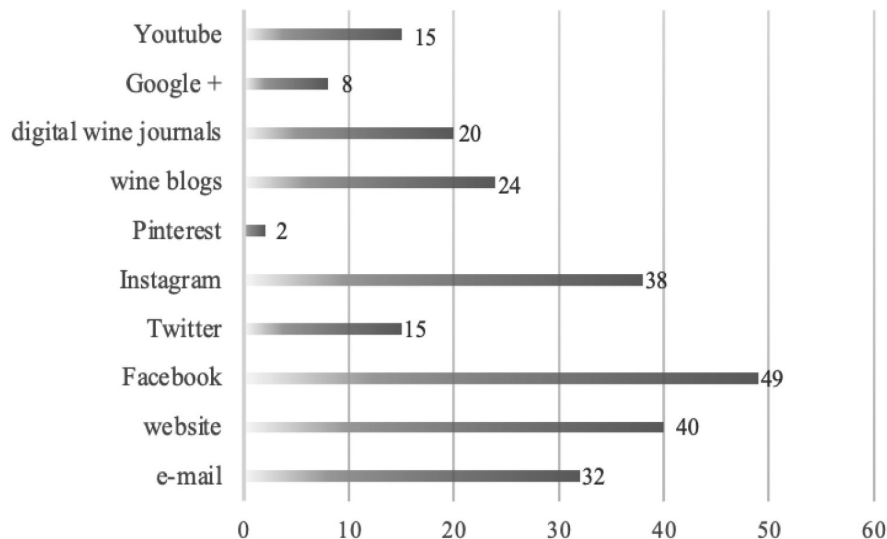
The survey was conducted in Serbia wineries between 10 of January and 24 of February 2020. The data was collected through an online survey. According to the Wine Register in Serbia exist 355 registered wineries (Jakšić, 2019). About 15% of wineries participated in the study.

Of the total wineries which are involved in the questionnaire, 3 are large wineries (with more than 20 employees and more than 80 ha of vineyards), 18 are medium-sized wineries (between 10 and 30 employees and from 30 to 80 ha of vineyards), 29 small wineries (have less than 10 employees and less than 30 ha of vineyards).

This survey gives an overview of the social media activities from the winemaker's point of view and shows tendencies in terms of using social media among the winemakers. The data were analyzed with SPSS 25.

#### 4. RESULTS

The analysis shows that a wide variety of communication channels are used in the Serbian wineries. Channels like Facebook, Instagram, website, e-mail are utilized the most (multiple answers were allowed). The following chart represents which channels of communication are most preferably used by wineries in Serbia (Chart 1).



**Chart 1.** Channels of communication used by wineries

Source: Authors' research

Facebook represents the most important channel for 49 respondents (98%). 40 respondents (80%) have a website. Offering a website can be seen as the basis for online marketing, whereby social media is one way to strengthen look-and-feel goods on top of general marketing techniques. In third place is Instagram, which has registered a growing interest among users and winemakers in recent years.

**Table 1.** Relevance of digital channels for winemaker's business needs

		Frequency	%
Valid	Facebook	21	42.0
	e-mail	8	16.0
	no one	1	2.0
	Instagram	5	10.0
	Web	6	12.0
	TV	1	2.0
	Digital journal	1	2.0
	fb, Instagram, e-mail	7	14.0
	<b>Total</b>	50	100.0

Source: Authors' research

In terms of Relevance of digital channels for winemaker's business needs (Table 1), it has been determined that most of the wineries (42%) use Facebook as the main communication channel, followed by e-mail (16%), a combination of Facebook, Instagram and e-mail (14%), and the web (12%). Social networks have different approaches to their respective marketing campaigns. Each enterprise, in this case, a winery, chooses a social network that will bring the most benefit, based on its target consumers and the social network they use.



**Table 2.** Hours per day spent working on social networks

		Frequency	%
Valid	1h	21	42.0
	2h	16	32.0
	3h	7	14.0
	4h	3	6.0
	5h	1	2.0
	>5h	2	4.0
	<b>Total</b>	50	100.0

Source: Authors' research

The data in the previous table (Table 2) indicate that the majority of Serbian winemakers (42%) usually spend 1 hour per day on social networks for business purposes, followed by 32% who spend 2 hours, and 14% who spend 3 hours. Only 2% of the respondents spent 5 hours per day working.

**Table 3.** The importance of using social networks

Items	Mean	Std. Deviation
Sharing information about events at the winery	4.280	0.7010
Public Relations	4.040	1.0683
Consumer Communication	4.180	0.9409
Reaching new consumers	4.120	1.1718
Winery advertising	4.180	1.0437
Notice of winery promo activities	4.200	0.9897
Communication with others (winemakers...)	3.640	1.2415
Product Sales	3.440	1.1808

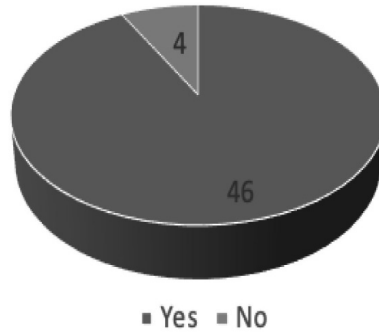
Source: Authors' research

The results of the descriptive statistics shown in Table 3 indicate that for the surveyed winemakers the most important questions are Sharing information about events at the winery (4.280) and a notice of winery promo activities (4.200). Questions with the lowest values of the arithmetic means of the ratings are Product Sales (3.440) and Communication with others (3.640). The standard deviation is between 0.7010 (Sharing information about events at the winery) and 1.2415 (Communication with others). 92% of the wineries believe that they can influence the brand image through digital channels, 94% of them want to build brand strength through these communication channels, but only half of them (52%) have employed a person in charge of social networking and digital marketing in general. It can be concluded that they know that social media can do the difference, but they still obey to employ one person to do that. The part of the problem could lay in the lack of well-educated persons in a rural environment or in them being lazy to make the effort and find the right person for the job. Empirically speaking, the wineries that have employed the right person has a stronger brand, higher prices, and bigger market share, and a bigger influence on the market.

When asked whether they can influence their brand image using digital channels, as many as 46 (92%) of respondents answered positively (Chart 2). Furthermore, 47 (94%) of respondents stated that they wished to build and influence the strength of the brand through digital communication channels (Chart 3). A brand is not just a name, sign, design, and symbol, but a combination of all of this, which the winery uses to handle its market competition. The concept that the brand represents to consumers decides whether the winery provides everything a consumer wants; from quality and assortment of products to trust, image, and sense of belonging. However, the

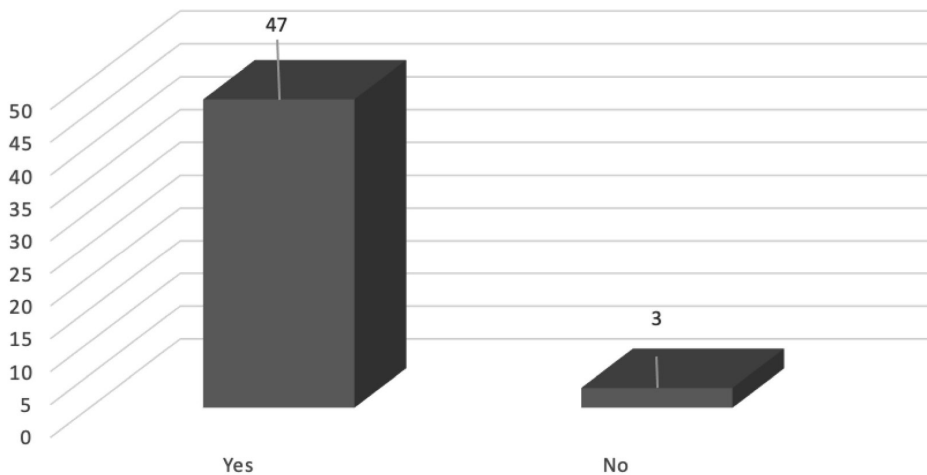


respondents were divided on the question of whether wineries had a person in charge of social networks and digital marketing. Only 26 (52%) of respondents answered that they have an employee in charge of social media (Chart 4). Today, social media managers are crucial in creating and executing the social media strategies of an enterprise. They focus on increasing brand awareness and attracting and nurturing prospective clients. They are responsible for representing their company brand on social networks. In smaller companies, they can also be in charge of everyday tasks, such as posting on social networks and answering user comments on their social channels.



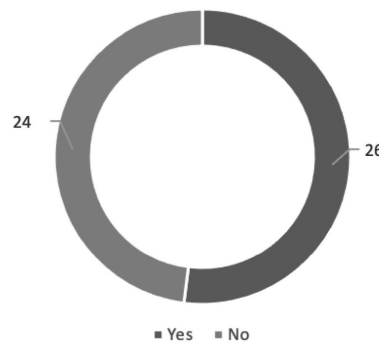
**Chart 2.** Could you influence your brand image through digital channels?

Source: Authors' research



**Chart 3.** Do you want to build or influence the strength of the brand through digital communication channels?

Source: Authors' research



**Chart 4.** Do you have a person in charge of working on social media and digital marketing in general?

Source: Authors' research

The results of an independent t-test showed that respondents' attitudes on influencing the brand image through digital channels differed significantly only concerning communication with consumers (Table 4).

**Table 4.** Results of t-test - Could you influence your brand image through digital channels?

Items	Groups	Mean	t
Sharing information about events at the winery:	Yes (46)	4.2826	.088
	No (4)	4.2500	
Public Relations:	Yes (46)	4.1087	1.565
	No (4)	3.2500	
Consumer Communication:	Yes (46)	4.2609	3.546*
	No (4)	3.2500	
Reaching new consumers:	Yes (46)	4.1957	1.571
	No (4)	3.2500	
Winery advertising:	Yes (46)	4.1957	.356
	No (4)	4.0000	
Notice of winery promo activities:	Yes (46)	4.2391	.947
	No (4)	3.7500	
Communication with others (winemakers...):	Yes (46)	3.7391	1.970*
	No (4)	2.5000	
Product Sales:	Yes (46)	3.5217	1.691
	No (4)	2.5000	

\* p<0,05

Source: Authors' research

Concerning the question of whether they intend to build or influence brand strength through digital communication channels, a significant difference was only found concerning public relations (Table 5). Respondents who nurture public relations were more intent on influencing brand strength through digital channels. However, the results of this and the previous t-test (Table 4) cannot be generalized, since groups are not uniform in size.

**Table 5.** Results of t-test - Do you want to build or influence brand strength through digital communication channels?

Items	Groups	Mean	t
Sharing information about events at the winery:	Yes (47)	4.2766	-.135
	No (3)	4.3333	
Public Relations:	Yes (47)	4.1277	2.406*
	No (3)	2.6667	
Consumer Communication:	Yes (47)	4.2340	1.635
	No (3)	3.3333	
Reaching new consumers:	Yes (47)	4.1915	1.743
	No (3)	3.0000	
Winery advertising:	Yes (47)	4.1702	-.260
	No (3)	4.3333	
Notice of winery promo activities:	Yes (47)	4.2340	.962
	No (3)	3.6667	
Communication with others (winemakers...):	Yes (47)	3.7234	1.932
	No (3)	2.3333	
Product Sales:	Yes (47)	3.5106	1.707
	No (3)	2.3333	

\* p<0,05

Source: Authors' research

T-test of independent samples was implemented to determine whether there is a significant difference in respondents' answers on whether they have a person in charge of social media and digital marketing. The results in Table 6. have shown that wineries that do employ people in these positions are much more open towards building public relations and communicating with other wineries. Moreover, wineries that organize human resources in line with digital marketing trends, meaning have employees in charge of social media marketing, give greater importance to their promotional notifications.

**Table 6.** Do you have a person in charge of working on social networks and digital marketing in general?

Items	Groups	Mean	t
<b>Sharing information about events at the winery:</b>	Yes (26)	4.4615	1.960
	No (24)	4.0833	
<b>Public Relations:</b>	Yes (26)	4.5769	4.312**
	No (24)	3.4583	
<b>Consumer Communication:</b>	Yes (26)	4.2308	.394
	No (24)	4.1250	
<b>Reaching new consumers:</b>	Yes (26)	4.1538	.211
	No (24)	4.0833	
<b>Winery advertising:</b>	Yes (26)	4.3846	1.459
	No (24)	3.9583	
<b>Notice of winery promo activities:</b>	Yes (26)	4.4615	2.004*
	No (24)	3.9167	
<b>Communication with others (winemakers...):</b>	Yes (26)	4.0000	2.218*
	No (24)	3.2500	
<b>Product Sales:</b>	Yes (26)	3.5385	.610
	No (24)	3.3333	

\* p<0,01; \*\* p<0,05

Source: Authors' research

## 5. CONCLUSION

This study confirms the growing importance of social media in wine tourism. More and more consumers believe information available on the web. Consumers trust recommendations on social channels like Facebook and Instagram. They want to see the real story behind the wine and people having fun while enjoying a glass of it. They want to be addressed through social media channels like Instagram or Pinterest where they can see pictures or comment and tag friends and family to initiate the same experience with their loved ones.

The current study provides a snapshot of wineries. The selection of the wineries was based on an electronic mailing list. Despite these limitations, the results are revealing and provide some key implications for practitioners and new issues for future research.

These results match that Facebook took first place with 98%, website the second (80%) and Instagram the third (76%). Social media creates awareness and can influence consumers to visit the vineyard. The use of other social media channels as Pinterest, Google+, and also Yelp (no wineries use it) might be a significant marketing opportunity. Winery owners and managers need to employ digital marketing strategies with experiential posts, appealing images, and stimulating messages. Wine producers need to change their traditional perception of marketing in order to satisfy the needs of their consumers.

One limitation of this study is the number of wineries involved in the survey, considering that fifty respondents answered the questionnaire. However, this paper is probably the first work that tests the wineries' skills in Serbia of using digital marketing and social media. A suggestion for future research is to compare the use of digital marketing and social networks in countries in the region, for example between Serbia, Croatia, Slovenia, Macedonia, Hungary, and Romania. Further, researchers could investigate the impact of brand loyalty and identification established through digital channels on wine sales, which can strengthen additional interest to adopt an innovative digital marketing approach.

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# TOURISM ENTREPRENEURSHIP IN THE DANUBE SHORE (CLISURA DUNĂRII) – POTENTIAL AND PROSPECTS

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**Abstract:** *Tourism is a global industry that brings considerable revenue to all states that know how to manage it. This chapter highlights aspects related to entrepreneurship in tourism along the Danube Shore (Clisura Dunării), a touristic area of extreme natural beauty, along with anthropogenic sights, a zone that can become a development engine for the region, by capitalizing on local resources and engaging related industries.*

*The first part of the work presents the current state of knowledge in the field of entrepreneurship and, in particular, of entrepreneurship in tourism, in order to later describe the Danube Shore and the most representative touristic sites for this area. The chapter also presents aspects related to the analysis of the correlations between the GDP of Caraș-Severin County and the number of overnight stays, as well as the results of a study on the touristic potential of the Danube Shore, a study conducted through a survey based on a questionnaire.*

**Keywords:** *Business, Economic growth, Local development.*

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## 1. INTRODUCTION

”Tourism, due to its distinct field of activity by its content and role, is considered a component of the high importance of economic and social life for many countries” (Gherghina, 2017).

The huge tourism industry brings considerable revenues worldwide, and in the European Union countries such as France, Italy, Spain, Croatia, and Malta stand out. In the European Union – 28, the number of overnight stays is impressive. In 2015, there were 2.94 billion overnight stays in tourists’ accommodation units, 1.5 billion of them by residents, and 1.4 billion by non-residents (Eurostat, 2018). As for the top of the regions with the most overnight stays according to NUTS 2, in 2016, on the first three places ranked the Canary Islands, Catalonia, the Adriatic Coast, with 103 million, 80 million, respectively 70 million overnight stays.

Practicing an appropriate kind of tourism brings advantages such as:

- job creation,
- increase the income of the inhabitants of the target area,
- the possibility of recognizing products as local brands or as products with a protected geographical indication.

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“Tourism can be a force for good in our world, playing a part in protecting our planet and its biodiversity, and celebrating what makes us human: from discovering new places and cultures to connecting with new people and experiences” (Guterres, 2020).

As regards the situation in Romania, tourism is a particular area that can be exploited. Romania is known internationally especially for the beauty of the Danube Delta or the myth of Dracula, the fortress of Sighisoara, the cities of Brasov and Sibiu, but these are just some of the tourist sites in our spectacular country. When it comes to the Western region of Romania, the area that stands out is the Danube Shore or the Danube Gorge (Clisura Dunării), an increasingly sought-after touristic area, under constant development.

As for the number of overnight stays in this region, we see a significant increase from 1.8 million in 2014 to about 2.5 million overnight stays in 2019. Also, according to Eurostat, in 2017, the number of nights spent in tourist accommodation was 1277.45 (per 1000 inhabitants) compared to 2285.79 overnight stays in the South East Region, where the Danube Delta or the Central Region stands out with 2500.42 overnight stays, the leading region of Romania in terms of tourism.

When analysing the activities in the field of tourism, we must implicitly take into account the GDP macroeconomic indicator, because the connection between the two is well known, an aspect highlighted in the following section of the chapter.

We remark an upward trend in the number of overnight stays in the Western Region, and in terms of GDP, the situation is similar. Thus, in 2000 the GDP registered a value of 7577.6 million lei (1.88 lei = 1 euro), and in 2017 it reached a value of 80895.3 million lei (4.77 lei = 1 euro). Tourism also employs a substantial workforce. In Romania, we see an increase in the number of people employed in tourism activities, hotels, or restaurants from 163,311 persons in 2014 to 195,956 employees in 2018.

Undoubtedly, tourism is a vector of development for a region because it involves both local resources and resources from other areas, and the planning of a touristic destination development must take into account the socio-economic principles along with those connected to environmental protection (Štetić & Trišić, 2019).

## **2. ANALYSIS OF THE CURRENT STATE OF RESEARCH ON ENTREPRENEURSHIP IN TOURISM**

### **2.1. The importance of entrepreneurship development for the business environment**

The sustainability of the business environment is closely linked to entrepreneurship, which is considered one of the „main pillars of economic development” (Mahmoud et al, 2019, p. 107, Biswas, Mamun-Or-Rashid, 2018), irrespective of the concerned area. Other researchers (Forouzandeh et al, 2015) identify a positive correlation between economic growth and entrepreneurship on a national level, but also considering the level of education of the population. However, Kuratko (2009) (in Gică et al, 2014) lists several factors that contribute to this effect, including leadership style, management, development capacity, innovation, productivity, etc.

Classical approaches, in theory, link the notion of entrepreneurship to the behaviour of individuals, delimiting direct relationships with risk attitude, motivation, and ability to innovate, also

emphasizing the importance of personal skills and characteristics. The definitions are given to this term and the ideas related to it are numerous, a synthesis is presented below:

**Table 1.** Approaches to the concept of entrepreneurship

Cantillon	1680 – 1734	"A domain that generates profit, but can always receive newcomers who pursue the potential profit that can be generated".
Say	1803	"Places the entrepreneur at the core of all economic activities, both production and distribution of goods and services for consumption, overlapping the functions of the entrepreneur with those of the manager".
Dollinger	1995	"Creation of an innovative economic organization in order to make a profit, in conditions of risk and uncertainty".
Schumpeter	1934	"Emphasizes innovation and the combination of resources, writing that the entrepreneur must be strong enough to swim against the current of the society in which he or she lives".
Drucker	1985	"Entrepreneurship is the creation of an organization, regardless of the organization's ability to support itself".
Timmons	1989	„Entrepreneurship is the ability to do something out of nothing. It is the initiation and construction of an enterprise, rather than the gaze and admiration of one".

**Source:** elaborated by the authors, based on the information found in the bibliographic references

The literature has taken a strong upsurge from this viewpoint, *establishing clear relationships between entrepreneurship, local and even regional development*. Joseph Schumpeter, in an attempt to define entrepreneurship, emphasized the importance of innovation but also creativity (Sheikh, 2015), drawing attention to the significance of the novelty, both in terms of production methods and the market, product, or organization. He outlined three development directions in this regard, namely: local entrepreneurship, innovation, and investment financing, to which the Aspen Institute Romania studies add a fourth element: public support on the local level, in order to encourage entrepreneurial initiatives. However, his research links the idea of entrepreneurship to those of "change, turbulence and instability" (Jaafar et al, 2011), while inducing the idea of the need for capitalizing on market opportunities.

Consequently, over these past three decades the importance of entrepreneurial initiatives, both in terms of small and large-scale business, has greatly increased in terms of industrial parks and clusters (Maticiu & Petrache, 2016).

It is also important to remind the significance of entrepreneurship as a "major source of employment" (Ciochină et al, 2016, p. 264, Sima et al, 2015). We cannot ignore the need to adapt to the conditions of the economic environment, nor the social impact, but the success of entrepreneurial activities is conditioned by a wide variety of factors. In this respect, a mandatory condition becomes the compatibility between the business idea and the conditions offered by the market, the efficient management of the available resources, and the maximum exploitation of the existing potential. The main challenges that arise when implementing a business idea are also to be taken into account, namely (Nongsiej & Shimray, 2017): clarifying the idea and business concept adopted, ensuring the necessary financial resources, attracting the right people to the team, focusing on the appropriate customer segment, objectively evaluating potential.

The development of the business environment is often slowed down by factors with a negative effect on long-term activity, which often induces insecurity, uncertainty and does not allow objective long-term planning, often lacking a coherent business expansion strategy, especially

on the SMEs level. The high problems of bureaucracy, the scarce knowledge in the field, the absence of certain categories of skills in the professional sphere, the lack of interest or financial resources are considered as representative challenges that today's entrepreneurs currently face (Zimmerman & Chu, 2013).

## **2.2. Entrepreneurship in tourism – overview**

Tourism and the hospitality industry, in general, are perceived as exponents of a sector with rapid growth potential (Mahmoud et al, 2019, p. 110; Sheikh, 2015), especially in developing countries (according to reports prepared by the European Commission). The OECD reports (2020) consider domestic tourism to be the very backbone of this sector, generating 4.4% of GDP, representing 6.9% of jobs and 21.5% of service exports.

In the literature, the direct link between the representative indicators of this sector and the level of economic growth of a country was established by authors such as Çağlayan, Şak, and Karymshakov (2012) who consider the Gross Domestic Product as a relevant analysis indicator for establishing this correlation. The authors propose the study of causal links through the prism of a panel approach, using the Granger analysis in three stages, similar conclusions being pointed out by Dees (2002) and Li (2008).

Tourism is currently undergoing a period of growth in terms of the development of this field, being considered even “the third economic phenomenon in the world, after the oil and automotive industry” (Forouzandeh et al, 2015), even exhibiting an advantage over them grace to its „green” nature. Also, tourism is no longer considered a symbol of status but has become a necessity over time (Sikari, 2018).

The positive influence of this sector on the overall economic development of a country was also studied from the perspective of the need to identify a causal relationship between the factors involved, one of them being the development potential of entrepreneurship in the field. “The tourism sector is heavily dependent on entrepreneurship and cannot survive in the long run if it is not both sustainable and entrepreneurial” (Butkouskaya et al, 2020), as we are also witnessing a “need for recognizing the importance of entrepreneurship in tourism” (Pădurean et al, 2015), especially on the regional level. In that context, it can contribute both to the achievement of a brand strategy (Oliveira, 2014) and the reduction of the poverty level, through the direct effect generated by the “salaries and earnings of those who work in this field” (Ashley et al, 2007). The literature also mentions in this case the importance of classical production factors: labour, nature, and capital, but Sullivan (2003) proposes a supplement, namely information or knowledge (Panasiuk, in Bednarczyk & Gancarczyk, 2013).

Entrepreneurship in tourism has benefited from a long period of attention, the proof of success in this regard being the large hotel chains (Brookes & Altinay, 2015), recognized worldwide. However, success in the field does not come out of anywhere, it is closely connected to the level of customer satisfaction, the overall development of the community, the financial possibilities of consumers of these services, etc. (Bardolet & Sheldon, 2008). Some sources also focus on creativity, however, from the perspective of teamwork (Bascavusoglu-Moreau et al, in Bednarczyk & Gancarczyk, 2013), and on the importance of encouraging innovation by local authorities (Najda-Janpszka, in Bednarczyk & Gancarczyk, 2013).

From the perspective of firms' size, however, small and medium enterprises in any field remain the engine of the economy (Manciu, 2019), being more adaptable and „providing a much faster response to society's needs” (Ciochină et al, 2016), and tourism also follows this trend, all the more so as it simultaneously stimulates the development of the trade and services fields. Also, the evolution trends in tourism indicate a predilection for rural tourism, oriented to nature and organized in the form of small businesses (Lordkipanidze et al, 2005). On the other hand, Štetić and Trišić emphasize the role and importance of ecosystems in the creation of tourism activities (Štetić & Trišić, 2018).

Although we can identify in practice many examples of large enterprises in the tourism sector, SMEs remain representative for these activities, Morisson (1996, in Jaafar et al, 2011) justifying this orientation towards small businesses by the following arguments:

- the small size of a business allows for much faster feedback and adaptation to customer needs;
- many of these businesses are family businesses, being managed and even passed down from one generation to another;
- they have a higher level of adaptation to specific market segments;
- they do not require significant equity.

Various sources explain the role of entrepreneurship in tourism, as well as how it can contribute to the economic development process. However, there is the issue of choosing the most appropriate development strategies, depending on the specifics of the area, and thus adapting the activity taking into account the profile of potential customers and promoting a „responsible entrepreneurship” (Lordkipanidze et al, 2005), even sustainable tourism, in the sense that “entrepreneurs in this field must not jeopardize the future of next generations” (Akrivos, 2014). The reports prepared by the World Tourism Organization indicate as main reasons why individuals choose to go to various destinations: relaxation, recreation, business trips, visiting acquaintances, family, and friends, etc., a fact confirmed also by the authors in the field, who consider that tourist services are „created to satisfy the needs of a superior order”, such as „information, organisation, transport, accommodation, alimentation, relaxation and treatment” (Gherghina, 2018).

Furthermore, Carvalho and Sardinha indicate the advantages generated by entrepreneurial activities in the field of tourism, by reference to local communities: the creation of new jobs and thus the integration of disadvantaged categories of people into employment, increasing the number of economic agents in this field, enhancing the living standards of the population, improving the quality of infrastructure, more active promotion and the creation of local brands.

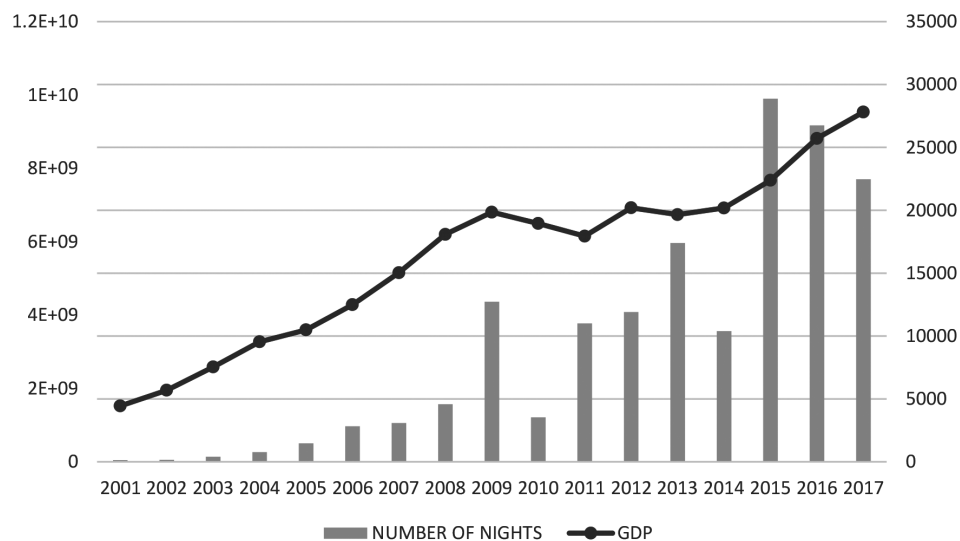
Biswas and Mamun-Or-Rashid (2018) explain the connection between the notions of “tourism development” and “economic development” in terms of the effects generated by capitalizing on opportunities in this field: generating new jobs, increasing incomes, attracting new sources of investments, encouraging entrepreneurship among women (Sikari, 2018). At the same time, the reports of the European Commission (UNWTO and UNEP, 2015) set the following objectives for the implementation of sustainable tourism: economic viability, local prosperity, an increase of jobs quality, social equity, local control, community welfare, cultural wealth, landscape and environmental integrity, biological diversity, resource efficiency.



### 3. CASE STUDY. ANALYSIS OF THE CORRELATION BETWEEN THE NUMBER OF OVERNIGHT STAYS AND THE GROSS DOMESTIC PRODUCT IN CARAS-SEVERIN COUNTY, ROMANIA

As the *general hypothesis of the case study*, we start from the idea that there is a direct link between the level of entrepreneurship development and the level of economic growth on the local level, a statement found in the specialized works quoted above.

Thus, to prove this hypothesis, we selected as relevant indicators for the study of the link between entrepreneurship and local economic growth: the total number of overnight stays in the Danube Shore area, respectively Gross Domestic Product in Caraş-Severin county, for 17 years. The data were collected for the years 2001-2017, this being the last year for which there is information on the GDP / county indicator (available in the database of the National Institute of Statistics).



**Figure 1.** Evolution of GDP and number of overnight stays between 2001 and 2017

**Source:** data processed by the authors, based on information from [www.insse.ro](http://www.insse.ro), Tempo online

The information in the graph above was entered into the EViews 11 program and processed, using the following regression equation to analyse the relationship between the two factors:

$$Y = \alpha + \beta \times X + \varepsilon \quad (1)$$

By replacing the parameters of the above equation with the factors considered relevant for the present study, the calculation relationship becomes:

$$\text{GDP} = \alpha + \beta \times nN + \varepsilon \quad (2)$$

The analysis of the connection between the variables is performed based on the regression equation above, where  $\alpha$  and  $\beta$  represent the coefficients of the equation (C1 and C2), X – the factorial variable (number of nights – nN), respectively Y – the resultant variable (GDP = GDP). The following table shows the values obtained from the data processing in the EViews 11 program.

**Table 2.** Regression analysis output

Dependent Variable: GDP				
Method: Least Squares (Gauss-Newton / Marquardt steps)				
Date: 11/09/20 Time: 01:15				
Sample: 2001 2017				
Included observations: 17				
GDP=C(1)+C(2)* nN				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	3.63E+09	4.45E+08	8.168658	0.0000
C(2)	207444.8	33801.30	6.137185	0.0000
<b>R-squared</b>	<b>0.715181</b>	Mean dependent var		5.57E+09
Adjusted R-squared	0.696193	S.D. dependent var		2.35E+09
S.E. of regression	1.29E+09	Akaike info criterion		44.91023
Sum squared resid	2.51E+19	Schwarz criterion		45.00825
Log likelihood	-379.7369	Hannan-Quinn criter.		44.91997
<b>F-statistic</b>	<b>37.66505</b>	Durbin-Watson stat		1.152826
Prob (F-statistic)	0.000019			

The regression equation of the 2 variables, GDP and nN, is:

$$\text{GDP} = C(1) + C(2) \times nN \quad (3)$$

where

GDP = dependent variable (resultant)

nN – factorial variable (independent)

C(1) and C(2) – the coefficients of the regression equation

Substituting the calculated values, the regression equation becomes:

$$\text{GDP}=3,63 + 207.444,8 \times nN \quad (4)$$

The coefficient C(1) has a standard error of 4.45, this being the free term of the equation. It represents the value that the resultant variable takes if the factor number of nights has the value zero. The regression coefficient C(2) has a standard error of 33801.3. The positive sign of this coefficient shows the existence of a direct link between the two variables, therefore, as the number of overnight stays increases, so does the GDP.

The intensity of the connection of the 2 variables can be studied in this case as well, using the R-squared correlation coefficient. In the situation presented in the table above, we find a strong and direct link between the two indicators analysed, given that the calculated value of the correlation coefficient (0.715) tends to the maximum limit of the interval (1). We can therefore see that the variable number of overnight stays positively influences the evolution of GDP, in the proportion of 71.5%.

At the same time, the regression coefficient C(2) indicates a direct link between the factorial variable and the resultant one, this being also very strong (the variation with one unit of the factorial variable determines the variation of the resultant one with an above-the-unit value).

The results obtained in the case of the above unifactorial model can also be analysed through statistical tests. In this sense, we proceeded to determine the values of the Student, Fisher and Durbin-Watson tests.

As regards the Student test, its value (t-Statistic), corresponding to C(1) is 8.16, and for C(2) it is 6.13. From the table related to the Student distribution, we notice that  $t_{critic}$  (determined according to  $v = 16$  degrees of freedom and the probability  $0.05 / 2 = 0.025$ ) is equal to 2.120. This value, compared to  $tc_1$  and  $tc_2$ , respectively, indicates that the null hypothesis is rejected, and we can state with a 95% probability that the model is statistically correct, and there is a direct and strong link between the two variables.

According to the data in the table above, the value of the Durbin-Watson test (d) is equal to 1.15. From the statistical tables related to this distribution we can identify a lower table value  $dL = 1.13$ , respectively an upper table value  $dU = 1.38$ , taking into account a significance level of the test = 0.05, as well as the number of observations (17), being used by this given a single factorial variable, k. The comparisons between the tabular values and the calculated value of the test indicate, however, the need to resume the calculations on an extended sample of data, the result being inconclusive, a fact indicated by the relation  $dL < d < dU$  ( $1.13 < 1.15 < 1.38$ ).

The calculated value of the Fisher test (F-statistic) is 37.66. From the Fisher-Snedecor distribution table, we notice that the critical value  $Ft = 4.49$ , taking into account the significance level 0.05 and the number of degrees of freedom. Following the comparison of the two values, we find that  $Fc > Ft$ , as a result, the null hypothesis is rejected with a probability of 0.95%, indicating a significant level of influence of the number of overnight stays on the GDP indicator.

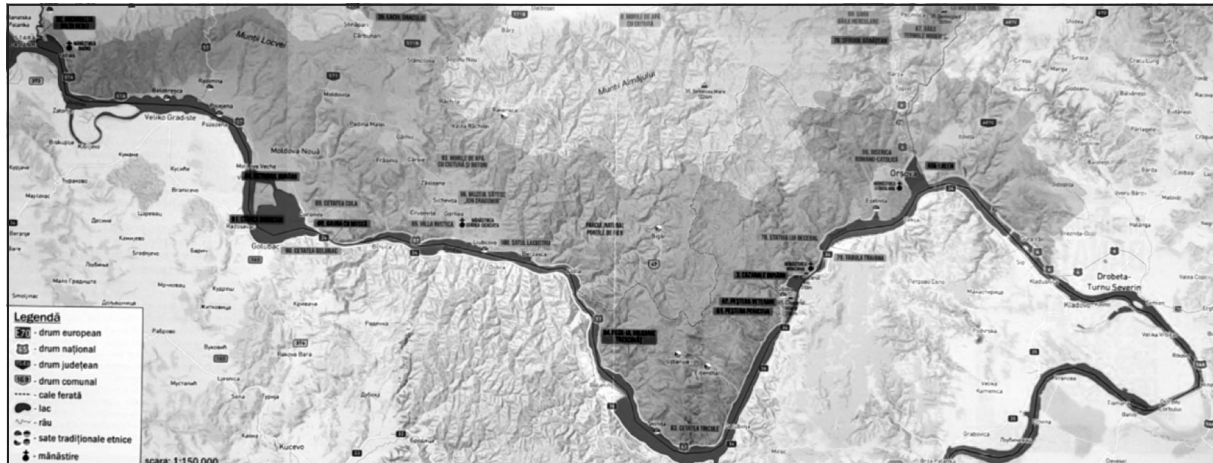
#### **4. THE DANUBE SHORE (CLISURA DUNĂRII) – THE “HERALD” OF TOURISM IN BANAT, ROMANIA**

After flowing through six countries (Germany, Austria, Slovakia, Hungary, Croatia, Serbia) and crossing four capitals (Vienna, Bratislava, Budapest, and Belgrade), the river that springs from the Black Forest Mountains continues its adventure, entering the Romanian territory at Baziaș, a locality situated in Caraș-Severin county, and flowing for 60 km in the county, at the border with the Republic of Serbia. The Danube Shore (in Romanian Clisura Dunării, in Serbian Banatska Klisura, in Cyrillic characters Банатска Клисура) comprises the longest gorge in Europe, the Danube Shore (135km), being the “herald” of tourism in Banat (Popovici, 2016), an unparalleled teller of the history of these places, from Baziaș to the Iron Gates (in Romanian Porțile de Fier, in Serbian Gvozdena vrata, in Cyrillic characters Гвоздена врата).

The most famous localities in the Danube Shore are the towns of Moldova Nouă (Caraș-Severin County) and Orșova (Mehedinți County). The area also includes the communes of Socol, Pojejena, Coronini, Gârnic, Sichevița, Berzasca (Caraș-Severin County), Svinița, Dubova, Eșelnița, Ilovița and Breznița-Ocol (Mehedinți County).

The Danube Shore or the Danube Gorge (Clisura Dunării), as it is called specially by the locals, a spectacular area not only from a historical or geographical point of view, is also a multicultural territory, being inhabited by Romanians, along with many Serbs (some localities having even the majority Serb population), an important German or Czech communities. Although wars, different political regimes, and many other turmoils passed over these localities, the people of

the area, especially those from rural localities, did not forget their faith, traditions, customs, and, especially, their language, unaltered by neologisms. Extremely rich in historical and cultural testimonies, the Danube Shore is of great interest in terms of biodiversity, on its territory being important to nature reserves, currently included in the Iron Gates Natural Park.



**Figure 2.** Map of the Danube Shore

**Source:** aplicatie.banatul-montan.ro

Undoubtedly, the Danube Shore is a masterpiece of God, it is a place shrouded in mystery and a perfect spectacle of nature. Nevertheless, is the Danube Shore a successful touristic area? Or at least can it become one?

## 5. STUDY REGARDING THE TOURISTIC POTENTIAL IN THE DANUBE SHORE AREA (CLISURA DUNĂRII)

### 5.1. Research methodology

In order to study the perception of the population in Romania and, in particular, of Banat inhabitants, about the touristic potential in the Danube Shore, as well as the possibilities of capitalizing on this potential, we used a *questionnaire-based survey* as the research method.

The survey is, according to the literature, one of the most complex methods of psycho-sociological investigation. It involves the collection of certain pieces of information, usually with the help of interviews and/or questionnaires (Curelaru, 2003, p. 45), from a sample extracted from the investigated population, a larger population, with the purpose of processing and generalizing the results.

The sociology dictionary defines the questionnaire as an „investigative tool, consisting of a set of written questions and possibly graphic images, logically and psychologically ordered which, when administered by survey operators or through self-administration, determine from the respondents' answers that are recorded in writing (S. Chelcea, *The questionnaire in the sociological investigation*, 1975). In sociological research, the questionnaire is used to collect both objective data (age, sex, level of education, income, etc.) and subjective data (opinions, attitudes, aspirations, needs, etc).” (Zamfir & Vlăsceanu, 1998, p. 95).

Based on these considerations, the main tool of this research was an online questionnaire, applied in a written form using Google Forms. This method of application was imposed, in par-

ticular, by the peculiarities of the current context, generated by the presence of the SarsCov2 virus, a situation that required the limitation of physical contacts, the questionnaire is administered in October and November 2020.

*The main objective* of the research was the analysis of the respondents' perception regarding the extent to which the Danube Shore can become a successful touristic destination.

*The secondary objectives* were the following:

- OS1.** identifying the level of familiarity of the respondents with the Danube Shore area;
- OS2.** identifying the extent to which subjects could choose the Danube Shore as a touristic destination and the main ways to spend their free time;
- OS3.** identifying the most important factors that determined respondents to visit the Danube Shore;
- OS4.** identifying the most appreciated tourists' objectives in the area;
- OS5.** identifying the level at which the Danube Shore is considered an accessible destination in terms of transport;
- OS6.** identifying the general level of attractiveness of the Danube Shore;
- OS7.** identifying the respondents' perception regarding the localities in the Danube Shore that would have the greatest chances to become successful touristic destinations.

In order to reach these objectives, a questionnaire consisting of 27 questions was designed and distributed online, consisting of 6 identification questions and 21 content questions. Of these, this paper presents the results obtained for 13 content questions, the others to be developed in a subsequent study, which intends to deepen the analysis of the investigated issues.

The identification questions referred to the gender of the respondents, their age, main occupation, level of education, net income per family member, area of residence. The structure of the questionnaire was complex, comprising both closed questions, with single or multiple answer options, and questions based on measurement scales, the respondents awarding a 1-to-5 score to the proposed criteria, according to Likert's scale.

## **5.2. Interpretation of data obtained and research conclusions**

The sample consisted of 333 people, 67.3% female, and 32.7% male.

Regarding the distribution of subjects by age groups, most respondents fell into the category of 25-34 years (27%), being closely followed by those under 25 years (25.5%), as well as those with age between 35 and 44 years (24.9%), the lowest number of answers coming from people over 65 (1.2%). The structure of the sample, according to the distribution of respondents by gender and age groups, is shown in the graphs 3 and 4.

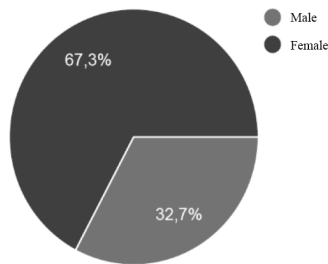
Out of the total respondents, more than two-thirds are employed, a little more than a quarter are school pupils/students and college students, very few are unemployed, housewives or pensioners (less than 5%).

39.3% of the respondents are master's graduates, 36.9% have a bachelor's degree, 18.6% are high school graduates and 4.8% declare to have a Ph.D.

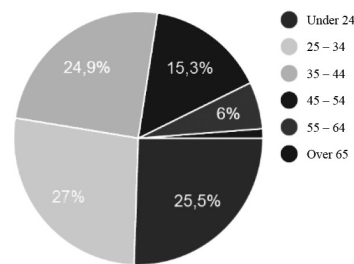


Most of the subjects (32.1%) stated that their net monthly income per family member is between 1500 - 2500 lei (approximately 300 - 500 euros) and only 15.6% of the respondents have a net monthly income below 1500 lei (less than 300 euros). It should be mentioned that 24.3% earn 2500 - 3500 lei (approximately 500 - 700 euros), 11.7% have incomes between 3500 - 4500 lei (approximately 700 - 900 euros per family member), and 16.2% earn net monthly incomes even higher than 4500 lei (approximately over 900 euros per family member).

As for the area of residence, over three-quarters of the subjects come from urban areas and only 24.6% of the interviewed persons live in rural areas.



**Figure 3.** Sample structure by gender

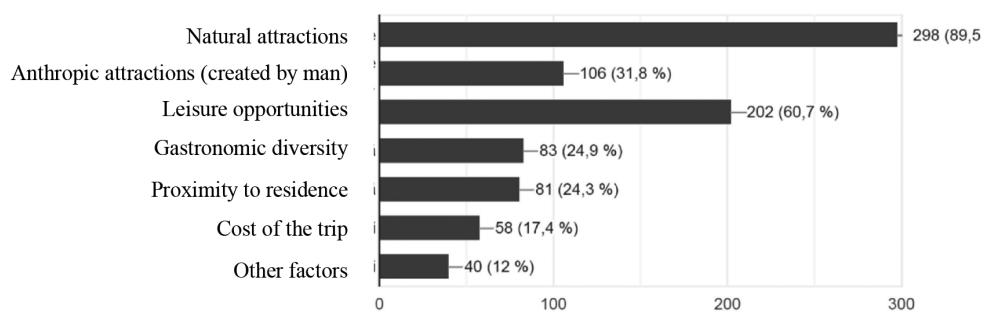


**Figure 4.** Sample structure by age groups

**Source:** elaborated by the authors

When it comes to the content questions, following the centralization of the results, we reached the following conclusions regarding the proposed objectives:

1. Regarding the level of familiarity with the Danube Shore, 61.8% of the subjects stated that they are familiar or even very familiar with this touristic area, and only 14.4% state that they are less or not at all familiar with the Danube Shore. The verification of the representativeness of the answers provided by the respondents indicates a value of 31.94% of the variation coefficient, therefore we find a fairly high level of homogeneity of the analyzed sample.
2. The vast majority of respondents (85%) say they would choose the Danube Shore as a leisure destination, 11.4% say they are neutral, while those who say they would not spend their leisure time in this area are extremely few (only 3.6%). In this situation also we identify a significant level of representativeness, proven by the level of the calculated coefficient of variation: about 19.23%.
3. For most people who constituted the researched sample, the 3 main factors that would cause them to visit the Danube Shore are, in order: natural attractions, leisure opportunities, and anthropogenic attractions. On the other hand, other factors such as the cost of travel or proximity to the residence are less important for respondents.

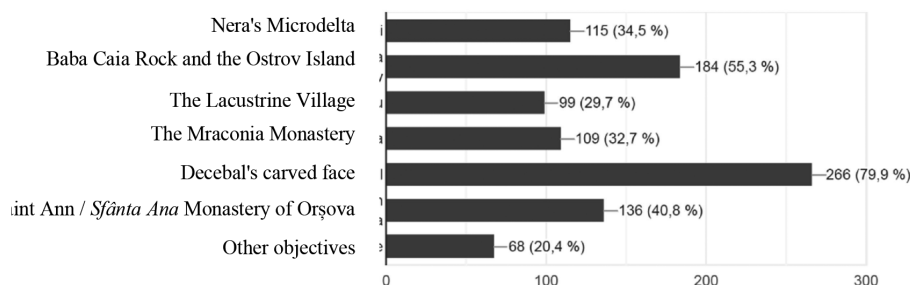


**Figure 5.** Factors that determined the respondents to visit the Danube Shore

**Source:** elaborated by the authors



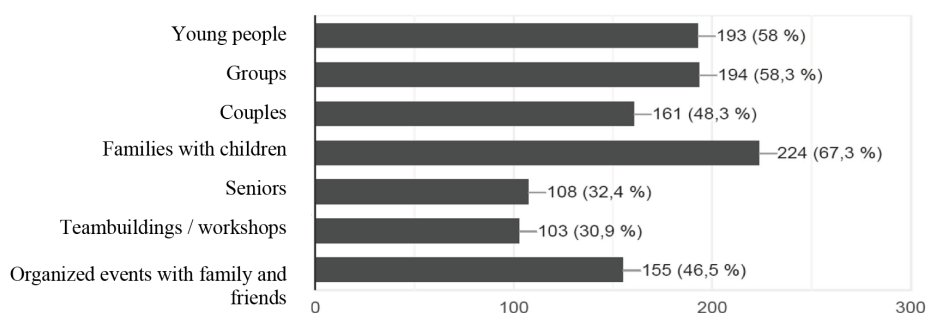
4. Among the natural or anthropic touristic sights, the most appreciated by the respondents are, in order, the following: Decebal's carved face, Baba Caia Rock and the Ostrov Island, as well as Saint Ann / Sfânta Ana Monastery of Orșova. A fairly large number of „votes” were awarded to other tourist attractions, such as the Nera Microdelta, the Macronia Monastery and the Lacustrine Village.



**Figure 6.** Touristic sights that would determine the respondents to visit the Danube Shore

**Source:** elaborated by the authors

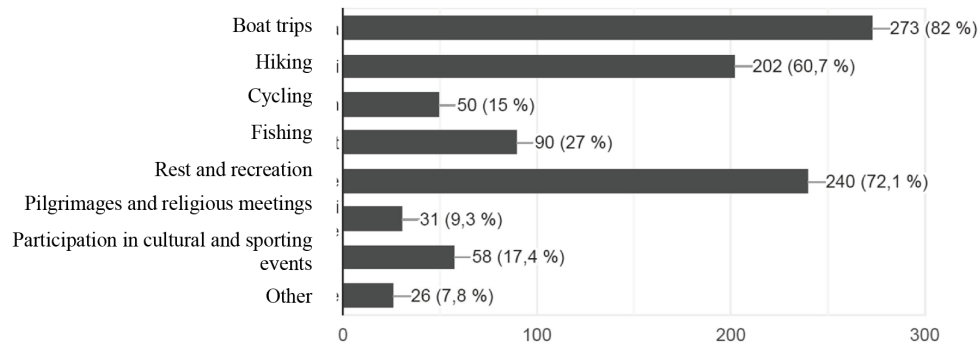
5. As for the means of transport by which they travelled to the Danube Shore on their last visit, the overwhelming majority (86.8%) state they went by car, being extremely few, on the other hand, those who claim to have travelled by train or minibus (they totalled 0.6% of the respondents), by bicycle/motorcycle (1.2%), by ship/boat (1.5%).
6. Most respondents (63.9%) consider the Danube Shore accessible in terms of transport, but, on the other hand, 11.1% consider the area very inaccessible and almost a quarter (24.9%) say they are neutral in this regard. Correlating this question with the previous one, we can easily realize that, not being able to travel by car, the Danube Shore becomes, in fact, less accessible for people who would like to reach this area by other transport means. There is also high representativeness of the answers, the calculated level of the coefficient of variation being 28.48%.
7. The Danube Shore is considered by most respondents to be an appropriate destination, primarily for families with children, groups and youth. It should also be mentioned that many people consider the Danube Shore a good destination for organizing events with family or friends, for couples, for seniors, or even for team building/workshops.



**Figure 7.** Target public category for the Danube Shore

**Source:** elaborated by the authors

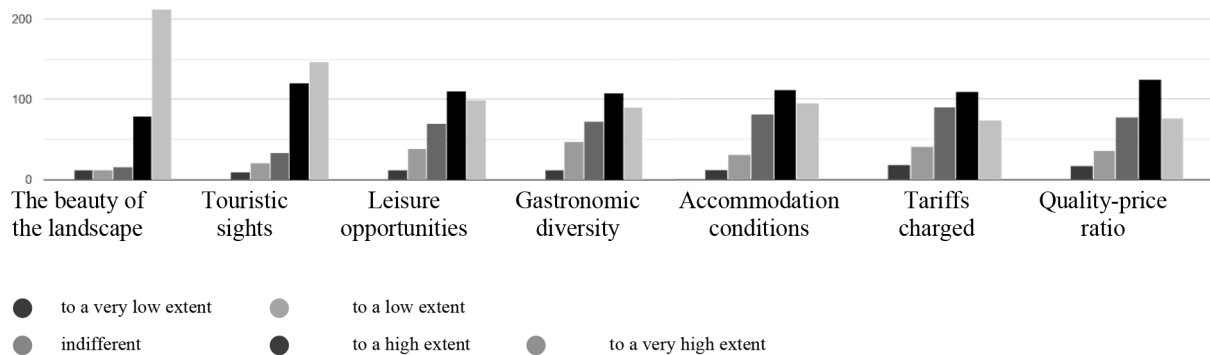
8. As regards how they would like to spend their time in the Danube Shore, most of the respondents to the questionnaire said they would like to get to this area for hiking, rest, and recreation, but, especially for boating. On the other hand, there are quite a few who say that they would like to come to the Danube Shore for cycling, pilgrimages and religious meetings, or for other activities.



**Figure 8.** How the respondents would like to spend their time in the Danube Shore

**Source:** elaborated by the authors

9. When asked how they appreciate the level of attractiveness of the Danube Shore, the vast majority of respondents (85.9%) consider this area to be attractive and even very attractive, 12.3% say they are neutral and only 1.8% consider the Danube Shore unattractive. These results practically reflect the very high interest of people for the analyzed area, a fact confirmed also from a statistical point of view, by determining the variation indicator, which registers a high level of homogeneity (17.81%).
10. Most of those who visited the Danube Shore say they would recommend this area to other people in full confidence, first of all for the beauty of the landscape, but also the touristic sights. The leisure opportunities, accommodation conditions, gastronomic diversity are other criteria according to which the respondents would recommend the Danube Shore, mostly the positive recommendations generally referring to the aspects related to the rates or the quality-price ratio.



**Figure 9.** Criteria for which respondents recommend the Danube Shore

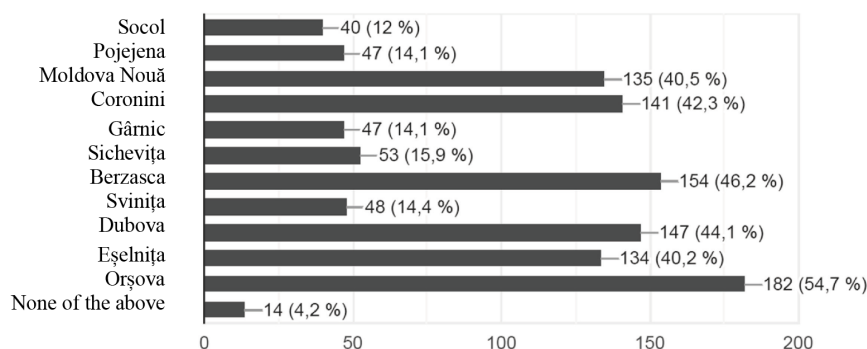
**Source:** elaborated by the authors

11. Almost three-quarters of those who answered the questionnaire (73%) say they would certainly return to the Danube Shore, 18% of subjects say that for them the possibility of returning to this area is quite high and only 1.5% say they would rather not return. It should be noted that there was absolutely no one to declare he or she would not return to the Danube Shore.
12. It is remarkable that 93.1% of the subjects consider that, to a high extent and/or even to a very high extent, the Danube Shore area can become a successful touristic destination.
13. The localities with the highest chances to become appreciated touristic destinations are the following, in the respondents' perception: the town of Orșova, followed by the communes of Berzasca, Dubova, and Coronini (the last being also known as Pescari). It should be mentioned that the town of Moldova Nouă, even if it was not ranked among the first four

nominations by most of the surveyed subjects, is still in the first part of the top of Danube Shore localities credited with the opportunity to become successful touristic destinations. Also, the commune of Eşelnița is seen by many of the respondents as a locality with quite high possibilities to become a successful touristic destination.

On the other hand, localities such as Sichevița, Svinița, Gârnici, Pojejena, and, especially, Socol are listed with little chance of becoming attractive from the tourists' point of view.

It should be noted that there are some very skeptical respondents (4.2%), for whom none of the above localities has a chance to become a successful tourist destination.



**Figure 10.** Localities considered having the potential to become successful touristic destinations

Source: elaborated by the authors

### 5.3. Verification of results

Each objective presented at the beginning of the study corresponds to at least one of the criteria found in the table below, the degree of homogeneity is determined for the criteria where the answers involved the use of the Likert scale, by the following statistical indicators: weighted arithmetic mean, dispersion, square deviation, and the coefficient of variation, respectively.

In the case of all the questions that involved the use of the Likert scale, we can remark a high level of homogeneity of answers, as a result, the sample on which the research was conducted is a representative one. However, the topic addressed in this chapter is very broad and offers many opportunities to be continued and enhanced, and can be extended in a study involving a larger sample, including subjects from most Romanian counties and, why not, even from other countries.

**Table 3.** Statistical verification of results

Objective	Corresponding question	Weighted arithmetic mean	Dispersion	Average square deviation	Variation coefficient
OS1. identifying the level of familiarity of the respondents with the Danube Shore area;	Q1	3.7928	1.4675	1.2114	31.94%
OS2. identifying the extent to which subjects could choose the Danube Shore as a touristic destination and the main ways to spend their free time;	Q2	4.4294	0.7255	0.8517	19.23%
	Q7	***	***	***	***
	Q8	***	***	***	***

OS3. identifying the most important factors that determined respondents to visit the Danube Shore;	Q3	***	***	***	***
OS4. identifying the most appreciated tourists' objectives in the area;	Q4	***	***	***	***
OS5. identifying the level at which the Danube Shore is considered an accessible destination in terms of transport;	Q5 Q6	*** 3.8679	*** 1.2138	*** 1.1017	*** 28,48%
OS6. identifying the general level of attractiveness of the Danube Shore;	Q9	4.3544 ***	0.6011 ***	0.7753 ***	17.81% ***
OS7. identifying the respondents' perception regarding the localities in the Danube Shore that would have the greatest chances to become successful touristic destinations	Q12 Q13	4.6036 ***	0.4194 ***	0.6476* ***	14.07% ***

**Source:** calculations performed by the authors, based on the data collected from the answers to the questionnaire

## CONCLUSION

Tourism is a global driving force that engages different types of industries, both vertically and horizontally. Practicing sustainable tourism, which respects the particularities of the various areas and is friendly to the environment, is the imperative requirement of our days. Tourism is a source of income for those areas that attract grace to natural scenery, anthropogenic sights, leisure time offers, or gastronomic diversity.

The Danube Shore or Gorge, in Romanian Clisura Dunării, as it is known by the locals, can be one of the areas of this type. From the statistical data presented, correlated, and interpreted herein, from the descriptions that appear in the tourism literature, as well as from the results of the questionnaire-based survey, it is crystal clear that the Danube Shore is an area with great touristic potential.

These past years exhibit the development of the area, starting from the modernization of the road along the Gorge, the increase of the number of accommodation units for tourists, the diversification of the leisure offers boat rides, bicycle routes, fishing, hiking, etc. At the same time, it should be mentioned that the quality of the services offered has increased: 4 and 5-star (“daisies”) pensions, with relaxation areas, swimming pools among the most spectacular in Romania, with increasingly diversified and surprising menus served.

According to the results of the survey, the Danube Shore can attract through the beauty of the natural landscape and the anthropogenic sights, being, at the same time, an area recommended for relaxation and recreation. The vast majority of subjects stated that the general level of attractiveness of the area is very high, being a suitable destination for leisure for young people, as well as for couples, families with children and seniors, the respondents saying they intend to return to the area, and also to recommend it to acquaintances.

The increase in the number of tourists in this area means that its potential is not fully exploited, but there is hope in this regard. Also, the fact that the number of overnight stays in the accommodation areas along the Danube Shore, although increasing, is still quite low, proves, once again, that the area is not currently exploited to its true potential.

The town of Orșova, the village of Dubova with the Danube Boilers, the Lacustrine Village at Berzasca, as well as the village of Corinini are considered by the survey subjects to be localities in the Danube Shore that can become successful destinations. But for this to become reality, the collaboration between the private sector and the authorities must be as close as possible.

Therefore, the efforts for the economic relaunch of Caraș-Severin County and, in this case, of the Danube Shore, could start from the very tourism industry, given the multiplier effect on the zonal economy by engaging local resources, by creating new places, and by attracting surplus labour from neighbouring localities, especially in rural areas, as well as by attracting investors who understand that the area offers huge opportunities to implement profitable business ideas.

It becomes clear that both in terms of infrastructure and touristic facilities, serious investment is needed for the Danube Shore area to turn it into a truly successful touristic destination and, in this context, adequate support should come from the public administration, which may finally lead, at the end of the day, to the intended improvements so much needed for the development of entrepreneurial activities in the analyzed area.

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# BIRDWATCHING AS A NEW RESOURCE FOR SERBIAN ECO-TOURISM DEVELOPMENT

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**Abstract:** *The topic of this paper is the branding of the tourist offer of birdwatching in Belgrade. Although it brings significant income to the world, birdwatching in Serbia is still not adequately recognized and there is no developed offer of programs for bird watchers. Serbia has no access to the sea and must rely on eco-tourism, primarily spa and rural tourism. Unlike other types of tourism, birdwatching does not require significant investments in infrastructure. It is practiced by nature lovers of all ages and develops in all areas where birds can be observed, from backyards, parks to hard-to-reach and untouched parts of nature. Promoting this type of hobby can have a significant impact on spending more time in nature, as well as raising awareness of the need to preserve nature. The uniqueness of the birdwatching offer on the territory of the city of Belgrade is reflected in the presence of a large number of different habitats in a relatively small area, so it is possible to see almost in one focus and the White-tailed eagle and the wetland bird.*

**Keywords:** *Birdwatching, Birds, Branding, Tourism, Belgrade, Serbia.*

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## 1. INTRODUCTION

The process of globalization has reduced the distance between tourist destinations and at the same time increased their competitiveness. In order to attract visitors, places compete in building reputation, image, identity and brand. Given that many authors dispute the possibility of building a place brand, we will clarify this term and the procedure for branding locations. A brand is much more than its symbols and the characteristics that distinguish it, it represents the relationship between the customer and the brand (Schultz, Barnes, 1999). The emotions it evokes in the consumer determine its value. Building a distinctive brand identity is the most effective and fastest form of market communication (Ilić et al., 2017). When attracting tourists, destinations, by pointing out their qualities, try to evoke positive associations with consumers (Morgan et al., 2015). The competitiveness of a certain tourist locality is reflected in its potential to attract visitors (Mladenović, Bojičić, 2020). The branding process is based on arousing emotions in consumers. Tens of thousands of tourist locations compete in attracting tourists, so it is necessary to send customers a strong message about their products (Gobe, 2001; Milićević et al., 2019).

Serbia has considerable, diverse resources (Marković et al., 2018), and favorable conditions for the development of eco-tourism (Dašić, Anufriev, 2018). By analyzing the natural resources and eco-potentials of Serbian tourist destinations it is concluded that their attractiveness ensures the possibility for diverse development of eco-tourism (Živković, 2018).

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## **2. RESEARCH METHODOLOGY**

The aim of the paper was devoted to the implementation of the research process in the area of birdwatching by the application of the following methods:

- Basic methods: analysis and synthesis, induction and deduction.
- General scientific methods: descriptive and comparative analysis.

The objectives were focused on diversification of tourist portfolio in Belgrade and other tourist destinations with the purpose of Serbian eco-tourism development.

Starting from the conceptual definition of branding and determination of birdwatching, in order to reach a descriptive level of scientific knowledge, examples of good practice in the world were considered, in order to reach a scientifically acceptable explanation. As, unlike the natural sciences, the social sciences cannot investigate phenomena in experimental conditions, the paper analyses the current situation as well as the possibilities for improvement. Through basic data sources, such as relevant bibliographic units (books, textbooks, magazines, etc.), and modern electronic data sources, analyzes were made that aimed to shed light on a topic that was only partially covered in scientific and professional circles in the Republic of Serbia.

The scientific goal is expressed in the contribution of theoretical knowledge about birdwatching in the area of Belgrade and its surroundings, with special reference to the potential that this insufficiently exploited type of tourism has in our country and the possibilities for its improvement through the destination branding process.

The social goal is to determine the elements of the comparative advantage that Belgrade has concerning other tourist destinations, especially in the segment of birdwatching tourism and ecotourism in order to target improve the tourist presentation of Belgrade.

## **3. BRANDING TOURISM DESTINATIONS**

For most, branding seems simple and comes down to persistently repeating certain, often exaggerated claims about a particular product or service. However, branding is not so simple (Olins, 2003). It sublimates a multitude of different activities that can help achieve the ultimate goal, and that is the desired perception of a particular brand (Okanović et al., 2020). These activities usually include advertising, PR activities, trademark, design, geographical indication of origin, eco-labels, etc. (Štetić, Trišić, 2020).

The Internet has offered types of direct and indirect communication on which an increasing number of consumers rely. When choosing the tourist potential, natural resources of destination users increasingly first check the appearance and prices of accommodation facilities, experiences and evaluations of other users via the Internet (Virijević Jovanović et al., 2020).

Smaller social communities, especially those to which passionate members of certain social segments belong, are particularly coherent. Numerous specialized portals of nature lovers offer a lot of information about tourist sites around the world. The community of ornithologists stands out among them. Thanks to several bird lovers from Serbia, it is possible to permanently monitor the appearance of certain species in localities throughout Serbia, which is the primary motive for birdwatchers. In order to further promote birdwatching, they need to be given more

significant support and not allow this great tourist potential to depend on their enthusiasm. The promotion of this type of tourism does not require large investments in marketing but requires permanent care for all segments that are important for its popularization. The possibility for tourists to see the medieval fortress Kalemegdan or the Millennium Tower Gardoš and more than 200 different species of birds in one view, actually located in the strict city center, is undoubtedly a great tourist potential that must be wisely and carefully branded.

#### 4. BELGRADE AS A TOURIST DESTINATION

Belgrade is located at the crossroads of Eastern and Western Europe leading to the shores of the Aegean Sea, Asia Minor and the Middle East. The city lies on a waterway that connects Western European and Central European countries with the countries of Southeast and Eastern Europe. Ships come to its port from both sides of the waterway: North Sea - Atlantic - Black Sea. Visiting cities is the most dynamic form of travel after cruising, which in the last five years has recorded a spectacular growth of almost 60% (Tourism Development Strategy of the City of Belgrade 2020-2025). Apart from the larger number of tourists that are generated through cruise visits, nautical tourism has great potential for the arrival of tourists. It is estimated that there are over 15 million vessels in Europe, and several million more are produced in the world every year. This is great potential not only for coastal states but also for continental states whose rivers, canals and lakes make an interesting waterway for nautical tourists (Štetić et al., 2014).

Due to its geographical position and connection with the whole of Europe and the Middle East, Belgrade is an excellent city break destination. This type of tourism is one of the most popular types of tourism in the world with almost 50% of tourist trips. In order for a city to be assessed as a good city break destination, it needs to meet several parameters. Easy and affordable accessibility is one of the key factors, the specificity of the location, gastronomic offer, the price of non-board services, security, accommodation prices, cultural and historical heritage, events (festivals, concerts, sports events, etc.), information systems, kindness hosts, attractions, etc. Belgrade meets the vast majority of these parameters at the highest level, especially because city break tourists spend most weekends or extended weekends in their destinations and want to see as much as possible. Some authors distinguish two basic groups of cities break tourists, those for whom the cultural activities of the city are the main motive for visiting a tourist destination and those who want to get to know the atmosphere of the city through local gastronomy, entertainment, nightlife and the like (Štetić et al., 2014). Promoting birdwatching as a specific local tourist offer of Belgrade, not only would complete its rich tourist offer but would also significantly contribute to the promotion of Belgrade as a tourist destination that is attractive to nature lovers. Also, one-sided tourism no longer meets the needs of modern tourists looking for heterogeneity of offers. This is especially true for tourists in urban areas who base their visit not only on vacation but on the entire offer. Diversity of supply generates new jobs, economic progress, regenerates urban pockets, etc.

Belgrade's position on one of the most important rivers in Europe has been an underutilized potential in the past. The reconstruction of fortresses on the banks of the Danube in Serbia certainly strengthens the tourist potential of Serbia and Belgrade, especially bearing in mind that nautical tourism records the highest growth rates of all branches of tourism (Štetić et al., 2014).

As a rare city of two million inhabitants, Belgrade has a wide offer, in addition to monuments, museums and galleries, theaters, congresses and education, restaurants and bars, shopping, sports

and cultural events, music concerts, fairs, unforgettable gastronomic offer and nightlife. make it unique. In a period of just ten years 2009-2019. the number of tourists in Belgrade has doubled. Most tourists come from China, Germany, Turkey, Poland and Croatia, Slovenia and Romania. The largest growth in tourist traffic was achieved by tourists from China, Israel and the USA.

In recent years, Belgrade has become connected with many cities and low-cost airlines, which, along with favorable accommodation prices and non-board services, has further influenced the increase in the number of tourists.

**Table 1.** Trends in the number of tourists in the city Belgrade for the period 2009-2019. years

2009.	2010.	2011.	2012.	2013.	2014.	2015.	2016.	2017.	2018.	2019.
602.034	618.454	619.124	660.674	718.943	753.742	807.607	913.150	1.035.205	1.160.582	1.258.348

**Source:** The Statistical Office of the Republic of Serbia

## 5. NATURAL ASSETS OF BELGRADE

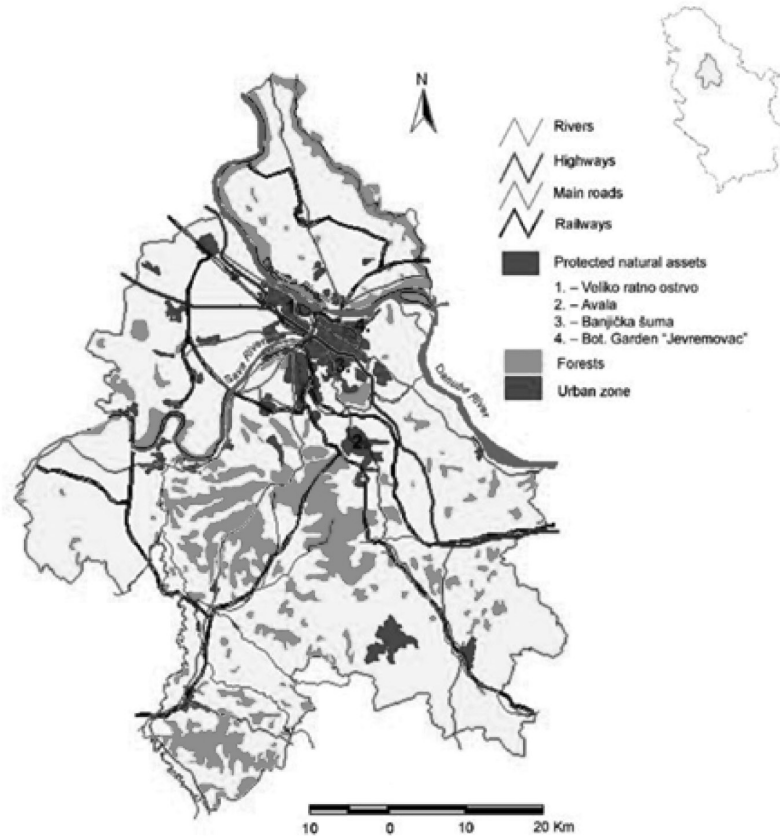
The role and importance of ecotourism is growing. Eco-tourists, more often than other tourists, express their commitment to the preservation of natural values through the transmission of impressions about the destination they visited (Vujović et al., 2012). They more often record and share records from their travels, publish impressions in their blogs, have public appearances, etc. There are many definitions of eco-tourism, according to Todorović and Štetić (2009), eco-tourism is „a form of tourism where ecologically conscious individuals and groups participate, who try to reduce the effects of mass tourism by acting on the environment.”

Although many equate ecotourism with isolated, distant destinations, ecotourism includes parks, green areas, cultural heritage and heritage, and as such can be applied in urban areas (Malinić, 2016), and especially to protected natural assets in cities. Belgrade is located on the border between the Pannonian Plain and the Balkan Peninsula with a mild continental climate that creates geographical conditions for vegetation consisting of a mosaic of grass formations in the north, forest vegetation in the south, oak forests in the west, hydrogenic and chernozem soils in a zone from the Sava and the Danube River towards the south (Durđić et al., 2011).

As birdwatching tourism is a subcategory of nature-based tourism, a significant proportion of tourists engaged in birdwatching are also interested in nature tours. Belgrade can offer a wide and diverse network of protected preserved natural areas on its territory. In the area of Belgrade, protected natural assets are: Landscape of Exceptional Features Avala, Landscape of Exceptional Features Kosmaj, Natural property The Great War Island, Strict nature reserve Forest of Silver linden, Strict nature reserve Forest of Pedunculate oak and Hornbeam near Hajduk fountain, Natural monument „Bajford’s forest”, Natural monument Bojćinska forest, Natural monument Miljkovačka forest, Natural monument ‚Jevremovac’ Botanical Garden, Topčiderski park, Natural monument Akademski park, Natural monument Pionirski park, Natural monument Vine in Zemun, Natural monument Cypress on Dedinje, Natural monument Hrast on Cvetni trg, Natural monument Three Pedunculate oaks Bare, Natural monument Tisa in Požeška street, Natural monument Tisa in Botičeva, Natural monument Cedar tree, Natural monument Trees in Zemun park, Natural monument ‚Mašin majdan’ Senonian shelf, Sea Neogene shelf - Kalemegdan, Natural monument Obrenovački zabran, Natural monument Platan near Miloš konak, Natural monument Platan in Vračar, Natural monument Ginkgo tree, Light profile Chapel in Batajnica, Miocene shelf – Tašmajdan, Nature monument „Zvezdarska šuma”, Nature monument „Kesten na Dorćolu”,



Nature monument „Lalino drvo”, Nature monument „Lipovička šuma - Dugi rt”, Nature monument Two Yew trees of Cathedral Church, Nature monument Two Himalayan pine trees, Nature monument A group of pedunculata oak trees near Jozić hut, Natural monument of groups of trees on Andrićev trg and Kalemegdan and a protected mushroom habitat on Ada Ciganlija.



**Figure 1.** Selected protected natural assets in Belgrade area

**Source:** Durđić et al., 2011

Avala is a mountain located 16.5 kilometers from the center of Belgrade. Although it is a low mountain, it is characterized by a great diversity of flora and fauna (594 plant species have been found so far, which can be systematically classified into two classes, 86 families and 317 genera). In addition to roe deer, rabbit, badger, squirrel, gray down, marten beetle, marten squirrel, partridge, pigeon, quail, forest snipe, fox, common buzzard, harrier, hawk, barn owl, crow, pupa, roe deer, rabbit, pheasant, field partridges, wild boars can also be encountered. Of the 67 bird species seen on Avala, 21 are regular (avalinfo.com). The landscape of the exceptional features of Kosmaj is also rich in flora and fauna. Almost 600 plant species, about a hundred species of birds, 300 edible, medicinal and poisonous fungi, 50 mammals and a large number of insects have been registered on this mountain. Rich forests cover an area of 670 ha, mostly deciduous (oak, Turkey oak, beech and hornbeam) and coniferous trees (pine, fir, spruce and cedar). Veliko Ratno ostrvo includes two river islands (Veliko and Malo ratno ostrvo) which form a unique geological formation on an area of about 211 ha. This protected natural asset is located in the very center of Belgrade, almost at the confluence of the Sava and the Danube. Topčider park is the fifth most visited tourist destination in Belgrade. It spreads over an area of about 13 hectares, it used to be a residential park, and today it attracts mostly domestic visitors (Lakićević, Srđević, 2011). Topčider Park is adorned with a large number of plants (78 species) which is a consequence of the connection with the forest Košutnjak, of which it is an integral part (Stavretović et al., 2011). The Nature



Monument Zvezdarska Šuma represents an important part of the city's ecosystem and one of the favorite picnic spots of its citizens. So far, 136 plant species have been recorded in its area, of which rare, relict, endemic and endangered tree species stand out (white ash, white poplar, royal jelly, cherry, birch, embroidery, elm, bear hazel and walnut. This green surface is a typical urban biotope where 48 species of birds of different protection status can be found (zelenilo.rs).

## 6. BIRDWATCHING

Birdwatching is a sustainable source of long-term and reliable financing (Kerlinger, 1992), which can significantly contribute to sustainable nature management (hunting and fishing), preservation of local customs and culture. Birdwatching involves observing different species of birds in their natural habitat, either with the naked eye or with the help of optical aids and photographic equipment. Although greater interest in wild birds was expressed around 1880 in Great Britain, and later in the Scandinavian countries, the Netherlands, Germany, Switzerland and others. until the beginning of the 20th century, this scientific and sports activity did not exist. Interest in birds was predominantly associated with hunting (Rajević et al., 2016).

Birdwatching is the fastest growing outdoor activity in America, bringing together about 20% of U.S. citizens. Among wildlife lovers in the United States, birds attract as much as 72% of this group of tourists. According to the latest available National Report (National Survey of Fishing, Hunting, and Wildlife-Associated), 45.1 million Americans engage in birdwatching, spending an average of 96 days a year observing birds, of which 16 days were away from home (National Survey of Fishing Hunting, and Wildlife-Associated, 2016). In Great Britain, as much as 500 million euros are spent annually on this activity, which surpassed fishing as a hobby, which has been number one for decades. The UK is the second-largest market for birdwatching tourism in the world, with around six million people regularly engaged in bird watching, it is also the seat of the largest organization for the protection of birds in Europe (Royal Society for the Protection of Birds) with more than a million members (White, 2019). In proportion to the population, the largest association of birdwatchers is in the Netherlands. Tourists who observe birds do so throughout the year and are directed mainly towards facilities of smaller accommodation capacity and authentic gastronomic offer.

Interest in bird biodiversity is wide (Kolstoe, Cameron, 2017), there are several different groups among bird observers, depending on the nature of their observation. Twitchers have a focus on observing as many birds as possible and are equipped with their equipment (telescopes, binoculars, etc.). They are willing to cover great distances to see rare species that they can put on their lists. Casual twitchers represent almost a third of this type of tourists, they are not strictly dedicated to birdwatching, but the primary goal of their trip is interest in nature and activities in nature. Birdwatching enthusiasts make up the largest segment of bird watchers and although they are also interested in other activities (especially cultural) they are the biggest consumers among this group of tourists. They respond very favorably to all marketing offers on the market, especially those that include activities related to local cultural heritage (Birdwatching tourism from Europe, 2017).

Urban bird watching also has its admirers, they are not attracted by hours of waiting in nature to see rare birds, but they tend to observe birds as urban guerrillas, where they climb walls, run railways and streets carrying bird watching equipment that is smaller and more modest. (Hinchliffe, 2010).

Belgrade provides opportunities for active observation of all these groups.

## 7. BIRDWATCHING IN SERBIA

Birds are the most diverse class of terrestrial vertebrates with between 10 and 11 thousand species known so far (Stanković, 2021). So far, 352 bird species have been recorded in the Republic of Serbia (Šćiban et al., 2015), of which 333 species can be seen regularly. Five species that are among the endangered species: Ferruginous Duck (*Aythya nyroca*), Imperial Eagle (*Aquila heliaca*), Lesser Kestrel (*Falco naumanni*), Great Bustard (*Otis tarda*) and Corncrake (*Crex crex*). They cause special attention among the birds in the sky of Serbia: Pygmy Cormorant (*Microcarbo pygmeus*), Black Stork (*Ciconia nigra*), Glossy Ibis (*Plegadis falcinellus*), Spoonbill (*Plateinae*), Griffon Vulture (*Gyps fulvus*), Saker Falcon (*Falco cherrug*), Common Crane (*Grus grus*) and Collared Flycatcher (*Ficedula albicollis*).

The most attractive locations for birdwatching in Serbia are Ludaš Lake, Gornje Podunavlje, Slano Kopovo, Great Bustard Pastures, Rusanda Lake, Carska Bara, Kikinda, Tamiš River floodplain, Fruška Gora, Zasavica, Deliblato Sands, Djerdap Gorge, Ovčar-Kablar Gorge, Uvac Gorge, Mountain Maljen, Fantast Castle, Bečej Fishponds, Gruža Lake (Birdwatch Serbia).



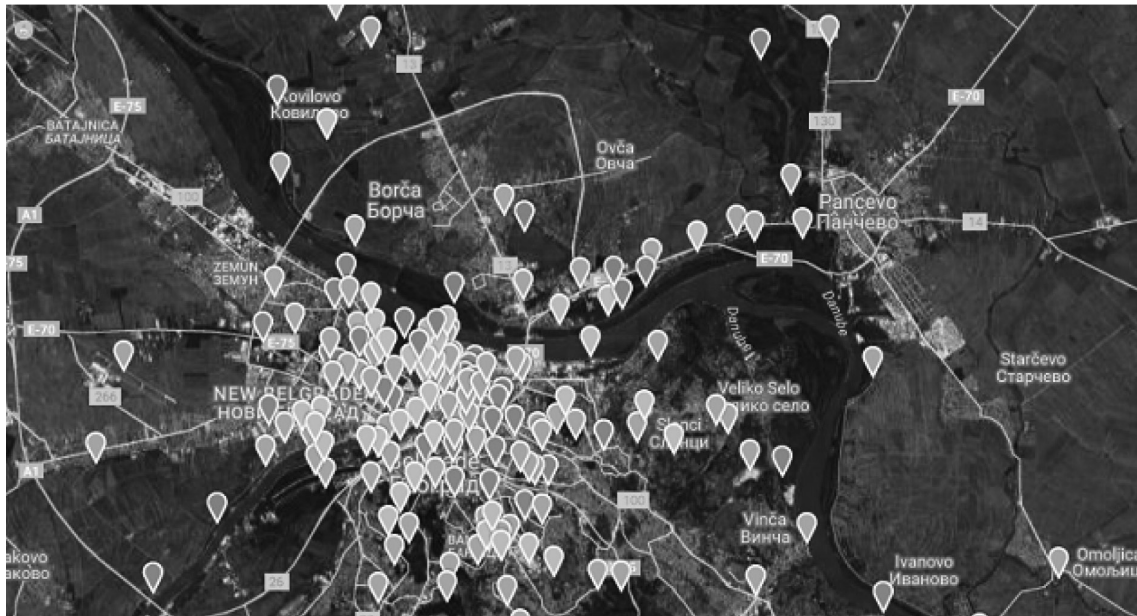
Figure 2. Birding areas in Serbia

Source: Birdwatch Serbia

## 8. BIRDWATCHING IN BELGRADE

Although Belgrade cannot compete with the most attractive birdwatching locations such as Madeira, Portugal, Loop Head, Ireland, Nin, Croatia, North Yorkshire, the UK, Extremadura, Spain (Best Bird Watching Destinations in Europe, 2021), Belgrade is a rich historical heritage, as rarely a city of two million in Europe is home to a large number of birds. Most bird species do not tolerate urban habitat (Bonier, Martin, Wingfield, 2007), which is why Belgrade is a real rarity among

urban metropolises. One of the many sites that recommend Belgrade, as an unavoidable destination for all bird lovers, states in its recommendation that it can confirm with certainty that there are more than 350 species of birds in Belgrade in Serbia, while highly urbanized urban areas of Belgrade keep almost 100 birds, on the periphery has more than 200 species (Simić, 2017). Rare benefits thanks to which Belgrade can offer this type of tourists such a large number of birds, it is necessary to brand in order for tourists around the world to be familiar with its offer.



**Figure 3.** Hotspot map of Belgrade  
Source: Simić, 2017

Different conditions have influenced the fact that about 210 different species of birds can be seen in the Belgrade sky. The biggest reason is the geographical position of Belgrade, the river flows are corridors for the migration of birds, two large rivers, the Danube and the Sava. Very close to the central city center there are numerous river branches, ponds and flood zones that are a suitable habitat for many bird species.



**Figure 4.** Top 5 places to watch birds in Belgrade  
Source: Simić, 2017

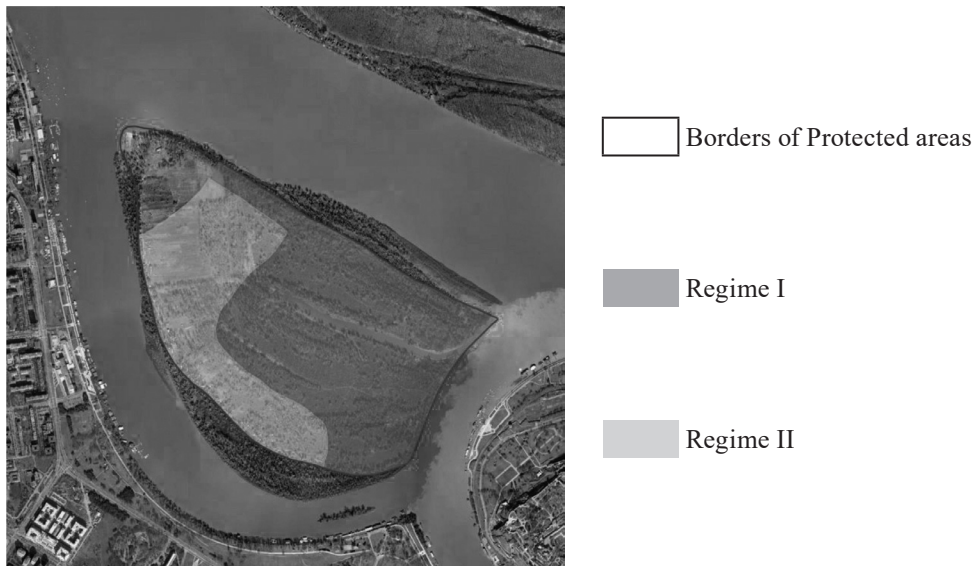
Numerous animal species have adapted to human proximity (Møller, 2009), and show clear cognitive differences relative to the same species living in rural areas. The urban structure of habitats, as well as their proximity, influences the easier availability of food through anthropogenic factors, which significantly influences the appearance of predatory bird species that inhabit cities in search of more abundant prey (Chace, Walsh, 2006). For example, the panorama of Belgrade is often adorned with a white-tailed eagle that flies over its roofs in search of food.

Bird watchers in urban areas are also attracted by the fact that some of the wild birds that live in cities change their song, primarily due to the higher noise level, some of them sing in a higher key (Paunović, 2013).

The confluence of the Sava and the Danube has 167 species of birds, of which bird watchers noticed 104 species according to the last check-in.

## 9. VELIKO RATNO OSTRVO - GREAT WAR ISLAND

The landscape of exceptional features of the Great War Island is the point of the greatest biodiversity of Belgrade. At the confluence of the Sava and the Danube, between the Belgrade fortress and the Zemun medieval fortress, there is a green oasis that has the diversity and richness of the animal world, characteristic of the flood zones of the Danube and the Sava. In 2005, the Assembly of the City of Belgrade passed the Decision on placing the natural asset „Veliko ratno ostrvo” under protection („Official Gazette of the City of Belgrade”, No. 7/2005) declaring it a protected natural asset. The goal of that solution is to preserve picturesque landscape features and undisturbed primary landscape values which are of exceptional importance for the preservation of habitats of natural rarities, rare and endangered wetland birds, as well as for the protection of a representative morphological and geological formation - a river island.



**Figure 5.** Borders of Protected areas Veliko ratno ostrvo

**Source:** Institute for Nature Protection (Zavod za zaštitu prirode), 2012

Thanks to the well-preserved aquatic and wetland vegetation, a large number of migratory and resident birds are present, where more than 5,000 different bird species can be observed in the winter (Veselinović et al., 2006).



On this island, which is located in the city center, you can meet 163 species, classified into 46 families and 16 orders (Management Plan of the Landscape of Outstanding Features „Great War Island” 2011-2020). On an area covering almost 170 ha, three zones with different protection regimes have been identified: Nature protection zone - protection regime of the first degree which has the character of a special nature reserve (coast, forest complex and wetlands within the island); Recreation zone - protection regime of the II degree (inner parts of the Great War Island) and Tourism zone - protection regime of the III degree which includes (Lido beach with planned expansion).

The proximity of this protected area to the city center enables observation that does not require any equipment, not even going to nature, but more than 90 species of birds can be observed from the Belgrade promenades (Zemun Quay or Dorcol Promenade).

The eBird portal (<https://ebird.org>) is one of the most relevant real-time birdwatching databases on bird distribution and abundance and on which passionate birdwatching enthusiasts confirm the current presence of bird species at birdwatching sites, in January 2021 confirmed the current presence of 141 species in Belgrade (out of 288 registered): Tawny Owl (*Strix aluco*), Labud grbac (*Cygnus olor*), Black swan (*Cygnus atratus*), Northern shoveler (*Anas clypeata*), Common pochard (*Aythya ferina*), Ferruginous duck (*Aythya nyroca*), Eurasian Nuthatch (*Sitta europaea*), Velvet Scoter (*Melanitta fusca*), Black-necked Grebe (*Podiceps nigricollis*), European robin (*Erithacus rubecula*), Eastern Olivaceous Warbler (Eastern Olivaceous Warbler), Song thrush (*Turdus philomelos*), Eurasian wryneck (*Jynx torquilla*), European turtle dove (*Streptopelia turtur*), Black Woodpecker (*Dryocopus martius*), Wood Warbler (*Phylloscopus sibilatrix*), Common Chiffchaff (*Phylloscopus collybita*), Mistle Thrush (*Turdus viscivorus*), Greater white-fronted Goose (*Anser albifrons*), Marsh Warbler (*Acrocephalus palustris*), Canada Goose (*Branta canadensis*), Greater Scaup (*Aythya marila*), European pied flycatcher (*Ficedula hypoleuca*), River Warbler (*Locustella fluviatilis*), Savi's Warbler (*Locustella luscinioides*), Short-toed Treecreeper (*Certhia brachydactyla*), Black Stork (*Ciconia nigra*), Spotted Woodpecker (*Leiopicus medius*), Collared Flycatcher (*Ficedula albicollis*), Peregrine Falcon (*Falco peregrinus*), Cranes (*Gruidae*), Garganey (*Anas querquedula*), Dunnock (*Prunella modularis*), Long-tailed Duck (*Clangula hyemalis*), Common Eider (*Somateria mollissima*), Common Shelduck (*Tadorna tadorna*), Oystercatchers (*Haematopodidae*), Black kite (*Milvus migrans*), Ruddy Shelduck (*Tadorna ferruginea*), Caspian tern (*Hydroprogne caspia*), Eurasian skylark (*Alauda arvensis*), Mute swan (*Cygnus olor*), Black-headed Gull (*Larus ridibundus*), Yellow-legged Gull (*Larus michahellis*), Pygmy Cormorant (*Phalacrocorax pygmeus*), Great Cormorant (*Phalacrocorax carbo*), Lesser Black-backed Gull (*Larus fuscus*), European herring gull (*Larus argentatus*), Black redstart (*Phoenicurus ochruros*), European goldfinch (*Carduelis Carduelis*), Mallard (*Anas platyrhynchos*), Caspian gull (*Larus cachinnans*), Common gull (*Larus Laridae Linnaeus*), Eurasian Jackdaw (*Corvus monedula*), Hooded crow (*Corvus cornix*), Grey Wagtail (*Motacilla cinerea*), Common Wood Pigeon (*Columba Columbidae Linnaeus*), Common wood pigeon (*Columba palumbus*), Great Black-backed Gull (*Larus marinus Linnaeus*), Grey Heron (*Ardea cinerea*), Eurasian sparrowhawk (*Accipiter nisus*), Eurasian magpie (*Pica pica*), Rook (*Corvus frugilegus*), Great tit (*Parus major*), Eurasian tree sparrow (*Passer montanus*), Common gull (*Larus canus*), Common Pheasant (*Phasianus colchicus*), Common moorhen (*Gallinula chloropus*), Long-tailed tit (*Aegithalos caudatus*), Eurasian wren (*Troglodytes troglodytes*), House sparrow (*Passer domesticus*), White wagtail (*Motacilla alba*), Old world warbler sp. (*Passeriformes* sp.), Loons (*Gavia Gaviidae Forster*), Great black-backed gull (*Larus marinus*), African Stonechat (*Saxicola torquata*), Eurasian collared dove (*Streptopelia decaocto*), Eurasian hobby

(*Falco subbuteo*), Red-backed shrike (*Lanius collurio*), Barn swallow (*Hirundo rustica*), Common swift (*Apus apus*), Little ringed plover (*Charadrius dubius*), Common sandpiper (*Actitis hypoleucos*), Common Tern (*Sterna hirundo*), Little egret (*Ergetta Garzetta*), Common kestrel (*Falco tinnunculus*), Common whitethroat (*Sylvia communis*), Common Starling Catalan (*Sturnus vulgaris*), Common nightingale (*Luscinia megarhynchos*), Eurasian blackcap (*Sylvia atricapilla*), Lesser Whitethroat (*Sylvia curruca*), Common redstart (*Phoenicurus phoenicurus*), Finch (*Fringillidae*), European serin (*Serinus serinus*), Black-crowned night heron (*Nycticorax nycticorax*), Old World orioles (*Oriolidae*), Common house martin (*Delichon urbicum*), Black-winged stilt (*Himantopus himantopus*), Wood sandpiper (*Tringa glareola*), Bee-eater (*Meropidae*), Whinchat (*Saxicola rubetra*), Western yellow wagtail (*Motacilla flava*), European greenfinch (*Chloris chloris*), White-tailed eagle (*Haliaeetus albicilla*), Tree pipit (*Anthus trivialis*), Eurasian hoopoe (*Upupa epops*), White stork (*Ciconia ciconia*), Hawfinch (*Coccothraustes coccothraustes*), Common buzzard (*Buteo buteo*), Green sandpiper (*Tringa ochropus*), Common chiffchaff (*Phylloscopus collybita*), European robin (*Erithacus rubecula*), Coal Tit (*Parus Peripatus ater*), Syrian woodpecker (*Dendrocopos syriacus*), Long-eared owl (*Asio otus*), Greylag goose (*Anser*), Eurasian blue tit (*Cyanistes caeruleus*), Common reed bunting (*Emberiza schoeniclus*), Eurasian Wigeon Catalan (*Anas penelope*), Northern goshawk (*Accipiter gentilis*), Whiskered tern (*Chlidonias hybrida*), Common kingfisher (*Alcedo atthis*), Fieldfare (*Turdus pilaris*), Larus (*Larinae sp.*), Eurasian siskin (*Spinus spinus*), Eurasian coot (*Fulica atra*), Eurasian jay (*Garrulus glandarius*), Willow Warbler (*Phylloscopus trochilus*), Great Egret (*Egretta alba*), Squacco heron (*Ardeola ralloides*), Great Spotted Woodpecker (*Dendrocopos major*), Common cuckoo (*Cuculus canorus*), Lesser grey shrike (*Lanius minor*), House sparrow (*Passer domesticus*), Tawny Pipit (*Anthus campestris*), Great reed warbler (*Acrocephalus arundinaceus*), Red-breasted merganser (*Mergus serrator*), Great crested grebe (*Podiceps cristatus*), Lesser white-fronted goose (*Anser erythropus*), Common blackbird (*Turdus merula*), Little grebe (*Tachybaptus ruficollis*), Common chiffchaff (*Phylloscopus collybita*), Western marsh harrier (*Circus aeruginosus*), Hen harrier (*Circus cyaneus*), Eurasian teal (*Anas crecca*), Gadwall (*Anas strepera*), Red-breasted merganser (*Mergus serrator*), European green woodpecker (*Picus viridis*), Spotted Flycatcher (*Muscicapa striata*), Common Merganser (*Mergus Merganser*), Northern Wheatear (*Oenanthe oenanthe*), Pallas's Gull (*Ichthyaetus ichthyaetus*), Common Goldeneye (*Bucephala clangula*) (eBird, Veliko Ratno Ostrvo).

Fans of bird watching as top hotspots for birdwatching in Belgrade list the following locations: Dorćol quay (143 currently confirmed bird species), Veliko ratno ostrvo (141), Reva lake (135), Kotež floodplain (135), Galovica (131), Veliko blato lake NR / Mika Alas fish farm (127), Krnjača (120), Jakovački ključ/Surčin (116), Čapljin (107), Bojčinska šuma (106), Ada Huja (104), Guberevačke šume (103), Ada Ciganlija (96), Beli potok (91), Kalemegdan (89), Savski nasip/blokovi 45,44,70, 70a (88), Vinča bara (87), Crvenka (86), Topčiderski park (82), Zvezdarska šuma (82), Avala (78).

BirdLife International, the world's umbrella organization of ornithologists, based on biogeographical and ecological conditions, assesses the areas according to their international importance for birds, their entry into international registers, and the implementation of adequate protection measures (Puzović, Grubač, 1998). Areas that meet these criteria are defined as International Important Bird Areas (IBAs). On the territory of Belgrade, it is the confluence of the Sava and the Danube, with the following points: Veliko ratno ostrvo, Kotež floodplain, Reva lake, Veliko blato lake NR / Mika Alas fish farm, Krnjača, Ada Huja, Čapljin, Vinča bara and Crvenka.



The special feature of Belgrade's offer is complemented by the multitude of birdwatching sites located near Belgrade, which offer a different atmosphere of bird watching with more direct interaction with nature. Among these locations, the area of Deliblato Sands stands out where some of the rare species can be observed, such as Imperial eagle (*Aquila heliaca*), Corncrake (*Crex crex*) and Saker falcon (*Falco cherrug*) (Mitchel, 2013).

## 10. CONCLUSION

It is necessary to train and license tourist guides who specialize in bird watching, to encourage travel agencies to get involved in promoting this type of tourism. Tourist organizations, as an invaluable link between tourists, accommodation facilities and local tourist organizations, when we talk about this branch of tourism, have an incomparably easier job when it comes to promoting and attracting tourists. Primarily because bird watchers are predominantly members of local organizations for bird watching, nature conservation and the like. Therefore, it is incomparably easier to target and focus on the promotion of such a tourist offer.

The tourist potential for bird watching on the territory of Belgrade is great but insufficiently used. It seems that it is necessary to primarily brand birdwatching as a hobby in Serbia, especially among the leaders of local communities, travel agencies, owners of tourist facilities, etc. to recognize the opportunities that this type of tourism can provide them. This would achieve the necessary synergy, and provide more significant assistance to birdwatching enthusiasts who are the best promoters of this hobby, but also of our natural beauties.

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# ASSESSMENT OF THE VALUE OF PROTECTED AREAS IN SERBIA, ON THE EXAMPLE OF APPLICATION OF PA-BAT METHOD AND TOURISM DEVELOPMENT

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**Abstract:** *This chapter discusses the importance of evaluating ecosystem services by showcasing the Protected Areas Benefit Assessment Tool (PA-BAT), which has been applied in seven Dinaric Arc countries, and has gathered information on a range of values and benefits that protected areas provide. The PA-BAT results presented here include data for protected areas in Serbia (national parks Tara, Djerdap, Fruška gora and Kopaonik, Landscape of exceptional features of Vlasina and Special Nature Reserve of the Upper Danube) and economic assessment of 22 protected area values with special reference to tourism and recreation. This chapter gives a brief overview of other analyzes and initiatives for assessing the value of ecosystem services related to protected areas in Serbia. This chapter aims to contribute to a better understanding and promotion of the concept of ecosystem services in tourism and other sectors using PA-BAT and other methods of evaluation of protected area services.*

**Keywords:** *Protected Areas Benefit Assessment Tool (PA-BAT), Serbia, Ecosystem services, Tourism.*

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## 1. INTRODUCTION

Economic assessment of the value of protected areas is of strategic importance for the local and national economy and especially for the development of tourism. Evaluation of protected areas and mapping of provided values, based on effective participation of decision makers and other stakeholders, are part of a long-term process that leads to greater interest for conservation and sustainable investments in natural values. Of particular importance is the involvement of various stakeholders in decision-making in natural resource management (Gbadegehin & Ayileka, 2000; Rastogi et al., 2010; Lakićević, 2013; Dobričić & Josimović, 2018), as well as the involvement of ecosystem services and the results of their evaluation in other sectoral areas, one of which is tourism (Zingstra et al., 2009; Stojkov & Dobričić, 2012; Dobričić, 2012a; Woodruff & Ben Dor, 2016; Dobričić et al., 2017). Ecosystem services are essentially the benefits that human society receives from nature (Millennium Ecosystem Assessment, 2005). Unfortunately, the population living in protected areas is often unaware of the benefits that ecosystem services bring to them, much less its economic value (Costanza, 1997). In order to overcome this problem, methods based on the participation of local communities are being developed, such as the Protected Areas Benefit Assessment Tool (PA-BAT). The development of tourism and its activities largely depends on ecosystem services (Pueyo-Ros, 2018), while the degradation and depletion of ecosystem services and resources over time can jeopardize the ecological sustainability of the tourism sector itself (Simmons, 2013).

To date, numerous evaluations of protected areas have been conducted (WWF, 2011; Spurgeon et al., 2009; UNDP, 2011; Flores & Selimi, 2013; Flores & Ivicic, 2011; Emerton, 2009; UNEP,

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2016), which have improved our knowledge on natural values and have contributed to better management of protected areas. So far, several assessments of ecosystem values have been done in protected areas in Serbia such as the Special Nature Reserve Koviljsko-Petrovaradinski rit, Bosutske šume, Djerdap National Park or the Special Nature Reserve Zasavica. The overview of the results of those assessments is given in a separate part of this chapter. The evaluation of protected areas, through the evaluation of ecosystem services, also contributes to the implementation of the Strategic Plan for Biodiversity 2011-2020 and the achievement of Aichi goals by raising awareness of the value of biodiversity and by providing sustainable solutions for its use and conservation. (Secretariat of the Convention on Biological Diversity, 2010). In addition, ecosystem services have a significant role in achieving the global Sustainable development goals, especially goal 15, which refers to the sustainable use of terrestrial ecosystems and stopping the loss of biodiversity (UN, 2015).

In this chapter, special attention is given to the application of protected areas benefit assessment tool (PA-BAT) for the assessment of the value of protected areas, i.e. the methodology developed by Dudley & Stolton (2009). To date, the PA-BAT methodology has been applied to 58 protected nature areas in seven Dinaric Arc countries - Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Macedonia, Albania and Serbia (Ivanić, 2017; Ivanić et al., 2017; Sekulić et al., 2017; Sekulić et al., 2018). This chapter presents the results of the PA-BAT assessment conducted in six protected areas in Serbia (Tara, Djerdap, Fruška gora and Kopaonik National Parks, Vlasina Landscape of Outstanding Features and Special Nature Reserve Gornje Podunavlje), as well as the results of the economic assessment of 22 values of the protected areas, with special reference to tourism as one of the ecosystem values of protected areas. This chapter aims to contribute to a better understanding and promotion of the concept of ecosystem services in the development of tourism and other sectors by applying the PA-BAT methodology for the evaluation of protected areas.

## **2. OVERVIEW OF THE VALUE ASSESSMENTS OF PROTECTED AREAS IN SERBIA**

So far, several assessments of the value of protected areas in Serbia have been conducted with different methodologies applied. The subjects of the assessment were the Djerdap National Park in 2014, the Koviljsko-Petrovaradinski rit Special Nature Reserve in 2015 and the Bosut-Morović forests in 2018. Assessments of the mentioned protected areas were conducted by the Institute for Nature Protection of Serbia and PE National Park Djerdap (for NP Djerdap), as well as the Provincial Institute for Nature Protection of Serbia (for SRP Koviljsko-Petrovaradinski rit and Bosutske šume).

The assessment of the Djerdap National Park identified all four common categories of ecosystem services (providing, regulating, cultural and supporting). Two dominant ecosystems have been identified in the park area - forest and aquatic (Javno preduzeće Nacionalni park Đerdap & Zavod za zaštitu prirode Srbije, 2014). Great potential for development of specific types of tourism based on natural predispositions and values of the Djerdap area (nautical, ethno and ecotourism, hunting and fishing, excursion, historical, wine, gastronomic, geotourism, photo safaris, etc.) has been indicated. By reviewing the state of ecosystems and the ways and scope of using their services, it was concluded that the capacities of natural capital are still preserved and that they have the potential for development, primarily of local communities. Having in mind the present predominant types of ecosystem services and the type of economic and other activities in the subject area, interested groups and sectors have been identified that benefit from these resources



and services, namely: economic sector (public, state and private companies), local governments (local communities and municipalities), non-governmental sector (non-governmental organizations, groups of citizens, local initiatives, etc.) and the international organizations and initiatives.

The evaluation of the Koviljsko-Petrovaradinski Rit Special Nature Reserve was conducted by the Provincial Institute for Nature Protection, Novi Sad, in 2015 with the support of the Global Environment Facility (GEF) and the United Nations Development Program (UNDP). The economic value of each individual ecosystem service of the SRP Koviljsko - petrovaradinski rit was made by the use of specific methodology, in order to obtain the most objective assessment. Field data are combined with literary and official data, but also with informal information, as needed (Provincial Institute for Nature Protection, 2015). Detailed economic assessment was performed for the following ecosystem services: cattle grazing; commercial fishing; groundwater; forestry; reed exploitation; air purification - forest ecosystems, water and vegetation as regulators; water purification; carbon-forest bonding; carbon sequestration - soil; flood mitigation; pollination; control of unwanted rodents by birds; control of undesirable rodents by carnivores; hunting tourism; recreational fishing; tourism; aesthetic values; habitat revitalization projects. The economic assessment showed that the highest value in this SRP is the ecosystem service is „flood mitigation” (1,350,867,714.00 dinars) while the lowest economic value of the ecosystem service is „tourism” (38,000.00 dinars), which shows that the tourism utilization of the SRP is at a very low level. This also showed that the ecosystem service „forestry”, which has traditionally been considered the most cost-effective value of the SRP, is far below the service of „flood mitigation”. The obtained financial indicators are especially important for making decisions on the management of SRP Koviljsko - Petrovaradinski rit, and in general for protected areas of Serbia.

**Table 1.** Ecosystem service in Special nature reserve Koviljsko-petrovaradinski rit

Type of service	Subclass	Value (in RSD)
<b>Provisioning</b>	Grazing	60.816.700,00
	Commercial fishing	31.501.141,00
	Underground waters	131.745.076,00
	Forestry	123.786.642,00
	Reed exploitation	240.000,00
<b>Regulating</b>	Air purification – forest ecosystems, water and vegetation as regulators	74.990.349,9
	Water purification	397.800.000,00
	Carbon sequestration- forests	3.533.934,00
	Carbon sequestration- soil	129.422.597,00
	Flood mitigation	1.350.867.714,00
	Pollination	43.015.811,00
	Control of rodents by birds	515.016,00
	Control of rodents by carnivores	714.546,00
<b>Cultural</b>	Hunting tourism	159.150,00
	Recreational fishing	821.464,70
	Tourism	38.000,00
	Esthetic value	3.509.356,00
<b>Supporting</b>	Habitat revitalization projects	2.320.778,00
<b>Total</b>		2.355.798.276,00

**Source:** Pokrajinski zavod za zaštitu prirode (2015:53)

The analysis of stakeholders (individual, groups or organizations that are in any way interested in the implementation of a particular strategy) was focused on the relationship or impact on the protection of the SRP Koviljsko-Petrovaradinski rit. Thus, several groups of stakeholders which are inter-

ested in the conservation of the area and can influence the implementation of conservation measures have been identified, including companies, institutions and other organized groups. These are land owners, managers, local users, state institutions, local self-government, media and NGOs. Part of the stakeholders was actively engaged and participated in the implementation of conservation measures, while other part was passively engaged, meaning that conservation has affected them.

The case study for Bosut forests covers four basic ecosystem services, which the subject area provides, namely: wood production, flood mitigation, food production (pork) and biodiversity. Flood safety, sustainability of income in forestry, nature conservation and well-being of the local population depend on the above four ecosystem services (Pokrajinski zavod za zaštitu prirode, 2018). As part of this assessment, two round tables were held with the participation of key sectors and users of the area in the field of forestry, water management, traditional livestock and nature protection, to recognize the needs of users and improve cooperation in the use and management of Bosut forests. The assessment aimed to show the possibility of increasing of benefits from ecosystems (quantitatively and qualitatively), by introducing integrated planning and multipurpose use of the area. The two basic recommendations derived from the Study are that Bosut forests should be used as forest retention on up to 10,000 ha and that the number of pigs in forests should be systematically increased to 5000-7000. Both of these changes should be implemented in a planned manner, with prior consultation with the main users (forestry, water management, traditional livestock and nature protection), as well as with other sectors (hunting, fishing, agriculture, infrastructure, etc.). In relation to tourism, the tourist offer of Bosut forests, which is poorly developed and related to the natural environment (hunting, fishing, traditional products and eco-tourism), could be significantly improved with an adequate strategy.

In 2019 the project EcoWet - Assessment of wetland ecosystem services in the cross-border area Croatia-Serbia was completed. The project aimed to contribute to the protection and sustainable use of wetland ecosystems and their services (Pokret Gorana Sremske Mitrovice, 2019). Wetland ecosystems have multiple significance for humans, from water purification, flood risk reduction, climate regulation to providing opportunities for various types of recreation. This was the key motive for the Nature Conservation Movement of Sremska Mitrovica, the Organization for Nature and Environmental Protection Zeleni Osijek, the Provincial Institute for Nature Protection and the Public Institution Agency for Management of Protected Natural Values in Osijek-Baranja County to launch the EcoWet project. The pilot areas where the research was conducted were: Bara Trskovača, Bosutske šume and SRP Zasavica (in Serbia); and nature reserve Podpanj, ponds Donji Miholjac, Northern Croatian Danube region and Spačva basin (in Croatia). Main outputs of the projects are: guidelines for the assessment of ecosystem services, a plan for the improvement of key services of wetland ecosystems in the project area, system for natural wastewater treatment at the visitor center of the Special Nature Reserve Zasavica and revitalized Ilovac canal in Zlatna Greda near Osijek.

### **3. PROTECTED AREAS IN SERBIA WHERE THE PA-BAT METHOD WAS APPLIED**

The assessment of the value of protected areas in Serbia using the PA-BAT methodology was conducted in six protected nature areas from different geographical parts of Serbia: Tara, Djerdap, Fruška gora and Kopaonik National Parks, Vlasina Landscape of Outstanding Features and Gornje Podunavlje Special Nature Reserve (Sekulic et al., 2018). The total area of protected areas in which the PA-BAT methodology has been applied is 160,000 ha, which is 35% of the total area of all protected areas in Serbia.

Tara National Park is one of a total of five national parks in Serbia (next to Djerdap, Fruška gora, Kopaonik and Shar Mountain) which is protected by law (Zakon o nacionalnim parkovima, 2015-2018). It was first declared a national park in 1981, and is located in the western part of Serbia, on the border with Bosnia and Herzegovina. It covers parts of the territory of one municipality - Bajina Basta, in 10 cadastral municipalities, with a total area of 24,991.82 ha. This national park is managed by the Public Company „Tara National Park” from Bajina Basta. Tara National Park is part of the wider Tourist Region „Western Serbia” (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016). Djerdap National Park is located in the northeastern part of the Republic of Serbia, on the border with Romania. It was declared a national park in 1974 and is located on the territory of three municipalities (Golubac, Majdanpek and Kladovo), within 17 cadastral municipalities, total area 63,786.48 ha. This national park is managed by the Public Company „Djerdap National Park” from Donji Milanovac. The Djerdap National Park is part of the tourist destination „Donje Podunavlje” (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016).

Fruška gora National Park is located in the northern part of Serbia in the Autonomous Province of Vojvodina. It was declared a national park in 1960 and is located on the territory of eight municipalities (Novi Sad - Petrovaradin, Sremska Mitrovica, Backa Palanka, Beocin, Indjija, Irig, Sremski Karlovci and Sid) and 45 cadastral municipalities, total area 26.672 ha. This national park is managed by the Public Company „National Park Fruška gora” from Sremska Kamenica. Fruška gora National Park is part of the tourist destination „Novi Sad, Fruška gora and Sremski Karlovci” (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016). Kopaonik National Park is located in the southern part of Serbia. It was declared a national park in 1981, and is located on the territory of two municipalities (Raška and Brus), within 16 cadastral municipalities, with a total area of 11,969.04 ha. This national park is managed by the Public Company „Kopaonik National Park” with its headquarters on Kopaonik. The Kopaonik National Park is part of the tourist destination „Kopaonik” (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016).

The Landscape of exceptional features Vlasina is located in the southeastern part of Serbia. It was declared by the Government as a natural area of exceptional importance of the first category of protection (Decree on the proclamation of the Landscape of Exceptional Features of Vlasina, 2018), and it has been under protection since 2006. It is located on the territory of two municipalities (Surdulica and Crna Trava), in nine cadastral municipalities, with a total area of 13,329.84 ha. The landscape of exceptional features is managed by the Tourist Organization of the Municipality of Surdulica, from Surdulica. The area of exceptional features of Vlasina is part of the wider tourist destination „PIO Vlasina, Vranje and Vranjska Banja” (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016). The special nature reserve Gornje Podunavlje is located in the western part of Vojvodina. It was declared by the Government as a natural area of exceptional importance of the first category of protection (Decree on the protection of the Special Nature Reserve of the Upper Danube, 2001-2009), with a total area of 19605 ha and has been under protection since 2001. It covers the left bank of the Danube River from Bogojevo (1367 + 500 km) to the border with the Republic of Hungary (1433 km). The special nature reserve is managed by the Public Company „Vojvodinašume” from Petrovaradin. The Special Nature Reserve of the Upper Danube is part of the tourist destination „Upper Danube with Bačka canals” (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016).

**Table 2.** Assessed protected areas

Protected Area	Year of protection	Area (ha)	IUCN* management category	Manager
National Park Fruška Gora	1960	26672	II	Public Enterprise NP Fruška gora
National Park Đerdap	1974	63786	II/UNESCO Global Geopark	Public Enterprise NP Đerdap
National Park Tara	1981	24991	II	Public Enterprise NP Tara
National Park Kopaonik	1986	11969	II	Public Enterprise NP Kopaonik
Landscape of Exceptional Features Vlasina	2006	13329	V/Ramsar site	Tourism Organization Surdulica
Special Nature Reserve Gornje podunavlje	2001	19605	IV/UNESCO MaB/ Ramsar site	Public Enterprise Vojvodinašume

\* Categorization of protected areas in Serbia has not been harmonized with the IUCN categorization and the given categories are orientation only.

#### 4. PA-BAT METHODOLOGY

The Protected Areas Benefit Assessment Tool (PA-BAT) is used to assess the value of protected nature areas, their potential and the benefits that protected areas provide to stakeholders. This methodology was developed to help gather information on a range of protected area values, as well as their current and potential benefits (economic and essential) of individual protected areas through a participatory approach (Dudley & Stolton, 2009). The results of the PA-BAT analysis can be used on the state level as well as on the local or protected area level, to improve the management of these areas and to develop appropriate policies that support nature protection, while promoting sustainable development and responsible use of natural resources.

The implementation of the PA-BAT methodology includes the following steps: determination of the PA-BAT coordinator for each protected area; collecting basic data on the protected area; organizing participatory workshops in protected areas; conducting a survey among stakeholders; verification of the obtained data and their analysis for each protected area at the international and national level; preparation of guidelines for the application of the obtained results; and implementation of recommendations. This methodology identified eight groups of stakeholder beneficiaries, namely: local population living in the protected area; local population living in the vicinity of the protected area; total (national) population; scientists / experts; civil society organizations; public sector, state / protected area manager; business sector; and the international community. PA-BAT is based on a total of 22 values of protected areas (tourism and recreation, nature conservation, water quality and quantity, cultural and historical values, specific characteristics of the area, formal and non-formal education, knowledge building, fishing, hunting, commercial and non-commercial water use, wood, pollination and honey production, medicinal herbs, edible herbs and mushrooms, protected area activities, traditional agriculture, livestock grazing, natural materials, genetic materials, soil stabilization, climate change mitigation and flood mitigation). These 22 values of protected areas are classified into nine groups, namely: nature protection; protected area management; food; water; culture; health and recreation; knowledge; ecosystem services; and natural materials.

The evaluation of the stated values is performed according to a scale that includes six levels, as follows: no profit (empty cell); small non-economic / existential profit (+); large non-economic / existential gain (++); small economic profit (€); large economic gain (€€); and potential economic gain (P). Low economic / non-economic value essentially refers to small importance for a certain group of stakeholders, or that it is significant only for a narrow circle of stakeholders. High economic / non-economic value is important for a number of groups / stakeholders. In the analysis, PA-BAT combines stakeholder assessment at the workshop, information gathered by protected area managers and expert assessment in the data verification process. Valuable data are also obtained from surveys conducted with participants after each workshop. PA-BAT in Serbia was conducted in six protected areas by WWF Adria with the participation of more than 150 representatives of local communities, managers of protected areas, users of natural resources, government officials, entrepreneurs, experts and representatives of NGOs and other persons and institutions (Sekulic et al., 2018).

## 5. RESULTS AND DISCUSSION

### 5.1. Economic and non-economic values and the main potentials of protected areas in Serbia

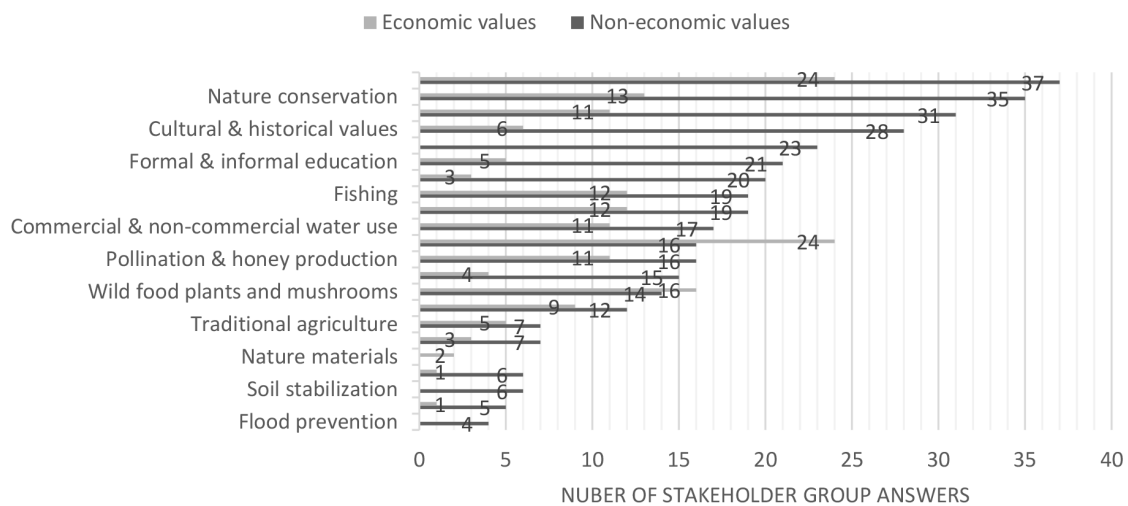
Using the PA-BAT methodology, workshop participants assessed economic and non-economic / existential values in terms of the benefits that protected areas provide to a range of stakeholders and users. Of the 22 values offered, each was recognized by at least one stakeholder group. The values that are most recognized are tourism and recreation, natural resources and biodiversity, cultural and historical values, water quality and quantity, forests / forestry, wild edible plants and mushrooms. These six values account for 48% of the total number of responses provided by all stakeholders (Sekulić et al, 2018).

Stakeholders belonging to the local community group most easily connect tourism as an economic activity with protected areas, while the natural and cultural values of the protected area are connected with tourist destinations that support the local economy by providing various services. Nature protection is recognized as a basic function of protected areas by different stakeholder groups. This data shows that stakeholders support protected areas and that their management meets the primary objectives, when it comes to the six analyzed protected areas in Serbia. Water resources, in terms of quantity and quality, are highly dependent on the preservation of ecosystems. This was recognized by the communities that live in rural areas and are in constant contact with nature. The high positioning of the values of protected areas related to water resources in the assessed areas reflects the strong dependence of people, water and preserved ecosystems. Cultural and historical values are closely related to the protected areas in Serbia. Many protected areas have a very rich cultural history as well as numerous cultural monuments and facilities. Most of the protected areas have been inhabited since ancient times, although today in most of those areas there is an evident depopulation trend. Cultural heritage stands out not only because of its potential for attracting tourists, but also because of the spiritual values it has for the local population and community (Dobričić & Josimović, 2018). In addition to the above, more and more attention is being paid to an integrative approach in which natural and cultural heritage are interconnected, which, among other things, requires a vital connection with communities (Velandia & Ospina-Tascón, 2020).

The current management in most protected areas allows forest exploitation. Managers of protected areas (except in the case of the Landscape of Outstanding Features of Vlasina, which is managed by



a tourist organization), very much depend on activities related to forestry, because it contributes significantly to their budget. Many stakeholders recognize wood production as one of the main values of protected areas. The local community uses wood for its own needs (mainly as fuel), but also participates in the sale of wood assortments. Other values related to various ecosystem services such as hunting, fishing, wild edible herbs and mushrooms, medicinal herbs, honey production are also highly recognized in the assessment. Very relevant for protected area managers is the fact that the participants recognized the value of protected areas in education and knowledge development. Social values and benefits are very often underestimated and neglected in the process of protected area management. These results show that it is necessary to encourage and direct managers and users of protected areas towards protected area management concepts based on an integrated approach.



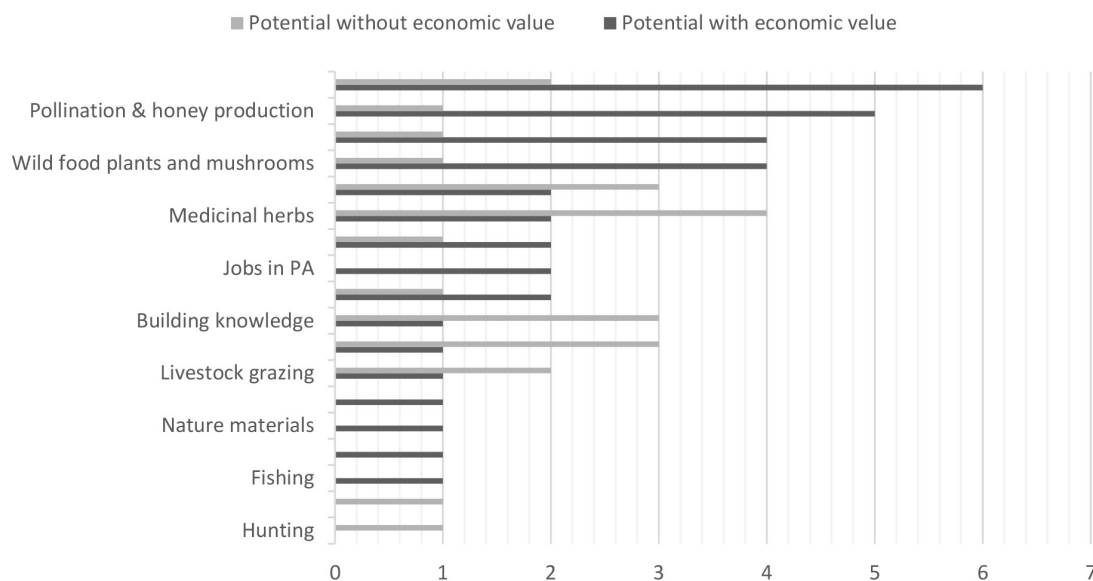
**Figure 1.** Economic and non/economic values and benefits of analyzed protected areas in Serbia (PA-BAT results).

**Source:** Sekulić et al., 2018

The importance of protected areas for generating new jobs is not so much emphasized in the assessment. Stakeholders generally recognized the possibility of employment in an organization that manages a protected area, but not so much other jobs that may be related to the protected area or the values it has (e.g. jobs in tourism, trade in natural and local products, etc.). Agricultural production in the protected area is not recognized as a relevant value and a relatively small number of stakeholders currently benefit from it. Rural and mountainous areas with the largest number of assessed protected areas are very affected by negative trends in agricultural production, but also by the migration of the population to larger, mostly urban areas. In new approaches to protected area management, traditional and sustainable agriculture is perceived as an important segment of the conservation of natural habitats and species (e.g. grazing as a way of managing mountain pastures). Obviously, such management practices have not yet been adequately developed in Serbia. The least recognized values are related to regulatory and supportive ecosystem services, such as climate change mitigation, land stabilization and flood mitigation. Public awareness of these important services of an ecosystem is very low. Ecosystem services represent a new concept and it will certainly take some time to be accepted and adequately valued by the local community. Specific knowledge related to local erosion and flood characteristics, droughts and landslides exists, but it is not considered in the broader context of access to ecosystems and climate change.

In addition to assessing the economic and non-economic value of protected areas, an overview of the main potentials of protected areas identified by different stakeholder groups also provides

very important information to protected area managers and decision makers. As can be seen in Figure 2, tourism is at the very top of the recognized potentials, as one of the most important values of a protected area that can bring significant benefits to various stakeholders, especially to those living in economically vulnerable areas, such as mountain areas (Pantić & Milijić, 2019). However, protected area managers need to adapt their knowledge and capacity to new requirements in order to improve the management of these areas. Education is very high on the list of potentials. A high position of value that does not have an explicit economic impact is contrary to the current concept of protected area management, which largely relies on the direct use of resources. This statement shows that stakeholders are ready for more advanced, integrated management of protected areas that can benefit a wider group of actors. The stated assumption is supported by a very low assessment of the potential for forest use, which is the current basic characteristic of the management method in most protected areas in Serbia.



**Figure 2.** Main potentials of protected areas in Serbia (PA-BAT results)

**Source:** Sekulić et al., 2018

The need for participatory governance that is open to local communities and other stakeholder groups is also reflected in the recognition of potential in the collection of wild edible plants and mushrooms as well as in honey production. These activities are mainly carried out by the local population in the protected areas and in their surroundings, but they do not have adequate support from the managers. Traditional agriculture and cattle grazing are not highly rated among the potentials. Current market developments and agricultural policies, however, recognize great potential in areas with preserved natural resources, especially in the production of healthy and organic food. These potentials should not be overlooked and therefore further consideration by protected area managers and other stakeholders is needed.

## 5.2. Economic assessment of tourism and other values of protected areas in Serbia

An assessment based on the PA-BAT methodology showed that stakeholders in all six protected areas recognize the non-economic value of tourism. In the national parks of Tara and Kopaonik and in the area of exceptional features of Vlasina, interested groups consider tourism in a protected area as the greatest economic value for them. The values related to tourism and recreation were almost equally recognized by all stakeholder groups. They were better recognized by the public

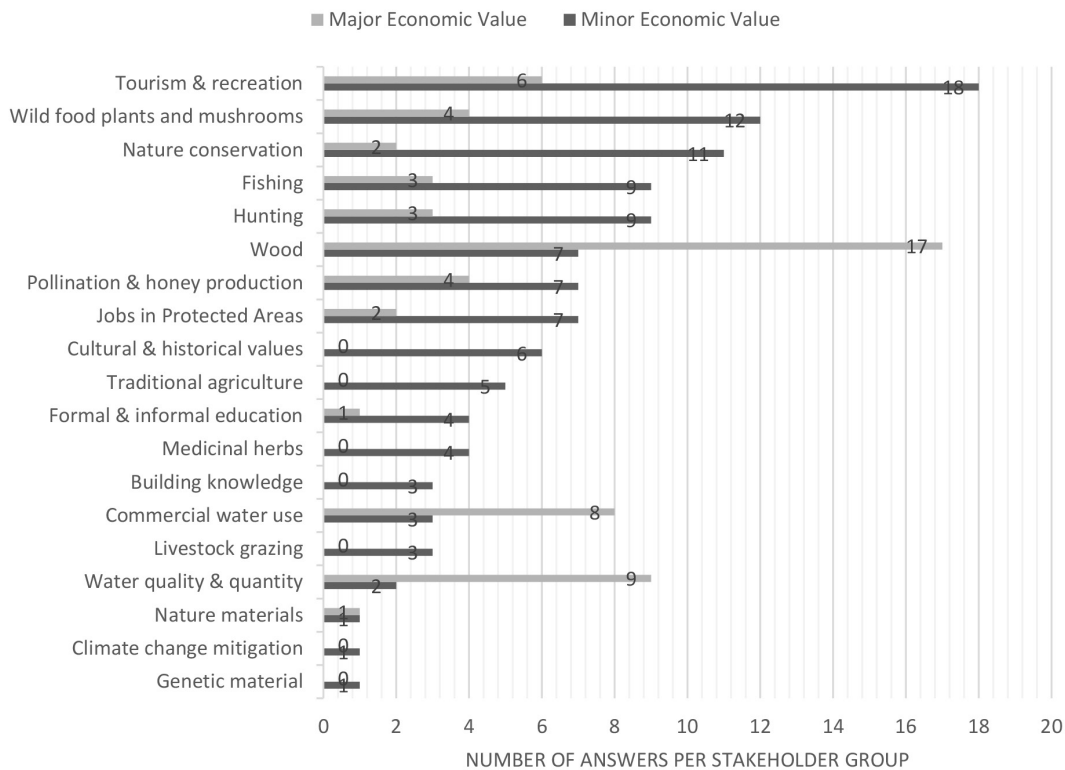
sector, entrepreneurs and the general public (15% of the total number of responses), while the local community living in the protected area recognizes these values somewhat less (8% of the total number of responses). Based on the obtained results, it can be assumed that the local community living in the protected area is not adequately integrated in the planning of tourism activities.

A good example of the integration of the local community into tourism is Bački Monoštor, a village located next to Gornje Podunavlje Special Nature Reserve and within the boundaries of the UNESCO-MAB Bačko Podunavlje Biosphere Reserve. The community is well organized when it comes to local accommodation, local food and craft products and all services are based on small entrepreneurs. Two well-attended and popular festivals are organized every year, such as „Bodrog Fest” and the eco-music festival „Danube Regeneration”. This example gives hope that other protected areas in Serbia will follow a similar path.

Protected areas, especially those of national and international importance are a special attraction for the development of tourism products. Their preservation and further protection and improvement of the sustainable management system is an important condition for increasing tourism traffic (Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine, 2016). If not adequately planned and organized, tourism can become a major threat to protected areas and their values. Therefore, it is necessary to adequately consider and resolve potential conflicts (Dobricic & Maksic, 2017) between the development of tourism (and other purposes in space) and nature protection, in order to avoid harmful impact on the values of natural resources and life of local communities. In addition, it is necessary to conduct planned tourism valorization of such areas, as well as to monitor the impact of tourism on the protected areas. One of the effective mechanisms for achieving sustainable tourism in protected areas is the European Charter for Sustainable Tourism, developed and supported by the EUROPARC Federation. Fruška gora National Park and Gornje Podunavlje Special Nature Reserve are the first protected areas in Serbia to receive the charter.

A good example of the development of tourism in protected areas is the development of a specific tourism offer - bear watching in the Tara National Park, which was implemented as a component of a regional project „Protected areas for nature and people” which is implemented by WWF Adria and Association of Parks Dinarides. This project aims to improve the protection and conservation of wild species and their habitats, through specific field activities and cooperation with national parks and local people. Cooperation with hunters and the local community in the development of a specific tourist offer - bear watching and accompanying tourist services and products, should contribute to the creation of coexistence between humans, wild species and protected nature.

In addition to tourism, stakeholders have recognized other values of protected areas such as forestry. Forestry is recognized by most stakeholder groups as the greatest economic value. Wood, as a natural resource, is most recognized by the local community living in the protected area or in its immediate vicinity (50% of all responses). This is followed by government representatives and business sector representatives (approximately 30% of all responses), while the total population and civil society organizations represent groups that do not recognize wood as a significant value (less than 10% of all responses). Stakeholders have shown that the values of protected areas associated with water resources have a clear economic significance for them. The economic value of water resources is mostly recognized by the public and private sectors, primarily through hydropower, water bottling companies and factories and communal water supply systems, while the local community living within or near protected areas generally recognizes the non-economic value of water - used to supply the population.



**Figure 3.** Minor and major economic value of protected areas (PA-BAT results)

Source: Sekulić et al., 2018

In five of the six protected areas assessed, stakeholders recognized the economic value of collecting wild edible plants and fungi. Obviously, wild fruit collection is a significant source of income for local communities. The interested group most involved in the collection of wild edible plants, medicinal herbs and mushrooms are people living in the vicinity of protected areas (about 40% of the total responses). According to the number of responses, they are followed by the community living in the protected area itself, which recognized the value of wild fruits and plants with about 20% of the total responses. The value of honey production was recognized by all stakeholders in all assessed protected areas. A very popular destination for honey production is the Fruška Gora National Park, due to the large population of linden trees in that national park, which is very attractive for beekeepers. To some extent, it is surprising that stakeholder groups rated education relatively high relative to all other values of protected areas. In three protected areas, education was recognized as a low economic value, but in all six areas it was recognized as a non-economic value. Observed according to the total number of answers, education is in the first third of the highest rated non-economic values. Recognition of the value of education is evenly distributed among different stakeholder groups. There is no significant difference in how the importance of education is seen by the local community living in the protected area, the administration of the protected area, representatives of the public or business sector. Some of the protected areas are also traditional destinations for school excursions, primarily the Tara and Djerdap National Parks.

### 5.3. The importance of public participation in the management of protected areas and application of the results obtained by PA-BAT assessment

The results obtained by the PA-BAT assessment confirm the fact that the concepts of protected area management rely on intensive cooperation of different stakeholders. Therefore, protected area administrations should not only inform stakeholders about their work but should develop

opportunities to involve them in planning and management. Participation significantly increases the effectiveness of protected area management, but also provides a favorable environment for the development of sustainable ways of using natural resources and thus reduces the negative impacts on protected areas (Sekulić et al, 2018). Most of the protected areas assessed in Serbia were established by the government sector with very low participation of other stakeholder groups, especially the local community. Gradually, this practice has changed over the last two decades. The value of involving different stakeholders has not yet been fully recognized and accepted, but some change in practice is visible. The legal framework has also undergone positive changes. National parks have been obliged to establish a national park user council since 2015 (*Zakon o nacionalnim parkovima, 2015-2018*). Certain legal provisions on participation in the process of establishing of a protected area and in adopting management plans exist, although they are not sufficiently specific and clear.

The research showed that the majority of users (more than 50%) support the open discussion about the values and benefits of protected areas, and that they are interested in gaining more information and knowledge on this topic. The obtained results indicate that a certain level of communication between different stakeholders exists, but that it should be further improved. About 80% of participants showed interest in establishing future cooperation with other stakeholder groups, which may be important in the development of new local initiatives, cooperation and joint projects in the future. These results as well show the importance of the PA-BAT process for stakeholders. The described assessments are not exclusively technical processes used to assess the value and well-being of protected areas, they are also a mechanism for achieving good communication and cooperation between different actors in protected areas.

Possibilities of applying the results obtained by PA-BAT analysis include the following strategic recommendations for improving the system of protected areas in Serbia: (1) integrating the value of protected areas into sectoral strategies and plans, tourism, forestry, water resources, spatial planning, energy, education, etc.); (2) abandoning a model in which protected areas rely solely on the exploitation of natural resources; (3) supporting activities based on values with high recognized potential (e.g. tourism, education, collection of wild edible plants) through legal framework, planning processes and financial mechanisms.

General recommendations at the level of protected areas include: (1) integrating identified values and benefits into protected area management plans; (2) informing decision makers about the values and benefits of protected areas and advocating for the integration of protected area issues into strategic documents of other sectors (e.g. forestry, water management, spatial planning, energy); (3) formation of groups of stakeholders whose work will be focused on individual activities (focus groups); (4) transformation of current protected area management mechanisms, to enable the integration of local, sustainable initiatives; (5) capacity development in accordance with the identified values and their potentials; (6) improving the monitoring of biodiversity and identified values, as well as monitoring and control in relation to the values assessed in the PA-BAT analysis; (7) increasing tourist capacities and improving the tourist offer by developing partnerships with local actors in tourism; Bearing in mind that protected areas are part of tourist destinations in Serbia, the increase of tourist capacities and the improvement of the tourist offer is possible only within the limits of sustainable tourism; (8) developing specific educational programs in protected areas and developing partnerships with schools and academic institutions; (9) conducting a detailed analysis of the condition and quantities of wild edible plants, mushrooms and medicinal plants; market development based on the principles of fair trade for wild



fruits, plants and mushrooms in or around protected areas; (10) identifying and connecting with vulnerable stakeholders (e.g. poor population, women in rural areas, etc.), and involving them in sustainable economic activities of protected areas.

## 6. FUTURE RESEARCH DIRECTIONS

This chapter provides only a limited set of general recommendations for improving the system of protected areas in Serbia. Each protected area is specific, and as such requires additional analysis of potentials, challenges and possible solutions. Therefore, it is necessary to integrate the identified values and benefits into the protected area management plans and, if necessary, perform a review of protected area management plans in relation to the results of the PA-BAT analysis. It is recommended that the PA-BAT value analysis should be periodically repeated in order to update the obtained values and prepare new cycles of protected area management plans. Existing analysis include only limited number of protected areas, therefore it is necessary to perform the analysis in other protected areas of Serbia, especially those that are under national and international protection (such as Nature Park and Golija Biosphere Reserve, Special Nature Reserve and Ramsar site Obedska bara, etc.). Further research should be based on the possibilities of applying the results of PA-BAT in other sectors, such as tourism, spatial planning, etc.

## 7. CONCLUSION

A comprehensive assessment and evaluation of the value and benefits of protected areas is a contribution to achieving a more efficient system of protected areas and nature protection in Serbia. Examples of ecosystem services assessments conducted in Serbia so far, such as assessments of the value of special nature reserves in Koviljsko-Petrovaradinski rit and Zasavica, Bosutske šume or Djerdap National Park, also contributed to the study and better management of protected areas. The assessment with the PA-BAT methodology, which was done in six protected areas in Serbia (national parks Tara, Djerdap, Fruška gora and Kopaonik, Landscape of exceptional features of Vlasina and the Special Nature Reserve of the Upper Danube), showed that stakeholders recognize a wide range of values and benefits which they offer. Stakeholders have identified many values that are important to them from an economic and non-economic perspective. Among these values are not only values that rely on traditional and direct use of natural resources, such as e.g. forestry and mining, but also values based on sustainable practices that depend strongly on the protection and conservation of natural resources, such as tourism and recreation or education. In addition to the analyzed six protected areas in Serbia, it is necessary to further apply PA-BAT in other protected areas of Serbia, especially those under national and international protection, all in order to obtain a comprehensive picture of protected areas in Serbia and generally improve nature conservation.

The development of tourism in protected areas is directly related to the ecosystem services they provide; the degradation can directly affect the ecological sustainability of the tourism sector. Therefore, the development of tourism requires careful and planned valorization of these areas. The obtained results of the PA-BAT analysis indicate the need for further development of the network of protected areas and improvement of the management of existing protected areas. The PA-BAT methodology supports these processes systematically and transparently. In addition to identifying values, this method contributes to initiating and developing communication and cooperation between different users and stakeholders (through the establishment of a national park user council, focus groups of stakeholders whose work would be focused on individual activities, etc.), which is a fundamental need for more efficient management of protected areas in Serbia.

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# DEVELOPMENT OF THE TOURIST POTENTIAL IN SERBIA IN THE LIGHT OF TOURIST FREQUENCY AND ACCOMMODATION CAPACITIES

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**Abstract:** *In the last several decades, tourism registers continuous growth on the global level. The subject of analysis of this paper is the ratio of the number of arrivals and overnight stays of tourists in general, as well as the number of arrivals and overnight stays of tourists by regions for the chosen three-year period 2017-2019. Also, this paper establishes and analyses both the total and quantitative indicators of the accommodation capacities by regions, also for the chosen reference three-year period. The last analysis refers to the survey of accommodation capacities by types of tourist resorts and facilities in the year 2019. This paper is methodologically based on the theoretical analysis of the relevant contemporary standpoints in theory, normative analysis of legislative sources and quantitative analysis of statistical indicators in the field of the subject of research. The research is based on official statistical data of the Statistical Office of the Republic of Serbia. The goal of the presented analyses and conclusions regarding the obtained results, and in the light of the frequency of tourist and accommodation capacities, is the emphasis on the importance of the tourist turnover at a certain tourist destination, which is one of the basic components of the development of the tourist potential.*

**Keywords:** *Tourist potential, Arrival of tourists, Overnight stay of tourists, Accommodation capacities, Republic of Serbia.*

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## 1. INTRODUCTION

The development of tourism in a certain area is determined by many factors. Nevertheless, a good foundation for tourism development are certain predispositions which a certain area disposes of and which can be determined by natural values a certain location disposes of, or even be the result of man's endeavour to develop and promote the competition of the tourist offer in a certain area. In this sense, the development of the tourist potential is certainly determined by a series of natural attractions, as well as the territorial diversity of natural potentials, on the one hand, and the achieved level of accommodation and other capacities, as well as the actual interest of tourists to visit certain locations which is primarily reflected in the frequency of visits of a certain area. In this sense, important indicators are certainly the number of arrivals and overnight stays of tourist service users in a certain area, during the whole year or in certain periods of the year.

Despite the above-said, one should not disregard the fact that the development of the tourist economy mainly depends on the level and state of the development of a country's total economy. In this sense, the development of tourist potentials of a region is determined by national capacities which the economy of a state can put aside and offer for the development of tourism as an important economic branch.

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On the other hand, the frequency of users of tourist services and the occupation of accommodation capacities is under a strong influence of the seasonal character of the tourist economy as the highest percentage of their use is recorded during certain months. The seasonal character of the tourist economy, together with the potentially accessible stimulus which tourism, as an economy branch, can achieve from the total economic potential of the state, considerably stipulates numerous other aspects. Thus, the above-said has a direct impact not only on the quantitative aspects of the tourist offer, in the sense of the number and diversity of tourist services, but also on the quality of offered tourist services, which again is manifested in the gradual increase or decrease of the interest of users of tourist services on a certain location.

In the last few decades, tourism records continuous growth on the global level. With such a trend, the positive effects of tourist development in various systems have become evident, too, starting with the field of finance, employment, development of technology, traffic and communications, etc. Accordingly, it can be said that in the area of the Republic of Serbia in the second half of the 20<sup>th</sup> and at the beginning of the 21<sup>st</sup> century, tourism experiences a strong expansion and is hence permanently developing every year.

In principle, and referring to the above-said, the need of people to travel in order to rest, recover, develop the business segment or even for medical or sport reasons, has created the possibility for tourism to find its role in the satisfaction of many people's needs. Thus, it is of crucial importance that the destinations, for which there is interest of the users of tourist services, improve and use their total tourist potential.

Bearing in mind the significance and stated advantages of tourism, and understanding the importance which tourism has for a modern society, it seems necessary to overview certain quantitative indicators of development of the tourist potential in the Republic of Serbia which are reflected, inter alia, in the light of the frequency of users of tourist services (arrivals and overnight stays), then in the number and quality of accommodation capacities, and accordingly, it is necessary to consider and analyse the available parameters in this field. In this context, it is especially interesting to overview the ratio of the number of arrivals and overnight stays of tourists in general, as well as the number of arrivals and overnight stays by regions for the chosen three-year period – 2017-2019, based on available official statistical data. It is also important to establish both the total and the quantitative indicators of accommodation capacities by regions, also for the chosen reference three-year period (2017-2019). Finally, an overview of accommodation capacities by types of tourist resorts and facilities in the year 2019 has been given.

The paper is, in terms of methodology, based on the theoretical analysis of relevant modern standpoints in the theory, normative analysis of legislative sources and quantitative analysis of statistical indicators in the field of the scope of research.

## **2. LITERATURE REVIEW**

Tourism can be primarily stipulated in the sense of a voluntary migration of users of tourist services, "where their motives, needs and striving are established by the type i.e. form of tourism" (Počuča & Matijašević-Obradović, 2019, p. 493). As Camilleri stipulates, „tourism is considered as all activities of tourists at the occasion of visits of certain locations, regardless of their duration” (Camilleri, 2018, p. 4). Thus, tourism is included in the voluntary movement of people to various sites, both one-day visits and outings lasting several days (Cooper, 2008: Holoway & Taylor, 2006).

According to Cvijanovic and associates, „a methodical approach to the development of tourism is the backbone of its successful development” (Cvijanović, Vuković & Kljajić, 2011, p. 11). Accordingly, the economic development of a certain region or area is, inter alia, significantly established by tourist activities” (Karampela, Kizos and Spilanis, 2016, p. 161). In this context, Zhenhua (2003) states that in less developed regions the local community can have very significant economic-social benefits from tourism (pp. 465-466), and the development of this economic branch can be a significant milestone for the further development on the local level. This spirit is followed by Gašić and his associates (2015), who assumes the attitude that „tourism, by its multiplicative effects, is expected to give an impulse to the development of this economically backward region, offer a permanent basis of existence for the population, stop the migration and activate the development of the agriculture, private entrepreneurship, trade and other activities” (p. 494).

In the field of development of tourism, it is important to emphasize the concept of sustainable development, as a „contemporary development concept” (Matijašević-Obradović & Škorić, 2017, p. 283). As emphasized by Šimkova (2007), an important characteristic of modern society is precisely the directing of the primary attention to sustainable development (p. 236). According to Ristić (2013), sustainable development is a „contemporary development concept which coordinates social, economic and ecological interests of present and future generations” (p. 229), and the continuous development of contemporary aspects of tourism can result in „a new relationship among environment, work and leisure, in the sense of sustainability of all, and especially rural regions” (Fagioli, Diotallevi & Ciani, 2014, p. 166). In the above context, Matijašević-Obradović & Kovačević (2016) state that sustainable development as an integral approach is the basis of all development policies of EU countries today, whose membership Serbia is striving for (p. 493).

As an economic branch, tourism has proved to be significant in the sphere of development of rural areas. Namely, according to Ćirić, Počuča & Raičević (2014), „on the one hand, tourism has a big impact on the development of rural areas, but on the other hand, the significance of tourism is reflected in the creation of a market for agricultural products, considering that they are important inputs for hotels and restaurants” (p. 26). Thus, although sustainable development of rural tourism can be economically justified, it also must contribute to the preservation of natural, social and cultural characteristics of the tourist destination (Počuča, Matijašević-Obradović & Drašković, 2017, p. 1252). The authors also state the essential difference between „tourism as a phenomenon and man’s endeavour to research new locations and changes”, which consists of „organized travelling and change of sites, which hints at the conclusion that the difference between travelling for the change of sites, amusement and new understandings, on the one hand, and the tourist travelling, on the other hand, actually lies in the organization itself” (Gržetić, Favro & Saganić, 2007, p. 23).

Namely, a very important area in the field of tourist business is the process of deciding of users of tourist services on certain tourist services, destinations, etc. A very large number of factors influence the behaviour of consumers in general, and they are basically classified according to the following categories: psychological factors, social and economic factors, physiological factors, group stimulus and purchase factors, and others. As Cooper (2008) emphasizes, the process of decision-making of tourists is very dynamic concerning destinations, types of services, modes of travel, accommodation types, prices and other crucial factors.

In this sense, it is necessary to emphasize that the tourist market is one of the indicators of economic development in the country. As Popescu (2002) states, “the tourist market is defined as a

set of supply-demand relations in the sphere of services and goods that serve to meet the tourist needs in a certain area” (p. 16).

The potential of the tourist market is certainly conditioned by certain specifics on the side of the tourist offer, as well as on the side of the tourist demand, which in principle conditions the offer and emphasizes the seasonal character as one of the more important characteristics. Also, tourist demand is conditioned “by the income of the holders of tourist needs, the prices of tourist services and advertising content” (Radović, 2016, p. 26).

When analysing the tourist market, we actually determine in which direction the needs and motives of tourists are moving when choosing a particular destination. In that sense, it is very important to consider some of the parameters of the development of tourist potential in Serbia - the number of tourist arrivals and overnight stays, indicators of accommodation capacities by regions, as well as an overview of accommodation capacities by types of tourist places and facilities.

According to Hamović and associates (2009), „the tourism of special interests and different aspects of movement is especially developed, which also determines the possibility of development of special forms of tourism. We would like to list only some that are mentioned most often: alternative tourism, sustainable tourism, green tourism, cultural tourism, heritage tourism, business tourism, manifestation tourism, congress tourism, nautical tourism, religious tourism, tourism for seniors, city tourism, sports tourism, local community tourism, wine tourism, gastronomic tours, festivals and customs, ethical tourism, seasonal tourism, spa tourism, hunting tourism ...” (pp. 58-66).

Vujović and associates (2012) emphasize the conditions which a special form of tourism has to meet in order to become competitive in the tourist market. Namely, „for a specific tourist product to be competitive on the tourist market, it is very important to know its characteristics: strength, weaknesses, threats and its potentials. The selective forms of tourism are developed in countries that possess attractions and qualities for the development of its forms and which have understood that this is the future of the development of tourism. Besides, for the development of all forms of tourism human resources are required which could recognize the chances for development of certain forms of tourism and develop them according to the qualities of tourist destinations. The tourist offer of specific forms of tourism has its unique values which can be used” (p. 52).

As tourism represents an economic branch that not only depends on the total economic potential of a state or region but also contributes to the total socio-economic development, many countries have directed considerable resources to the development of strategic tourist potentials. However, what Ilić and associates (2017) emphasize, that parallel to the large impetus in development, tourism „has also shown a considerable vulnerability at moments of economic crises, various political unrests (terrorist attacks, wars), but also at moments of other upheavals (as a result of pandemics, climatic disasters) ... etc., which occurred in this period” (p. 160). Still, as the authors further stress, „tourist trends very quickly return to their long lasting increase trajectory. What is, however, necessary, even at moments of a weak tourist turnover, is to keep the tourist economy fit for the performance of its activities, i.e. to preserve the assets of tourist companies so that their business could be successful in the long term” (Ilić, Ivanov & Stefanović, 2017, p. 160).

In connection with the above-said, Gašić and associates (2015) emphasize that „accommodation and catering capacities are one of the most necessary bases of tourist travels so that they have to be taken into account with the establishment of the degree of development of tourism” (p. 494).

Establishing tourism in the sense of organized travel will satisfy the needs of tourists for rest, amusement and other, in Art. 3 of the Tourism Law („Official Gazette of the Republic of Serbia”, no. 17/2019) the relevant concepts in this field have been stipulated. Thus, „the tourist activity is offering of services of travel agencies, tourist profession services and offering of other services” (Art. 3, item 30 of the Tourism Law), whereas the tourist destination comprises the „destination of a tourist travel which, by its facilities, makes possible the accommodation and stay of tourists” (Art. 3 item 3a of the Tourism Law). The tourist product represents a „group of interdependent elements which, in practice, are organized as a special chain of values which consists of material products and services, natural values and cultural goods, tourist attractions, tourist superstructure and tourist infrastructure” (Art. 3 item 39 of the Tourism Law), and the tourist travel is stipulated as a „combination of two or more tourist services (transportation, accommodation and other tourist services), which have been established or prepared by the travel organizer independently or at the passengers’ request, in duration exceeding 24 hours or in a shorter duration if it includes one overnight stay, as well as one or several overnight stays which include only the service of accommodation on a certain date or in a certain duration which is sold at a uniform price” (Art. 3 item 42 of the Tourism Law).

Besides the legal aspect, equally important is the strategic aspect of the regulation of the field of tourism in the Republic of Serbia. In this sense, one should mention the importance of the Tourism Development Strategy of the Republic of Serbia, for the period 2016-2025 (Ministry of Trade, Tourism and Telecommunications, 2016).

Namely, considering that the needs, motives and endeavours of tourists in the last years are surveyed more realistically in terms of marketing and placed into primary determinants; according to the regulations of the Tourism Development Strategy of the Republic of Serbia the following three groups of new trends in the promotion and development of tourism are stressed. These trends are 1.) new trends in the manner of promotion and booking, 2.) new types of accommodation, as well as 3.) contemporary travelling motives on the global tourist market (Ministry of Trade, Tourism and Telecommunications, 2016, p. 20).

According to the regulations of the Strategy, „in the field of promotion and booking new communication and promotion tools have been developed which are based on the e-marketing technology for communication with consumers and which strongly increase the efficiency of marketing activities” (Ministry of Trade, Tourism and Telecommunications, 2016, p. 20), whereas in the field of „accommodation, contrary to large international chains, which also experience a transformation adapted to the destination authenticity, small family accommodation capacities are developed which facilitate the organization of stay and rest at own choice, as well as meeting of ever more expressed requirements of modern tourists for contact with nature and local culture and environment” (Ministry of Trade, Tourism and Telecommunications, 2016, p. 21). In the field of contemporary motives for tourist travelling, the following determining motives can be set apart: intensive holiday, acquisition of new experiences, introduction to cultural heritage, organization of active fitness and sport travels, wellness holidays, introduction to gastronomic specialties, etc. (Ministry of Trade, Tourism and Telecommunications, 2016, p. 22-23).

### 3. MATERIALS AND METHODS

The scope of the analysis in this paper, as was mentioned in the introduction, is the ratio of the number of arrivals and overnight stays in general, and of the number of arrivals and overnight stays of tourists by regions for the chosen three-year period – 2017-2019, based on available official statistical data. It is also important to stipulate both the total and the quantitative indicators of accommodation capacities by regions, also for the chosen reference three-year period (2017-2019).

Finally, an overview of accommodation capacities by types of tourist resorts and facilities in 2019 has been given.

This paper is methodologically based on the theoretical analysis of relevant contemporary stand-points in theory, normative analysis of legislative sources and quantitative analysis of statistical indicators in the field of the scope of research. The research is based on official statistical data of the Statistical Office of the Republic of Serbia.

### 4. RESEARCH RESULTS

The research part of this paper included the analysis of the relevant data for the three-year period which comprises the years 2017, 2018 and 2019.

As stated in the current Statistical Yearbook (2020), „The total number of tourists in 2019 was 3,690,000. Of this number 1,843,000 were national tourists, which is 7.6% more than in 2018, whereas the number of foreign tourists who visited our country totalled 1,847,000, which is 8.0% more than in 2018” (p. 347). Further, the „achieved number of overnight stays of all tourists who used accommodation capacities totalled 10,073,000 and was 7.9% higher than in the previous year. National tourists had 6,063,000 overnight stays (an increase of 6.8% in comparison with 2018), whereas the number of overnight stays of foreign tourists was 9.6% higher and totalled 4,010,000 overnight stays” (Statistical Yearbook, 2020, p. 347).

The Statistical Yearbook also states the detail that „the largest number of foreign tourists who visited the Republic of Serbia in 2019 came from China (145,000 arrivals, 269,000 overnight stays), Bosnia and Herzegovina (136,000 arrivals, 294,000 overnight stays), Turkey (108,000 arrivals, 228,000 overnight stays), Germany (104,000 arrivals, 203,000 overnight stays) and Croatia (104,000 arrivals, 199,000 overnight stays)” (Statistical Yearbook, 2020, p. 347).

On this occasion, the relevant research terms in this field have been stipulated.

Thus, „a tourist is every visitor who in the place of visit spends at least one night in an accommodation facility, whereas a visitor is every person who travels outside their usual surroundings, during a period which does not exceed 12 consecutive months, and the main purpose of the travel is not the performance of an activity which is paid by the place of visit” (Statistical Yearbook, 2020, p. 347, Statistical Yearbook, 2019, p. 339, Statistical Yearbook, 2018, p. 342).

Thus, „the term arrivals means the number of tourists who stay for one or more nights in an accommodation facility in the observed period. This includes children, regardless of their age. This does not include persons with permanent residence in the facility (facility personnel, fa-



cility owner and members of their household, and similar), nor persons who have the status of refugees. The above-said implies that the number of arrivals does not coincide with the number of tourists. One person can travel several times during a year; also, one person can, during one travel, visit several places, and each time their arrival is registered in the accommodation facility where they stay. Accordingly, the statistics record the number of arrivals of tourists, and not the number of tourists” (Statistical Yearbook, 2020, p. 347, Statistical Yearbook, 2019, p. 340, Statistical Yearbook, 2018, p. 342).

Also, „the country of origin is stipulated based on tourist’s country of residence, whereas the tourist resort is the organizational and functional unit with a formed tourist offer, natural values, cultural goods and other tourist attractions of importance for tourism, public utility, transportation and tourist infrastructure, as well as facilities and other contents for accommodation and stay of tourists” (Statistical Yearbook, 2020, p. 347, Statistical Yearbook, 2019, p. 340, Statistical Yearbook, 2018, p. 342).

Consulting the Statistical Yearbooks for years 2017, 2018 and 2019 of the Republic Institute for Statistics, the following Table 1 will show the number of arrivals of tourists with total annual values and by regions: Region of Belgrade, Region of Vojvodina, Region of Sumadija and Western Serbia, Region of South and East Serbia, Region of Kosovo and Metohija, and then Table 2 will show the number of overnight stays of tourists, also with total annual values, and by regions.

**Table 1.** Number of tourist arrivals with total annual values, per region, for the period 2017-2019

Republic of Serbia						
Total	Region of Belgrade	Region of Vojvodina	Region of Sumadija and Western Serbia	Region of Southern and Eastern Serbia	Region of Kosovo and Metohija	
Tourist arrivals						
Total						
2017	3,085,866	1,035,205	496,625	1,086,264	467,772	-
2018	3,430,522	1,160,582	538,472	1,184,051	547,417	-
2019	3,689,983	1,258,348	561,657	1,259,685	610,293	-
National tourists						
2017	1,588,693	172,043	269,025	835,074	312,551	-
2018	1,720,008	188,640	278,516	890,187	362,665	-
2019	1,843,432	201,770	287,419	950,289	403,954	-
Foreign tourists						
2017	1,497,173	863,162	227,600	251,190	155,221	-
2018	1,710,514	971,942	259,956	293,864	184,752	-
2019	1,846,551	1,056,578	274,238	309,396	206,339	-

**Source:** Statistical Yearbook, 2020, p. 349, Statistical Yearbook, 2019, p. 341, Statistical Yearbook, 2018, p. 343

The following table shows the number of overnight stays of tourists with total annual values, per region, for the observed three-year period.

**Table 2.** Number of overnight stays of tourists with total annual values, per region, for the period 2017-2019

Republic of Serbia						
Total	Region of Belgrade	Region of Vojvodina	Region of Sumadija and Western Serbia	Region of Southern and Eastern Serbia	Region of Kosovo and Metohija	
Overnight stays of tourists						
Total						
2017	8,325,144	2,190,474	1,159,845	3,664,283	1,310,542	-
2018	9,336,103	2,480,516	1,314,968	3,926,783	1,613,836	-
2019	10,073,299	2,696,832	1,384,344	4,173,466	1,818,657	-
National tourists						
2017	5,150,017	432,335	684,394	3,005,592	1,027,696	-
2018	5,678,235	469,767	756,832	3,183,718	1,267,918	-
2019	6,062,921	524,529	774,143	3,369,471	1,394,778	-
Foreign tourists						
2017	3,175,127	1,758,139	475,451	658,691	282,846	-
2018	3,657,868	2,010,749	558,136	743,065	345,918	-
2019	4,010,378	2,172,303	610,201	803,995	423,879	-

**Source:** Statistical Yearbook, 2020, p. 349, Statistical Yearbook, 2019, p. 341, Statistical Yearbook, 2018, p. 343

Consulting the Statistical Yearbooks, in the following table, accommodation capacities with total values are shown for two regions – Serbia North and Serbia South, also for the chosen reference three-year period 2017-2019.

**Table 3.** Accommodation capacities in the Republic of Serbia for the period 2017-2019

	Republic of Serbia					
	Total		Serbia North		Serbia South	
	rooms	beds	rooms	beds	rooms	beds
2017	44,813	106,029	17,049	36,252	27,764	69,777
2018	48,190	114,771	19,225	40,665	28,965	74,106
2019	50,110	121,289	20,055	42,671	30,055	78,618

**Source:** Statistical Yearbook, 2020, p. 356, Statistical Yearbook, 2019, p. 348, Statistical Yearbook, 2018, p. 350

Finally, in the last table, an overview of accommodation capacities per type of tourist resorts and facilities in 2019 is shown.

**Table 4.** Overview of accommodation capacities per type of tourist resorts and facilities in 2019

	Total	Thereof:			
		Spa resorts	Mountain resorts	Other tourist resorts	Other resorts
<b>Rooms</b>					
<b>Total</b>	<b>50,110</b>	<b>11,671</b>	<b>9,138</b>	<b>11,681</b>	<b>4,274</b>
Hotels	17,131	2,106	3,016	4,011	944
Motels	216	–	17	146	53
Apartments	1,860	99	1,181	242	15
Tourist settlements	253	53	74	48	20
Boarding houses	98	–	61	–	37
Guest houses	4,696	733	845	1,728	950
Inns	1,049	130	114	544	234
Garni hotels	3,242	186	106	1,045	20

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Apart hotels	513	–	513	–	–
Spa resorts	1,992	1,912	–	80	–
Climatic health resorts	733	422	311	–	–
Mountain lodges and houses	215	–	190	16	9
Workers' resorts	283	72	211	–	–
Children's and youth resorts	1,378	101	877	240	160
Hostels	2,690	66	113	902	–
Camps	311	150	92	42	–
Campsites, camping resorts	2,178	13	70	292	303
Private rooms	8,609	4,445	871	1,630	1,301
Private houses	1,852	1,159	269	318	94
Rural tourist households	644	19	207	362	56
Sleeping and dining car	45	–	–	–	–
Hunting houses and huts	35	5	–	–	30
Other	87	–	–	35	48
			<b>Beds</b>		
<b>Total</b>	<b>121.289</b>	<b>28,486</b>	<b>26,815</b>	<b>27,826</b>	<b>11,461</b>
Hotels	34,238	4,552	7,842	8,169	2,092
Motels	482	–	33	329	120
Apartments	5,453	319	3,511	583	53
Tourist settlements	446	76	116	106	32
Boarding houses	240	–	155	–	85
Guest houses	11,937	1,839	2,542	4,284	2,4319
Inns	2,542	316	296	1,303	538
Garni hotels	6,953	435	296	2,331	57
Apart hotels	1,970	–	1,970	–	–
Spa resorts	4,168	3,988	–	180	–
Climatic health resorts	1,915	1,265	650	–	–
Mountain lodges and houses	760	–	638	72	50
Workers' resorts	837	222	615	–	–
Children's and youth resorts	5,429	452	3,496	917	564
Hostels	8,124	140	213	2,711	–
Camps	823	300	328	168	–
Campsites, camping resorts	5,049	26	195	876	952
Private rooms	23,303	11,729	2,814	3,944	4,027
Private houses	4,282	2,756	571	722	202
Rural tourist households	1,732	61	534	534	143
Sleeping and dining car	220	–	–	–	–
Hunting houses and huts	70	10	–	–	60
Other	316	–	–	137	167

Source: Statistical Yearbook, 2020, p. 357

## 5. DISCUSSION OF RESEARCH RESULTS

Consulting the Statistical Yearbooks for the observed three-year period (2017-2019), the first two tables present data for parameters - the number of tourist arrivals with total annual values, also by regions for the period 2017-2019, and the number of tourist overnight stays with total annual values, and by regions for the period 2017-2019.

The values of total arrivals were observed, then the parameter of domestic tourist arrivals, and finally the parameter of foreign tourist arrivals. Analysing the data from Table 1, the following conclusions were drawn.

In the domain of all three observed parameters (total arrivals, arrivals of domestic tourists, arrivals of foreign tourists) there is a progressive numerical growth by years, i.e. in all three parameters, the number of arrivals increases with years (total arrivals: 2017 - 3,085,866, 2018 - 3,430,522, 2019 - 3,689,983, arrivals of domestic tourists: 2017 - 1,588,693, 2018 - 1,720,008, 2019 - 1,843,432, arrivals of foreign tourists: 2017 - 1,497,173, 2018 - 1,710,514, 2019 - 1,846,551).

By observing the parameters by regions, it is realized that the Region of Sumadija and Western Serbia has the largest number of total tourist arrivals (2017 - 1,086,264, 2018 - 1,184,051, 2019 - 1,259,685) and the largest number of domestic tourist arrivals (2017 - 835,074, 2018 - 890,187, 2019 - 950,289). Regarding the parameters of foreign tourist arrivals, the highest values are recorded in the Region of Belgrade (2017 - 863,162, 2018 - 971,942, 2019 - 1,056,578).

Within the parameters of total arrivals, the lowest frequency has the Region of Southern and Eastern Serbia in 2017, and the Region of Vojvodina in 2018 and 2019. In the category of domestic tourist arrivals, the lowest frequency of tourists is recorded in the Region of Belgrade in all three observed years, while in the category of foreign tourist arrivals, the lowest frequency of tourists is recorded in the Region of Southern and Eastern Serbia, also in all three observed years.

By analysing the data from Table 2, the following conclusions were drawn:

In the domain of all observed parameters (total overnight stays, overnight stays of domestic tourists, overnight stays of foreign tourists) there is a progressive numerical growth by years, i.e., in all three parameters, the number of overnight stays increases with years (total tourist nights: 2017 - 8,325,144, 2018 - 9,336,103, 2019 - 10,073,299, domestic tourist overnight stays: 2017 - 5,150,017, 2018 - 5,678,235, 2019 - 6,062,921, foreign tourist overnight stays: 2017 - 3,175,127, 2018 - 3,657,868, 2019 - 4,010,378).

By observing the parameters by regions, it is realized that the Region of Sumadija and Western Serbia has the largest number of total tourist overnight stays (2017 - 3,664,283, 2018 - 3,926,783, 2019 - 4,173,466) and the largest number of domestic tourist overnight stays (2017 - 3,005,592, 2018 - 3,183,718, 2019 - 3,369,471). Regarding the parameters of overnight stays of foreign tourists, the highest values are recorded in the Region of Belgrade (2017 - 1,758,139, 2018 - 2,010,749, 2019 - 2,172,303).

Within the parameters of total overnight stays, the lowest frequency has the Region of Southern and Eastern Serbia in 2017, and the Region of Vojvodina in 2018 and 2019. In the category of domestic tourist overnight stays, the lowest frequency of tourists is recorded in the Region of Belgrade in all three observed years, while in the category of foreign tourist overnight stays, the lowest frequency of tourists is recorded in the Region of Southern and Eastern Serbia, also in all three observed years.

If we compare the numerical values of the number of tourist arrivals with total annual values, and by regions, and the numerical values of the number of tourist overnight stays with total annual values, and by regions, in the observed three-year period, it is noticed that the frequency of total overnight stays and domestic and foreign tourists' overnight stays is much higher than the frequency of tourist arrivals with all three parameters. Also, the frequency of overnight stays by regions (total, overnight stays of domestic and overnight stays of foreign tourists) is higher than the frequency of tourist arrivals by regions with all three parameters.

Consulting the Statistical Yearbooks regarding the accommodation capacities, Table 3 presents the total values, and the values for two regions – Serbia North and Serbia South, also for the selected three-year period 2017-2019.

Namely, the total accommodation capacities with both parameters - rooms and beds, show progressive numerical growth over the years. The total accommodation capacities with the room parameter record the following values by years: 2017 - 44,813, 2018 - 48,190, 2019 - 50,110. The total accommodation capacities with the parameter beds record the following values by years: 2017 - 106,029, 2018 - 114,771, 2019 - 121,289. Progressive numerical growth by years in the domain of accommodation capacities is evident in two regions – Serbia North and Serbia South.

By comparing the accommodation capacities of the two regions, it can be noticed that the region Serbia South has better accommodation capacities both with the room parameter and with the beds parameter. The accommodation capacities with the room parameter for all three years are: 2017 - 27,764, 2018 - 28,965, 2019 - 30,055, while accommodation capacities with the bed parameter for all three years are: 2017 - 69,777, 2018 - 74,106, 2019 - 78,618.

The last table, based on the data from the Statistical Yearbook, presents an overview of accommodation capacities by types of tourist places and facilities in 2019. The analysis of numerical values related to tourist places and tourist facilities is classified into two categories - the category of rooms and the category of beds. The analysis includes the following tourist places: spa resorts, mountain resorts, other tourist resorts and other places. The analysis also includes the following tourist facilities: hotels, motels, apartments, tourist resorts, boarding houses, guest houses, inns, Garni hotels, Apart hotels, spa resorts, climatic health resorts, mountain lodges and houses, workers' resorts, children's and youth resorts, hostels, camps, campsites, camping resorts, private rooms, private houses, rural tourist households, sleeping and dining cars, hunting lodges and huts.

If the parameter of the room is observed, we can single out the following conclusions. Having in mind the total value (for all tourist places), the most represented tourist facility is a hotel, with the value of 17,131 rented rooms. If we separately analyse the representation of tourist facilities by tourist places, we see that with spa resorts the most represented tourist facilities are private rooms (4,445 rented rooms), then, that with mountain resorts the most represented tourist facilities are hotels (3,016 rented rooms), further, that with other tourist places the most represented tourist facilities are also hotels (4,011 rented rooms), and finally, with other places, the most represented tourist facilities are private rooms (1,301 rented rooms). If we compare tourist places with each other, and according to the criteria of rented rooms, it can be concluded that the places with the highest frequency are spa resorts (11,671 rented rooms) and other tourist places (11,681 rented rooms).

If the bed parameter is observed, we can draw the following conclusions. Having in mind the total value (for all tourist places), the most represented tourist facility is a hotel, with values of 34,238 rented beds. If we separately analyse the representation of tourist facilities by tourist places, we see that with spa resorts the most represented tourist facilities are private rooms (11,729 rented beds), then with mountain resorts the most represented tourist facilities are hotels (7,842 rented beds), further, that with other tourist places the most represented tourist facilities are also hotels (8,169 rented beds), and finally, with other places the most represented tourist facilities are private rooms (4,027 rented beds). If we compare tourist places with each other, and according to the criteria of rented beds, it can be concluded that that the places with the highest frequency are spa resorts, with 28,468 rented beds.



## 6. CONCLUSION

One of the basic goals of the strategic approach in the field of the tourism development is a sustainable concept in tourism development, as well as planned activities in this domain. Tourism is an economic branch which is in a highly interactive relationship with both natural and social values. Namely, on the one hand, users of tourist services are increasingly insisting on the inclusion of „untouched” natural resources in the tourist offer, while on the other hand, tourism is often a factor in disrupting and degrading the elements of the environment. In that sense, a sustainable, i.e. „responsible” concept in the development of tourism is an approach that enables a responsible attitude of tourism towards the natural environment, which is at the same time one of the most important levers in the further development of tourism itself.

The importance and characteristics of tourism as an economic branch were discussed in more detail in the theoretical part of the paper. What should be mentioned once again in the conclusion, and in the context of the topic of the paper which refers to the analysis of the development of tourist potential, in light of the frequency of tourists and accommodation capacities, is the importance of tourist traffic at a certain tourist destination.

In this sense, the strategic goals of tourism development for the future should be stated, bearing in mind that tourism is of great importance as a „potential for economic growth and development, creating new added value and new employment possibilities” (Ministry of Trade, Tourism and Telecommunications, 2016, page 37). Thus, the goals of tourism development until 2025 can be defined in the following sense: “1) increase of the share of hotel and similar hospitality facilities for accommodation in total accommodation facilities to 50%; 2) reaching the total occupancy of accommodation capacities (accommodation units) of 30%; 3) increase of tourist traffic by 2025 up to three times, i.e. by at least 50%; 4) increase in tourist consumption per unit (per night) by 50%; 5) increase of the share of foreign overnight stays to 45% by 2020 and 55% by 2025; 6) double increase of the direct share of tourism in the gross domestic product of the Republic of Serbia; 7) increase of the number of directly employed persons in tourism by at least 50% and increase of the number of employees in tourism and complementary activities up to three times; 8) increase in direct investments (Ministry of Trade, Tourism and Telecommunications, 2016, p. 38).

Also, according to the Strategy (2016), it is necessary, in addition to the already mentioned, to achieve the following goals: “1) establishment of an efficient system of tourism development management with strengthening of public-private partnerships; 2) improvement and harmonization of methodology and procedures for collection and processing of statistical data with international standards and practices; 3) establishment of the Tourism Register based on legal grounds; 4) reduction of the gray economy in tourism ”(p. 38).

In order to provide a closer overview of the situation in the Republic of Serbia in the field of tourism potential, the research part deals with the analysis of the number of tourist arrivals and overnight stays in general, and the number of tourist arrivals and overnight stays by region for the selected three-year period - 2017-2019, based on available official statistical data. Also, quantitative indicators of accommodation capacities by regions were analysed, also for the selected reference three-year period (2017-2019). Finally, an overview of accommodation capacities by types of tourist places and facilities in 2019 was singled out.

A summary of the research results is as follows. By analysing the data on the number of tourist arrivals with total annual values, and by regions, as well as the number of tourist overnight stays with total annual values, and by regions for the period 2017-2019, the following conclusions were drawn. In the domain of all three observed parameters (total arrivals/overnight stays, arrivals/overnight stays of domestic tourists, arrivals/overnight stays of foreign tourists) there is a progressive numerical growth by years, i.e., with all three parameters, the number of tourist arrivals/overnight stays increases with years.

By observing the parameters by regions, it can be seen that the Region of Sumadija and Western Serbia has the largest number of total tourist arrivals and the largest number of domestic tourist arrivals. As for the parameters of foreign tourist arrivals, the Region of Belgrade has the highest values. Within the parameters of total arrivals, the Region of Southern and Eastern Serbia in 2017, and the Region of Vojvodina in 2018 and 2019 have the lowest frequency.

Also, by observing the parameters by regions, it can be seen that the Region of Sumadija and Western Serbia has the largest number of total tourist overnight stays and the largest number of domestic tourist overnight stays. As for the parameters of overnight stays of foreign tourists, the Region of Belgrade has the highest values. Within the parameters of total overnight stays, the lowest frequency has the Region of Southern and Eastern Serbia in 2017, and the Region of Vojvodina in 2018 and 2019.

Total accommodation capacities with both parameters - rooms and beds, record a progressive numerical growth over the years. The progressive numerical growth by years in the domain of accommodation capacities is evident in two regions – Serbia North and Serbia South. By comparing the accommodation capacities of the two regions, it can be noticed that the region Serbia South has better accommodation capacities both with the room parameter and with the beds parameter.

The last table analysis refers to the overview of accommodation capacities by types of tourist places and facilities in 2019.

If the room parameter is observed, the most represented tourist facility is a hotel, with the value of 17,131 rented rooms. If we analyse the representation of tourist facilities by tourist places, we see that with spa resorts the most represented tourist facilities are private rooms, then, that with mountain resorts the most represented tourist facilities are hotels, further, that with other tourist places the most represented tourist facilities are also hotels, and finally, that with other places the most common tourist facilities are private rooms. If we compare tourist places with each other, and according to the criteria of rented rooms, it can be concluded that the places with the highest frequency are spa resorts and other tourist places.

If the bed parameter is observed, the most represented tourist facility is a hotel, with values of 34,238 rented beds. If we analyse the representation of tourist facilities by tourist places, we see that with spa resorts the most represented tourist facilities are private rooms, then, that with mountain resorts the most represented tourist facilities are hotels, further, that with other tourist places the most represented tourist facilities are also hotels, and finally, that with other places the most represented tourist facilities are private rooms. If we compare tourist places with each other, and according to the criteria of rented beds, it can be concluded that the spa resorts have the highest frequency.

The research in this paper is based on research data for the period 2017 - 2019. In the future analysis of the development of tourist potential in Serbia, it is necessary to take into account the impact of the Covid-19 pandemic on the entire tourist sector of Serbia. Then, the recommendation is that the direction of future research be focused on a comparative analysis of the frequency of tourists and the occupancy of the accommodation capacities of the tourism sector in Serbia before the pandemic and during the pandemic. It is especially interesting to focus future research on the analysis of parameters and possibilities of development of certain modern forms of tourism in Serbia, such as rural tourism, having in mind the influence of Covid-19 on the possibility of tourists moving across the border and changing tourist preferences of domestic tourists.

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# PERFORMANCE MEASUREMENT SYSTEM: A BENCHMARKING SYSTEM OF THE SLOVENE AND CROATIAN HOTELS

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**Abstract:** *The paper presents a performance measurement system that was developed with the aim to provide a useful benchmarking tool for Slovene and Croatian hotels. Financial results of Slovene and Croatian hotels show that there is room for improvements. That is why the necessity to develop a performance measurement system emerged. The paper presents the development process of this performance measurement system and the theoretical background of selected measures that are included in the system. This system includes both financial and non-financial indicators of performance. Financial indicators are based on USALI standards for the lodging industry, while non-financial indicators were developed based on a literature review. Non-financial indicators include information about guests, employees, and corporate social responsibility. The presented performance measurement system enables hotels to analyse their financial performance on a daily level, while non-financial indicators can be evaluated on a monthly and annual basis.*

**Keywords:** *Hotel industry, Performance analysis, Benchmarking analysis, Slovenia, Croatia.*

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## 1. INTRODUCTION

The purpose of this paper is to present a performance measurement system that was developed with the aim to provide a useful benchmarking tool for Slovene and Croatian hotels. The necessity of having this kind of system emerged since to date in both countries a system that would facilitate a benchmarking analysis of hotel companies was not yet in use. Since the hotel industry is an important branch in both countries, the idea to develop a performance measurement system emerged. Indicators included in the developed performance measurement system are grounded on the literature review and USALI<sup>3</sup> standards.

Direct and indirect effects of tourism on the Slovenian GDP in 2019 were 9.9%, while the share of employees working in this industry in relation to total employees amounted to 10.3% (WTTC, 2020). Tourism in Slovenia is also an important export activity, as in 2019 it reached €177 million, which represents 6.2% of total exports. Within the Standard Classification of Activities, the most important tourist activity in terms of generated revenues and number of employees in Slovenia are accommodation and food service activities (AJ PES, 2020). 2019 was the sixth consecutive record year for the Slovene tourism industry. The number of tourist arrivals amounted to 6.2 million and, overnight stays to 15.7 million (STB, 2020). In contrast, data regarding financial performance show that the hotel industry sector has not been successful. On average Slovene hotel, companies do not add value for their owners (Stubelj and Jerman, 2019).

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<sup>3</sup> USALI - Uniform System of Accounts for Lodging Industry (2019) is a standard system of accounting reports on the level of a unit – hotel, which was developed under the influence of American international hotel chains. The first edition of the uniform report system was published in 1926.

The latest data for Croatian tourism show that the number of tourist arrivals was increasing from year to year and reached a total number of 19 million arrivals in 2019. In the same year, the number of tourist overnight stays reached 91 million. Hotels recorded 22.8% of total tourist overnight stays. In 2019, the share of employees working in hotels and restaurants in relation to total employees amounted to 8.2%. In 2019, the share of the tourism industry represented approximately 19.5% of Croatian GDP (Ministry of Tourism Republic of Croatia, 2020).

Since data show that the hotel industry is a very important sector for the creation of the Slovenian and Croatian GDP, the idea of having a performance measurement system that could provide prompt (up to date) information about the performance of companies operating in this industry emerged. The purpose of the paper is to present this performance measurement system and its theoretical background.

## **2. DEVELOPMENT OF A PERFORMANCE MEASUREMENT SYSTEM FOR SLOVENE AND CROATIAN HOTELS**

The idea was founded by the Operational program Slovenia-Croatia. The project was entitled “Benchmarking of Croatian and Slovenian hotel sector: an instrument to increase competitiveness and entrepreneurship development”.<sup>4</sup> The main objective was to create dynamic cross-border cooperation between hotel enterprises aiming to enable comparison of their businesses in order to increase the level of their economic development and tourism entrepreneurship in general. To achieve its purpose, the project aimed to:

- Develop a joint methodology of financial and non-financial indicators for performance analysis;
- Enable a benchmarking analysis between hotels;
- Develop software that would enable performance analysis on a daily basis.

In Slovenia, the principal obstacles preventing the possibility to perform a benchmarking analysis of hotels were/are as follows. Hotels that are part of a larger hotel group do not report separately for the purpose of external financial reporting. Thus, financial reports are often prepared for the group and not for a single entity. These reports do not allow management to make comparisons with the results of competitors. Moreover, several hotels are owned by companies that do not operate only in the hotel industry. If only consolidated financial reports are prepared for the group of companies, the results cannot be used for making comparisons. Secondly, the reports are not prepared in accordance with the widely used standards for the lodging industry USALI. They are prepared in accordance with the national accounting standards (Slovene Accounting Standards). Slovene hotels rarely implement the standards for the hotel industry. Finally, financial reports for the accounting period are publicly available only several months after the period when business events occurred, thus the analysis of this kind of data is not timely.

That is why a system enabling hotel management to perform a benchmarking analysis with competitors was needed. The project aimed to develop a methodology that includes both finan-

<sup>4</sup> There were four partners in the project. The leading partner was the Faculty of Tourism and Hospitality Management from Opatija (Croatia), which has extensive experience with similar projects. The second partner was the Faculty of Tourism Studies from Portorož (Slovenia), which has extensive experience from the field of hotel industry analysis. Finally, the remaining two partners were organizations that have an important influence in the field of hospitality tourism in both countries, i.e. Tourism and Hospitality Chamber of Slovenia and Association of Employers in Croatian Hospitality (UPUHH). The latter is the leading professional association in the hotel industry, and hospitality in general, in Croatia, focusing on long-term development goals in the hospitality sector.

cial and non-financial indicators. The development process of this performance measurement system required a theoretical review of the literature and best practices. Based on the literature review, the proposed list of indicators for the performance measurement system was prepared. The list of indicators was presented to the hotel representatives. Project partners organized several workshops in each of the two countries involved in the project. At the workshops, all the proposed inputs were presented. Based on the comments and suggestions of hotel representatives, the list was upgraded. Thus, a list of the most important indicators was prepared. The paper will now present the performance measurement system developed for the purpose of benchmarking analysis and continue with the theoretical background that supports the selections of indicators included in the presented performance measurement system.

## **2.1. Indicators used in the performance measurement system**

This performance measurement system is composed of two major parts, i.e. the part that includes financial data and the part that includes mainly non-financial data. To understand the performance measurement system that was developed and is used by hotels, both the financial and non-financial indicators will be presented. The first part of the system includes financial data about hotel operations. The methodology is based on USALI standards (2019).

## **2.2. Financial indicators included in the performance measurement system**

The following inputs have to be uploaded on a daily basis to enable daily comparisons of results between different hotels. The required inputs for an individual hotel daily are:

- General information about facilities: number of available rooms, number of rooms occupied.
- Number of overnight stays and guests (divided into domestic and foreign guests).
- Information about revenues: revenues from the accommodation, revenues from food and beverages, revenues from wellness/spa, revenues from other business departments.

Based on these inputs on a daily level, hotels have the chance to make a comparative analysis of the following indicators (outputs): rooms' occupancy rate, average room rate, revenues per available room, total revenues per available room, total revenues per overnight stay and structure of revenues. Hotels have the chance to monitor revenues by the segment on a weekly level.

On the monthly level hotels must provide data about generated revenues and costs, number of guests and guest structure. The required inputs for an individual hotel monthly are:

- Information about revenues: revenues from the accommodation, revenues from food and beverages, revenues from wellness/spa, revenues from other business departments, revenues from rental and other income.
- Cost information: direct costs of business departments (accommodation, food and beverages, wellness/spa, other departments).
- Direct labour costs and other direct costs of business departments (accommodation, food and beverages, wellness/spa, other departments).
- Unallocated indirect costs: administrative and other indirect costs, marketing and sales, investment and current maintenance, energy, fixed (uncontrollable) costs.

On a monthly level, hotels have the possibility to receive the following indicators: rooms' occupancy rate, average room rate, revenues per available room, total revenues per available room,

total revenues for the segment of lodging, an average rate of half board packages, share of direct cost in revenues (separately for each department), share of direct cost in total revenues (by business department), share of indirect cost in total revenues, share of gross operating profit in revenues and gross operating profit per occupied room. Moreover, hotels receive information about revenues (by departments), direct costs of business departments, sum of contribution margins to cover business departments, unallocated general costs – controllable, gross operating profit (GOP), fixed costs - uncontrollable, EBITDA (earnings before interests, taxes, depreciation, and amortisation), depreciation and EBIT (earnings before interests and taxes). These data enable a hotel to perform revenue management and cost control.

Apart from financial indicators, the system also enables hotels to compare non-financial indicators. Non-financial indicators are monitored mainly on a monthly and/or annual basis.

### **2.3. Non-financial indicators included in the performance measurement system**

The second part of the presented performance measurement system includes mainly non-financial information about hotel performance. It is divided into three segments of information: information about guests, employees, and corporate social responsibility. Hotels are required to provide the following information about their guests: number of arrivals and overnight stays, share of different target groups, share of regular hotel guests, structure of domestic and foreign guests, country of origin of foreign guests, methods of hotel reservation and guests' satisfaction.

Apart from data regarding the characteristics of guests, the hotels are required to provide data about employees. The information about employees is separated into two parts. The first part concerns financial data about employees, while the second includes a questionnaire about their satisfaction. Employees' satisfaction is measured with selected questions that derive from the literature review.

The area of corporate social responsibility (CSR) covers three dimensions, i.e. local community, environment and marketplace policy. The dimension of human capital is covered separately from CSR.

Since the development of this performance measurement system was developed based on a literature review and best practices, hereinafter we present the theoretical background. The theoretical background concerns non-financial indicators covering the aspect of guests, employees, and corporate social responsibility.<sup>5</sup> Financial data (inputs) are based on USALI standards (2019).

## **3. THEORETICAL BACKGROUND OF THE DEVELOPED PERFORMANCE MEASUREMENT SYSTEM – INFORMATION ABOUT GUESTS, EMPLOYEES AND CORPORATE SOCIAL RESPONSIBILITY**

Hotel enterprises have unique operational characteristics, as they bring together many activities that are essential for guest satisfaction. Corresponding particularities are, according to several authors (Jones and Lockwood, 1998; Harris, 1992; Chibili, 2016): fixed facilities, direct contact with guests, volatile customer demand, critical human factor, and high fixed capital costs.

A high level of competitiveness is typical for the business environment in the hotel industry. It requires that management continuously adjusts to guest needs that are essential for the good performance of an individual hotel. A developed MAS (management accounting system) is

<sup>5</sup> The aspect of employees is monitored with both, financial and non-financial data.

useful in meeting the needs of guests and furthermore in achieving business objectives (Damonite et al., 1997; Chibili, 2016). Information of the MAS is required for high-quality decisions (Mia and Chenhall, 1994; Dopson and Hayes, 2016) and utilization of comparative advantages (Downie, 1997). That is why MAS has to provide the information required for management decision-making (Dent, 1996; Mia and Chenhall, 1994). The development of an adequate MAS has to be primarily grounded on business objectives and business strategies. In the continuation, crucial variables (to achieve the goals) have to be identified, i.e. critical success factors (CSF).

Since guests are the focus of hotel operations, we will first present the theoretical background used for the development of the performance measurement system in this area. It will be followed by the literature review of indicators concerning employees.

### 3.1. Guest segmentation

Market segmentation in the hotel industry is an important marketing tool that is essential for the success of the hotel (Ivankovič et al., 2015). Various authors similarly define market segmentation. Tranter et al. (2014) define market segmentation as the practice of dividing a market into smaller specific segments sharing similar characteristics. Market segmentation is an important marketing tool with which the company distributes the heterogeneous consumer market into smaller homogeneous groups or segments. Nickels and Wood (2000) highlighted four positive effects of market segmentation: the possibility of establishing more genuine and long-term relationships with key customers, improving the efficiency and effectiveness of marketing, a better understanding of the competitive marketing tools and faster adaptation to needs of customers.

In order to better understand the characteristics of different people, the market can be divided into groups that have common needs and distinct buying habits. Market segmentation is a necessary strategic measure for the best results. Since companies are not capable of operating on all markets, they must select target markets. The major traditional market segmentation variables, according to Forgacs (2010, p. 69-70) are geographic, demographic, psychographic and behavioural traits and price-sensitivity.

Polovitz (1996) defines different criteria for market segmentation in the hospitality industry. Guests must be divided by their demographical and psychological characteristics, meaning age, time of arrival, method of reservation, willingness to pay, different needs and other characteristics of their behaviour. A revenue manager should also distinguish price-sensitive guests from those who are not price-sensitive. These two basic groups call for different marketing and revenue management approaches (Forgacs, 2010).

Most often, the authors specify different approaches to segmentation (Tkaczynski et al., 2009):

1. Geographic - this segmentation classifies guest segments, arising from the same country, region or even continent.
2. Demographic - this segmentation considers sex, age, gender and other characteristics of singlehood guests (D'Urso et al., 2013). Tranter et al. (2014) lists also marital status, education, occupation, income, race, and religion.
3. Psychographic - people are classified according to their interests, mainly based on personality that affects a certain behaviour. Our inner self, according to psychographic theory affects the whole process of thinking and decision-making for the purchase of a service.



4. Behavioural segmentation is based on certain situations and reactions of consumers shopping in the sales process. People have different patterns of behaviour, so the ones who have travelled together are usually the ones with similar habits (Kahre et al., 2014).

Another distinction of a market segment is determined by the type of advertising. It is important to figure out which products increase guest satisfaction and which products are perceived as something necessary by tourists, without additional value (see Fuller and Matzler, 2007). Another question is what the target segment of guests is because the importance of different products varies from segment to segment. Based on this information the hotelier can develop products, from which they should stand out in the market and justify the price of services, and their advertising strategy (Fuller and Matzler, 2007).

### ***3.1.1. Market segmentation - guest usage segmentation***

Lewis and Chamber (1989) consider that usage segmentation is the most appropriate for the hospitality industry and covers a range of categories. Guests can be divided in accordance with their purpose of staying at the hotel. Frequency segments deal with usage regularity (loyalty of guests). Many hotels offer guest programs. These are designed to reward loyal patronage and induce repeat returns of guests (Tranter et al., 2014).

Timing depends upon different periods of visits. These depend on different days of the week, weeks, months, and seasons. Timing segmentation consists of low season and high season. It depends on what people seek (for example peace and rest, summer heat). Timing segments can also be based on the time the guest buys the service. For example, for some events or international conferences, the hotels are booked at least a year in advance (Lewis and Chambers, 1989).

### ***3.1.2. Market segmentation regarding the type of advertising***

Hotel offer does not only include a room but also various free or payable services (such as swimming pool, restaurant, bar, sauna), attractions, etc. These additional services can also be used for target segmentation, as something that sets a hotel apart from the competition. A hotel can also differentiate itself by providing healthy food, special sorts of food, natural and cultural attractions near the hotel, etc.

Online central reservation systems (that are connected into bigger global distributing systems) are becoming an increasingly popular method of advertising and distribution because, in addition to being very well known among the users and providing up to date and specific information, they also enable immediate reservation and purchase of hotel facilities. Both independent hotels and hotel chains rely on this method (Nemec Rudež, 2013).

Some hotels still put focus on advertising through specialized agencies, particularly hotels with a target segment of older guests (for example hotels with wellness facilities). But in general, the power of agencies is decreasing, as more and more people use online systems (Nemec Rudež, 2013).

## **3.2. Employees – a critical success factor**

Jones (1995, pp. 163) has come across a discrepancy between the existing management accounting system and the requirements for information on different levels of accounting, originating

from critical factors for achievement. Consequently, it has been drawn out that employees are the most important critical factor for achievement in most accounting systems of the hotel companies under study (Jones, 1995, pp. 163). The importance of human capital for future performance measurement was already pointed out by Kaplan and Norton (1992) with their Balanced Scorecard (BSC), where target priorities were divided into financial and non-financial targets (including fluctuation of employees). The empirical analysis of Slovene hotels showed that in order to increase competitiveness managers should focus much more on developing human capital (Nemec Rudež and Mihalič, 2007). The quality of personal services for individual guests and the preparation and implementation of services in hotels depend mostly on the employees. To that end, it is not surprising that hotels' employees most frequently represent the most important critical success factor.

The hotel industry in Slovenia has its unique work environment characteristics. It is denoted by low salaries, restricted opportunities for career progression, disadvantageous work times, discomfort in working conditions and a high degree of undeclared work. These are the reasons that lead to poor operational efficiency and, moreover, a high staff turnover (RNUST, 2009). Lower wages in the hospitality sector in comparison to other private sectors were already evidenced by Casado-Díaz and Simón (2016). They found that wage disadvantage for hospitality workers is particularly a consequence of lower educational qualifications (Casado-Díaz and Simon, 2016). The study of Arbelo et al. (2017) shows a positive correlation between accumulated experience or knowledge and efficiency, emphasizing the importance of employee training.

The research into human resources has demonstrated that the biggest weaknesses in the field of tourism (and hence also in the hotel industry) in Slovenia are (RNUST, 2009):

- the low level of knowledge,
- a gap between formal education and restricted practical qualifications in touristic enterprises,
- a gap between formal education and the needs of companies in practice and, finally,
- a decreasing interest in professions from the hotel industry.

Employee satisfaction is a central concern in the service industry in general and in hospitality in particular. Many studies found a positive relationship between employee satisfaction, customer satisfaction, and company performance (Matzler and Renzl, 2007). Employee satisfaction is typically viewed as a multidimensional construct. There exist several scales to measure satisfaction regarding several dimensions. Only satisfied employees can be effective and successful in the performance of their duties (Matzler and Renzl, 2007).

Since studies have demonstrated the link between employee satisfaction and guest satisfaction in the hotel industry, many companies monitor employee satisfaction and implement programmes to enhance the satisfaction and loyalty of the employees (Yee et al., 2008). Yee et al. (2008) found that employee satisfaction is significantly related to service quality and customer satisfaction, while the latter in turn influences firm profitability.

### ***3.2.1. Employee satisfaction and customer satisfaction***

Research on consumer psychology has shown that exposing customers to happy employees results in customers having a positive attitude towards a product. Likewise, research on organizational behaviour has revealed that the hostility of service employees has a direct impact on the

hostile mood of customers, leading to customer dissatisfaction regardless of the performance of the core tasks of the services delivered to fulfill customer needs (Yee et al., 2008).

Service employees with a high level of job satisfaction will appear to the customer to be more balanced and pleased with their environment, leading to a positive influence on the level of customer satisfaction. In contrast, dissatisfied service employees are likely to display unpleasant emotions to customers, reducing the level of customer satisfaction through emotional contagion. Employee satisfaction has a long-term financial impact on the business – there is a link between employee satisfaction and customer satisfaction and its various outcomes, such as customer loyalty and profitability. Highly satisfied customers of a company are likely to purchase more frequently, in greater volume and buy other goods and services offered by the same service provider (Yee et al., 2008).

### ***3.2.2. Factors affecting job satisfaction***

An employee's overall satisfaction with the job is a result of a combination of factors. Financial compensation is only one of them and research suggests that other factors have a more important role (Ashton, 2018). The employee's overall satisfaction depends on working conditions, the opportunity for advancement, workload and stress level, financial and non-financial rewards, and several others.

*Working conditions* - since employees spend a lot of time at their workplace, companies should try to optimize working conditions. Such things as providing spacious work areas rather than cramped ones, adequate lighting and comfortable work stations contribute to favourable work conditions (Tutuncu and Kozak, 2007). The study of Laškarić (2017) made on the sample of employees working in the Croatian hospitality industry show that there is a direct relationship between employee satisfaction with co-worker relationships and job satisfaction, but also an indirect relationship with employee hospitality.

*Opportunity for advancement* - employees are more satisfied with their current job if they see a path available to move up the ranks in the company and be given more responsibility and higher compensation (Tutuncu and Kozak, 2007).

*Workload and stress level* - dealing with a workload that is far too heavy and deadlines that are impossible to reach can cause job satisfaction to erode for even the most dedicated employee. Falling short of deadlines results in conflict between employees and supervisors and raises the stress level of the workplace. Many times, this environment is caused by ineffective management and poor planning (Tutuncu and Kozak, 2007).

*Financial and non-financial rewards* - job satisfaction is impacted by an employee's views about the fairness of the company wage scale as well as the current compensation received. Opportunities to earn special incentives, such as bonuses, extra paid time off or vacations, also bring excitement and higher job satisfaction to the workplace (Tutuncu and Kozak, 2007).

### **3.3. Corporate social responsibility**

Many researchers have identified several dimensions of social responsibility that occur in different economic activities. These dimensions relate to the environment, human resources, the local community, employees, business performance, etc. (Ahmad et al., 2003; Khasharmeh and

Desoky, 2013; Lipunga, 2013; Ponnu and Okoth, 2009). The European Union has also recognized the importance of corporate social responsibility, and in 2001 the European Commission issued a Green Paper on corporate social responsibility to launch a wide-ranging debate on this topic at national and international level.

Social responsibility is also highlighted by the international non-profit organization Global Reporting Initiative (GRI), which has developed a framework for reporting on sustainable development. The guidelines dictate three dimensions of reporting; economic, environmental, and social category (GRI, 2020). There is an increase of reports about corporate social responsibility as more and more stakeholders expect information on the socially responsible operation of a company (De Grosbois, 2012).

In 2014, the Council of the European Union adopted an amended Directive on the disclosure of non-financial information of certain large companies. The amendments must be considered by companies with more than 500 employees. Companies must prepare a description of policies, results and risks related to environmental protection, social responsibility and treatment of employees, respect for human rights and anti-corruption and bribery. The amended directive must be taken into account by companies in their annual reports from 2018 onwards (Directive 2014/95/EU).

Social responsibility in the hotel industry has not been of interest to researchers for a long time. However, this has changed considerably, especially in the last decade, with more research on the implementation of socially responsible behaviour in the hotel industry (Kim et al., 2019). The most common dimensions of corporate social responsibility in the hotel industry are local communities, the environment, human resources, and market policy (De Grosbois, 2012; Holcomb et al., 2007; Garay and Font, 2012; Tsai et al., 2012, Benavides-Velasco et al., 2014; Su et al., 2017). In terms of reporting, further studies are needed to explore the actual levels of information quality disclosed in corporate social responsibility reports (Serra-Cantallops et al., 2018).

#### **4. INDICATORS INCLUDED IN THE DEVELOPED PERFORMANCE MEASUREMENT SYSTEM**

When considering the indicators that should be included in the benchmarking software, the authors of the software tried to include as many dimensions as possible. However, not all of the indicators that were identified in the literature as important could be included, since this would result in too extensive amount of data that hotels should prepare as inputs for the benchmarking system. Based on the theoretical review and the discussion with hotel representatives, the following indicators were defined as the most important and as such are included in the software. First, we present the indicators regarding guest segmentation.

Room occupancy rate by (monthly data):

- Marketing distribution channels (individuals, groups, allotments, others),
- Day of the week (separately for each day of the week).

Indicators about guests by (monthly data):

- Their motive of stay (leisure, business, congress, other),
- Frequency.

Questionnaire for the management about (annual data):

- Importance of different marketing media (for each media, importance is expressed in %),
- Usage frequency of different marketing media (in %).

In accordance with accounting standards and the USALI a set of non-financial indicators and selected financial indicators regarding employees was included in the system. Financially oriented information about employees is the following (monthly level):

- cost of employees per available room (gross salaries / available rooms),
- cost of employees (including outsourcing) per available room (gross salaries + cost of outsourcing / available rooms),
- value added per employee (number of employees is expressed by using effective hours),
- revenues per employee,
- GOP per employee.

On the annual level, apart from the above-mentioned indicators, we also monitor the following indicators:

- cost of education per employee, and
- share of employees that had quit the job.

Annually, employees are supposed to fill out a questionnaire that measures their satisfaction. An employee's overall satisfaction with the job is a result of a combination of factors. Financial compensation is only one of them. The employee's overall satisfaction depends on working conditions, opportunity for advancement, workload and stress level, financial and non-financial rewards, and several others. The questionnaire was composed using a combination of questions already used by Gu and Siu (2008) and Chi and Gursoy (2009).

The questions are the following:

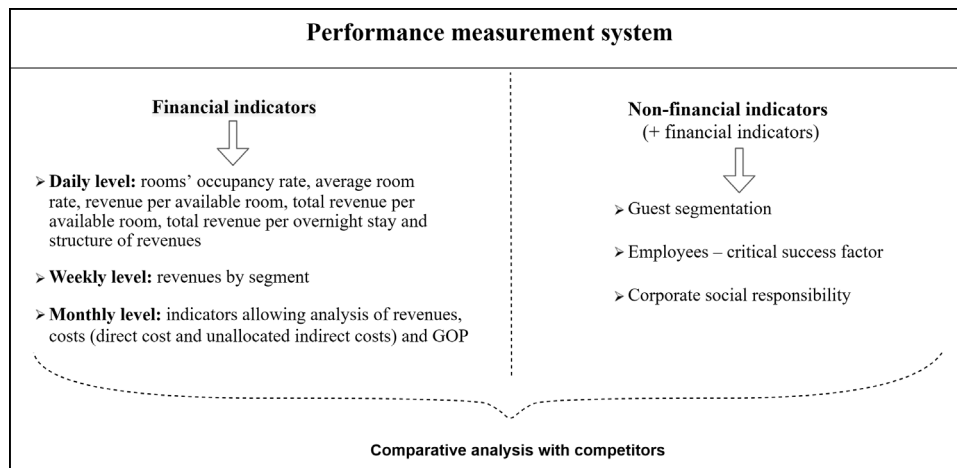
- How satisfied are they with their job (Chi and Gursoy, 2009);
- How satisfied are they with the salary (Gu and Siu, 2008);
- How satisfied are they with the remuneration system (Gu and Siu, 2008);
- How efficient is the training system (Gu and Siu, 2008);
- How often do they evidence stress at their workplace (Gu and Siu, 2008);
- Do they intend to work for the company for a long time (Chi and Gursoy, 2009).

For all the questions, a 5-point Likert scale is used. The questionnaire also includes some questions about demographic data.

Based on the literature review and feedback of hotel representatives, we created a set of indicators for measuring the social responsibility of an individual hotel. The selection of indicators was based on the most frequently defined dimensions of corporate social responsibility in the hotel industry and on the recommendations of the European Commission. The dimension of the local community is monitored with the indicator that measures the share of donations in relation to gross operating profit (GOP). The environmental dimension is covered with several indicators such as water usage per occupied and available room, electricity usage per occupied and available room, oil usage per occupied and available room, gas usage per occupied and available room, share of investments into energy efficiency of buildings in GOP and share of costs of printed promotional materials in GOP. The dimension of marketplace policy is covered with



the liabilities turnover ratio indicator. Moreover, representatives of the hotels have to fill out the questionnaire about CSR concerning activities about separating all types of waste, recycling (reuse within the company, e.g. wastewater, paper), energy savings (electricity, heating/cooling), financial assistance for activities and projects in the local community (sponsoring of local sports clubs, charitable contributions, etc.), cooperation with local producers. This questionnaire aims to raise the company's efforts regarding CSR activities. The framework of the developed performance measurement system is shown in figure 1.



**Figure 1.** Framework of the developed performance measurement system

## 5. APPLICATION IN PRACTICE AND FUTURE RESEARCH DIRECTIONS

Based on the presented data, the user of this performance measurement system can choose the desired set of benchmarks. The user must choose at least three other hotels (from among those using the software). The selection is based on the number of rooms and/or type of the hotel and/or number of stars, or some other general characteristic of the hotel. The selection process does not allow choosing other hotels by their names, but the benchmarks must be selected based on characteristics of interest (number of rooms, number of stars, etc.). After selecting the benchmarks, the user has the chance to compare its own results to the lowest, highest, and the average value of chosen benchmarks. The important feature of the system is that it performs the comparison and shows to the user results only if the user uploads its own data. Unless the hotel uploads its own results, it will not have the chance to see the results of the competitors.

The project founding has served to develop the performance measurement methodology. The result of the presented project is a performance measurement tool for daily, monthly, and annual monitoring and comparison of hotel operations. This performance measurement system compares internal achievements of hotels, according to the same criteria and considering international reporting standards in the hotel industry, as well as modern management concepts and best practices.

The intention of the authors is to implement the presented benchmarking performance measurement system by Slovene and Croatian hotel companies. The performance measurement system, based on financial indicators, is currently used by 112 hotels in Croatia (FTHM, 2020). These companies use the USALI standards and regularly send daily and monthly business data, and in return receive reports with key business indicators for a pre-determined comparative set. The benchmarking analysis is provided daily.

Data confidentiality is ensured as only the highest, lowest, and mean values of indicators for the selected sample of hotels are displayed. Indicators of the selected comparative set of competitors are shown only if at least three hotels are involved. This benchmarking system allows comparison of hotels based on different indicators; individual hotels can thus identify their strengths and weaknesses and receive information for revenue and cost management.

In Slovenian hotels, the implementation was not that successful, as the financial reporting system is basically different and the required adjustments to the accounting records are more numerous and consequently lead to higher costs. We assume that the interest in introducing the aforementioned business performance measurement system will be greater when Slovenian companies will implement the concept of USALI standards in monitoring the performance of individual hotels.

For hotel companies to be successful and stay competitive, they need to adapt to changes required by the market. In this sense, it is necessary to continuously seek good business practices that will also enable the achievement of the best business results. These continuous improvements are also carried out based on positive as well as negative experiences of others, to improve one's own business. Benchmarking can be of great help to businesses in this process. In this regard, data of own operations, without placing them in the context of hotels from the same region and/or of similar characteristics, are not a sufficient basis for a realistic analysis of the hotel's position, analysis of strengths and weaknesses in relation to competition and for strategic decision-making purposes. The possibility to solve this problem is the introduction of modern and innovative solutions for monitoring, measuring, and comparing business results. Köseoglu et al. (2020) found that managers in hotels prioritize monitoring competitors' behaviours and macro-environmental characteristics over internal analysis of the company when formulating business strategies.

Limitations of the presented performance measurement system refer to the number of indicators included. Even though the authors of the methodology and future users from hotels are aware that many other indicators could be included in the software, the authors were obliged to decide between the level of functionality and the amount of information provided. Representatives of the hotels emphasized that the transmission of data should not take too much time.

Future research could expand to new markets where the hotel companies do not use performance measurement systems which allow them to compare performance with their competitors. Future research could also address particularities of the hotel industry in other countries and develop a suitable methodology for measuring performance in these markets.

## **6. CONCLUSION**

The purpose of the presented performance measurement system developed for Slovene and Croatian hotels is to enable the management of these hotels to perform a benchmarking analysis on time. This benchmarking system provides a prompt comparative analysis with competitors and enables timely corrective actions when inefficiencies are discovered. The system gives a unique possibility to make comparative analyses with similar hotels. The developed performance measurement system provides selected results of hotels' performance on a daily, monthly, and annual level and thus provides a basis for benchmarking analysis.

Slovene hotels still do not monitor their performance based on USALI standards. USALI provides a base for detecting the existing state of performance and moreover renders possible a comparative analysis with international competitors. Since the methodology of financial indicators used in the presented performance measurement system is based on USALI standards, Slovene hotels have the opportunity to monitor their performance according to internationally recognized standards in the hotel industry. This kind of performance measurement system is especially necessary for Slovenian hotels since on average they do not generate value for their owners. Even though statistical data about tourist arrivals and overnight stays are satisfactory, many hotels in the region are not successful. The proposed performance measurement system can help them in solving this issue.

Problems faced by hotels in both countries are reflected in large differences in methods of internal monitoring and measurement of business results, the absence of a system for measuring social responsibility indicators, non-implementation of performance measurement systems with financial and non-financial business indicators and incomplete implementation of financial reporting standards USALI. The implementation of USALI is especially important so that hotels can be compared with each other, both at the local level and internationally.

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# THE EFFECT OF FINANCIAL PERFORMANCES ON EARNINGS QUALITY OF SERBIAN HOTELS

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**Abstract:** *This study examines the effect of financial performances on earnings quality using a sample of Serbian hotels during the period 2015-2019. First, the authors build a multidimensional measure of earnings quality including attributes as the hotel's going concerned, size, current liquidity, age, profitability, and leverage. Second, the authors examine variables that are potentially associated with earnings quality. The methodology includes descriptive statistics, univariate test, correlation matrix for the variables, multivariate regression, F-test. This paper presents managerial implications for professionals, users of financial statements, and academics.*

**Keywords:** *Earnings quality, Earnings management, Financial performances, Serbian hotels.*

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## 1. INTRODUCTION

The Serbian accounting system is based on International Accounting Standards - *IAS*/ International Financial Reporting Standards - *IFRS* and on the Law on Accounting and the Law on Auditing and other regulations imposed by the Government and Ministry of Finance. The World Bank Report on Compliance with Regulations and Standards in the Field of Accounting (*Report on the Observance of Standards and Codes - ROSC Serbia*), published in June 2015, notes significant progress in the reform of accounting regulations that have been achieved by the current Accounting Law and the Law on Audit adopted by Serbia in July 2013 compared to 2005, when there was a preliminary examination, but also noticed are certain shortcomings. Key weaknesses relate to the following (Center for the Financial Reporting Reform, 2015):

1. The institutional financial reporting system has many weaknesses,
2. Legal bases of financial reporting are incompatible with EU requirements,
3. Weaknesses of the education system and further training of professionals based on financial reporting practices.

Financial reports are used to convey financial information on firm performance. Sometimes the management of the company takes advantage of accounting choices to manipulate earnings and mislead users. However, managers could choose reporting methods to reflect the financial figures to their advantage to temporarily either inflate or reduce the firm's current income to meet a predetermined target. One of these accounting practices is called earnings management manipulation (Hai-Yen, Li-Heng, & Hui-Fun, 2019). The practice of earnings management is a way for managers to use accounting standards to meet specific objectives, without breaking the accounting principles.

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The remainder of this paper has been organized as follows. In the next section, we present the literature review and hypotheses development. In section 3 we focus on the research methodology adopted for the study; while sections 4, 5, and 6 discuss the empirical results, the conclusion of the study, and future research directions.

## 2. LITERATURE REVIEW

The academic literature has numerous definitions of earnings quality.

1. Based on earnings stability: The more sustainable the earnings, the higher the quality of earnings (Tapia & Fernández, 2011).
2. Based on information content: Kirschenheiter and Melumad (2004) state that high-quality earnings are more informative and closer to the long-run value of the firm.

Several measures of earnings quality are proposed in the literature. The Miller (2009) approach is used to measure this variable. The relationship is to be known as the MR (Miller Ratio) and specified as  $\Delta WC/CFO$  (change in working capital/cash flow from operations). Specifically, the further from zero the MR is, the more probability of earnings management, since it detects discretionary accruals. It is the level of discretionary accruals that suggest earnings management. Chan et al. (2006) find that increased earnings accompanied by high accruals suggest low earnings quality.

Earnings management is defined as a process to manipulate data and numbers legally exploiting the flexibility of the international accounting standards (IAS) to show an unreal picture of the content of financial statements and in contrary with the real condition of the company's performance to achieve their management interests. Earnings management refers to a strategy used by a firm's management to apply accounting rules flexibly to manipulate corporate profits (Bodie, Kane, & Marcus, 2013).

The development of the global economy imposes a need for the harmonization of financial reporting. Quality financial reporting implies the application of accounting standards, that enable the comparability of financial reports within the international framework. International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) was issued as a single set of global accounting standards to offer better transparency and comparability of the financial statement. Also, IAS/IFRS standards provide greater flexibility of accounting choices and subjective estimates (Biddle, Hillary, & Verdi, 2009).

Extant literature suggests that IFRS improves the reliability of financial reporting by limiting opportunistic management discretion and increasing earnings quality (Aharony, Barniv, & Falk, 2010; Djatej, Gao, Sarikas, & Senteney, 2011; Burca, & Mates, 2015). Other studies argue that the implementation of international regulation does not limit earnings management and does not improve earnings quality (Anwer, Michael, & Dechun, 2013).

If profitability is extremely low, managers may decrease income, which is known as the 'big bath' strategy (Healy, 1985). A „big bath” is an accounting term defined as “the attempt to increase reported earnings in subsequent periods by charging items that may have a negative future impact to expenses in the current period, further worsening current period business results in an accounting period in which results are bad” (Itoh 2007).

Managers may decrease earnings to meet bonus targets or to protect their job, to control fluctuations in reported earnings, to assure investors of a steady earnings flow, etc. The companies with a low return on assets have a greater tendency to smooth earnings (Ratnanigrum, 2016). Koch (1981) defines that income smoothing as a method used by management to reduce fluctuations in reported earnings to match the desired target either artificial (artificial smoothing), and in real terms (real smoothing). Income smoothing is a common form of earnings management (EM) where managers can manipulate earnings in two directions, inflate or deflate net income so that income movement seems smoother and less fluctuated. Income smoothing could be classified as artificial, where techniques of accounting earnings management such as accruals manipulation could be implemented, or real, where methods of real earnings management could be applied such as sales of assets (Khalil, & Simon, 2014). Jayaraman (2008) argues that income smoothing distorts the contemporaneous information content of earnings and cash flow.

There are many other reasons why and how managers manipulate, such as capital market pressure, managerial incentives, political connections, building credibility with the capital market, maintaining or increasing stock prices, improving the external reputation of the management team, to convey future growth prospects and unrealistic forecasting of revenues (Wijesinghe, & Kehelwalatenna, 2017). Earnings management is regarded as an inverse measure of the earnings quality by representing a deliberate intervention in the financial statements, negatively impacting the earnings quality (Baxter, & Cotter, 2009). There is no clear consensus on a definition of earnings management in the literature.

Existing literature has different definitions of „earnings management”. Schipper (1989) defined earnings management as „a purposeful intervention in the external financial reporting with the intent of obtaining some private gain.” According to Healy (1999) „earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting practices.” Scott (2009) determines earnings management as „the choice of accounting policies or actions that can affect earnings to achieve a specific objective.” According to Scott (2009) various earnings management tactics are: 1) the big bath, 2) income minimization, 3) income maximization, and 4) income smoothing.

Earnings management is a purposeful intervention in financial reporting, designed to reach earnings targets by varying accounting practices. However, it is an action that takes place without necessarily violating accounting regulations, and which takes advantage of possibilities of choice in accounting policy. The action may mislead stakeholders, causing them to make decisions based on financial reports that they would not have made otherwise (Callao, Jarne, & Wroblewski, 2014a, 2014b).

Earnings management may arise from information asymmetry problems and agency conflicts (Deegan, 1996, Watts, & Zimmerman, 1986). Earnings management is an attempt by managers to alter financial reports either for their private benefits or for the benefits of the stockholders. Prior studies identified different incentives for earnings management, such as management compensation, income-smoothing motivation, meeting or beating the earnings expectations of analysts, avoiding debt covenant violation, regulatory incentives, and earnings management performed to avoid financial distress (Rahman, Moniruzzaman, & Sharif, 2013; Ronen, & Tzur, 2006; Iatridis, & Kadorinis, 2009; Watts & Zimmerman, 1990; Wruck, 1990).

Concerning Altman's Z-Score which is founded on the strength of firms' balance sheets, it is likely that healthy firms have higher earnings quality than bankrupt firms, and therefore these firms' catego-

ries are significantly different because the strength of accounting-based information is more important in determining earnings quality attributes (Barker, & Imam, 2008).

Financial distress was measured using Altman Z-Score according to Altman (1968). Prediction of the company's financial condition according to Altman (1968) can be seen from the value of the Z-Score with the following conditions:

1. For a Z-Score smaller than 1.80, it means that the company is experiencing financial difficulties and the risk of bankruptcy is high.
2. For the Z-Score value between 1.80 and 2.99, the company is considered to be in the gray area. In this area, there is a possibility that the company will go bankrupt, and some will not.
3. For the value of Z-Score greater than 2.99, give an assessment that the company is in a very healthy state so the possibility of bankruptcy is very small.

The research conducted by Indracahya and Anggraini (2017) shows that good corporate governance has a significant influence on earnings management and the effect is negative. Leverage and profitability have a significant influence on earnings management and the effects that are generated are positive. The age of the company does not have a significant effect on earnings management. Company size does not have a significant effect on earnings management. Previous research studies show that the size of a company could have both positive and negative relationships with earnings management/discretionary accruals (Becker et al., 1998; Chung, Firth, & Kim, 2002). High liquidity allows the manager in the absence of a proper management structure of the company to manipulate profit (earnings) (Gombolaa, Amy, & Chin-Chuan, 2016). Mohammadi and Amini (2016) show results that financial distress and earnings management has a positive and significant relationship. Roychowdhury (2006) found evidence that managers manipulate real activities to avoid reporting annual losses.

Hotels in AP Vojvodina were profitable for the period 2014-2018. The average value of return on assets (ROA) is 32.56%. The empirical analysis reflected that total revenues increased by 218.18%, while total expenses grew by far less intensity and their growth was 123.47% for the observed period. It can be concluded that total revenues have almost doubled to total expenses of analyzed hotels in AP Vojvodina and this fact can confirm that these hotels are profitable for the period 2014-2018 (Kalaš, Mirović, & Pavlović, 2019).

Firms located in more developed countries and common-law countries are associated with a lower level of earnings management, which is consistent with previous research on the determinants of earnings management worldwide (Ball, Robin, & Wu, 2003; Leuz, Nanda, & Wysocki, 2003; Gaio, 2010). The hotel industry shows higher sales volatility, higher incidence of losses, and lower earnings quality (Parte-Esteban, & Garcia, 2014). However, not much is known about the incentives to earnings management in this industry (Park, & Jang, 2014). We aim to fill this gap in the literature, by analyzing the firm characteristics that play an important role in explaining the level of earnings management in the hotel industry.

This study aims to understand the impact of firm characteristics/financial performances on the earnings quality of Serbian hotels. Two research questions were asked:

1. Does the earnings management exist among Serbian hotels in the sample?
2. Do factors such as financial performances affect the earnings quality of hotels in Serbia?



These arguments suggest our first hypothesis:

**Hypothesis One:** *Serbian hotels have low quality of accounting earnings during the period 2015-2019.*

The main objective of this paper is to investigate the influence of firm-specific characteristics on earnings quality in Serbian hotels.

**Hypothesis Two:** *Financial performances of Serbian hotels are associated with the quality of accounting earnings.*

In order to examine our two hypotheses, we developed the following regression model:

$$EQ = \beta_0 + \beta_1 \times Z\text{-Score} + \beta_2 \times SZ + \beta_3 \times CL + \beta_4 \times AG + \beta_5 \times ROA + \beta_6 \times LEV + \varepsilon \quad (1)$$

Where:

*EQ* = Quality of accounting earnings;

*Z-Score* = Hotel's going concern;

*SZ* = Hotel's size;

*CL* = Current liquidity;

*AG* = Hotel's age;

*ROA* = Return on assets;

*LEV* = Leverage;

$\beta_0, \beta_2 \dots \beta_6$  = Hotel-specific parameters;

$\varepsilon$  = Residual.

### 3. DATA AND METHODOLOGY

In this research secondary data was used which was obtained from Scoring ("Scoring", 2020) and based on the single financial statement's data of 20 hotels/ business entities registered in Serbia from the years 2015 to 2019 (Table 1). This period was chosen because it is the period after mandatory IFRS adoption by Serbian companies. The final sample has 100 firm-year observations. The available data is processed using the statistical software SPSS (*Statistical Package for Social Sciences*) IBM Statistics Version 20.

**Table 1.** Review of the explanatory variables

<i>Symbol</i>	<i>Variable</i>	<i>Description</i>	<i>Source</i>
<i>Dependent variable</i>			
EQ	Earnings quality	Earnings quality measured by Miller ratio = $\Delta$ ( $\Delta$ Change in net working capital/Cash flows from operating activities)  In the absence of earnings management, the result of the equation will be as follows: $(\Delta WC/CFO)_t / (\Delta WC/CFO)_{t-1} = 0$  In the case of earnings management (low quality of earnings) the result of the equation will be as follows: $(\Delta WC/CFO)_t / (\Delta WC/CFO)_{t-1} \neq 0$	Authors calculation

<b>Independent variable</b>			
Z-Score	Hotel's going concern	Z-Score measured by Edward Altman (1968) = $1.2 \times X_1 + 1.4 \times X_2 + 3.3 \times X_3 + 0.6 \times X_4 + 0.999 \times X_5$ Where: $X_1$ = Working capital/Total assets $X_2$ = Retained earnings/Total assets $X_3$ = Earnings before interest and taxes (EBIT)/Total assets $X_4$ = Market value of equity/Book value of debt $X_5$ = Sales/Total assets <ul style="list-style-type: none"> <li>• According to this model, the company is persistent if the value of Z is greater than or equal to 3 (indicating healthy hotels)</li> <li>• The hotel is doubtful if the value of Z is between 1.80 to 2.99, (indicating financially distressed hotels and a high probability of going bankrupt)</li> <li>• The company's continuity is threatened if the value of Z is less than or equal to 1.8. (indicating bankrupt hotels)</li> </ul>	Authors calculation
SZ	Size	Natural logarithm of the total assets	Authors calculation
CL	Current liquidity	Current assets/Current liabilities	Authors calculation
AG	Age	Natural logarithm of the hotel age	Authors calculation
ROA	Return on assets	Net income/ Total assets	Authors calculation
LEV	Leverage	Total debt/Total assets	Authors calculation

Source: Authors' illustration

**Table 2.** List of the analyzed Serbian hotel companies

No.	Name of the hotel company	Size of the hotel company
1.	Crystal doo Beograd	small
2.	Euro Garni Hotel doo Beograd -Zemun	small
3.	HTP Plaža doo Beograd	small
4.	Hotel Elegance doo Beograd	small
5.	Hotel Novi Sad doo Novi Sad	small
6.	Hotel Putnik Beograd doo Beograd -Novi Beograd	small
7.	Hoteli Palisad Zlatibor	medium
8.	Hoteli Tri O doo Topola	micro
9.	HTP Olimp Zlatibor	small
10.	HTP Srbija doo Vršac	small
11.	Hotel Park ad Novi Sad	medium
12.	Kopernikus Hotel Prag doo	small
13.	Majdan Luks doo Beograd	micro
14.	Hotel Majestic doo Beograd	medium
15.	Metropol Palace doo Beograd	medium
16.	Prezident doo Novi Sad	medium
17.	Slavija Hoteli doo Beograd	medium
18.	Svetlost doo Niš	medium
19.	Todor Hotels doo Beograd	medium
20.	AD Hotel Srbija Beograd	small

Source: Business Registers Agency of the Republic of Serbia

Basically, the size of the hotel company is only divided into 3 categories: 1. medium companies, 2. small companies, and 3. micro enterprises (Table 2). Selected hotels use IFRS/IAS in the process of financial statement preparation.

#### 4. EMPIRICAL RESULTS AND DISCUSSION

Since the purpose of this section is to present the results of the methodology and their interpretation in the context of the research and the literature, the obtained results are as follows. Firstly, Table 3 indicates the descriptive statistics of all variables of the model.

After a detailed analysis of the movement of indicators by years, the collected data will be summarized by descriptive statistics. There are 100 hotel-firm observations for the period 2015-2019.

**Table 3.** Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
<b>EQ</b>	100	-8.4885	21.8015	1.030402	3.1186095
<b>Z-Score</b>	100	-2.0700	13.4700	3.118000	3.2776991
<b>SZ</b>	100	8.6101	15.5446	12.920268	1.3942531
<b>CL</b>	100	0.0200	14.5100	1.413200	2.4503312
<b>AG</b>	100	1.0986	3.6889	2.710961	0.4832580
<b>ROA</b>	100	-106.4200	79.4200	2.266700	19.8121489
<b>LEV</b>	100	3.1800	238.6000	50.066800	41.3355864
<b>Valid N (listwise)</b>	100				

**Source:** Authors' calculation, SPSS output

The presented descriptive analysis of analyzed hotels shows the mean value, standard deviation, minimum, and maximum value of the collected research data. Based on 100 observations, the results showed positive mean values for all variables/indicators.

Using a sample of 100 firm-year observations over the period from 2015 to 2019, we examine the practice of earnings management behavior. The result showed low earnings quality (EQ = positive mean values for earnings management is 1.030402). Results of the univariate test suggest that earnings management is significantly different from zero (Table 4).

**Table 4.** One-Sample test

One-Sample Statistics						
	N	Mean	Std. Deviation	Std. Error Mean		
<b>EQ</b>	100	1.0304	3.11861	3.1186		
One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
<b>EQ</b>	3.304	99	0.001	1.03040	0.4116	1.6492

**Source:** Authors' calculation, SPSS output

If Serbian hotels are engaged in earnings management, we expect earnings quality (EQ) measured by the Miller Ratio to be significantly different from zero. Therefore, hypothesis one ( $H_1$ ) is confirmed. There are significant statistical indicators of earnings management practices in Serbian hotels during the period 2015-2019 (Presented Sig. value ( $Sig. = 0.001 < 0.05$ )). The presented findings in this subsection are consistent with the existing research of earnings management around emerging countries (Callao, Jarne, & Wróblewski, 2019).

Table 5 shows the results of Pearson correlation coefficients between the dependent variable (EQ) and all independent variables.

**Table 5.** Correlation matrix

		Correlations						
		EQ	Z-Score	SZ	LC	AG	ROA	LEV
Z-Score	Pearson Correlation	0.151	1	-0.009	0.732**	0.375**	0.197*	-0.646**
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)	0.133		0.932	0.000	0.000	0.049	0.000
LC	Pearson Correlation	0.032	0.732**	-0.079	1	0.283**	0.052	-0.381**
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)	0.753	0.000	0.432		0.004	0.609	0.000
ROA	Pearson Correlation	0.388**	0.197*	0.155	0.052	-0.021	1	-0.437**
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)	0.000	0.049	0.123	0.609	0.834		0.000
LEV	Pearson Correlation	-0.129	-0.646**	-0.279**	-0.381**	-0.320**	-0.437**	1
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)	0.201	0.000	0.005	0.00	0.001	0.000	
EQ	Pearson Correlation	1	0.151	0.310**	0.032	0.197*	0.388**	-0.129
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)		0.133	0.002	0.753	0.050	0.000	0.201
SZ	Pearson Correlation	0.310**	-0.009	1	-0.079	0.355**	0.155	-0.279**
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)	0.002	0.932		0.432	0.000	0.123	0.005
AG	Pearson Correlation	0.197*	0.375**	0.355**	0.283**	1	-0.021	-0.320**
	N	100	100	100	100	100	100	100
	Sig. (2-tailed)	0.050	0.000	0.000	0.004		0.834	0.001
**		Correlation is significant at the 0.01 level (2-tailed).						
*		Correlation is significant at the 0.05 level (2-tailed).						

**Source:** Authors' calculation, SPSS output

The Pearson correlation coefficients ( $r$ ) can only take values from -1 to +1. The sign indicates whether the correlation is positive (both variables together decrease and increase) or negative (one variable decreases when the other increases). The absolute value of this coefficient (when we ignore its sign) indicates the strength of the connection. Various authors give different interpretations; however, Cohen (1988) provides the following guidelines for the magnitude of correlation coefficients:

1. small  $r = 0.10$  to  $0.29$
2. mean  $r = 0.30$  to  $0.49$
3. large  $r = 0.50$  to  $1.0$ .

In order to identify potential multicollinearity between independent variables, the empirical study includes Variance Inflation Factor test.

**Table 6.** Multicollinearity test

Collinearity Statistics		
Variable	Tolerance	VIF
Z-Score	0.285	3.515
SZ	0.733	1.364
CL	0.446	2.244
AG	0.704	1.420
ROA	0.767	1.304
LEV	0.421	2.375
<b>Mean</b>	0.559	2.037

Source: Authors' calculation, SPSS output

The table above shows that all VIF values are less than 10 and that all Tolerance values are greater than 0.1. The results of the VIF test confirmed that there is no high correlation between these variables. It implies that variable selection is appropriate and the model satisfies the condition of multicollinearity absence which is one of the fundamental assumptions in econometric analysis.

The next table shows the multiple linear regression model summary.

Based on the results of the multiple regression model, R-square is 0.287 which implies that the model explained 28.70% of independent variables variations. The adjusted coefficient of determination (*Adjusted R Square*) shows that 24.1% of the variability of the dependent variable – earnings quality (EQ) can be explained by the regression model. However, low adjusted R Square values mean that those firm characteristics cannot explain a lot of reasons for earnings quality. There are also other factors (market variables, corporate governance, business strategy, audit function, institutional factors, etc.) that also have to be included in the explanation of magnitude and direction of earnings quality of Serbian hotels (Morteza, & Daryosh, 2014; Klein, 2002; Caramanis, & Lennox, 2008; Leuz, Nanda, & Wysocki, 2003). Sink and Tuttle (1989) mention that performance should not be evaluated only through financial indicators, therefore non-financial indicators should be taken into consideration (customer satisfaction, employee satisfaction, etc.) (Avcı, Madanoglu, & Okumus, 2011).

**Table 7.** Summary of the regression model

Model Summary <sup>b</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.536 <sup>a</sup>	0.287	0.241	93.7687153	0.287	6.233	6	93	0.000	2.380
<sup>a</sup> Predictors: (Constant), LEV, SZ, AG, ROA, CL, Z score										
<sup>b</sup> Dependent Variable: EQ										

Source: Authors' calculation, SPSS output

The Durbin-Watson  $d = 2.380$ , which is between the two critical values of  $1.5 < d < 2.5$  (Kalayci, 2005). Therefore, we can assume that there is no first-order linear auto-correlation in our multiple linear regression data.

The next output table is the F-test. The linear regression's F-test has the null hypothesis that the model explains zero variance in the dependent variable (in other words  $R^2 = 0$ ).



**Table 8.** ANOVA results

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	328827.691	6	54804.615	6.233	0.000
	Residual	817709.193	93	8792.572		
	Total	1146536.884	99			

<sup>a</sup> Dependent Variable: EQ

Source: Authors' calculation, SPSS output

Presented Sig. values (*Sig.* = 0.000 < 0.05) in Table 8 suggest that our model is significant.

The next table shows the multiple linear regression estimates including the intercept and the significance levels.

**Table 9.** The Coefficients of regression model

Coefficients <sup>a</sup>								
Model	B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		Std. Error	Beta				Lower Bound	Upper Bound
1	(Constant)	-454.566	108.892		-4.174	0.000	-670.804	-238.327
	Z-Score	10.860	5.390	0.331	2.015	0.047	0.156	21.565
	SZ	22.537	7.895	0.292	2.855	0.005	6.859	38.214
	CL	-4.769	5.761	-0.109	-0.828	0.410	-16.209	6.672
	AG	27.486	23.235	0.123	1.183	0.240	-18.654	73.625
	ROA	2.400	0.543	0.442	4.419	0.000	1.322	3.479
	LEV	0.931	0.351	0.357	2.649	0.009	0.233	1.628

<sup>a</sup> Dependent Variable: EQ

Source: Authors' calculation, SPSS output

If we force all variables into the multiple linear regression, we find that the hotel's going concern (Z-Score), size (SZ), return on assets (ROA), and leverage (LEV) are significant predictors. Other factors current liquidity (CL) and age (AG) do not have a significant impact on the earnings quality of the analyzed hotels.

## 5. CONCLUSION

Earning quality is an important measure for the financial health of the business entity/hotel unit. This paper examines the firm-level determinants of earnings quality in the hotel industry. Therefore, the earnings quality is affected by reports and manager's discretion and their ability. We concluded that particular characteristics of the company such as hotel's going concern (Z-Score), size (SZ), return on assets (ROA), leverage (LEV) are the major determinant of earnings quality in the hotel industry. The data available could only allow a period coverage of 5 years; possibly a large period could have yielded more relevant results.

Our research has potential, as there is not a lot written about earnings quality in the Western Balkans. The study used a quantitative approach in collecting hotel sector data based on financial statements of 20 hotels/ business entities registered in Serbia. We consider the 100 firm-year observations from 2015-2019. There are many recognized methods, which can be used when measuring the existence of earnings management. In this paper, the Miller (2009) Model

was used to measure earnings quality and detect earnings management in financial statements. Based on the results, we do not reject hypothesis one ( $H_1$ ) that Serbian hotels have a low quality of accounting earnings during the period 2015-2019.

The study aimed to examine the impact of financial performances on the earnings quality of Serbian hotels. Based on empirical results, the authors found a significant positive correlation between earnings quality (EQ) and the hotel's going concern (Z-Score), size (SZ), return on assets (ROA), leverage (LEV). Therefore, hypothesis two ( $H_2$ ) is confirmed. The financial performances of Serbian hotels are associated with the quality of accounting earnings.

## 6. FUTURE RESEARCH DIRECTIONS

This research has been conducted on the emerging Serbian market. The results of this study produced implications for managers, investors, creditors, regulators, and other users of financial statements. It is suggested that future researchers investigate the relationship of the following parameters with earning quality in their future:

1. The impact of change in accounting standards on earnings quality,
2. The relationship of reporting type and audit quality with earning quality,
3. The effect of earning quality on the accuracy of earning predicting,
4. The impact of market variables, corporate governance, business strategy, institutional factors, etc. on earning quality,
5. Measuring earnings quality using different accruals approach.

Despite these limitations, the results of this study are important to different users of financial statements and researchers who study the problem of earnings management in emerging economies. This research contributes to the earnings management literature by examining a specific hotel industry.

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# INVESTIGATING INCOME SMOOTHING: EMPIRICAL EVIDENCE FROM SERBIAN'S HOTEL COMPANIES

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**Abstract:** *The flexibility in accounting standards and principles, lead to incentives for managers to show a good picture of the companies. It is logical and rational for managers to attempt to smooth income by using certain accounting devices to reduce the companies' income fluctuation over time to improve relations with creditors, investors, and employees. Income smoothing enables companies to stabilize earnings and thereby increase earnings predictability. For detecting income smoothing through examining the financial statements Eckel's (1981) approach (income variability approach) has been the most popular and most used one. In this research study, we use a selection criterion between smoothers and non-smoothers hotel companies based on the income smoothing.*

*This study aims to classify Serbian hotel companies during the period 2016-2019 as smoothing and non-smoothing hotel companies. The method used to determine the presence or absence of income smoothing and the company value results is based on the coefficient of variation model proposed by Eckel (1981). According to the coefficient of variation method, the more the income smoothing (IS) index tends to zero, the more smoothed out the company's earnings are. This study examines the presence of artificial income smoothing in 22 Serbian hotel companies. A binomial test is used to test the hypothesis. As a result of research, there are no significant statistical indicators of income smoothing practices in Serbian hotel companies during the period 2016-2019.*

**Keywords:** *Income smoothing, Eckel model, Hotel company, Serbia, Binomial test.*

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## 1. INTRODUCTION

Accounting as an information system aims to provide users with useful information that is disseminated throughout the financial statement to rationalize different decisions. The management of a company is obliged to provide financial information for users of financial statements. Looking at the financial statements, the users could, then, assess the performance of its managers and the company. The information on earnings in financial statements is very useful for management to make a decision. However, the existence of profit information encourages management to perform dysfunctional behavior. Maximizing profits by utilizing the flexibility of accounting standards used by companies is one form of dysfunctional behavior. This dysfunctional behavior arises due to the existence of asymmetrical information between the parties concerned. As a result, companies need to involve with earnings management. One of the ways to do this is by engaging with income smoothing practices. Income smoothing is a dimension of the accounts manipulation theme that has been attracting great attention in the accounting literature. A goal of manipulation widely ascribed to managers is the desire to smooth (Savitri, 2019).

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The concept of income smoothing is connected with the theory of agency (Altaie, Hammood, & Hassnain, 2017). The theory of the agency emerged as a result of the large size of companies and the separation of ownership from management as an initiative to solve the problem of conflict within the relevant parties of an economic unit. Based on agency theory, the concept of income smoothing states that the practice of income smoothing is influenced by the conflict of interest between managers (agent) and the owner (principal) when each party seeks to achieve or maintain the desired level of prosperity for their interest. The management of companies exploited the accounting principles and standards to achieve their motives by increasing the performance of the company. Accounting standards allow companies to choose methods that facilitate income smoothing practices by managers. Income smoothing has an obvious goal and that is creating a steady growth flow in profit. The existence of agency theory will encourage managers to increase the company's profits. If the profit earned increases, the amount of income tax will also increase. As agents in theoretical agencies, managers will try to minimize taxes to avoid the reduction of manager's performance compensation. It shows that the company continues to pay taxes to the state with an increasing amount, but not significantly to avoid tax audits.

Obaidat (2017) asserted that accounting earnings are of major concern for shareholders as they reflect companies' performance. But due to the flexibility of accounting standards represented by the different treatment alternatives (e.g. depreciation methods) allowed by accounting standards (e.g. *International Financial Reporting Standards - IFRS*) income has been subject to management influence to smooth it. Income smoothing refers to the use of accounting techniques to level out net income fluctuations from one period to the next. Thus, the research problem led to the following questions:

1. Do Serbian's hotel companies implement income smoothing in the financial statements?
2. There are significant or no significant statistical indicators of income smoothing practices in Serbian hotel companies?

This research study is organized into thematic sections. After the introduction, the second and the third section present a brief description of income smoothing and a review of the papers on this issue. The fourth section describes Eckel (1981) model to measure income smoothing practices. The fifth section contains the results of the empirical analysis. Finally, the sixth and seventh sections summarize the main findings for the Serbian market and future research directions.

## **2. RESEARCH OBJECTIVES**

Income smoothing defines as the use of managerial discretion to dampen fluctuations in earnings streams. The more a company employs income smoothing, i.e., uses accruals to reduce the variability of profits, the less possibility there is for the timely acknowledgment of future economic losses, i.e., bad economic news in profits. Income smoothing is one of the incentive accountings that involves adjusting and manipulating fluctuations about some heights of earnings for the business. Income smoothing is a form of earnings management and is defined as the dampening of fluctuations in reported earnings over time. Management is inclined to take actions to increase earnings when earnings are relatively low and to decrease earnings when earnings are relatively high (Al Baaj et al., 2018). Income smoothing is a technique of earnings management is one of the approaches in creative accounting whereby companies make adjustments and manipulate a company's revenue (Firnanti, 2019). Income smoothing represents managers' attempts to use their reporting discretion to intentionally dampen the fluctuations of their companies' earnings realizations. That as long as managers have discretion over accounting choices, they smooth

reported income and the rate of income growth. On one hand, income smoothing improves earnings informativeness if managers use their discretion to communicate their assessment of future earnings, and, on the other hand, income smoothing makes earnings noisier if managers intentionally distort the earnings numbers. Managers may smooth reported income to meet the bonus target or to protect their job. (Tucker, & Zarowin, 2006). High ability managers can use smoothing as a channel to reduce information asymmetry. While low ability managers might also smooth earnings, given the skills required to smooth and the potential costs associated with poor smoothing decisions (e.g., financial misstatements, diminished reputation, job loss), that low ability managers are less likely to smooth (Baik, Sunhwa, & Farber, 2019).

Income smoothing is practiced in accounting to reduce the variability of the accounting results. However, executive discretion is not used only in earnings management. The discretionary power of executives is also reflected in the degree of conservatism of companies. Companies can be more or less conservative in their accounting policies, and that degree of conservatism affects their accounting results. That conservatism can impair the measurement of economic reality by imposing the smallest value between two available alternatives. Financial adjustments that depreciate assets are most often reflected in companies' accounting results, for example, via provisions for loan losses, adjustments to asset depreciation rates, or losses raised by impairment tests. These accounting choices are subjective and are directly related to the degree of discretion of those who draft the financial statements (de Almeida et al., 2012). Income smoothing is the voluntary management of the results to reduce the variability of accounting income (Ergin, 2011). It is accomplished by deferring earnings during the profitable years for use during the downturn years. This process is considered ethical unless it is a fraudulent or abusive activity. Income variability may be changed by shifting losses or expenses from time to time. For example, a business can reduce discretionary costs in the current financial year to advance current time earning which will result in the coming year that the discretionary cost will be expanded. Income smoothing is defined as the deliberate normalization of income to reach the desired trend. Stable income patterns and reduced earnings variability are consistently related to earnings predictability. Income smoothing is one of the earnings management methods by reducing fluctuations in earnings to make it look stable because relatively stable earnings are preferred by investors. Income smoothing can influence investor decisions and have consequences for the capital market.

Baik, Sunhwa, and Farber (2019) suggest that managers believe that smoothing makes their companies' earnings more useful. Financial executives believe that smooth earnings help analysts and investors to predict future earnings. Bora and Saha (2015) examined whether income smoothing garbles earnings information or improves the informativeness of past and current earnings about future earnings and cash-flows. The result revealed that the change in the current stock price of higher-smoothing companies contains more information about their future earnings than does the change in the stock-price of lower-smoothing companies. Smoothing may occur through the accounting processes of recognition, measurement, and disclosure, as well as intentionally. Artificial income smoothing implies the use of accruals, which does not affect cash flow and is not based on economic events; rather, it is similar to a postponement or anticipation of revenues and expenditures. Conversely, real income smoothing involves economic events, such as the sale or purchase of fixed assets, which also affects cash flow. However, in both cases, executives act intentionally to smooth results.

Income smoothing or earning management can be classified into real discretion and technical accounting policy (Al Baaj et al., 2018). In real discretion, the management achieves the target-

ed number of figures by changing transactions between the firm and stakeholders. Technical accounting policy allows the management to change the accounting estimates or accounting policies. The term earnings management is broader than this practice alone, as it involves many different manipulation techniques, aside from smoothing, which are used to reduce variability in results or to make it grow gradually. If a business has more income smoothing there is less variability of incomes concerning the cash flows and more negative or reduced correlation among expenses and cash flows. Various methods can be carried out by managers as income smoothing actions. Eckel (1981) explained two types of income smoothing: 1. Naturally smoothing (of accounting processes) - natural smoothing results from the income-generating process that produces smooth income, which is not considered a manipulation by the management; 2. Intentionally smoothing by managers - intentional smoothing can be (Martinez, & Castro, 2011):

1. Real income smoothing (manipulating and changing transactions) - that named the transactional or economic smoothing. Real smoothing involves making production and investment decisions that reduce income variability. Real income smoothing is the smoothing of profits that occurs when managers take action to compile economic events resulting in a flat income stream (Suyono, 2018);
2. Artificial income smoothing or accounting smoothing (changing the timing of the transaction record) - is the smoothing of profits that occurs when managers manipulate the financial data during accounting records to produce a stable profit stream. Artificial income smoothing is achieved through accounting practices. This type of income smoothing does not include the use of an economic event and transfers revenues and expenses from one period to another period (Thu, & Khuong, 2017).

The objectives of this research study are:

1. To present and discuss the concepts of income smoothing;
2. To investigate artificial income smoothing in Serbian hotel companies during the period 2016-2019;
3. To measure the practices of income smoothing in the financial statements of hotel companies in the Republic of Serbia.

Eckel's (1981) model is used to satisfy our research objectives. The statistical package for social sciences (*Statistical Package for Social Sciences* - SPSS) was used to achieve the objectives of this study.

### **3. LITERATURE REVIEW**

Scholars and researchers worldwide have dedicated considerable efforts to defining income smoothing. Many studies in the international literature indicate that companies engage in practices to reduce the variance of earnings. Income smoothing can be defined as the increase or decrease of the current earnings in the financial statement by a manager to achieve his own specific goals (Al-Othman, 2019). Income smoothing is a form of earnings management and is defined as the dampening of fluctuations in reported earnings over time. In other words, management is inclined to take actions to increase earnings when earnings are relatively low and to decrease earnings when earnings are relatively high (Fengju et al., 2013). Income smoothing is practiced in accounting to reduce the variability of the accounting results. However, executive discretion is not used only in earnings management (Feres de Almeida et al., 2012).

The management of companies prefers to report a smooth stream of earnings because fluctuations in the profitability of the company are considered to have a negative effect on the com-

pany's risk profile. Although this misleading of users of the financial statements at first appear to have a negative effect, positive effects of this type of earnings management exist (Thu, & Khuong, 2017). Kusuma (2005) stands out that managers know that investors prefer smoothed income numbers for several reasons: 1. smoothed income numbers reduce the estimate of various claimants of the company about the volatility of its underlying earnings process and thereby reduce the assessment of the probability of bankruptcy, 2. income smoothing reflects the accuracy of the manager's knowledge of the company's future performance, 3. investors hate shocks because shocks in earnings forecasts increased investors' risk. The purpose of income smoothing is as follows (Alexandri, & Anjani, 2014):

1. Improving: the company's image in the eyes of outsiders that the company has a low risk; the business relationship satisfaction; the perception of external parties on the ability of management;
2. Providing relevant information to make predictions against earnings in the future;
3. Increasing compensation for management;
4. Minimizing taxes, particularly in cases where the company has a large tax debt.

#### 4. MEASURING INCOME SMOOTHING: ECKEL (1981) MODEL

Taking into account the accounting scandals concerning Enron, WorldCom, and Parmalat, previous research studies worldwide have been interested in investigating income smoothing existence, its objectives, types (real or artificial), objects (e.g. gross profit, net income), factors leading to income smoothing, tools, motivations, and their effect on companies and stakeholders. One of the most popular models and the most referred to by many researchers to detect the smoothing of accounting income are (Mushtaq, Sultan, & Ijaz, 2016; Altaie, Hammood, & Talab, 2017): 1. model by Copeland and Licastro, 2. model by Imhoff, 3. model by Eckel, 4. Jones model, 5. Levitt model and 6. Mulford and Comiskey model. The study results Thu and Khuong (2017) suggest that the Eckel index is suitable for the Vietnam stock market and shows a slight increase compared to the previous research. Also, Al Baaj et al. (2018) proposes that to determine the income smoothing the coefficient of variation by Eckel's is best to be applied.

The Eckel's (1981) model proposes that to show the connection between net income and sales, the coefficient of variation in net income and sales should be used. The model is based on the premise that revenues and costs are linear over a period hence they are directly related. Therefore, they grow or decline at the same rate; when a linear relationship is not observed, this property may be due to interference from executives to smooth the results. Eckel model use is there for identifying smoothing companies from non-smoothing. The model developed by Eckel (1981) examined the smoothing of income based on the comparison between net incomes' change and sales' change. The income variability approach is selected by Eckel to examine artificial income smoothing. Eckel method looks more at identifying the artificial one as it distorts the appearance of the economic reality. According to Eckel (1981) model, a company is regarded as smoother if its ratio of dispersion coefficient during a period of net income (gross, operational, or net profit) to dispersion coefficient during a sales period is less than one (1) (Nejad, Zeynali, & Alay, 2013). The income smoothing (IS) index has calculated the measure of smoothing as an index of the fraction between the coefficients of variation - CV. Income smoothing is estimated using Eckel's index (EI) formula (Fengju et al., 2013; Husaini, & Sayunita, 2016):

$$\text{Eckel's index (EI) or Income smoothing (IS) index} = CV_{\Delta\% \text{Net income}} / CV_{\Delta\% \text{Sales}} \quad (1)$$



Where:

- IS<sub>*i*</sub> - The income smoothing index for company *i*;
- Δ% Net income - Annual change in net income (the change in net income for one term);
- Δ% Sales - Annual change in sales revenue (the change in sales for one term).

The Eckel (1981) model relates the coefficient of variation in net income to sales. According to de Almeida et al. (2012), an interval between 0.9 and 1.1 is considered a gray area in which it is not possible to sort companies into smoothers or non-smoothers. This procedure allows for the objective classification of companies, thus reducing the risk of bias from the researcher. The following formula defines the gray area:

$$0.9 \leq |CV_{\Delta\%Net\ income} / CV_{\Delta\%Sales}| < 1.1 \quad (2)$$

This shows that if the Eckel's index (EI) or Income smoothing (IS) index obtained is less than 0.9, the company performs income smoothing, and if the Eckel's index (EI) or Income smoothing (IS) index is greater than 1.1, the company does not perform income smoothing.

The coefficients of variation of net income and sales are calculated as follows (Kusuma, 2005):

$$CV_{\Delta I} = \sigma_I / \mu_I \quad (3)$$

$$CV_{\Delta S} = \sigma_S / \mu_S \quad (4)$$

Where:

- CV<sub>ΔI</sub> - The coefficient of variation of net income change for the company *i* in the period range of study (ratio of the standard deviation to the mean);
- CV<sub>ΔS</sub> - The coefficient of variation of sales change for the company *i* in the period range of study;
- σ<sub>S</sub>, σ<sub>I</sub> - The standard deviations of sales and net income series for the company *i* (ratio of the standard deviation to the mean);
- μ<sub>S</sub>, | μ<sub>I</sub> | - The means of sales and the absolute value of the means of net income series for the company *i*;
- | ... | - Absolute value.

To observe the relationship between net income and sales, the coefficients of the percentage variations of net income and sales are used. When the coefficient of the net income is less than that of the sales, this demonstrates that the company is interfering in the profits through artificial smoothing. Based on this, it is assumed that an index lower than one (<1) in absolute value indicates the presence of income smoothing because the coefficient of variation of net income - CV<sub>Δ%Net income</sub> is smaller than the coefficient of variation of sales - CV<sub>Δ%Sales</sub> (Altaie, Hammood, & Talab, 2017):

$$IS = CV_{\Delta\%Net\ income} < CV_{\Delta\%Sales} \Rightarrow \text{Income smoothing} \quad (5)$$

When:

- Income smoothing (IS) index < 1, the company has income smoothed its interests (the company is an artificial income smoother);
- Income smoothing (IS) index > 1, the company hasn't income smoothed its interests.

This ratio calculates the absolute value for the coefficient of variation (which is defined as the ratio of the standard deviation to the mean) of the net income divided by the absolute value for the coefficient of variation of sales. If sales have more variation than net income, the company is said to be artificially smooth (Abdullah Al Baaj, Hadi Al-Zabari, & Shareef Al Marshedi, 2018). In brief, the companies with absolute value are equal to (=) or smaller (<) than one (1) income smoothing (IS) index is categorized as a company that does the practice of income smoothing (the company is identified as a smoother). On the contrary, the company with income smoothing (IS) index are greater (>) than one (1) are not considered the practice of income smoothing (the company is identified as a non-smoother) (Namazi, & Khansalar, 2011; Kustonovo, 2011; Fengju et al., 2013).

## 5. METHODOLOGY OF RESEARCH AND HYPOTHESIS

In this research study, the Eckel (1981) model was used for identifying income smoothing. The Eckel's model was used to classify hotel companies in Serbia as smoothing or non-smoothing. The study on income smoothing of hotel companies in Serbia will be performed by SPSS (*Statistical Package for Social Sciences*) IBM SPSS Statistics Version 20.0. In this study, the following statistical methods were used:

1. Descriptive statistics: includes a set of statistics aimed to introduce the variables of the study, including means, standard deviations, minimum and maximum;
2. Binomial test: is a non-parametric statistical procedure for determining whether the frequency distribution of nominal scaled, dichotomous variables corresponds with an assumed distribution. Here, the probability of the respective variable assuming one of the two characteristics is compared with the actual frequency. The observations classify into one of two mutually exclusive categories: 1- if the company smooths income or 0 - if the company does not smooth. A binomial test is run to see if observed test results differ from what was expected. Assumptions for the binomial test (Martinez, & Castro, 2011): 1. items are dichotomous (i.e. there are two of them) and nominal, 2. the sample size is significantly less than the population size, 3. the sample is a fair representation of the population and 4. sample items are independent (one item has no bearing on the probability of another).

The research study is based on the following hypotheses:

**Hypothesis One:** *There are no significant statistical indicators of income smoothing practices in Serbian hotel companies during the period 2016-2019.*

**Hypothesis Two:** *There are significant statistical indicators of income smoothing practices in Serbian hotel companies during the period 2016-2019.*

The hypothesis has been tested using the binomial test. Differences in the groups identified by nonparametric tests in cross-section or as time series indicate that there is a statistically significant difference in performance in the Serbian market between companies that do and do not engage in smoothing. It examines if the observed value differs significantly from the expected value. The calculated frequency value is therefore compared with the previously defined critical value of the binomial distribution.

## 5.1. Sample selection and data

In this research, secondary data was used which was obtained from Scoring (“Scoring”, 2020) and based on the single financial statement’s data of 22 hotel companies registered in Serbia from the years 2016 to 2019. This period was chosen because it is the period after mandatory IFRS adoption by Serbian companies. This research study aims to classify Serbian hotel companies during the period 2016-2019 as smoothing and non-smoothing hotel companies. The selection of hotel companies was made randomly according to the availability of financial reports from the website of the Business Registers Agency of the Republic of Serbia. Basically, the size of the hotel company is only divided into three categories: 1. medium companies, 2. small companies, and 3. micro-enterprises. The determination of the size of the company is based on the company’s total assets. The sample selection does not include large companies.

Meiryani et al. (2020) show that companies controlled by managers tend to do income smoothing compared to those controlled by owners. Small companies will be more likely to practice income smoothing compared to large companies because large companies tend to get more attention from analysts and investors than small companies. Large companies are expected to avoid fluctuations in profits that are too drastic because a drastic increase in profits will cause tax increases. The results of the study Namazi and Khansala (2011) indicated that growth companies achieved a higher degree of income smoothing than value companies. This study suggests that investors should review a company’s financial situation before purchasing its stocks, to determine whether it is a value company or a growth company. As the results have revealed, buying stocks from a value company would be riskier than buying from a growth company, although there is more expected profit in the short-term from a value company. Thus, investors must thoroughly consider the balance between a company’s potential risks and returns.

In this study, Eckel (1981) model is adopted to measure income smoothing practices. The income smoothing value is calculated using the Eckel index (EI) or Income smoothing (IS) index. In the Eckel index, a company is considered to have taken income smoothing measures if the coefficient of variation from changes in sales is greater than the coefficient of variation from net income changes. These companies (Table 1) were sorted based on the smoothing measures of Eckel (1981) model to give a final sample of 22 Serbian hotel companies during the period 2016-2019, divided into two groups: 1. smoothers and 2. non-smoothers.

**Table 1.** List of the analyzed Serbian hotel companies

No.	Name of the hotel company	Size of the hotel company
1.	Hotels Tri O doo Topola	micro
2.	Majdan Luks doo Beograd	micro
3.	Hotel Crystal doo Beograd	small
4.	Euro Garni Hotel doo Beograd -Zemun	small
5.	Hotel HTP Plaža doo Beograd	small
6.	Hotel Elegance doo Beograd	small
7.	Hotel Novi Sad doo Novi Sad	small
8.	Hotel Putnik Beograd doo Beograd -Novi Beograd	small
9.	Kopernikus Hotel Prag doo Beograd	small
10.	Hotel Srbija ad Beograd	small
11.	Hotel Zlatibor ad Užice	small
12.	Hotel Mir Zlatibor doo Zlatibor	small
13.	Hotel HTP Olimp Zlatibor	small
14.	Hotel HTP Srbija doo Vršac	small

15.	Hotel Park ad Novi Sad	medium
16.	Hotels Palisad Zlatibor	medium
17.	Hotel Majestic doo Beograd	medium
18.	Hotel Metropol Palace doo Beograd	medium
19.	Hotel Prezident doo Novi Sad	medium
20.	Slavija Hotels doo Beograd	medium
21.	Hotel Svetlost doo Niš	medium
22.	Todor Hotels doo Beograd	medium

**Source:** Business Registers Agency of the Republic of Serbia

## 5.2. Empirical results and discussion

This research study measures the income smoothing activities by using a formula developed by Eckel (1981) the so-called Eckel index. This measure of income smoothing is based on the results gotten from the absolute value in the above model's equation (Formula 1). The income variability approach examines net income and sales for several periods (Thu, & Khuong, 2017). The income variability method is applied to identify which companies are smoothers and which companies are non-smoothers. The ratio of the coefficient of variation of net income to the coefficient of variation of sales has been used as a proxy for income smoothing. Since sales are less subject to manipulation, the lower degree of the coefficient of variation of net income compared to the coefficient of variation of sales indicates income smoothing. According to the method developed by Eckel, values of the coefficient of variation of the annual change in net income to the coefficient of variation of the annual change in sales which are between -1 and +1 are an indication of smoothing behavior. This is formulated in equation (Ergin, 2011; Thu, & Khuong, 2017):

$$|CV_{\Delta I} / CV_{\Delta S}| \leq 1 \quad (6)$$

When:

The variability of net income is lower than the variability of sales,  $|CV_{\Delta I} / CV_{\Delta S}| \leq 1$  the company is classified as smoother and vice versa.

A company is considered to do income smoothing if the Eckel index is equal to (=) or smaller (<) than one (1) and is considered not to do income smoothing if the Eckel index is greater (>) than one (1) (Obaidat, 2017). If the ratio of the income smoothing (IS) index is equal to (=) or smaller (<) then one (1) between the year t and the year t-1 there is the income smoothed and we give to the company an imaginary variable (1). If the ratio of the income smoothing (IS) index is greater (>) than one (1) between the year t and the year t-1, the company is classified as non-practice for income smoothing and we give to the company an imaginary variable (0) (Amina, 2018; Firnati, 2019).

The result comprises the statistical analysis of the data, the change in the net income and the change in the sales of the Serbian hotel companies (Table 2). A dummy variable, income smoothing, is given a value of one (1), while no income smoothing is given the value of zero (0).

The numbers (frequency and percentage) of smoother and non-smoother Serbian hotel companies are given in Table 3.

**Table 2.** The income smoothing (IS) index and income smoothing (IS) practices in Serbian hotel companies during the period 2016-2019

No.	Serbian companies	2016-2017		2017-2018		2018-2019	
		IS practices	IS index	IS practices	IS index	IS practices	IS index
1.	<i>Hotel Crystal doo Beograd</i>	1	0.728	1	0.209	0	3.799
2.	<i>Euro Garni Hotel doo Beograd -Zemun</i>	0	1.804	1	0.090	0	30.102
3.	<i>Hotel HTP Plaža doo Beograd</i>	0	3.224	0	6.230	0	2.698
4.	<i>Hotel Elegance doo Beograd</i>	0	2.004	0	7.968	0	1.853
5.	<i>Hotel Novi Sad doo Novi Sad</i>	0	9.728	0	19.464	0	4.063
6.	<i>Hotel Putnik Beograd doo Beograd -Novi Beograd</i>	1	0.006	0	2.177	1	0.033
7.	<i>Hotels Palisad Zlatibor</i>	0	1.409	0	7.470	1	0.080
8.	<i>Hotels Tri O doo Topola</i>	1	0.872	1	0.190	0	2.235
9.	<i>Hotel HTP Olimp Zlatibor</i>	1	0.764	0	8.601	0	2.903
10.	<i>Hotel HTP Srbija doo Vršac</i>	1	0.999	0	16.967	0	5.547
11.	<i>Hotel Park ad Novi Sad</i>	0	6.973	0	1.107	1	0.791
12.	<i>Kopernikus Hotel Prag doo Beograd</i>	0	9.351	0	7.456	1	0.225
13.	<i>Hotel Majdan Luks doo Beograd</i>	0	10.373	0	1.938	0	1.015
14.	<i>Hotel Majestic doo Beograd</i>	1	0.912	0	2.269	0	1.917
15.	<i>Hotel Metropol Palace doo Beograd</i>	1	0.107	0	1.378	1	0.409
16.	<i>Hotel Prezident doo Novi Sad</i>	1	0.445	1	0.080	1	0.183
17.	<i>Slavija Hotels doo Beograd</i>	0	1.521	0	1.021	0	1.413
18.	<i>Hotel Svetlost doo Niš</i>	0	1.489	0	2.878	0	1.061
19.	<i>Todor Hotels doo Beograd</i>	1	0.476	0	7.308	1	0.322
20.	<i>Hotel Srbija ad Beograd</i>	0	1.661	0	1.320	0	104.937
21.	<i>Hotel Zlatibor ad Užice</i>	0	113.734	0	3.113	0	1.204
22.	<i>Hotel Mir Zlatibor, doo Zlatibor</i>	0	1.299	0	1.729	0	1.197

Source: Authors' calculation

**Table 3.** Results of the income smoothing (IS) classification on Eckel index

The period	Smoothed income (1)		Non-smoothed income (0)	
	Frequency	Percentage	Frequency	Percentage
<b>2016-2017</b>	9	40.90% ≈ 41%	13	59.10% ≈ 59%
<b>2017-2018</b>	4	18.18% ≈ 18%	18	81.81% ≈ 82%
<b>2018-2019</b>	7	31.81% ≈ 32%	15	68.19% ≈ 68%

Source: Authors' calculation

According to the above conditions, the numbers of 22 Serbian hotel companies:

1. in 2016 to 2017 period were selected, in which the number of 9 hotel companies was identified as smoothing and 13 of them as non-smoothing according to Eckel model;
2. in 2017 to 2018 period were selected, in which the number of 4 hotel companies was identified as smoothing and 18 of them as non-smoothing according to Eckel model;
3. in 2018 to 2019 period were selected, in which the number of 7 hotel companies was identified as smoothing and 15 of them as non-smoothing according to Eckel model.

The data analysis consists of descriptive statistics. The descriptive statistics are given in Table 4. The Mean, Standard deviation, Minimum, Maximum was obtained by SPSS (*Statistical Package for Social Sciences*) statistical program.



**Table 4.** Descriptive statistics for  $|CV_{AI} / CV_{AS}|$

	N	Mean	Std. Deviation	Minimum	Maximum
VAR00001	66	.3030	.46309	.00	1.00
VAR00002	66	6.6489	18.99498	.01	113.73

Source: Authors, SPSS output

SPSS produces the following figures when performing the binomial test (Table 5).

**Table 5.** Calculating the binomial test

	Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	
VAR00001	Group 1	$\leq 1$	66	1.00	.50	.000
	Total		66	1.00		
VAR00002	Group 1	$\leq 1$	20	.30	.50	.002
	Group 2	$> 1$	46	.70		
	Total		66	1.00		

Source: Authors, SPSS output

The value of sig (a p-value) less than 0.05, indicates that the result is significant (Pallant, 2009). SPSS (*Statistical Package for Social Sciences*) produces a p-value of 0.002. This value (the value of sig = 0.002) is less than 0.05, which indicates that the result is significant. In this study, the critical value is 0.50. Table 5 shows the percent of the frequencies in the Observed prop. and the expected frequency in the Test prop. The result of the binomial test shows that the sample of Serbian hotel companies practiced income smoothing during the period 2016-2019 by 30% with a total of 20 of 66 views, while the percentage of non-practice is 70% with a total of 46 of 66 views. For the advantages of this test, the value of Sig = 0.002 is less than 0.05. Thus, hypothesis one ( $H_1$ ) was rejected and hypothesis two ( $H_2$ ) has been accepted, so we can conclude that:

*There are significant statistical indicators of income smoothing practices in Serbian hotel companies during the period 2016-2019.*

## 6. CONCLUSION

During economic turbulence, companies are under pressure that makes them turn to the accounting department in an attempt to control the frustrations by changing the financial information to their desired level. When the management oversees that the targeted level cannot be managed from the initial planning, they result in decrease the figure in earning. This type of management practice to change the accounting records is called income smoothing. When other conditions are identical, the management usually prefers smoothed income over genuine income that fluctuates greatly. Smoothed income allows the firms to evade discounting in the capital market that brings undesirable consequences to the stakeholders. Management of some companies do some conscious manipulating in the financial statement for pretending suitability of profitability items to attract investors. Income is an indicator considered by investors in making investment decisions. The income smoothing practice is a common phenomenon in a company when asymmetric information occurred between managers and shareholders because of the separation of ownership and control. This condition causes managers to have more information about the company than shareholders, and managers often take advantage of the information they have to pursue their interests. As an agent, managers tend to improve the presentation of the financial statements that can be done by income smoothing; so that it looks like to have a good performance in front of the shareholders.

In this research study, the authors analyze the concept of income smoothing. This study should be of interest to researchers, practitioners, and others concerned with understanding the determinants and usefulness of smoothing. This study aims to determine the existence of practices of income smoothing in hotel companies in Serbia. Based on the study, it can be concluded that companies in the hotel sector in Serbia have empirically conducted income smoothing practices. The study sample consisted of 22 Serbian hotel companies during the period 2016-2019. This study uses the coefficient of variation to measure the variability of net income and sales - Eckel's (1981) method. As a result, if the income smoothing (IS) value is greater ( $>$ ) than one (1), this means that the change in net income is greater than the change in sales; therefore, the company is not an artificial income smoother. If the IS value is equal ( $=$ ) to smaller ( $<$ ) than one (1), then the company is considered as an artificial income smoother. Based on the results, hypothesis one (H1) was rejected and hypothesis two (H2) has been accepted: There are significant statistical indicators of income smoothing practices in Serbian hotel companies during the period 2016-2019.

This research study may still contain weaknesses caused by the following limitations: 1. this study uses only four years of research, preferably for research related to income smoothing; it is better to use longer financial statement data to be more detailed in its analysis, 2. this study uses the Eckel index as a method of classifying samples, whether the sample of companies includes income or non-income grading companies and 3. this study only uses a sample of hotel companies.

## 7. FUTURE RESEARCH DIRECTIONS

In connection with these limitations, the suggestions that can be submitted for further research can add financial report data with a longer period so better research results could be obtained. Furthermore, for the next research we should be able to use a larger sample, not only in the hotel sector but also in other sectors to be able to compare which companies in the sector use earnings management the most often, especially income smoothing between the various sectors. Future studies can also use other sample classification methods, such as the Jones index, and then compare whether there are different results from the Eckel index that is widely used in previous studies.

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# CURRENT STATE OF SOCIAL ENTREPRENEURSHIP IN TOURISM SECTOR OF THE REPUBLIC OF SERBIA

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**Abstract:** *The paper evaluates the current state and the rise of social entrepreneurship in the Republic of Serbia, with an emphasis on the tourism sector. The first section of the paper presents the social entrepreneurship concept, as well as a brief analysis of the relevant economic and legal environment for social entrepreneurship development in the Republic of Serbia. The paper identifies the key factors influencing social entrepreneurship development in the tourism sector of the Republic of Serbia. The main specific objective of this paper is an affirmation of social entrepreneurship in the tourism sector, while at the same time presenting the significant role of the legal and economic framework for the development of social entrepreneurship in the tourism sector of the Republic of Serbia.*

**Keywords:** *Social entrepreneurship, Tourism sector, SWOT analysis, Republic of Serbia.*

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## 1. INTRODUCTION

Although the idea of solidarity through business activities in the Republic of Serbia has been present for more than 150 years, on the traditional foundations of cooperatives (Pavlovic, 2015), the current state is unclear. The existing administrative, legal, investment and economic support for the social concept are not sufficiently effective. Social enterprises are the most active organizations in the EU and world social economy, where systematic actions are being done to support their growth and development.

Although it has roots in some economic forms from earlier socio-economic systems, under this name and with recognized significance for the national economy, social entrepreneurship emerged only after 2000. The rise of this concept in the Republic of Serbia after 2000 happened due to the increased social needs after the collapse of socialism, which led to new models of support for socially disadvantaged groups. The second reason is the importance of this concept for the social policy transformation in the European Union (EU). Like the EU, with its donations and standards for candidate countries, has the greatest influence on the social policy transformation in the Republic of Serbia, thus the social enterprise growth has been promoted as an important tool to help socially vulnerable citizens (European Commission, 2015).

Social entrepreneurship began to attract the attention of policy makers in the Republic of Serbia after 2008, when the economic situation deteriorated significantly, and when both political decision-makers and the professional public were forced to actively seek innovative solutions to economic problems, such as high unemployment. As a result, the Republic of Serbia has speed up the

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development of social entrepreneurship and achieved this through the modification of legal regulations. At the same time, social entrepreneurship in the Republic of Serbia continued development through cooperation, knowledge, experience and information exchange, as well as lobbying.

This paper presents an overview of the social entrepreneurship development in the Republic of Serbia and the perspective of quality social enterprise in the tourism sector. Although social entrepreneurship, which we deal with in the paper, is a subject of frequent theoretical consideration, this study contributes to the literature with concrete recommendations for economic, social and political decision-makers dealing with tourism sector development. The paper is devoted to further study of social entrepreneurship in tourism, to accelerate its growth and development in our country. The development of the legal and economic framework for social entrepreneurship in the tourism sector would affect unemployment, as a burning problem, as well as social exclusion, which occurs at the same time as unemployment.

In order for the phenomenon of social entrepreneurship in the tourism sector to be analyzed as completely as possible, it is necessary to consider and take into account as many aspects and levels of social entrepreneurship development as possible, i.e. to analyze theoretical and practical interpretations from different angles, from the point of view of an individual as an entrepreneur, as well as from the perspective of the whole society.

## 2. DEFINITION OF SOCIAL ENTERPRISE

Although very popular in the last twenty years, the term social enterprise is not well defined, that is, there are doubts and differences between authors and institutions. The causes of poor definition are the novelty of term and concept, as well as different intellectual and cultural traditions of academics and institutions engaged in social entrepreneurship.

In literature and practice, the term “social entrepreneurship” appeared in the late 1980s in Italy, and this term was used for organization whose existence was not based on economic profit, but social goals. Social enterprises are performing economic activities, but have a strong orientation toward social goals and community interests.

Social enterprises may be prohibited by law from distributing profit or may eliminate profit as a business objective (Cvejić, Babović, Vuković, 2008). Social enterprises have multiple benefits for society: provide goods or services for vulnerable categories of the population; contribute to the development of underdeveloped regions; create new jobs, especially for hard-to-employ categories of the population. Some of the most widely accepted definitions of social enterprise are summarized in Table 1:

**Table 1.** Definitions of social enterprise

Source	Definition
European Commission. (2011). <i>The Communication on the Social Business Initiative (SBI)</i> . <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0682">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0682</a>	Social enterprise is an operator in the social economy whose main objective is to have a social impact rather than make a profit for their owners or shareholders. It operates by providing goods and services for the market in an entrepreneurial and innovative fashion and uses its profits primarily to achieve social objectives. It is managed openly and responsibly and involves employees, consumers and stakeholders affected by its commercial activities.

Defourny, J., Nyssens, M. (2008). Social Enterprise in Europe: Recent Trends and Developments, <i>Social Enterprise Journal</i> , 4(3): 206.	Social enterprises are not-for-profit private organizations providing goods or services directly related to their explicit aim to benefit the community. They rely on a collective dynamic involving various types of stakeholders in their governing bodies, they place a high value on their autonomy and they bear economic risks linked to their activity.
Social Enterprise. (2019, April 15). <a href="https://www.investopedia.com/terms/s/social-enterprise.asp">https://www.investopedia.com/terms/s/social-enterprise.asp</a>	A social enterprise is a commercial organization that has specific social objectives that serve its primary purpose. Social enterprises seek to maximize profits while maximizing benefits to society and the environment. Their profits are principally used to fund social programs.
OECD (1999), <i>Social Enterprises</i> , OECD, Paris.	Social enterprise deals with any private activity conducted in the public interest, organized with an entrepreneurial strategy, but whose main purpose is not the maximization of profit but the attainment of certain economic and social goals, and which has the capacity for bringing innovative solutions to the problems of social exclusion and unemployment.
Social enterprise. (2019). <a href="https://en.wikipedia.org/wiki/Social_enterprise">https://en.wikipedia.org/wiki/Social_enterprise</a>	Social enterprise is an organization that applies commercial strategies to maximize improvements in financial, social and environmental well-being — this may include maximizing social impact alongside profits for external shareholders.
What Is A Social Enterprise? A Simple Definition & 3 Examples (2019). <i>The Good Trade</i> . <a href="https://www.thegoodtrade.com/features/what-is-a-social-enterprise">https://www.thegoodtrade.com/features/what-is-a-social-enterprise</a>	Social enterprise is a cause-driven business whose primary reason for being is to improve social objectives and serve the common good.
Austin, J.E., SEKN Team. (2004). <i>Social Partnering in Latin America</i> , Cambridge Mass: Harvard University.	Any kind of organization engaged in activities of significant social value, or the production of goods and services with an embedded social purpose, regardless of legal form.

**Source:** Authors

The social enterprise is denoted by the following categories: economic and entrepreneurial dimension, social dimension, and participatory governance of social enterprises (EMES, 2001). There is no universally accepted definition of social enterprise, however, the central idea is obvious – to supplement state activity in the social sphere with private sector activity, which should bring entrepreneurial spirit and efficiency.

### 3. BRIEF HISTORY OF SOCIAL ENTREPRENEURSHIP IN EUROPE AND THE REPUBLIC OF SERBIA

Social entrepreneurship has emerged in the 18th and 19th centuries. The industrial revolution in Europe led to the impoverishment of working class, and it has encouraged new initiatives for poverty reduction. New initiatives originally appeared in Italy and France, where the process of industrial development itself was slower, and where there was a tradition of cooperatives (Anheier, 2005).

A turning point in the development of social entrepreneurship in Europe happened during the 1980s (Defourny & Nyssens, 2008) when many European countries faced high structural unemployment, which they could not cope with traditional social policy mechanisms. Public policy creators have been given the task of creating adequate public policies, which would enable certain population groups to enter the labor market, such as individuals who have been out of work for a long time, or individuals who are insufficiently qualified, etc.

In response to the new economic situation in European countries, various types of social enterprises have evolved. Civic associations and foundations, that have traditionally been socially oriented, got involved in a profitable business with stronger entrepreneurial initiatives (Cvejić et al., 2008). Cooperatives, instead of their own profitable business goals, focused on meeting the social needs in the country (Cvejić et al., 2008).

In Europe, social entrepreneurship had its beginnings in Italy, where the first social enterprises were established. First social enterprises were called “Cooperative sociale” to include vulnerable groups in the labor market (Defourny & Nyssens, 2008). They were regulated by the “Italian Law on Social Cooperatives of 1991” (Fici, 2015). Between 1991 and 2003, there were 6,500-7,000 Cooperatives sociale established in Italy, employing some 200,000 workers and contributing to the well-being of 1.5 million people (Borzaga et al., 2008). Social enterprises were soon established in other European countries. “Cooperatives of Social Solidarity” (*Cooperativas de solidariedade social*) have been established in Portugal; “Cooperative societies of collective interests” (*Societe cooperative d’interet collectif SCIC*) were introduced in France; “Community interest company” were founded in England, providing services such as local transport, social housing, childcare, etc. (Velev, 2011).

Today, just traditional social economy organizations (cooperatives, associations, foundations) make an impressive number of two million. They make a significant contribution to all European business (10 to 12%), and are employing 14.5 million people. Besides, cooperatives have 140 million members, making every fifth European member of the cooperative (Cooperatives Europe, 2016).

The social entrepreneurship idea in the Republic of Serbia has been present for more than 150 years on traditional foundations of cooperatives (Pavlovic, 2015). The first cooperative was founded in 1868 in Titel, Vojvodina (Parun Kolin & Petrušić, 2007). Until World War II, cooperatives in the Republic of Serbia were one of the most developed economic sectors, as evidenced by the fact that Serbian cooperatives were one of the founders of the International Co-operative Alliance (ICA) in London in 1895 (Zakic & Nikolic, 2018).

Two specifics in cooperatives development in the Republic of Serbia have diminished the significance of this historical heritage. The cooperatives were originally developed in villages, as producer cooperatives or credit unions (agricultural cooperatives), which served to protect peasants and small landowners, threatened by agriculture modernization in the early 20th century. The cooperative spirit has been negligibly expanded to other spheres of economy, since the first Cooperative Law, which regulated other forms of cooperatives, was introduced in 1937 (Stojanovic & Gnjatovic, 2015). Then, during the period of socialist regulation (1945-1990), as well as during the period of post-socialist (unsuccessful) transition (1990-2000), social enterprises in the form of cooperatives were strongly influenced by the state, which imposed restrictions on them, and led to a reduction in their activities (Cvejić, 2018).

In the late 1980s, the Law on Cooperatives (1989) was adopted, and an attempt was made to reaffirm the cooperative movement. One of the basic problems faced by cooperatives was the unresolved property ownership, since a significant part of the cooperative property was socially owned (Parun Kolin & Petrušić, 2007). In the late 1990s, a new Law on Cooperatives (1996) was adopted, as well as a new General Rules of Cooperative Union of Yugoslavia (1998), but their implementation did not lead to a significant improvement, nor towards solving the problem

of cooperative property ownership. Cooperatives have undergone significant legal and organizational changes since 2000, and together with non-profit organizations have created a legal and organizational basis for social enterprise development in the Republic of Serbia.

Contemporary social entrepreneurship has emerged in the Republic of Serbia through the process of approaching the European Union, with some specifics. The Republic of Serbia has long been characterized by a significant economic development lag, accompanied by economic problems. As a result, the number of citizens not included in standard market mechanisms is higher than in most European countries. These problems threaten the entire economy and, therefore, the strengthening of social enterprises may to some extent relieve the market economy of high social expectations.

An aggravating factor for the social enterprises' development is the poor entrepreneurial spirit in the Republic of Serbia. The country first went through 45 years of socialism, during which private entrepreneurship was suppressed. Then, the 1990s were marked with suspicious privatization and corruption that compromised the entrepreneurship idea and practice. An additional problem facing the social enterprises in the Republic of Serbia is the lack of legal and economic framework, as well as the lack of adequate financial incentives both for creating its activities and for maintaining current business. The existence of a stimulating environment in form of the legal and economic ecosystem would facilitate the establishment and operations of social enterprises. A stimulating environment would successfully shape the social entrepreneurship sector in the Republic of Serbia.

#### 4. TYPES OF SOCIAL ENTERPRISES IN THE REPUBLIC OF SERBIA

Social enterprises are categorized within seven legal and business forms in the Republic of Serbia, which correspond to the concept of social entrepreneurship: cooperatives, enterprises for employment and vocational rehabilitation of persons with disabilities, civic associations and foundations (non-profit organizations), limited liability companies and joint-stock companies (usually spin-offs of non-profit organizations, business incubators or development agencies) (Cvejić et al., 2008; Vukmirović et al., 2014).

**Cooperatives.** Cooperatives in the Republic of Serbia are more oriented towards promoting the interests of their members than the public interest in the local community. Membership in some cooperatives consists of specific vulnerable groups (small agriculturists, poor craftsmen, unskilled workers), so they are specifically supporting the interests of these groups, or provide basic social protection services (health care, housing, poverty eradication) and therefore considered social enterprises.

**Enterprises for employment and professional rehabilitation of persons with disabilities.** The most developed type of social enterprise in the Republic of Serbia, which is defined under the Law on Professional Rehabilitation and Employment of Persons with Disabilities (2009) as a form of employment and professional development of persons with difficult employment possibilities. Their activities are regulated by the Companies Law (2011), but they receive significant state subventions and have priority at public tenders.

**Civic Associations and Foundations.** They emerge as an important and competitive actor in social care services (SeConS, 2013). Associations and foundations are mostly founded to

explicitly pursue social goals and accomplish their social mission. Another characteristic that highlights the strong social dimension of associations or foundations is their orientation to vulnerable categories of the population as defined by The Social Welfare Act (2011).

**Limited Liability Companies and Joint Stock Companies.** This legal and business form of social enterprise is the rarest in the Republic of Serbia. They are mostly set up by associations to financially support their social goals through the commercial business. In this case, these limited liability companies and joint-stock companies operate as spin-offs or business incubators. If established by local or national governments, they usually operate as development agencies. Social enterprises that are registered as limited liability companies and joint-stock companies also generate income from other sources. They receive donations and various types of local government support.

## **5. LEGAL AND ECONOMIC ENVIRONMENT FOR SOCIAL ENTREPRENEURSHIP IN THE REPUBLIC OF SERBIA**

The functioning of most social enterprises in Europe is governed by the Law on Cooperatives, the Act on Associations, or the Law on Social Enterprises (Velev et al., 2011). Additional legislation forms have been enforced in many countries to encourage innovative, modern forms of social entrepreneurship.

The legal framework governing social entrepreneurship in the Republic of Serbia is not adequately shaped, despite its importance and positive effects being recognized in the civic sector and professional public. However, several laws, bylaws, and regulations are governing the fields of social enterprise activity, its constitution, and operation, as well as taxation. These are: The Social Welfare Act (2011); Law on Professional Rehabilitation and Employment of Persons with Disabilities (2009); Act on Associations (2009); Law on Endowments and Foundations (2010); Companies Law (2011); Law on Cooperatives (2015); Law on Volunteering (2010); Public Procurement Law (2012); Labor Law (2005); Legal Entity Profit Tax Law (2001) and Value Added Tax Law (2004).

The goal that should be pursued is the adoption of systemic law in this area, as the solutions in EU countries, respecting the transitional specificities in the Republic of Serbia. Adoption of comprehensive law should consider the current situation in social entrepreneurship, the other countries' experiences, as well as practice as a source for positive legal norms.

Considering the legal framework for social entrepreneurship development in the Republic of Serbia, it can be concluded that different laws shape this area of action. The most important laws that regulate this concept are the Companies Law, the Legal Entity Profit Tax Law, the Value Added Tax Law and the Act on Associations. Social entrepreneurship receives minimal subsidized funds, while tax liabilities are almost identical to those applicable to for-profit organizations.

Other sources of funding are available to social enterprises in the Republic of Serbia, and that are, first of all, funds for the establishment and performance of social enterprises. There are funds for financing vulnerable and marginalized groups, as well as the funds for financing the social enterprises' growth and development. Within each of these three groups of sources, there are funds financed from the Republic of Serbia budget, Vojvodina budget, or local budget; then funds of non-governmental organizations dealing with the area of interest; as well as foreign funds (see more in the European Movement in Serbia, 2011).



In addition to strengthening existing structures for the use of EU funds for social inclusion and poverty reduction, it is necessary to establish a Social Inclusion Fund that would affect the more efficient use of available EU funds for social inclusion (Third National Report on Social Inclusion and Poverty Reduction in the Republic of Serbia, 2018). The establishment of such a fund is in line with the need to set up a national fund equivalent to the European Social Fund.

## 6. SWOT ANALYSIS OF SOCIAL ENTREPRENEURSHIP IN TOURISM SECTOR

Social enterprises in the tourism sector in the Republic of Serbia could play a significant role in social development, but they are conditioned with the certain general framework. The most important driving factors for their development and growth are positive historical heritage, entrepreneurial approach to social problems, strengthening public awareness, EU influence, network development as support platforms, institutional sensitivity (Aleksić Mirić & Lebedinski, 2015; Borzaga et al., 2008).

Positive historical heritage – Serbian culture values social motives. The importance of positive historical heritage is huge for the future development of social enterprises in the tourism sector. Entrepreneurial approach to social problems – Reduced reliance on the state has led to independent organizing of citizens. Strengthening public awareness – The public is becoming increasingly aware of the need for active involvement in social issues.

EU impact – EU impact has a positive effect on the social entrepreneurship development in the tourism sector, reflecting through donation programs, and learning from international organizations (Borzaga et al., 2008). Network development as support platforms – It is an important tool for supporting social enterprises because it enables pooling of resources, better lobbying and advocacy (Borzaga et al., 2008). Institutional sensitivity – Increasing initiatives of competent institutions, aimed at the needs of disadvantaged categories, such as active labor market measures, employment laws, insurance, ban on discrimination against disadvantaged categories (Borzaga et al., 2008).

Social entrepreneurship in the tourism sector faces many challenges that restrain its emergence, growth and development. As the most important stand out (Vukmirović et al., 2014; Aleksić Mirić & Lebedinski, 2015; Borzaga et al., 2008):

Suspicion towards social concept – In the Republic of Serbia there is a certain suspicion towards enterprises that have a “social” status in their name. Uncompleted transformation of legal framework – Legal regulation in this area must be approached carefully, analyzing all relevant effects.

Limited access to financial resources – Commercial banks have a very conservative attitude towards entrepreneurs, also towards enterprises with a social mission. Weak economy – Although the Republic of Serbia has implemented significant reforms in many fields, one of the biggest obstacles to social entrepreneurship in the tourism sector is low economic development and a large shadow economy.

Poor employment potential – Existence of significant rigidity in the labor market, and relatively limited mobility of the working population in the Republic of Serbia. Excessive pressure from numerous disadvantaged groups – Social welfare expenditures is a large part of the state budget. Social enterprises supplement state obligations that haven't been systematically resolved and for

which there is insufficient capacity. Development instability – Social enterprises in the tourism sector need support throughout the entire cycle of their development, not only financially, but also in the process of developing business skills.

Lack of entrepreneurial culture – Serbian national culture, by its basic characteristics (Hofstede, 2001), is not entrepreneurial and shows a very low-risk appetite. Low awareness of social enterprises' importance – Low awareness is present among all stakeholders and potential social beneficiaries. The awareness of the importance of social entrepreneurship in the tourism sector should be strengthened, as an important future development factor in the Serbian economy.

Unrealistic expectations from the state – The modest development of social enterprises in the tourism sector so far can also be explained by a fundamental misunderstanding of state institutions. Poor financial discipline – Poor economic environment and legal uncertainty lead to a low degree of financial discipline. Corruption – High corruption level in the Republic of Serbia affects all segments of society, as well as social entrepreneurship in the tourism sector.

Based on the aforementioned advantages and disadvantages, that have a positive or negative impact on social entrepreneurship in the tourism sector, opportunities for its development could be identified, as well as threats. Following is a summary of the author's views on the advantages and disadvantages of social entrepreneurship in the tourism sector, through a SWOT (strengths, weaknesses, opportunities, and threats) analysis.

SWOT-analysis helps in identifying the main strengths (advantages) and weaknesses (disadvantages), as well as opportunities (possibilities) and threats (constraints) for developing social entrepreneurship in the tourism sector in the Republic of Serbia. Table 2 shows the main findings of SWOT analysis of social entrepreneurship in the tourism sector in the Republic of Serbia.

Presented SWOT analysis can be used to establish opportunities and threats of social entrepreneurship in the tourism sector in the Republic of Serbia, its competitiveness, as well as to develop an economic and legal framework that would facilitate the social entrepreneurship development. SWOT analysis assessed the internal and external factors that represent the strengths, weaknesses, opportunities and threats, that is, the present and future potential of social entrepreneurship in the tourism sector in our country.

Based on the presented SWOT analysis, all stakeholders in the social entrepreneurship context should be aware that further development can be accelerated if they focus on their strengths, that is, on strong entrepreneurial orientation, flexibility, social business goals, competitiveness, sensitivity to disadvantaged groups, diversity of goals and activities, organizational dynamism, motivation, economic integration of persons with disabilities, adaptation to working abilities of persons with disabilities and rich cooperative tradition.

In the process of focusing on strengths, social entrepreneurship in the tourism sector should minimize its weaknesses, above all conflict of interest in the case of several founders, low entrepreneurial affinity, insufficient experience in management positions, inadequate qualifications, lack of financial resources, absence of long-term planning, operating losses, unadjusted physical conditions for persons with disabilities, inadequate legal framework, as they are the biggest obstacles to growth.

**Table 2.** SWOT analysis of social entrepreneurship in the tourism sector

S	W
<ul style="list-style-type: none"> <li>• Strong entrepreneurial orientation of social enterprises</li> <li>• High degree of adaptability to market requirements</li> <li>• Social business goals</li> <li>• Competitiveness</li> <li>• Need for helping to vulnerable groups of population</li> <li>• Large degree of diversification, in the area of set goals, in accordance with the needs of certain groups of the population</li> <li>• Flexibility and innovation of social enterprises</li> <li>• High level of expertise, motivation and commitment of employees</li> <li>• Employment of categories of population with special needs and disabilities</li> <li>• Rich cooperative tradition</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict of interest in the case of the existence of several founders</li> <li>• Low entrepreneurial affinity</li> <li>• Insufficient experience in management positions, inadequate qualifications</li> <li>• Lack of financial resources to finance all operating phases of a social enterprise</li> <li>• Lack of planning in longer time frames</li> <li>• Certain unplanned activities can lead to business losses</li> <li>• Work environment and workplace equipment insufficiently adapted to people with special needs and disabilities</li> <li>• Inadequate law regulative, not adapted to the needs of social entrepreneurship</li> </ul>
O	T
<ul style="list-style-type: none"> <li>• Partnership and cooperation with local authorities</li> <li>• Achieving a positive reputation in the environment</li> <li>• Large number of funds for financing all operating phases of a social enterprise</li> <li>• Development of promotion of socially responsible business</li> <li>• Using positive practices from developed countries</li> <li>• Logistic support by foreign donors</li> <li>• State support, allocation of certain funds for social entrepreneurship</li> <li>• Grant for tax liabilities</li> <li>• Law concessions for establishing social enterprise in tourism sector and employing persons with disabilities</li> <li>• Connecting social enterprises in national network</li> <li>• Strengthening public awareness of social entrepreneurship importance</li> </ul>	<ul style="list-style-type: none"> <li>• Not recognizing the value of work, benefits and initiatives from social entrepreneurship</li> <li>• High corruption level reflected through public procurement</li> <li>• Low financial discipline</li> <li>• Unstable market</li> <li>• Unfavorable legal framework</li> <li>• Administrative barriers</li> <li>• Misuse of social entrepreneurship concept in order to use favorable financial resources</li> <li>• Inconsistent interpretation of tax regulations</li> <li>• Insufficiently active state role in creating favorable conditions for social entrepreneurship</li> <li>• Negative prejudices towards social entrepreneurship, originated from the period of socialism</li> <li>• Inadequate cooperation with local authorities</li> <li>• Uninformed entrepreneurs on the procedures for social enterprise establishment</li> <li>• Uninformed entrepreneurs on employing persons with disabilities</li> <li>• Emigration of high educated population</li> </ul>

**Source:** Authors, based on EMES (2001) and Cvejić et al. (2008).

Focusing on strengths and minimizing weaknesses will enable social entrepreneurship to take advantage of available development opportunities in the tourism sector: partnership and cooperation with local authorities, positive image, use of various financial sources, promotion of socially responsible business, using positive practices from developed countries, logistic support by foreign donors, state support, allocation of certain funds for social entrepreneurship, tax concessions, concessions in establishing social enterprise and employing persons with disabilities, connecting in the national network and strengthening public awareness of social entrepreneurship importance.

Opportunities for the growth of social entrepreneurship in the tourism sector may be partially reduced due to the presence of certain environmental threats, i.e. external conditions that are unfavorable (possible problems such as: not recognizing the value of social entrepreneurship,

high corruption level, low financial discipline, unstable market, unfavorable legal framework, administrative barriers, misuse of social entrepreneurship concept in order to use favorable financial resources, inconsistent interpretation of tax regulations, insufficiently active state role in creating favorable conditions for social entrepreneurship, negative attitude, inadequate cooperation with local authorities, misinformation on the social enterprise establishment, misinformation on employing persons with disabilities, emigration of the high educated population).

## **7. CONCLUSION**

Social enterprise operates with the idea of fulfilling a social mission through earning revenue from selling products or services. For this reason, in addition to the importance for Serbian economic development, social enterprises have an extremely important role in solving social issues and have a great impact on the whole society. There is a real need for social entrepreneurship in the Republic of Serbia, and there is a tradition of joint market appearance with a social mission.

Social entrepreneurship in the function of tourism sector development should contribute to the optimal engagement of available resources, activation of intangible heritage in the function of entrepreneurial activities, job creation, economic and social empowerment of local communities and ensuring a self-sustainable long-term business. By careful observation of the development of social entrepreneurship in the tourism sector on the territory of the Republic of Serbia, it can be concluded that the principle of social entrepreneurship development is present primarily through encouraging the development of rural tourism. Rural tourism means a set of all tourist activities that are realized in rural areas and as such provides a wide range of social entrepreneurial activities in the field of tourism and complementary areas that can be realized in rural areas of the Republic of Serbia, in accordance with the principles of sustainable development. From this point of view, the development of social entrepreneurship is a tool for achieving environmental, economic and socio-cultural well-being in rural areas in order to raise the quality of life of the local population from both material and intangible aspects.

The two most common problems faced by social enterprises in the tourism sector in the Republic of Serbia are the non-continuous inflow of financial resources and an inadequate legal framework adapted to the needs of social enterprise. On the other hand, a major problem is the lack of entrepreneurial affinity and adequate knowledge and skills, important for the management quality and sustainability of social enterprises in the tourism sector.

The legal framework, governing social entrepreneurship in the Republic of Serbia, does not adequately recognize the “social entrepreneurship” concept. There is no legal regulation that comprehensively governs this matter, but several laws and strategies regulating social enterprises. The goal to be pursued is the adoption of systemic law in this area, as the solutions in EU countries, while respecting the specificities of the Republic of Serbia.

Financial support for enterprises with social goals is minimal, with tax liabilities almost the same as for-profit enterprises. Social enterprises are focused on domestic and foreign sources of financing, funds for financing their establishment and operation, funds for financing different needs of vulnerable groups, and funds that represent sources of financing more favorable than on Serbian financial market. It is necessary to set up a Social Inclusion Fund, to support social inclusion programs for more vulnerable groups, and to influence the more efficient use of available EU funds.

SWOT analysis showed that social enterprises in the tourism sector have development opportunities in the Republic of Serbia. First, it is necessary to overcome the weaknesses of social enterprises, as well as to overcome resistance to this idea, and to strengthen public awareness of their importance. In this process, state support should be moderate and reasonable, in line with the real effects that social enterprises have on solving social and similar problems in the tourism sector, without discrimination.

The development of a legal framework to support social entrepreneurship in the tourism sector in the Republic of Serbia should be approached gradually but dynamically. A comprehensive overview of the current state of social entrepreneurship is needed, and good coordination between ministries and the social enterprise sector should be established. It is especially important to develop an adequate economic framework, more precisely financing options, through the development of financial institutions and instruments that support the social enterprises in the tourism sector in all stages of development.

Finally, government support is needed for creating a favorable climate for social enterprises in the tourism sector, such as reducing corruption, increasing financial discipline, increasing market stability, reducing administrative barriers. Social entrepreneurship in the tourism sector should be recognized and supported by measures that will enable its independent development.

State role should be much more active in creating favorable conditions for social entrepreneurship. Support programs for management skills development, for managers of social enterprises (planning, controlling, marketing, accounting, IT and other skills), are certainly important in this domain, and adoption of knowledge and experience from other countries, with more developed social entrepreneurship in the tourism sector. Direct financial government support grants and various funds for social entrepreneurship in the tourism sector are also important, as well as tax concessions and concessions stipulated by the law in establishing social enterprise and employing persons with disabilities. The state should also have an active role in strengthening public awareness of social entrepreneurship's importance in the tourism sector.

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# OPPORTUNITIES AND DIRECTIONS OF RURAL TOURISM DEVELOPMENT IN THE REPUBLIC OF SERBIA

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**Abstract:** *Rural tourism is a specific form of tourism, in which the main motive is travel to ecologically clean landscapes and the return of man to his historical roots. Rural tourism was created based on preserving the nature of rural areas and cultural and historical identity. Rural tourism is considered a new form of modern tourism together with already developed conventional forms of tourism. Rural tourism can be considered a very important form of sustainable tourism.*

*Modern global trends such as nature protection, health care, especially during a pandemic, staying in nature, as well as preserving and reviving local traditions, customs, cultural and historical events and manifestations have contributed to the development of rural tourism in the world. Rural tourism successfully incorporates all these elements into its offer, which is why more and more tourists travel to rural areas. Interest in rural tourism arises from the desire to escape from urban centers pressed by industrialization and man-made environmental pollution.*

*At present, rural tourism is one of the potentially important segments of the tourist offer on the Serbian market. Rural tourism includes a large number of activities that take place in rural areas. However, its potential is only partially valorized through rural tourism operators located in the central and northern regions of Serbia, as well as Vojvodina.*

*Given that financial problems are often an obstacle in the realization of most ideas, financial support is a necessary lever for the development of rural tourism and rural regions in general. EU funds can be a chance to achieve financial support for the improvement of development potentials, better promotion, networking of tour operators and the implementation of tourism projects.*

**Keywords:** *Rural tourism, Rural area, Development potential, Sustainable development, Benefit, Nature protection, Financial support, EU funds, Organic production, Cluster, Diversification, Marketing, Promotion, Serbia.*

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## 1. INTRODUCTION

The twenty-first century has brought a significant strategic shift in the tourism sector: from mass tourism to alternative forms of ecotourism in response to growing uncertainty caused by global climate change and structural changes in consumer behavior patterns. As a result, the desire of a large number of city dwellers to travel to peaceful rural areas is growing, where they can get comfortable accommodation in country houses and walk freely in the fields and forests, breathing fresh air. Ethno food in rural households and the opportunity to participate in field work or recreate in the fresh air have a special attraction for tourists. Especially in the conditions of the COVID-19 pandemic, ecological rural tourism is considered the best suitable form

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of tourism for city dwellers, frightened by the possibility of getting a life-threatening illness and tired of crowds in shopping malls and queues in front of pharmacies and banks.

The concept of rural tourism is not exactly defined. Because of it, rural tourism is subject to many interpretations. There are several definitions of rural tourism. Rural tourism is defined as a form of tourism that takes place in rural areas and contains elements of an authentic rural setting on a tourist farm or in a rural hotel (OECD, 1994).

Rural tourism is considered a sustainable, multifunctional form of tourism based on local resources and traditional agricultural activities.

Rural tourism is very diverse and fragmented in terms of operational structures, activities, markets and operating environment. Rural tourism includes farm-based holidays but also adventure, hunting, educational travel, arts and heritage tourism, ethnic tourism (Roberts, Hall, 2001).

„Rural tourism is a term used when the rural environment and culture become key components of a tourism product” (UNWTO, 2004).

Any form of tourism that showcases the rural life, art, culture, and heritage at rural locations, thereby benefiting the local community economically and socially, as well as enabling interaction between the tourists and the locals for a more enriching tourism experience, can be termed as rural tourism (Irshad, 2010).

We can connect rural tourism with special forms of tourism, for example, tourism with „special interests”, such as hunting, fishing, „Scandinavian” hiking, etc. In addition, there are opportunities for active participation in certain agricultural activities and other activities related to the traditions and the way of life of the inhabitants in rural areas.

Rural tourism presupposes a temporary change of place of residence, which usually implies a stay in a space qualitatively and landscape completely different from the urban environment.

The main contribution of rural tourism is associated with the general revival and diversification of the rural economy and the creation of new products of rural tourism, generating additional income on family farms, protecting natural resources and solving the social and economic problems faced by rural residents due to the emigration of the population to other countries or moving to urban areas.

The development of rural tourism is based on small accommodation capacities, most often family facilities. The specific quality in rural tourism is based on food production, but also social contacts in an authentic environment. The growth of rural tourism depends on the willingness of local families and the local community to get involved in its development.

As presented at the Congress on Rural Tourism, annual expenditures in rural tourism amount to around € 12 billion, and taking into account the added value and multiplier effects, revenues reach a figure of around € 26 billion. In addition, it is estimated that rural tourism creates about 500,000 jobs. Italy, for example, records a growth of over 1 million annual arrivals on agro-tourism farms. Estimates indicate that more than 10% of English farms are now involved



in some area of ecotourism, while in some regions this share is growing up to 23%, and about 10,000 farms offer bed and breakfast accommodation. The percentage of rural households offering some type of tourist accommodation in Austria is about 10%, which is about 300,000 accommodation units. Also, 8% of farms in Germany and 4% in the Netherlands and France provide tourist services (Jerkić et al., 2019).

According to available data from 2017, the largest number of overnight stays in rural areas was registered in France, Germany, Switzerland, Great Britain and Italy. Also, the Czech Republic, Poland, Hungary, Latvia, Estonia and Lithuania record a significant number of visits to rural areas (<https://ec.europa.eu/eurostat>).

## **2. GOAL AND SUBJECT OF THE RESEARCH**

The Republic of Serbia has exceptional geographical conditions and natural resources for the development of a sustainable form of tourism - rural tourism. This paper focuses on the study of the possibilities of rural tourism development in the Republic of Serbia.

The basic goal of the research is focused on the objective valorization of rural tourist resources of the Republic of Serbia and finding ways to develop rural tourism in the Republic of Serbia.

## **3. POTENTIALS FOR THE DEVELOPMENT OF SUSTAINABLE RURAL TOURISM IN SERBIA**

The rural economy in Serbia is largely dependent on agriculture, with about 75% of the rural population engaged in agriculture for their own needs. 85% of the territory of the Republic of Serbia consists of rural areas. However, despite the richness of natural and cultural resources, rural areas continue to suffer from high unemployment rates, depopulation, low economic activity and declining natural resources.

The goals of sustainable development of rural tourism are focused on economic, environmental and institutional effects.

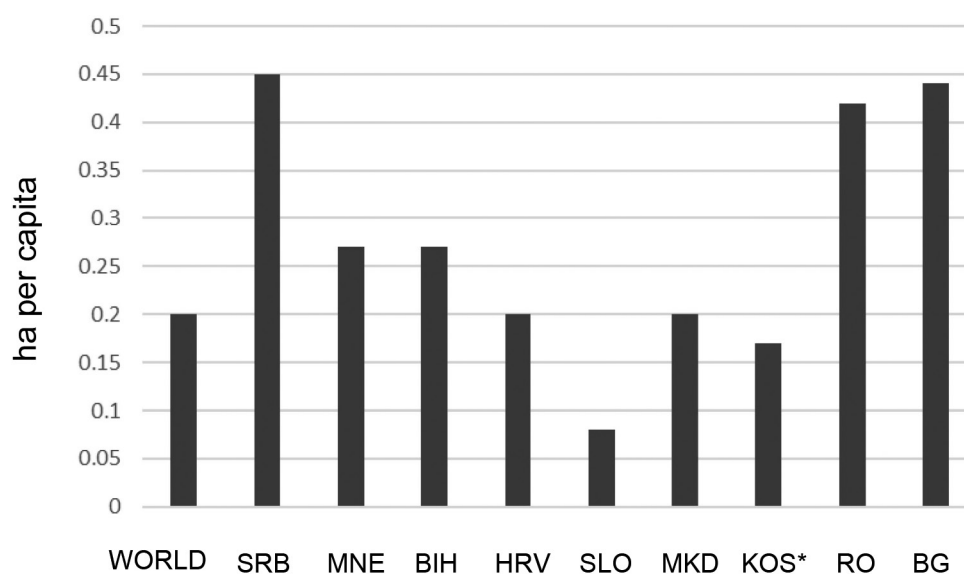
- The economic goals are: strengthening and diversification of the economy in rural areas, providing stable income to the rural population from local activities, elimination of the gray economy;
- Ecological goals in the field of environmental protection relate to the care for the preservation of ecosystems and natural heritage, reducing the use of non-renewable resources, increasing the efficiency of the use of natural resources, reducing the negative impact and pollution of the environment to an acceptable level;
- Institutional goals include control and management of the processes of sustainable development of rural tourism.

Serbia has great potential for the development of rural tourism, but the current level of competitiveness of Serbia in the field of rural tourism is not particularly high, despite the fact that there are already natural, cultural and social preconditions for development. The traditional approach to agriculture and the production of ethno-food are good potentials for the development of rural tourism. Serbia's natural resources are also favorable for the development of complementary activities such as hiking, recreation, hunting, fishing, horseback riding. Participation in the daily activities of the rural way of life is also an advantage of rural areas. For that reason, rural

tourism is recognized as one of the priority Serbian tourist products and as one of the six key Vojvodina tourist products (Tourism Development Strategy, 2016).

In Vojvodina, farms are becoming an element of the tourist offer. In the Tourism Development Strategy of the Republic of Serbia for the period, 2016-2025 the farmsteads were, among other things, recognized as a key attraction for the rural areas of Vojvodina (Fruška gora, and the surroundings of Sremski Karlovci, Subotica, Palić, Potisje and Podunavlje) (Tourism Development Strategy, 2016). In addition to the idea and financial support, it is important to set a good legal basis. Namely, the legislation does not recognize farms as a special category, but equates them with standard accommodation units and prescribes equal conditions for them. By fulfilling the prescribed conditions, the farms lose their authenticity. Improvement of legislation and special categorization of farms is a precondition for the formation of the new tourist offer. At the level of local communities, it is necessary to design arrangements that will unite several different services and thus provide visitors with a complete experience within the tourist clusters.

The Republic of Serbia has significant and untapped potential for the development of rural tourism. Thus, for example, Serbia has the largest amount of available agricultural land (ha per capita) compared to other countries in Southeast Europe (Fig. 1). For the development of modern agriculture and organic food production, we should overcome many limiting factors and define a clear strategy.



**Figure 1.** Available agricultural land (ha per capita) in the countries of Southeast Europe  
**Source:** Drašković (2017)

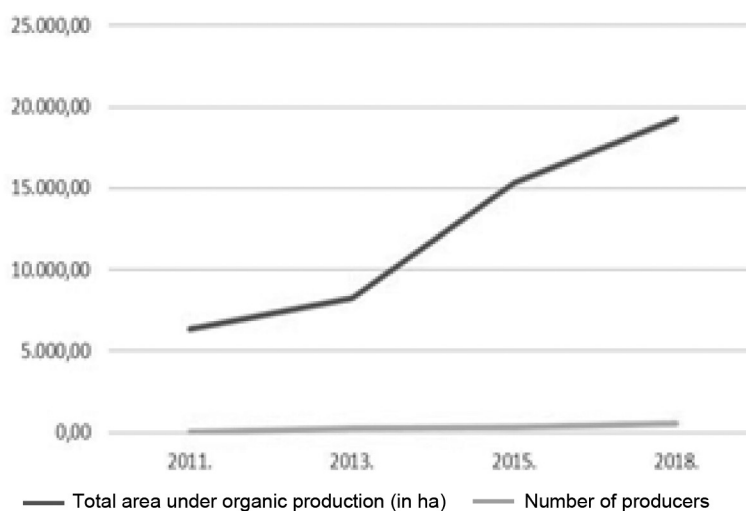
Many rural areas are exposed to continuous processes of depopulation, economic decline and complete marginalization due to the intensive process of industrialization and urbanization. The number of inhabitants in the villages is declining, the authentic way of life and the comprehensive culture of the village are slowly disappearing due to people leaving the village, who have been the bearers and transmitters of these values for centuries. Migration from remote rural areas to urban centers that provide opportunities for better living conditions leads to the decline of rural properties and land degradation. Abandoned land is usually affected by erosion processes and other forms of degradation and pollution. Land as the main agricultural resource of Serbia should be subject to remediation (Marić et al., 2019).

Soil degradation can be overcome by applying new agro-technical measures through remediation and reclamation. The effect of soil erosion or salinization can be reduced by applying good environmental practices (Bashkin, Galiulin, 2019). This is the case, for example, with the cultivation of land after coal exploitation, or after degradation by natural and anthropogenic factors. The area contaminated with industrial waste can also be repaired (Galiulin et al., 2020).

Land reclamation after degradation and devastation is possible in many cases. Thus, for example, ecology and environmental engineering, especially industrial ecology, have devised many usable procedures for land reclamation and bioremediation after ecological devastation and tailings pollution (Bashkin, Galiulin, 2020). Procedures of chemical-technological neutralization of acidified or saline soil are known in the world (Galiulin et al., 2020). Land remediation is achieved by phytoremediation and absorption of harmful mineral compounds (Ermakov et al., 2019).

#### 4. DEVELOPMENT OF ORGANIC PRODUCTION IN SERBIA

For the development of rural tourism in Serbia, it is very important to pay attention to the production of quality healthy food. Rural tourism and organic agriculture are the main components of the green economy and green growth in agriculture (Janković et al., 2020). According to statistical data from the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia, the total area under organic production in the period 2011/2018 increased three times, while the number of producers of certified organic products, in the same reference period, doubled. Analysis of the structure of organic livestock production in the Republic of Serbia in the period 2013/2018 shows a significant increase in the number of heads of certain species, which is very important for the development of rural tourism and agro-tourism (<http://www.minpolj.gov.rs/organska/>).



**Figure 2.** Total area under organic production/number of organic producers in the Republic of Serbia

Source: <http://www.minpolj.gov.rs/organska/>

The structure of organic livestock production is changing in the five years, so the share of poultry increased from 12% to 33%, while the share of sheep increased by 10%. The share of cattle decreased by 1% in the structure. In the same reference period, the number of organic cattle increased significantly, by almost 94%.

**Table 1.** Structure of organic livestock production in the Republic of Serbia

Description / Year	2013	2015	2016	2017	2018	
Cattle	Organic status	1853	2593	2560	3099	3594
	Conversion period	323	153	335	-	-
	<b>Total</b>	<b>2176</b>	<b>2746</b>	<b>2895</b>	<b>3099</b>	<b>3594</b>
Sheep	Organic status	2793	3232	2552	4665	5138
	Conversion period	1238	1616	1826	-	-
	<b>Total</b>	<b>4031</b>	<b>4848</b>	<b>4378</b>	<b>4665</b>	<b>5138</b>
Goats	Organic status	81	1117	1115	2048	1486
	Conversion period	865	569	291	-	-
	<b>Total</b>	<b>946</b>	<b>1686</b>	<b>1406</b>	<b>2048</b>	<b>1486</b>
Pigs	Organic status	57	100	223	87	284
	Conversion period	118	132	60	-	-
	<b>Total</b>	<b>175</b>	<b>232</b>	<b>283</b>	<b>87</b>	<b>284</b>
Horses	Organic status	48	96	6	177	114
	Conversion period	162	128	159	-	-
	<b>Total</b>	<b>210</b>	<b>218</b>	<b>165</b>	<b>177</b>	<b>114</b>
Donkeys	Organic status	12	16	2	47	0
	Conversion period	9	4	0	-	-
	<b>Total</b>	<b>21</b>	<b>20</b>	<b>2</b>	<b>47</b>	<b>0</b>
Poultry	Organic status	1362	1079	3122	4415	6735
	Conversion period	28	301	36	-	-
	<b>Total</b>	<b>1390</b>	<b>1380</b>	<b>3158</b>	<b>4415</b>	<b>6735</b>

Source: <http://www.minpolj.gov.rs/organska/>

In the sector of organic plant production, the growth of cereals, industrial plants and both medicinal and aromatic plants was observed (Table 2).

**Table 2.** Structure of organic plant production, ha (2015-2018)

Description / Year	2015	2016	2017	2018	
Cereals	Organic status	2183	2192	2148	2612
	Conversion period	2069	2416	1514	1001
	<b>Total</b>	<b>4252</b>	<b>4608</b>	<b>3662</b>	<b>3613</b>
Fodder crops	Organic status	1043	806	999	905
	Conversion period	398	543	212	432
	<b>Total</b>	<b>1441</b>	<b>1349</b>	<b>1211</b>	<b>1337</b>
Industrial plants	Organic status	1458	1636	1444	1860
	Conversion period	1216	1281	847	102
	<b>Total</b>	<b>2674</b>	<b>2917</b>	<b>2291</b>	<b>1962</b>
Medicinal and aromatic herbs	Organic status	68	13	25	178
	Conversion period	3	100	90	15
	<b>Total</b>	<b>71</b>	<b>113</b>	<b>115</b>	<b>193</b>

Source: <http://www.minpolj.gov.rs/organska/>

Table 2 shows the data on the movement of organic plant production, and the structure of plant production, for the period from 2015 to 2018. Products obtained from organic plant production were used in organic livestock production (Pešić, 2020).

Demanding trends for organic agricultural products and organic food dominate the EU markets and other developed markets (Živanović et al., 2019a). Nowadays, organic agriculture and animal husbandry are increasingly in the focus of business banking in the context of commercial lending to agriculture (Živanović et al., 2019b).

## 5. RURAL TOURISM IN SERBIA

In the second decade of the 20th century, Serbia as a tourist destination experienced a rapid increase in the number of tourist arrivals and overnight stays. In large tourist centers every year (except for the decrease in 2020 due to the Covid-19 pandemic), about 97% of hotel capacity is recorded. The rest of Serbia, the rural hinterland, generates only 3% of overnight stays, which can be considered problematic in terms of sustainable and balanced regional development (Statistical office of Republic of Serbia, 2019).

This type of tourism can provide additional income to residents of rural areas. The development of rural tourism benefits not only service providers but also the local economy, which receives an inflow of funds with the arrival of tourists. Also, rural tourism can contribute to the revival of forgotten folk arts and crafts. However, despite all the advantages of rural tourism, Serbia is not using its potential to its full extent. Foreigners who travel to Serbia like to see much more than rafts and festivals, because of which Belgrade, Novi Sad and Nis are known to foreign tourists. Unfortunately, information on rural tourism in Serbia is insufficient and difficult to access for foreign tourists, although many of them could be interested.

That very few foreigners go to the countryside to enjoy the natural beauties of Serbia is confirmed by a statistical review. According to the data of the Republic Bureau of Statistics, in 2016, 2.75 million tourists were registered in Serbia, who realized 7.53 million overnight stays. Out of that, 4.79 million overnight stays were realized by domestic tourists and 2.73 million overnight stays - by foreign tourists. Only 4,094 domestic tourists and 237 foreign tourists spent time in 174 rural tourist households in 18 municipalities. The municipality of Gornji Milanovac has the largest number of registered rural tourist households, a total of 47. Every year, rural tourism becomes an increasingly massive form of ecotourism and rural tourism.

There are no official data on the number of registered households engaged in rural tourism, but according to local tourism organizations, rural tourism is supported by more than 32,000 both registered and unregistered beds in rural areas, 10,000 of which are exclusively in rural areas. Also, it is estimated that this total number of beds annually brings about 10 billion dinars of income from rural tourism.

Rural environments in Serbia are rich in significant natural and cultural development resources, but despite that, villages lag far behind in development concerning urban areas. There are also village-city migrations, which are usually one-way. Representatives of different age groups of the population are moving out, especially young people, who do not see their perspective in the countryside. This is understandable because domestic agriculture is poorly competitive and inefficient, and the state helps only large exporters with its measures, while ordinary small households hardly remain „at zero” after years of hard work.

However, rural tourism can really change the socio-economic picture of a rural area, and the positive effects are multiple: the development of rural tourism encourages the development of agriculture, as the primary activity in the countryside:

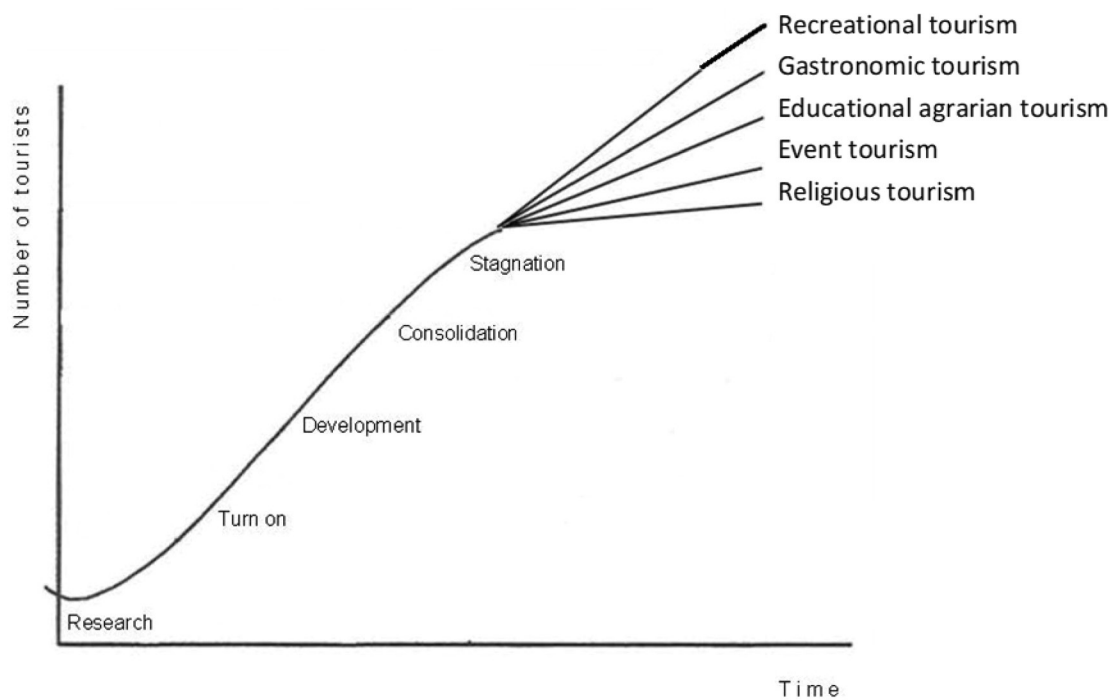
- rural tourism creates destinations, but also new jobs and preserves existing ones (in agriculture and crafts),
- the development of tourism and the arrival of tourists helps in the placement of home-made products and other forms of crafts,



- the development of rural tourism creates new business opportunities and represents a new opportunity for young people, which would reduce the negative trend of emigration to the city and abroad,
- development of rural tourism encourages the preservation of the natural environment, local culture, traditions and customs,
- development of tourism in villages will bring greater chances for building better roads and improving infrastructure (Plojović et al., 2017).

The growth of rural tourism is quite difficult to quantify, because statistics vary between countries and many of them do not separate rural tourism from other forms. Nevertheless, most national tourist associations confirm the growth. Although some call this only a modern trend, rural and agro-tourism cannot be considered a random and short-term phenomenon, and it is believed that their growth in Europe and in the world is conditioned by the following factors (Jerkić et al., 2019):

- growing interest in cultural and natural heritage,
- increasing leisure time and disposable income of the population in cities,
- faster transport and better communication with rural areas,
- growth of environmental and health awareness,
- interest in gastronomic specialties and ethno food,
- growing interest in organic products.



**Figure 3.** Life cycle diversification

**Source:** Modified figure from the work of Jovanović et al. (2019)

In many cases, rural tourism is an additional, multifunctional activity, which complements traditional agriculture and significantly contributes to the diversification of the traditional rural economy, improves the socio-cultural environment and provides protection of natural resources in rural areas. According to the Tourism Development Strategy of the Republic of Serbia for the period from 2016 to 2025, rural tourism includes various forms of tourism activities such as (Tourism Development Strategy, 2016):

- *agrotourism, accommodation of tourists in rural houses, on farms* - participation of tourists in traditional agricultural works,
- *outdoor activities* - recreation and leisure (hunting, fishing, horseback riding, cycling, hiking),
- *eco-tourism* - tourism that supports the protection of natural resources,
- *rural experience (rural tourism)* - tourists immerse themselves in everyday rural life,
- *cultural tourism* - visit of tourists to cultural and historical monuments, archaeological excavations in rural areas,
- *event tourism* - song festivals, production and sale of local souvenirs and agricultural products, etc.

In addition to the primary tourism form, later in the diversification of the portfolio, it is necessary to include other forms of rural-tourism that will innovate tourism eco-destinations and thus increase the number of target groups of tourists, and improve the profitability of tourism company (Fig. 3). Rural areas can also serve to open up new eco-destinations or to diversify portfolios and clusters with other forms of ecotourism (Mitrovic et al., 2019).

## 6. LIMITING FACTORS OF INTENSIVE DEVELOPMENT OF RURAL TOURISM IN THE REPUBLIC OF SERBIA

The existence of natural resources in rural areas of the Republic of Serbia is not a sufficient condition for the development of rural tourism. They constitute a comparative advantage but what essentially makes the tourism market competitive is the ability of property owners, local municipalities, and other stakeholders to organize long-term resource use and sustainable destination development efficiently and effectively to develop rural tourism and rural prosperity.

Previous efforts in the field of rural tourism development in the Republic of Serbia have not been at a satisfactory level. First of all, the lack of cooperation between government bodies (state, municipalities, local communities) should be pointed out. In addition, many factors have consistently slowed the growth of rural tourism. Some of the most important are:

- lack of adequate tourist infrastructure and superstructure,
- poor communal and traffic infrastructure,
- lack of equipped accommodation capacities,
- insufficient care for the preservation of the environment and natural resources,
- lack of adequate staff for marketing and tourism development,
- insufficient application of modern information and communication technologies,
- inadequate distribution of financial resources for the development of rural tourism,
- demographic trends and the aging process of the rural population,
- insufficient education of interested rural households on how to receive and animate tourists (Janković et al., 2020).

There are other risk factors that can affect the development of rural tourism, such as:

- lack of quality of services provided,
- lack of qualified staff and finances, which directs them to join forces for more efficient implementation of destination and market management programs,
- lack of understanding and/or misunderstanding of the concept of rural tourism, together with incorrect initial assumptions about a simple and easy product market, income and employment,

- non-compliance with development goals of local authorities and development agencies, as a result of inadequate communication, mistrust and lack of a common vision of development,
- lack of planning for further development and limited use of the marketing concept as a business philosophy that leads to a lack of information about the needs and desires of tourists,
- lack of funds to start and/or continue operations as a result of insufficient understanding and support from the state, banks and other financial institutions, especially in countries in transition,
- lack of information on opportunities for further development of tourism,
- lack of support from local, regional and governmental entities (Njegovan, 2016).

Limiting factors for the development of rural tourism are manifested in the lack of accommodation capacity, quality services, infrastructure, financial resources and control over the use of resources.

## **7. DIGITALIZATION AND DEVELOPMENT OF MARKETING IN RURAL TOURISM**

The basic characteristics of supply and demand in rural tourism, as well as the importance of the natural and cultural environment for the development of this type of tourism, or tourism market segment, indicate the importance of marketing in order to create a basis for the rational market business. On the other hand, the fact is that special attention is paid to the development of rural tourism due to its potential contribution to social and economic renewal of rural areas (importance of tourism as a factor in providing additional income and employment, as well as repopulation and removal of social isolation of rural areas). In this sense, we can view tourism as a way to solve or overcome a number of problems in the development of rural areas around the world. Having in mind the stated relationship between the development of rural areas and the development of tourism, we can state that the market approach to relations in rural tourism must be based on respect for the social benefits arising from that relationship.

Rural tourism in Serbia is not adequately structured and organized, and the main limiting factors are primarily insufficiently trained staff in the field of rural tourism and marketing, as well as the lack of a strategy for the promotion of tourist content. The promotion strategy should determine the target group of tourists to whom the marketing messages will be directed, while on the supply side special attention should be paid to meeting specific tourist requirements. Also, in the determination of the strategy, the directions of development and contours of the tourist offer are defined in order to create the tourist identity of the destination (Janković et al., 2010).

As an example, we can mention the website [www.selo.rs](http://www.selo.rs), which managed to collect data for about 576 agricultural farms engaged in rural tourism in addition to traditional agricultural activities. The idea is to make a serious offer, with true data provided by those agencies that are interested in convincing potential tourists of a quality offer of rural tourism.

The application of marketing in tourism is constantly being adjusted to turbulent changes in the economy and society. Along with the changes in the directions of tourism development, which are constant and strong, the very bases for the application of marketing are also changing. Current world tendencies in the application of marketing, especially in tourism, indicate its significant adjustment to social goals. Therefore, the basics for the application of marketing

are being expanded and the goals of the entire marketing system in society are being partially revised. Thus, for example, the branding of high quality food products, as well as products with a geographical origin (primarily wine and brandy) is becoming the main trend in the marketing attractiveness of rural areas. A brand is a way in which consumers can distinguish a destination. To be effective, a brand should unify all of rural benefits (culture events, gastronomic manifestation, recreation) in the mind of the consumer (Čajka, Jovanović, 2014).

The wide social significance of the development of rural tourism points to the importance of the application of marketing by state and social institutions, organizations and associations at the local, regional and national level. It is especially important to emphasize the role and importance of national tourism organizations (NTOs), as well as appropriate organizations at the local level (tourism organizations of municipalities and cities) in order to design, present, promote and educate related to rural tourism.



**Figure 4.** The most famous places for the development of rural tourism in Serbia

**Source:** <http://www.discoverserbia.org/en/seoski-turizam>

National, regional and local tourism organizations should especially support the market presence, i.e. the formation, sale and presentation of rural tourism products through market research, image creation, product development support, as well as through staff training, consulting and advisory activities to improve marketing efforts of organizations which deal with the marketing of rural tourism at the micro level (Plojović et al., 2017).

The overall process of marketing rural tourism in Serbia also faces a number of problems that may affect the market positioning of rural tourism products. The underlying problem could be defined as the existence of a mismatch between the expected benefits, by tourists, and the overall tourism product, which contains many undefined elements.

The rural tourism venture in Serbia is mainly owned by one family and is based on limited funds for further development. These farms usually remain small and rely heavily on family members, especially women. The typical rural lifestyle is considered to be the main attraction, and therefore the protection of this intangible element of rural cultural heritage is highly recommended. In any case, a previously maintained rural area with authentic rural life is a basic source for rural tourism.

The tourist offer of rural areas in Serbia is extremely fragmented and represents a large number of micro and small regionally dispersed providers. The best picture of how developed rural tourism in Serbia is can be seen from a very small number of locations on the map of Serbia (Fig. 4). In solving these problems, the relationship between the public sector, tourism companies, regardless of the form of ownership, and organizations and individuals who are directly involved in the provision of services in rural tourism is crucial. The answer should be found in the process of appropriate planning and management of rural tourism development, especially through financing instruments.

## 8. SOURCES OF FINANCING RURAL TOURISM IN SERBIA FROM EU FUNDS

The importance of investing in rural tourism is confirmed by examples of good practice from many countries around the world. For example, the US government has implemented several regional and state development projects aimed at increasing the efficiency of rural tourism and farm activities. The governments of Australia and the United Kingdom have also offered a wide range of products and services to promote tourism in rural areas. In Europe, the tourist rural brands of France (Gites de France), Austria (Urlaub am Bauernhof) and Italy (Agroturismo) are well known.

The development of rural tourism with special emphasis on agro-farm tourism is the subject of policy of many European countries whose goal is to encourage the global social and economic development of rural areas that mainly suffer from negative trends of deagrarization and depopulation. Some of the measures taken at the local and national level are shown in Table 3.

**Table 3.** Incentives for the development of rural tourism in European countries

State	Type of incentives and sources for the development of rural tourism
Belgium	The regional government subsidizes accommodation units up to 30% of the total project costs.
Denmark	The government subsidizes agro-tourism associations with fixed amounts of money on an annual basis.
France	The government provides incentives to new businesses in rural areas, assists with marketing activities, and conducts a feasibility study.
Greece	Tourism projects in the rural area of Petra Kesvos are subsidized by the government, local government and the EU.
Ireland	The Rural Tourism Development Agency "Ballyhoura Failte Society" is funded by the government, local government and the EU.
Italy	Agro-tourist boards are funded by the government on an annual basis.
Netherlands	Communities, such as the "Varninging Recreatie by de Boer", are funded by the regional government.
Germany	Incentives for the development of rural tourism are distributed at different levels: Bayern, Niedersachsen, Hessen, Baden-Württemberg are financed by the regional government, and Rheinland Pfalz and Schlesvig-Holstein by the regional government and other sources.

**Source:** Petric (2003)



The IPARD program is an EU financial instrument to support rural development and agriculture. By acquiring the status of a candidate for EU membership, the Republic of Serbia has exercised the right to use European Union funds from the IPARD pre-accession component. The essence of IPARD (Instrument for Pre-Accession Assistance for Rural Development) is to provide financial support to future members of the European Union in order to successfully implement the measures of the Common Agricultural Policy EU in accordance with the principles of sustainable development of agriculture and rural development.

To finance projects, part of the funds is provided from the IPARD Fund on the principle of co-financing, and part must be financed from domestic funds, where the participation of the public sector can be a maximum of 50%, while the rest must be provided from the private sector (Puškarić et al., 2015).

The assistance is intended directly for users, i.e. agricultural producers - legal entities and individuals, and the responsibility for managing this program and its implementation in Serbia lies with the Ministry of Agriculture and the Directorate for Agrarian Payments. In 2020, a new Measure 7 was introduced: diversification of agricultural holdings and business development, which refers to rural tourism. Currently, rural tourism in Serbia is financed through the IPARD fund (<http://www.minpolj.gov.rs/ipard-program-2014-2020>).

IPARD EU Rural Areas includes:

- investments in physical assets and costs of construction of accommodation and catering facilities,
- purchase of machinery and equipment,
- landscaping,
- construction of a local road network,
- development of tourist recreational activities,
- procurement of equipment for the use of renewable energy sources.

A serious amount of money was allocated from the EU budget, and partly from the national treasury for the construction and reconstruction of facilities for accommodation and catering or their equipment - 2.3 billion dinars. The competition is open for three months. The largest amount of IPARD support per user is 300,000 euros, and the return that can be obtained for the investment is up to 65 percent.

The minimum refund is € 5,000 and the maximum is € 300,000. There is a great interest in rural areas in consulting agencies that help farmers, entrepreneurs and businessmen to prepare IPARD projects.

In IPARD projects related to rural tourism, there are a number of novelties in relation to projects and public calls that farmers have had so far, and these are calls for co-financing investments in machinery and mechanization, construction and equipping of farms and warehouses, as well as orchards and greenhouses, facilities for processing fruits, vegetables, meat, milk and eggs and grapes. The procedure is not simple, especially when it comes to the construction and adaptation of the facility, and such investments are mostly within this new measure. The first condition for participation in this public invitation is that every farmer (natural person, entrepreneur, micro or small enterprise) has a farm registered in the register of agricultural farms, in active

status. When the investment is completed, the condition related to the categorization of the rural household or the facility for accommodating guests must be met.

Therefore, the first step in dealing with rural tourism is the establishment of an agricultural farm within which the rural tourism service will take place. The facilities in which catering services will be provided (from farms to boarding houses) in a rural tourist household must be categorized and meet the minimum technical and sanitary-hygienic conditions in accordance with Measure 7 for diversification of agricultural farms and business development.

Administrative formalities significantly slow down the process of preparing applications for grants, co-financing and other forms of support from the state and European Union funds. It is necessary to prepare business plans and collect bids from construction contractors and equipment suppliers. It is also necessary to obtain permits for the reconstruction of accommodation facilities and a decision for construction works.

At the end of 2020, the Directorate for Agrarian Payments held a three-day training for the use of software for processing documentation submitted to the public calls in the field of rural development. The transition from manual to electronic processing will greatly reduce the possibility of human error, speed up the selection of candidates for admission and harmonize the process of processing cases with the practice in EU countries. Rural tourism in Serbia has development potential, especially in the situation of the Covid-19 pandemic when the population is increasingly turning to domestic tourism. The popularity of rural tourism is growing all over the world. More and more people decide to spend their holidays in nature in the countryside ([www.selo.rs](http://www.selo.rs)).

## **9. RECOMMENDATIONS FOR FURTHER DEVELOPMENT OF RURAL TOURISM IN SERBIA**

The high priority given to tourism (and agriculture) as economic activities of strategic importance in several national development strategies and policies in Serbia, generates rapid growth of tourist arrivals, reaching the number of arrivals since the late ,80s, but still highly concentrated in destinations with large tourist centers. In the last decade, Serbia as a tourist destination has experienced a rapid increase in the number of tourist arrivals and overnight stays. Rural areas have not benefited much from tourism, except for destinations close to major tourist centers (along with Zlatibor, Vrnjacka Banja and Kopaonik) and areas and villages near Belgrade.

The rural tourism sector in Serbia represents a large number of small enterprises, mostly family-owned and developed with almost no or very little institutional support. However, the activities of domestic and foreign development agencies must be mentioned (USAID PRO program, etc.).

Future guidelines for the development of rural tourism in Serbia must be focused on (Bećirović et al, 2017):

- sustainable resource management,
- knowledge transfer and technical-technological development,
- growth of competitiveness,
- food chain and logistical support to the agricultural sector,
- development of rural areas and strengthening of social structure.

Special attention should be paid to the association and joint appearance of tourist organizations on both the domestic and foreign markets. As important factors in the development of rural areas in Serbia, clusters and cooperatives stand out in order to achieve the development of rural tourism in various diversified fields (Mitrović et al., 2019).

The site [www.selo.rs](http://www.selo.rs) best shows how far we have come with the association in the rural tourism sector. The basic idea of the site is to gather all service providers in the field of rural tourism in one place and to enable them a joint presentation in one place. The site is both informative and sales. Through the site, the tourist can be informed about the total offer, then, after choosing a rural household that interests him, he can open its subpage and be convinced of the offer of that rural household, to look at the ratings of those who previously used the services of that household, available calendar whether and when there is a reservation, and if he finds a free term he can make a reservation directly on the site.

The disadvantage of such a presentation is that it is not possible to search farms according to certain criteria, because that would make it easier to find an ideal tourist destination for a potential guest. In any case, the effort made by the organizers of the site [selo.rs](http://selo.rs) is to be commended and it can be said that it is one of the better ways of joint action of the main participants in the promotion of the tourist offer of Serbia in the field of rural tourism.

## 10. CONCLUSION

Geographical diversity (lowlands, hilly areas, rivers and lakes) and the richness of natural and cultural-historical resources indicate that rural areas and more intensive development of rural tourism could play a key role in the future economic development of the Republic of Serbia. Nevertheless, the tourism of the Republic of Serbia is in the initial phase of development. Fragmented and dispersed rural holdings, the turn of tourists to other forms of tourism and insufficiently developed awareness of the value of holidays in ecologically clean rural areas are just some of the factors that have influenced the poor development of rural tourism. Insufficient financial investments in the expansion of accommodation capacities and infrastructure of rural areas has negatively affected the development of rural tourism in Serbia.

Lack of financial resources, reduced volume of tourist traffic, inadequate infrastructure, inefficient marketing and inadequate staff are important influencing factors that are responsible for the current situation of rural tourism in the Republic of Serbia.

Rural areas have the opportunity to offer different types of agricultural products in Serbia. However, the lack of branded products and products with a geographical origin does not provide rural tourism destinations with the marketing power to attract tourists.

In order to achieve the expected effects from rural tourism, it is necessary to plan and stimulate organizational action in building the tourist offer of the village. In addition, the rural tourism product needs to be locally controlled, based on authenticity and promotion that highlights realistic expectations of product use. All this would lead to faster development of rural tourism in our country, which is currently below the real possibilities. In the last decade, Serbia as a tourist destination has experienced a rapid increase in the number of tourist arrivals and overnight stays. Rural tourism is emerging as a potential driver of sustainable rural development. Rural tourism can be promoted as a means of combating the social and economic challenges facing

rural areas in Serbia, primarily those associated with the decline of traditional sectors of the agricultural industry.

Tourism in many cases is an additional activity that provides significant support to the traditional rural economy, which primarily consists of agriculture, forestry, crafts, souvenir making and other activities. The offer of rural tourism is very rich and very dedicated to the characteristics of the area in which the tourist activity takes place. Due to this fact, it is necessary to insist on the complex promotion of rural tourism and the development of marketing activity.

Marketing should be understood, especially in relation to the development of rural tourism, as a bridge between organizations dealing with communication between local tourism companies, tourist destinations and society. Focusing the rural tourism on human needs, as well as the natural and cultural environment is the core of the concept of sustainable tourism development; it requires that the main goal of marketing in tourism is to improve the quality of life of all participants in the process.

By concerted action to increase the quality of accommodation, food and all services provided to tourists, as well as the natural and socio-cultural environment, goals can be achieved that will make rural tourism an attractive and useful activity for all participants. An insufficient number of participants in the rural tourism destinations in Serbia also indicates the shortcomings of marketing activities.

Positive experiences of European countries with developed rural tourism (Austria, Switzerland, France, Germany, Italy, Slovenia) indicate the possibility of using rural tourism as a complementary factor of economic development in rural areas of Serbia.

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# RURAL TOURISM IN SERBIA IN THE AGE OF THE CORONAVIRUS EPIDEMIC

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**Abstract:** *The coronavirus pandemic has caused a change of tourist habits, including turning more to domestic destinations. Serbian travel culture is specific, because most travelers choose sea destinations, given that Serbia is a continental country. Considering the number of natural resources along with accommodation capacities, it is necessary to work more on the promotion of rural tourism, in order to change the awareness and habits of travelers. The research conducted for this purpose addressed the travel habits of domestic tourists in their own country and showed that there are great opportunities in this regard to increase the number of guests in rural tourism, which will become permanent and use other benefits a rural household can provide. It also represents the opportunity to revitalize abandoned and devastated areas and affects the economic well-being of the whole region and even the whole country.*

**Keywords:** *Serbia, Travel, Accommodation, Local authorities, Tourist organizations.*

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## 1. INTRODUCTION

Modern age and modern economy, despite all technical and technological achievements, are not immune to natural forces and laws, as shown by the coronavirus pandemic that struck the world in late 2019 and early 2020 and which still cannot see the end, nor consequences. Even the most developed countries in the world, with the most stable economies, are exposed to the large losses, due to disabled work processes, redirected budget toward the fight against virus and social expenditures to help people get through this period more easily. For small and medium-sized economies, this wave has been disastrous, and losses are now being calculated, as well as ways to rebuild their financial resources.

There is practically no industry that was not endangered during the state of emergency in Serbia, and the biggest losses were certainly suffered by the tourism and catering sector because travel is limited and there are no indications when the situation will return to the level before the pandemic. "Tourism, as a social and economic phenomenon, is a business activity the most directly exposed to constant and strong changes" (Čerović, 2002, p. 21). "With its important features and the ways of functioning, the tourist market differs from other markets for goods and services" (Spasić, 2013, p. 16). Planning a trip abroad is uncertain and associated with many aggravating circumstances, which include mandatory testing for Covid-19, quarantine, or self-isolation, which again does not guarantee that the planned trip will be realized because experience shows that the epidemiological situation can change drastically in just a few days and with it the rules for entering certain countries from Serbia. "It is expected that in such conditions, tourism will suffer the greatest crisis when we talk about the economy. In a situation where humanity is struggling to survive, travel is not a priority" (Brzaković et al., 2020, p.104). In such conditions, it is safest to turn to domestic resources, to travel, relax and entertain in your country,

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and Serbia certainly has a large tourist offer that is unfairly neglected by domestic travelers, so this could be an opportunity to change the situation. It also should be noted that “there are other diseases, which may not deserve global attention, but which can be transmitted through the interaction of people from different communities. Although they are not fatal to health, such diseases can cause sociological and economic stress among the domicile population, which may have weaker immune resistance to certain diseases than the tourist population” (Tomka, 2012, p. 36). It is doubly important to promote the potentials of domestic tourism, firstly to encourage the population not to leave the country in uncertain epidemiological conditions, and secondly to pour financial resources into the domestic budget, which will significantly contribute to the recovery of this economic sector. Serbia is a rural country: “According to the definition of the Organization of Economic Cooperation and Development (OECD) rural regions in Serbia cover up to 85% of the total territory (population density is below 150 inhabitants per km<sup>2</sup>), in which lives more than a half of the total population of Serbia (55%)” (Medojević et al., 2011, p. 93). “However, the average capacity occupancy in rural tourism in Serbia is only 4% (Program for the development of sustainable rural tourism in the Republic of Serbia, 2011), and the average capacity occupancy in rural tourism in the European Union is 25% (Bartlet, 2006)” (Radović, 2020, p.1338). From the very beginning of the epidemic and especially in the last period it is noticeable the effort to promote domestic destinations, spas, and mountains, as well as rural and other types of tourism. There are numerous TV shows and newspaper reports about mountains, rivers, spas in Serbia, with an emphasis on the peculiarities and rarities that the nature of this country provides, in order to attract domestic tourists to visit destinations in Serbia with an attractive offer. Knowing what kind of tourist resources Serbia has, this position is completely justified, and it can be noticed that one negative situation had a positive consequence in drawing attention to the cultural, natural, and historical sights of our country. It had to be noticed that “mass communication is the most common form of communication in the modern world. It takes place precisely through the media and it is the one that creates public opinion” (Lešević et al. 2020, p. 525). The government can easily use public media to make an influence on the domestic tourists because the “public media as a mediating instance between society and the state, enables the education of the public that becomes the bearer of public opinion” (Tomić, 2003, p. 120). That is why we have to be aware that “successful development of rural tourism requires designed marketing with special arrangements for tourists to stay in rural areas, as well as to make their experience exciting and, in general, let them feel values of the rural lifestyle in the ecologically healthy countryside” (Đorđević, 2016, p.43).

“For years, tourism has been a significant factor of social and economic development of Serbia. Tourism affects the development of numerous economic and non-economic activities, and conditions development of the hotel industry as one of the leading economic activities. Tourists increasingly have a desire to spend holidays in nature, surrounded by silence in the middle of nature. Serbia has such regions and we should invest in them to make them competitive and to increase the number of tourists. This way the economic situation is improving, the population is being employed, agricultural products are used, etc.” (Marinoski et al., 2014, p. 21). One of the measures is vouchers released by the government and given to a certain number of citizens, which have greatly increased the interest of citizens to travel within the borders of their country. Even before the Covid-19 pandemic and the state of emergency, originally planned 100,000 vouchers plus 60,000 additional were distributed in record time, during January and February. In the new situation, according to the demands and wishes of citizens, but also to motivate people to stay in their country and thus be responsible for their health and their families, the Ministry of Trade, Tourism and Telecommunications has released another 400,000 vouchers, which

will cover a significant part of losses due to the cessation of business in tourism. Conditions for obtaining these funds have been simplified, so that students and people with incomes of up to 70,000 RSD can now apply for vouchers for accommodation in Belgrade and Novi Sad, whose offer had not been included before because these cities have otherwise realized a large number of overnight stays. Spas and mountains had the upper hand, and in the new circumstances, it is necessary to enable all parts of the country to earn money and attract tourists.

According to estimates, in the first five months of 2020, Serbia suffered damage of around 300 million euros due to lower foreign exchange inflows from foreign tourists, not counting domestic tourist trips. The damage based on the foreign exchange inflow this year will be close to a billion euros. Last year, tourism earned 1.4 billion euros, and 3.6 million tourists visited the country, an increase of eight percent. During the first two months of 2020, 453,728 tourists stayed in Serbia, a total of 1.4 million overnight stays were realized, and most guests from abroad were from Romania, Montenegro, Russia, Bosnia, and Herzegovina, and North Macedonia, according to which it could be concluded that one of the most successful years in tourism awaited us, which was abruptly and irreparably interrupted in March with a coronavirus epidemic and a state of emergency.

In order to determine how to use such circumstances for sustainable purposes and how to ensure the greater interest of domestic tourists in domestic destinations in the coming years, hoping without health problems, it is necessary to create campaigns that will not be based only on fear of disease, but rather on the desire to get acquainted with the rich tourist offer of own country, which often turns out to be less known than certain foreign countries. Also, it should be pointed out that it can contribute to the progress of other industries and the survival of many rural family households, because revenues from this type of tourism do not flow only into the state budget, but can enable the development and maintenance of small farms, that can provide tourist accommodation services. At the same time, people should be encouraged to pay attention to the offer of small farms, which, although it does not include luxury and modern trends, offers a different type of relaxation, in harmony with nature, and often reveals sites that are completely unknown to the general public. "Rural areas can offer special landscapes of exceptional value, ecological oases, fortresses of traditional culture, and ethno-cultural diversity heritage. Tourism is one of the activities that can have a significant impact on the economic, social, functional and physiognomic structure of the rural area" (Todorović, Bjeljac, 2007, p. 136).

The year 2020 is considered by forecasts, as well as certain reports, a year of rural tourism, and people engaged in this sector need help and support to properly prepare because the number and demands of tourists will be higher than ever before. Also, this opens opportunities for rural tourism to include households previously not involved in this activity, which will expand the offer. Of course, they will have to do certain preparatory activities to get involved in this business sector. In the first place, this includes certification of accommodation facilities and a description of everything that can be included in the tourist offer. In order to adequately do it, it is necessary to provide quality information and education to household members, so that they can recognize what to offer to the guests, and it is up to the authorities to assess the extent to which it can be interesting for tourists and what to do to enrich and adjust the offer according to demand. "Therefore, there is the need for law regulation in this area and precise definition of accommodation standards. World trends indicate that rural tourism is an ever-growing concept with increasing refined needs of domestic and international demand" (Vukosav et al., 2018, p. 770). Another idea is to expand the subsidies allocated for non-agricultural production to rural households

and design new ones, which could help agricultural producers as a kind of additional activity. Serbia is still primarily a rural country, one of the few in Europe that has preserved the tradition of the rural lifestyle, households, field activities, as well as specific male and female chores, which can be presented to guests and encourage them to participate. “Rural tourism is one of the specifics of the tourist offer of Serbia, and its subtype – active rural tourism, which involves the participation of guests in household activities, fieldwork, gardens, vineyards, facilities for accommodation of people and animals, care of animals, preparation of food – is becoming more and more represented” (Radanov, Brzaković, 2017, p. 582). Even though it sounds possible in theory, in reality, is quite different. “Despite the wealth of natural and cultural resources, rural areas continue to suffer from high rates of unemployment, depopulation, low economic activity and decreasing natural resources “(Erdeji et al., 2013, p. 310).

For such a program, it is necessary to make a planning structure at the highest level, and then institutionally focus on local authorities and municipal tourist organizations, which have data on resources and potentials of their home areas, as well as opportunities for cooperation of nearby territories. Serbia has huge tourist resources thanks to its natural beauties, as well as cultural and historical heritage, which should be presented to the domestic traveler in a modern way and persuade him to come to know new parts of his country. “The importance of education can best be seen in the programs implemented within the protection of the population against AIDS and in the programs on traffic behavior. Such educations have saved many lives” (Radanov, 2016, p. 155). These examples show that the population in Serbia is ready to learn and be educated.

## **2. RESEARCH**

### **2.1. Assumptions that initiated the research**

In order to maintain interest in domestic tourist destinations in non-Covid conditions, not only during the pandemic of the dangerous virus, which ensures greater inflow of money into the state budget, encourage the preservation of values and wealth of our country and revitalization of abandoned and endangered areas, it is necessary to create a systematic approach, which will include both the wishes of tourists and the available capacity for the implementation of these activities. In this regard, it is necessary to adapt both: institutional measures must meet the needs of tourist workers, to modernize and present their offer, and on the other hand, tourists must show greater interest in domestic destinations. This precondition will be fulfilled if the tourist offer of Serbia is presented in the right way, that is, the requests of tourists get properly examined and if we provide conditions allowing them to realize their desires when it comes to vacation.

With a quick reaction, authorities started designing propaganda activities, to present the wider range of destinations, which will attract all categories of travelers. It is noticeable in previous years that when it comes to the use of vouchers, the most popular is spa tourism and the absolute record holds Sokobanja, which shows that tourists are not looking for luxury but natural and rare beauty, as well as the possibility of combining several types of tourism (health, rural, active, cultural-historical). In this area, guests can use health services in specialized centers, enjoy many picnic areas in the immediate vicinity, engage in various forms of recreation (swimming pool, sports fields, hiking), gastronomic offer is extremely rich, the segment of entertainment and relaxation is highly developed. Also, in this way, it is possible to satisfy the interests of different generations, so Sokobanja and its surroundings can be a good benchmark for creating



the concept of a sustainable program for domestic tourists, as well as an indicator of specific expectations to be met in other areas to attract guests and position themselves better and more convincingly on the tourist map of Serbia. There are several localities in all parts of Serbia that can function in the same way as the Sokobanja region, even more successfully, it is only necessary to promote capacities and direct the actions of municipal authorities and local tourist organizations, with advisors from higher bodies and experts.

Practice shows that numerous guests use this type of travel and stay in the rural household to provide themselves with vegetable canning, which can be a significant source of income for the household. If this type of agreement is established, i.e. the guest, regardless of the stay, continues to be supplied with groceries and household products at least once a year or more often, and even recommends them to his acquaintances and friends, the household can count on a steady income and accordingly plan production and activities. It should be noted that the focus is primarily on small agricultural producers, who independently place and distribute their products on the market, mainly through local markets, buyers, and shops. Supporting a small producer, thus enabling it to move to the middle and develop its capacities, is the best way to reach a stable system, which will be able to expand in more directions and increase the number of employees and more diverse activities, as well as to include all family members, all ages and generations in the activities, which is of particularly important for maintaining the business. Also, the association of households and a unique offer and performance in a certain area increase the chances of successful business, because visitors have a greater range of activities and a much larger offer in all segments. In this way, it encourages staying in the countryside, supports agricultural production, and connects with other activities, in which a sustainable business is built in synergy, with the potential for progress and expansion.

It is necessary to provide additional incentives to small agricultural producers and encourage them with subsidies and education to get involved in tourism, to connect their main activity with tourism so that in cooperation with tourist organizations and representatives of municipal authorities for tourism and agriculture create activities that can involve guests (for example vegetable canning preparation). Also, this type of tourism can be educational, because guests can be trained, for example, to start beekeeping, to prepare traditional dishes, to make soaps or other home-made products, acquire the basics of some crafts, which expands the circle of experts and ensures preservation and expansion of these activities.

One of the specifics of the countryside life is the division into male and female jobs, which can be very interesting for a potential tourist. Women association in a joint promotion can significantly contribute to advertising and presentation of the area, and thus to attract a larger number of guests. Not negligible is the possibility for guests to help the hosts in certain activities, which will reduce the need to hire additional labor. This concept is based on the idea that people from the urban environment, which is becoming dominant in Serbia, increasingly want to be reminded of some activities from rural areas. It can also be a good incentive for those who have neglected properties to rent them, which would encourage the revival of the rural areas, or give them to use to socially endangered families. All this can be achieved through various initiatives and eco-initiatives because today's media and social networks enable information to be transmitted quickly and realistically. Thus, tourism and agriculture, i.e. micro-agriculture, would influence and encourage each other. This kind of tourist market is expanding very quickly through recommendations. They can also ensure the survival of one household and encourage others to turn to similar activities.

Televisions have started broadcasting propaganda shows and reports about destinations in Serbia, to a much greater extent than before. Particularly important promotional channels are social networks, which are today the main and the fastest source of information and the most influential one because they transmit information in real-time and directly reach the targets. There is as well personal recommendation, known to be the strongest marketing tool, regardless of all modern theories. More individuals and agencies deal exclusively with domestic destinations, and to include the widest possible population in domestic tourism and find undiscovered areas in the current tourist offer, take into account all kinds of travelers, interweaving them and researching the market, which shows that they have systematically started designing campaigns. If there is no adequate accommodation in a certain area that has other potentials, it is necessary to work on engaging the local population that can be included in the rural tourism program.

However, the first border openings, after the emergency state ended, showed that people, despite warnings, always choose sea destinations as their first choice, which means that it is essential to influence the change of consciousness of our citizens to change their habits. That is why it is necessary to know which of their needs need to be met and to find out what is the key factor that determines them in choosing a destination and how to meet their requirements.

In the last few decades, the urban environment has begun to dominate the rural one, so that today's young generations are no longer able, like their parents, to spend their holidays in the countryside, because those villages are now often abandoned. Also, dramatic situations and the war in the former Yugoslavia caused a large number of people to lose a village to go to and thus take a break from the urban environment, which is now the only one identified with the quality of life and opportunities for good earnings. Therefore, potentially interested consumers exist, and a return to an authentic Serbian household and physical activities on it would be a real challenge for guests.

Given the presented opportunities, it was considered justified to conduct research on the interests and requirements of domestic tourists when it comes to domestic tourist destinations, to obtain data on how to keep this interest live in the future after the pandemic ends. It is useful to promote tourist destinations in Serbia, not only because of the economy but also because of getting to know the country of origin and the rehabilitation of some abandoned and historically and biologically valuable resources. Also, this could influence the determination of families to stay in smaller areas and engage in agriculture and to encourage individuals without employment to turn to agricultural and tourist activity.

It was essential to start the research with tourists, first to check what their interests are, and then conduct a survey among existing small farmers and property owners that can be used for these purposes, if not by the owners themselves then by other stakeholders (lease or assignment for use).

Following the recommendations on preventing the spread of the epidemic, the research was conducted safely, through an online Google questionnaire, using a "research instrument called the survey" (Havelka et al., 2004, p. 97).

## **2.2. Hypothesis**

Analytical consideration of the situation in this area imposes three hypotheses:

**H<sub>1</sub>:** The tourist offer adjusted to the requirements of travelers will attract domestic tourists who will remain regular guests.

- H<sub>2</sub>:** By including the tourist offer in their activities, small agricultural producers can improve their activity.
- H<sub>1</sub>:** Providing institutional support to rural tourism enables the revitalization of forgotten and abandoned areas.

### 2.3. Plan and research methods

The survey was conducted online, via a Google questionnaire. This modern means of interrogation is increasingly used in public opinion research, and it is very practical to use because it can be distributed to a large number of respondents in a very short time. Also, since the questions are answered anonymously, the respondents give honest and thoughtful answers, which greatly affects the quality of the research. The questions were conceived clearly and unambiguously, and the answers were based on rounding off the offered options and adding personal views. The survey was distributed through personal channels, through associates, students, friends, and the social networks Facebook, Instagram, Twitter served as an additional channel for dissemination, with an explanation of the importance of providing this information. As many people are present on the networks, the response was higher than expected, so 375 completed survey forms arrived, which was enough to form a scientifically based opinion. The goal was to find an answer on how to ensure that interest in domestic tourist destinations is constant even when conditions are created for mass travel abroad, and on the other hand how small farms can be included in the sphere of active rural tourism.

### 2.4. Research parameters

The research sets parameters that in the given circumstances were directly related to the current situation due to epidemiological situation, but which in normal conditions can also be applied and used to improve the domestic tourist offer and divert the interest of domestic tourists to their own country, not only because of the security but also for several reasons.

**Observed parameters:** wishes and expectations of domestic tourists; quality presentation of the new and original offer on the tourist map of Serbia; selection of places that satisfy the desires of several generations; inclusion of small farms in the offer of rural tourism; contribution to the revitalization of certain parts of the country.

### 2.5. Interpretation of parameters

*Wishes and expectations of domestic tourists.* When making any strategy, one should first consider the wishes and possibilities of the average Serbian tourist. Some of its basic characteristics are modest purchasing power, one trip a year, often similar, which means security and controlled spending of the budget. It is necessary to examine what are the possibilities to change this standard picture, to point out that there is an option of favorable arrangements in Serbia, several times a year, which gives a new dimension to vacation and provides greater opportunities for quality relaxation. In domestic tourism, there is an option of weekend travels, because all destinations are relatively close, so with a good concept, people can enjoy getting to know different parts of Serbia for a small amount of money, through dynamically organized trips by an agency or independently. Most passengers expect good infrastructure, quality roads to the chosen location, but it should also meet the needs of tourists who want more alternative modes of transport to less accessible areas, to get acquainted with some hidden and rare natural beauties. Public opinion

can be influenced by well-conceived campaigns and the benefits of local travels. Desires and expectations are observed by age groups because each generation has its habits and needs that need to be met, so it is necessary to have programs for all generations. In general, it is necessary to direct the aspiration to stay in a natural, healthy environment, while fulfilling all conditions of safety and security, which is quite important to today's tourists, due to the growing number of inconveniences that occur in the modern world and cannot be influenced.

***Quality presentation of the new and original offer on the tourist map of Serbia.*** Quality and authentic presentation of the tourist offer is extremely important for attracting the attention of a potential traveler, and then for his final decision and choice. New marketing concepts show that personal impressions and emotions have the strongest influence on consumers, which means that marketers should start creating promotional videos about the places to visit and what can be experienced there. In this regard, social networks can be crucial, because through them information is transmitted very quickly, comes firsthand, and represents an authentic and realistic testimony about activities guests can expect; they get a realistic picture of the landscape, accommodation, infrastructure. Today, reports of hobby travelers, who present their travels on the Internet, are very influential, often to some parts of Serbia that are unknown to most, which arouses interest and desire to see something new and different, which is very important for some tourists. Presentations should also include the offer of rural households to make it easier for users to decide when choosing. It is noticeable that in addition to several attempts, there is no single base of accommodation in rural households in Serbia, and it would also significantly help to set up maps on how to get to certain facilities, which is much easier with modern techniques and maps. However, in addition to individual initiatives of sincere nature lovers and treasures of Serbia, not much has been done at the institutional and comprehensive level. There are travel agencies that have profiled themselves only for destinations in Serbia, but they are still few and insufficiently influential. In addition to the already existing and known areas, it is necessary to promote some lesser-known localities that deserve attention and remain in the shadows. Maybe now is the right opportunity to discover rarities in Serbia, which will bring back love and emotion towards one's country.

***Choice of places that satisfy the desires of several generations.*** The largest number of travelers choose the seaside and those are families who like this type of comfortable vacation with planned daily activities and a steady rhythm. Holidays are most often equated with relaxation on the beach and long walks, which can also be possible in domestic localities because we have rivers and lakes with an exceptional offer. Take for example the Đerdap gorge, lakes Vlasina, Srebrno, Zaovinsko, with excellent accommodation facilities, good access roads, and favorable prices. Besides, such places meet the requirements of several generations and different interests. For example, cities on the Danube, such as Kladovo, Golubac, Veliko Gradište, have exceptional beaches and promenades, bike paths, walking, recreational and hiking trails, there is the prehistoric site Lepenski Vir, traces of Roman times, Golubac Fortress, and other cultural and historical and natural specifics, which take at least a week to get to know completely, and all generations can find an activity that will suit their desires, affinities, and abilities. The local tourist offer can be crucially important, so the local tourist organizations should make additional effort to present the peculiarities of their region and to provide them with greater support in the promotion. It is expected that the tourist organization, local government, and owners of rural households in a certain area will work together, following a designed developmental and sustainable strategy of the area. This means that in addition to accommodation in the household, the special features and attractions of the immediate surroundings will be nicely integrated, to make the offer more interesting and suitable to several generations. The tourist organizations

of smaller places in Serbia are neglected, even though they have a rich tourist potential, which if used properly can contribute to the overall progress of one area, and consequently to the creation of new jobs, the offer of new services, and thus the emergence of new sources of income.

***Inclusion of small farms in the offer of rural tourism.*** The first movements of tourists after the mitigation of epidemiological measures showed that the known destinations are filled very quickly, which creates opportunities for opening new accommodation capacities. Statistics show that there is great interest in undiscovered areas and lesser-known landscapes, white peace, and pure nature. In such circumstances, possibilities open for small farmers, who can offer accommodation services, located in a region of distinct natural beauty, where guests in addition to excursions and sports activities can be involved in household activities. Also, guests can be buyers of domestic products, thus contributing to the household economy, and spread the word about them, which will enable households to survive and indirectly affect the quality of life of the whole region. It is necessary to target and in the right way inform and include in the training members of households that can provide these types of services. Sometimes motivation is needed in the form of support and strengthening of self-confidence to enter this type of business, while in other cases financial incentives will be extremely important, most often subsidies for furnishing a house or auxiliary premise. It is an ideal circumstance in which several households in one area decide to enter this activity at the same time, because united and with mutual support, they can act easier and safer.

***Contribution to the revival of certain parts of Serbia.*** By examining the characteristics of individual areas, it is possible to determine where it is possible to significantly influence the revival of devastated areas by encouraging rural tourism in areas that are dying out, already devastated, or with rapid emigrations. It is possible to design incentives at the state level, which would encourage landowners to return to these areas and start a business, or to sell them, or put them to lease for a certain period. Given the dynamic city life that includes an increasing degree of stress, there is a tendency to return to the countryside and consider options for buying property and putting it into business, whether within the tourist offer, or for agriculture, and it is possible to unite these options and thus obtain a sustainable strategy. There are many abandoned houses with orchards, backyards, meadows, which can be with valid investments turned into good production and tourist potential, and especially important is the option to consider growing organic food, which is a very profitable business, and in an area not used for a long time for these purposes; a certificate that the land is untreated, i.e. organic, can be quickly obtained. Positive examples of this kind would quickly influence other people to take the same business steps, which could lead to the revival of the entire village (a shiny example is the village of Vrm-dža in eastern Serbia). The proposed sites can be areas of exceptional natural beauty: Vlasina, Jerma canyon, then numerous villages in the Raška area, where there is infrastructure, and thus provided accessibility, which is the main prerequisite for the revitalization of villages.

## 2.6. Survey

The survey included different age categories of respondents since the function of the research is to encourage all generations to recognize the benefits of domestic tourism, especially rural ones. Accordingly, different answers were recorded, which can help determine the interests and expectations of each group individually, and accordingly plan offers that will satisfy families with small children, and retirees, nature lovers, sports, young people who want to have fun and entertain.



The questionnaire included the following questions:

1. Have you planned a trip this year? If so - where?
2. To what extent is your choice conditioned by the current epidemiological situation in the country and the world?
3. How often do you visit tourist destinations in Serbia?
4. Based on what do you choose destinations in Serbia?
5. Which destinations are your most common choice?
6. How long do you stay?
7. Do you like to be stationed in one place or to explore the environment?
8. Are you interested in rural tourism?
9. Have you already used this type of tourist offer?
10. What do you expect from rural tourism (descriptive)?
11. Would you return to the same household if you are satisfied with your stay?
12. Would you regularly buy groceries from a rural household?

## 2.7. Responds analysis

The answers to the questions were given by choosing one of the usual three (yes - not - partially) offered answers, but with each question, it was possible to add a personal opinion on the examined phenomenon, and some questions only required description and presentation personal attitudes.

**Question one.** The analysis of the first question revealed that 62% of respondents were planning a vacation/trip this year, while 17% were unsure. The percentage of planned trips might have been even higher if the epidemic had not started in the first quarter of 2020, which distracted many people from traveling. More than half of the respondents who decided to travel in 2020 chose the sea as their first desired destination (58%), which is in line with the traditional choice of Serbian tourists.

**Question two.** The change in the decision and the reorientation to locations in Serbia, in 75% of the respondents who want to travel, is a consequence of the epidemiological situation in the country and the world. From the media, it could be seen that traveling abroad is risky, due to the difficult departure, return, and complications with the duration of quarantine, which influenced the decision not to leave their country. Thus, the change is motivated by objective reasons and shows that it is justified to conduct research of this kind to determine how to encourage domestic tourists to choose domestic destinations more often. It is clear that the big disadvantage is that Serbia is a land country, and the majority of the population identifies vacations with sea destinations, but with properly directed campaigns, it is possible to influence public opinion to dedicate more to domestic destinations, if not every year, maybe every two years.

**Question three.** Respondents in a relatively low percentage of 21% state that they regularly visit tourist destinations in Serbia at least once a year. These are most often excursions, one-day trips, or extended weekends. A large number of respondents, as many as 41%, very rarely travel in their own country, except for excursions near the place where they live. This shows that the values of one's country are not appreciated enough, that one does not want to get to know it, and that its resources and beauties are underestimated. Also, there is no awareness of community, the understanding that staying in domestic tourist accommodation will help domestic tourist workers and indirectly affect the better overall standard of living in Serbia.

**Question four.** Destinations are chosen based on popularity (20%), recommendations from close people (25%), presence in the media (17%), and social networks (38%). The answers showed the absolute dominance of social networks in promoting destinations, thanks to the photos and videos, along with authentic comments, and have a strong influence on the observer who easily decides to make a choice. This may be the key to the promotion of domestic tourist potentials because practice shows that when they are familiar with the existence of a locality, people consider traveling to that area, especially because they have a personal authentic recommendation, which reduces the possibility of mistakes when choosing. Especially since Serbian tourist doesn't have high purchasing power, so he has been assessing for a long time whether and to what extent the offer will be in line with the package of services he will receive. It is often suspected that due to the lower price of accommodation in rural tourism, living conditions will not be good enough, although in practice it often turns out the opposite, because small businesses try hard to satisfy the guest, respect him more and take care of his needs, adjusting to his requirements to retain visitors.

**Question five.** Among the destinations in Serbia that are the most common choice of respondents are: spas (28%), mountains (22%), lakes (15%), while in other percentages of about 10% in the answers are cities, culturally and historically significant sites, tourist events (one-day or multi-day). The answers confirm that the population of Serbia does not travel enough in their country. Staying in spas is mostly reserved for the elderly population and families with small children, travelers opt mainly for a safe choice of famous spa centers, while other, also very nicely decorated centers, remain little-visited, due to insufficient promotion and slow change of awareness of domestic travelers. It is necessary to research and discover the entire offer of domestic tourism.

**Question six.** When it comes to the length of stay, a high percentage (32%) of respondents said that they usually spend three days at domestic tourist locations, an extended weekend for example, and much less often 7 or 10 days (15%) for rest, while a tour of natural and historical sites is reserved for day trips (35% of respondents), either independently or organized through travel agencies. It would be important to extend the number of days that passengers spend in accommodation to the standard 10 days, which is usually spent at sea. Vouchers have significantly contributed to extending this period. On the other hand, in addition to the financial incentive, the package of activities that will be offered will be important, which will influence the guest to stay in one place for several days, in order to visit all the localities, experience various activities. The seventh question supports this analysis, as it is to be seen.

**Question seven.** Respondents of all ages in a high percentage (71%) state that they like to explore the environment, that is, to get to know the area they came to. Therefore, in domestic tourism, static vacation is not a solution, but an active one, which includes relaxation activities, but also research walks, hiking tours, sightseeing, possibly attending local tourist events, participation in household activities, and the like.

**Question eight.** A 55% of respondents said they were interested in rural tourism, which is an important fact because it shows that more than half of the population is ready to spend their holidays in a rural area. This sends a message to the government and local authorities to support rural tourism programs because in this niche is a significant resource not only for tourism but also for the revitalization of entire areas that have simply ceased to be important with modern industrial development, which led to extinguishing households and even entire villages. Discovering such areas and returning them to their purpose or discovering a new purpose can have a far-reaching impact

on the recovery of the rural environment in some parts of Serbia and an opportunity for many people who want to return to nature and engage in tourism and agriculture to realize their plans.

**Question nine.** Rural tourism was used as a type of tourist service by 25% of respondents, and it is noticeable that families with small children, as well as slightly older people, opt for this type of vacation to a greater extent. This answer shows that more work is needed to promote rural tourism, for more people to choose this type of vacation, especially given the rich offer. Rural tourism should not be tied only to a static stay, because it also provides numerous opportunities for great fun for younger people, who love nature, adventure trips, walks, exploring the surroundings on foot or by bike, as well as other possibilities.

**Question ten.** Asked to describe their expectations from rural tourism, which relate to both accommodation and other characteristics of this type of tourist arrangement, respondents say they do not expect luxury accommodation, but a standard type of accommodation within a rural household, with basic benefits (cleanliness, bathrooms, accessibility of the location). Other expectations they state are peaceful vacation, stay in nature, participation in household activities at home and on the property as if they were in their village, the opportunity to get healthy food, learn something new, get to know parts of their country. A large number of respondents state that they especially appreciate the hospitality of the host because the feeling of intimacy and closeness is very important for a domestic traveler to feel nice and comfortable in the chosen accommodation.

**Question eleven.** A high 35% of respondents say they would return to the same household, even more than once a year. This points out the psychological characteristic that the traveler usually chooses a safe vacation, which will certainly meet expectations, and when it comes to the village there is a personal connection because a large number of people were left without the opportunity to spend time in the countryside because of the lifestyle changes, migration, urban domination, so this is an opportunity to make up for this shortcoming. The percentage of respondents who prefer to always opt for new and unknown destinations is lower - 17%, and among them are most often younger categories of people who are eager to discover new things and research. Therefore, when designing the offer, one should keep in mind the different categories of passengers and focus on the target groups.

**Question twelve.** A very large percentage - 71% said they would like to buy products from a rural household. In the minds of our consumers, the rural environment is associated with health, unpolluted soil, and air, so they are ready to establish permanent cooperation with rural households from which to procure food such as cheese, dried meat, fruits, vegetables, various canning vegetables and fruits (jams, sweets, juices) and the like. Respondents rate this contact as a great advantage, especially those who do not have relatives in the countryside from whom they could procure such quality and healthy food. There is a large market for these products, and thus the opportunity for households to earn and in which direction to plan production for the coming seasons.

## **2.8. Proving hypotheses**

### **1) The tourist offer adjusted to the requirements of travelers will attract domestic tourists who will remain regular guests.**

The survey showed that domestic tourists are interested in touring their country, as well as in accommodation in rural households, which provide a very high-quality service at affordable prices

and a whole range of activities that guests can do. A large percentage of domestic tourists do not expect luxury and comfort, but basic amenities, and they give priority to the attractiveness of the locality and the possibility for people of several generations to enjoy. They are interested in local products, local events and it is necessary to have more information about rural areas in the public, as well as photos from these areas. The influence of social networks is nowadays the biggest marketing tool because the presence on networks is measured by millions of users who are active every day. Statistics show that the largest number of recommendations come through social networks, which means that personal impression is the best recommendation and advertisement. Photos are crucially significant here, as well as video clips because they show an accurate picture and influence the recipient, encouraging his desire to have the same experience.

Structural analysis of the potential of an area and the wishes of tourists can quickly lead to conclusions about which areas can be improved and what needs to be added to the existing offer. It is also important to select the target groups for which the offer of a specific area will be intended, to adjust the existing capacities with the smallest possible investments and for the shortest possible period. For example, adapting the offer of the spa to young people or children will require much more work and investment, but expanding to slightly younger categories will be possible in a very short time, with regular visitors and companions, knowing that they will have many activities and a wide range of diverse tourist offer.

**2) By including the tourist offer in their activities, small agricultural producers can improve their activity.**

Such attitudes confirm that in Serbia there are great prospects for engaging in rural tourism, especially for households that are already engaged in agriculture and have the conditions to include tourism in their activities. Earlier research has shown that the owners of rural households do not easily decide to enter the tourist business because they do not have the experience or enough information, so they do not dare, they do not have self-confidence. With adequate support from the local authorities and the tourist organization, families can easily and quickly get involved in this activity and adapt to new working conditions, so with good education they can be trained on what to do, how to treat guests, what to offer. With the new knowledge, they will gain the necessary self-confidence, perform more confidently on the market, and continue with the acquisition of skills.

There is an increasing number of travelers looking for rarities, hidden areas, yet undiscovered. It is all about the prerogatives of the new age in which we live, which puts information in front of us, so it quickly becomes saturated, and the individual needs to stand out and originally present himself so that when it comes to tourism, he will go to a location which is not much exploited. This characteristic of the modern man should be taken into account, no matter how negative it may be, and turn it in favor of an area with a smaller population, abandoned, sparsely populated, which for these reasons will be interesting to tourists who will see attractiveness, originality, a peculiarity about already known domestic destinations. The main problems when it comes to these destinations in Serbia are the roads and accessibility, but there are several possibilities how this can be overcome, and to also be included in the attractive tourist offer: driving SUVs, jeeps, trucks, etc.

In such conditions, rural households can offer activities such as a collection of medicinal herbs, healthy food, medicinal springs, localities with special air currents, along with historical and other localities, which can all build a very stable structure of tourist offer, with peace and relax-

ation, which is especially needed by guests from the city, because there is an increasing number of tourists who want to spend a peaceful and relaxing holiday. Also, camping nearby can be encouraged if households do not have accommodation facilities, provide a good camping place, because now the offer of camping equipment is large and affordable, portable, and easy to install. In that case, households can focus on some other service offers. In this way, such areas get the much-needed support, information is transmitted through a direct recommendation and the number of guests increases relatively quickly, which encourages other residents to get involved in the same activity.

### **3) Providing institutional support to rural tourism enables the revitalization of forgotten and abandoned areas.**

It is necessary to educate the owners of small households about everything necessary to get involved in the offer of rural tourism, through training, information material, to show them whether they meet the prerequisites for tourism and to show what they can use in the offer of their household. It is also possible to encourage more households to network, which makes business easier and provides a sense of security. This can be especially important in abandoned areas of great natural beauty and wealth. Accordingly, it is necessary to offer certain subsidies to support the existing capacities to adapt to the purpose.

There are numerous reports from Serbia showing abandoned areas, abandoned houses, backyards, orchards, unmown meadows, on the other hand, an increasing number of people and initiatives to return to the countryside, supporting people's decisions to leave work and life in the city and move to the countryside, for the sake of a healthier and more peaceful life. In this concept, the tourist offer can additionally contribute to the promotion of the area, influence decisions to make it easier for individuals to decide on such business and life moves because to a certain extent it guarantees that the invested funds will return. That is why more subsidies and incentives must be awarded through various competitions to individuals, associations, who want to start various activities in abandoned or impoverished areas of Serbia, which can be a significant economic injection for the whole region and generate new employment and expansion of activities.

### **3. FUTURE RESEARCH DIRECTIONS**

An area such as tourism is an inexhaustible source of income, but only if resources are used wisely. On the other hand, it is necessary to keep up with the times and to adjust the offer to the demand, even when it is out of the comfort zone. Risk and embarking on something new are necessary if tourism is to be kept alive. The conducted research showed that there is interest in domestic tourist destinations, and even if it is mostly caused by Covid-19, it is still an opportunity for tourists to be attracted and stay for longer. On that road, the help of the state, the relevant ministry, local authorities, and tourist organizations is necessary. With that in mind, further research should in the first place determine which parts of Serbia could specifically engage in this business venture, keeping in mind the primarily neglected areas. It is then necessary to investigate in detail what kind of assistance is needed by potential destinations. Based on this knowledge, local authorities could plan the budget and the distribution of funds. Another important direction is market research, where it is necessary to investigate in detail what activities and contents today's tourists are looking for, to harmonize it with the offer of rural tourism. Also, research on this area should continue in another niche, among small agricultural producers, and examine the extent to which they are interested in getting involved in rural tourism because



the market is large enough to accommodate more workers in this area. And finally, in the hope that all the above will be realized, a long-term research plan is to examine the results of such a venture after a few years.

#### 4. CONCLUSION

The research conducted primarily in order to recognize the interest of domestic tourists for domestic destinations showed that the given situation can be redirected in favor of rural tourism, in which travelers are interested and which can make great progress. Therefore, we can say that in very bad circumstances, such as the pandemic of the dangerous virus, a useful possibility arose. Unable to travel abroad, and eager to change places, find relaxation, tourists have reoriented themselves to domestic destinations. As the main domestic tourist centers were preoccupied, and under the danger of infection, people were looking for more secluded and hidden places, small households that offer a safe and comfortable stay in pure nature came to the fore. Personal recommendation and social networks have again proved to be much more influential than large promotional campaigns of tourist organizations, which should be considered when forming future marketing strategies. Rural households provide comfort and peace that modern man needs, and with the future that seems to await us all, we will need this type of vacation several times a year, if possible. Establishing ties with the hosts opens the possibility for the purchase of food and other home-made products, which can be a significant boost to the economy of the household, and even the entire area. What is especially important, it provides an opportunity for the revitalization of abandoned and forgotten areas, which are in areas of exceptional natural beauty.

In order to start this activity, it is necessary to influence the consciousness of a domestic tourist, who is not used to traveling in his country, that is, he does not know it well enough. This claim is supported by the fact that a large number of people are surprised by certain destinations, which shows that they are not familiar with the natural rarities and cultural and historical features of their country. Confirmation for this can usually be found on social networks, which have become a real mirror of public opinion, but also a place where people can be positively influenced and through appropriate programs work on education and motivation to get to know their own country.

The research showed that rural tourism has great potential outside the summer tourist season, which is the main one, and that it is active all year round. To this end, cooperation with local authorities and tourist organizations must conceptualize plans for improving and expanding the offer. And when the conditions for that are met, that is, the epidemiological conditions improve and travel continues in full, the results will be even greater, with local tourist events and a larger scope of activities. Serbia is a country of great and insufficiently used beauties and resources that are endangered today, and by encouraging rural tourism, their preservation can be ensured, as well as the economic progress of the entire region and the benefit for the whole society.

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# MANAGEMENT OF TOURIST PERSONAL DATA PROTECTION IN COVID 19 – IT PERSPECTIVES, LEGAL AND ECONOMIC ASPECTS

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**Abstract:** *During 2020, the Covid-19 pandemic left its mark on almost every sphere of the economy. Travel bans, bans on entry and exit and the countries in which people live, mandatory quarantine after entering another country, fear of mutual contacts and locking of large European and world cities have affected tourism to feel the effects of the pandemic. In order to reduce the movement of the population infected with this virus, it was not uncommon for the personal data of those infected to be published. This paper aims to analyze the legal and economic aspects of the protection of personal data of tourists during the Covid-19 pandemic. The paper also proposes a software solution that would enable better control and registration of infected persons, all with the aim of preventing the spread of the virus by travel.*

**Keywords:** *Covid-19, GDPR, IT solution, Deficit, Restriction of movement.*

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## 1. INTRODUCTION

At the time of writing (December 2020), Covid-19 infected over 64 million people and caused the deaths of over 1.5 million worldwide<sup>3</sup>. Since the beginning of the year, more precisely since the beginning of the Covid 19 pandemic, the overall situation has affected people's daily activities. Common activities such as commuting, socializing, thinking, behaving have changed a lot under the influence of this virus. Covid-19 also impacts almost every aspect of the world economy, society and mental health. The way we conceive our privacy and the importance which we attach to the protection of our personal data has also been heavily impacted by this ground-breaking chain of events. As it has put into perspective other fundamental rights, which until then we would never have accepted seeing restricted by state measures, the pandemic has required us to balance privacy with health and security (Ventrella, 2020).

In response to the pandemic and as one way to reduce its spread, a large number of countries have closed their borders to both visitors and tourists. Such closure has had a great impact on the economy of the countries themselves. Also, the tourism of these countries has been significantly affected. According to the data of the World Tourism Organization<sup>4</sup>, during the second quadrant of 2020, for the first time, 100% of global destinations introduced some travel restrictions (Gosling, et.al., 2020). This locking caused international tourism to be almost totally suspended, and domestic tourism was curtailed by lockdown conditions imposed in many countries. Although some destinations have started slowly to open up, many individuals are afraid of international travel or cannot afford it due to the economic crisis. Research shows that before

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<sup>3</sup> World Health Organization, Retrieved 20.08.2020, from: <https://www.who.int/>

<sup>4</sup> World Tourism Organization, Retrieved 20.08.2020, from: <https://www.unwto.org/>

2020, tourism was considered as one of the fastest-growing economic sectors and is an important driver of economic growth and development. For example, in 2018 there were 1,407 million international tourist arrivals, a 6% increase from the previous year. Tourism receipts amounted to \$1,480 billion, an increase of 4.4%, higher than global GDP growth as in the previous 8 years. Passenger transport is worth another \$250 billion. Tourism exports account for 6% of global trade in goods and services, or \$1.7 trillion. In 2019, the most popular destinations were France, Spain, the USA and China. During 2020, these countries had the highest number of patients, locking in a long period, and thus large losses in tourism. The U.S. alone has seen more than \$297 billion in losses from the decrease in travel since the beginning of March (Farzanegan, et. al. 2002). In addition to these countries, there are a very large number of developed and developing countries for which tourism is the main source of income. In countries like this, the tourism sector is a major source of employment, government revenue and foreign exchange earnings. Without this vital lifeline, many countries may experience a dramatic contraction in GDP and a rise in unemployment. OECD now estimates that international tourism will fall by around 80% in 2020.<sup>5</sup> The application of information and communication technologies in the field of personal data protection can greatly help reduce movement restrictions caused by the Covid-19 pandemic. Also, the application of software solutions can provide facilitation and management of patient data, their records, categorization of those whose tests showed that they are positive for the virus, and their separation from those whose tests returned as negative, while providing different privacy policies. In this way, greater possibilities of movement of those persons who are not infected can be allowed, while patients in whom the presence of the virus has been confirmed can be more strictly controlled. Management tools created with the specific purpose of monitoring Covid-19 positive people enable easier work and more accurate information at any time. The proposal of the software solution described in this paper coordinates and consolidates data from the databases of the health system, the administrative system of state administration and local self-government, as well as the system of tourist organizations. The proposed system has multiple benefits, ranging from protecting patient data recorded as covid positive, to reducing the potential for virus spread and increasing travel and income opportunities in the field of tourism. In this way, better control of persons who should be in isolation would be enabled, and thus restrictions on movement would be reduced for persons who adhere to epidemiological measures and those whose testing showed that they are not positive.

The paper is organized as follows: The second part of the paper presents a review of relevant literature. The third part presents an analysis of the tourism sector during the pandemic Covid-19. The fourth part of the paper presents the legal review of the protection of tourists' personal data during the Covid-19 pandemic in 2020. The fifth part of the paper presents a description of a software system proposal intended for coordination between several administrative sectors, in order to relax measures in the tourism sector. Within the sixth part of the paper, some of the key conclusions and ideas for further research are given.

## **2. LITERATURE REVIEW**

In one of the conducted researches, the author provides legal insights on the general discussion about the balance between the fundamental right to privacy and the general public interest (Ventrella, 2020, p. 381). The main goal of the published article was to describe the most critical and controversial processing operations whose task was to suppress the epidemic and reduce its effects. These operations were conducted by government agencies across the planet. A focus on

<sup>5</sup> OECD Better Policies for Better Lives, Retrieved 15.10.2020, from <http://www.oecd.org/>



the increase in cybercrime during the pandemic then provides insights on the relevant risks and remedies for the security of personal data. The main conclusion of the author based on the conducted research is that GDPR, its principles and obligations, passed the first major test of their short existence, demonstrating to the world how high privacy standards can be maintained even in emergency circumstances. Viewed from an angle of supervisory authorities their task was to provide useful guidance regarding the development and deployment of invasive measures. Such measures were intended to mitigate the effects of the pandemic. Viewed from another angle, businesses and organisations may have discovered that compliance with the security-related requirements of the GDPR already provided the necessary technical and organisational measures to combat the rise in cybercrime during the pandemic. If we compare the readiness of the EU in the fight against a pandemic with the readiness to protect the personal data of its citizens in crisis situations, the author concluded that the EU is far more prepared in terms of personal data protection than is the case with pandemic protection.

A survey conducted in the United Arab Emirates showed losses of 121 million jobs and \$ 3.435 billion in GDP (Aburumman, 2020, p. 4). The main goal of the research was to examine the impact of Covid-19 on the global and UAE MICE (Meetings, Incentives, Conferences and Exhibitions) market by way of quantitative and qualitative analysis. The study revealed that in the conditions of severe travel restrictions and closed borders, travel-dependant industries like MICE or passenger air services were significantly hit by the pandemic. the research showed that the most significant drop in profit compared to the same period in 2019 was on June 1, 2020 and amounted to 82%. This decline relates to scheduled departure flights in the UAE. The research is based on multiplicative analysis to evaluate the profitability of the MICE industry and the impact of operating costs on the competitiveness of MICE companies. When it comes to the possibilities of recovery of the MICE industry, research has shown that the 5p model is the optimal choice for the recovery of MICE business companies, through outsourcing. Since the major resource of organisations under consideration is people and the product, it is advisable to use the competitive marketing strategy when developing a management approach. However, because the product in the MICE industry is a result of multi-stage cooperation, the MICE service provider should simultaneously focus on the external environment. According to the author, the results obtained by the research can certainly be used by travel agencies, in order to overcome the problems caused by the Covid-19 crisis, and in order to increase the competitiveness of MICE business. In order to determine the impact of the Covid-19 pandemic on the tourism industry research is conducted by Kumudumali (2020). The starting point of this research was the data obtained from UNWTO<sup>6</sup>, according to which losses in the tourism industry were estimated at approximately 1.1 billion international tourist arrivals, with a loss of \$910 to 1.1 trillion export revenues and 100-120 million jobs due to the wider spread of the novel coronavirus. The research covered all countries of the world, which made it possible to identify as many challenges as possible faced by the tourism industry. The study also identified short-term and long-term strategies to overcome the challenges posed by the Covid-19 pandemic. The task of the identified strategies was to minimize the economic consequences for tourism caused by the current pandemic. The researchers use a secondary source of data due to the unavailability of essential data for further statistical analysis. The significant findings highlighted the negative impact of the Virus outbreak on the tourism industry and the decline of supporting sectors such as air travel and the hospitality industry in a global context. The paper illustrated the adverse effects of Covid-19 on the tourism industry with the data available.

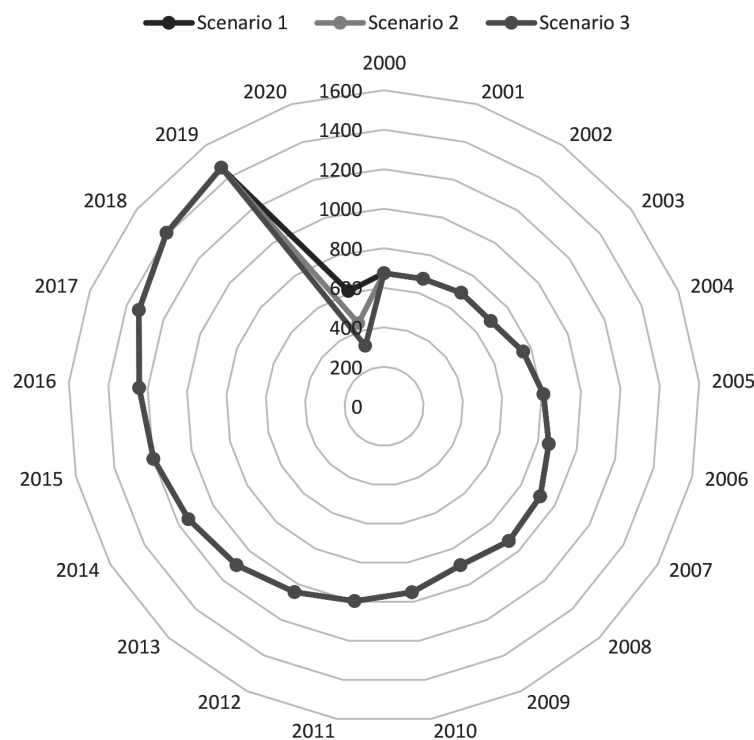
<sup>6</sup> World Tourism Organization, Retrieved 20.08.2020, from: <https://www.unwto.org/>



### 3. ANALYSIS OF THE TOURISM SECTOR DURING THE COVID 19 PANDEMIC

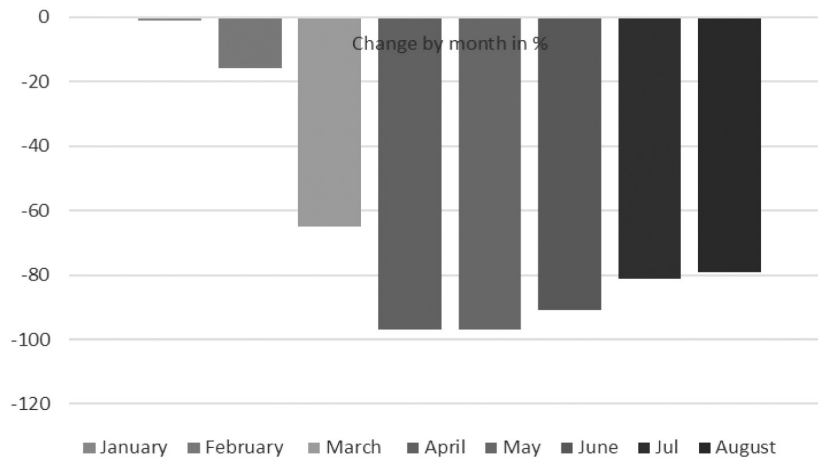
The impact of the Covid-19 pandemic, in addition to wearing masks and keeping distance, or less socialization of people, is visible in almost every sphere of human life and work. There is almost no industry that has not felt the economic consequences caused by locking, shortening working hours, the inability to travel and distribute products (Sigela, 2020). Tourism, as one of the economic branches of each of the countries, certainly did not remain without consequences. The consequences of the Covid-19 pandemic on both domestic and international tourism are certainly more significant precisely because the tourism sector is largely dependent on the free movement of people. This is especially the case when it comes to international tourism (Andrades & Dimanche, 2019). The economic deficit of international tourism due to the closure of borders directly impairs the survival of a large number of families whose livelihoods are directly based on income from foreign tourists (Bakar & Rosbi, 2020).

If we look at the movement of tourists through data on travel to other countries available from the World Tourism Organization for the period from 2000-2019, a prediction of the decrease in arrivals for 2020 has been made. Based on the data obtained from the first quarter of 2020 after the first wave of the pandemic was officially declared, three possible scenarios can be seen in Figure 1. According to preliminary data, in the first quarter of 2020, the impact of aviation losses can reduce global GDP from 0.02 to 0.12% (Aburumman, A. A., 2020). Besides, if events develop according to the worst-case scenario, before the end of 2020, these aviation losses can be as high as 1.41– 1.67%, with job losses of about 25–30 million (Iacus et al., 2020).



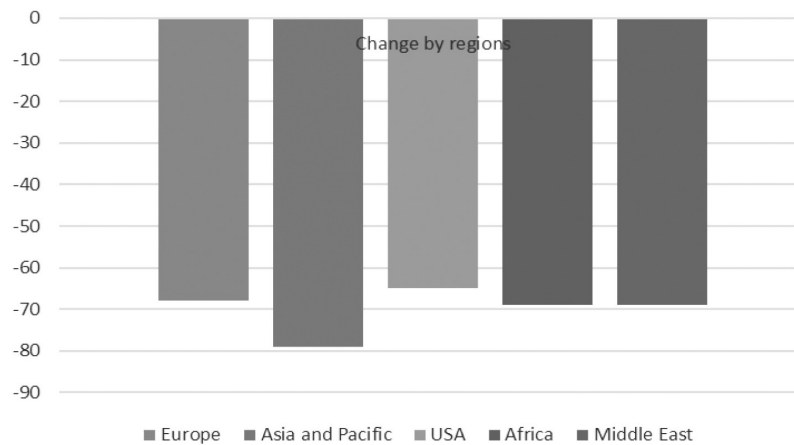
**Figure 1.** International tourist arrivals, 2000-2019 and scenarios for 2020 [millions]

Based on the available data for international tourist arrivals for the first eight months of 2020, the diagram shown in Figure 2 was created. Based on the diagram, a small decrease can be seen during the first months of 2020, while in other months the decrease is significantly higher.



**Figure 2.** International tourist arrivals on global level in first eight months of 2020 [%]

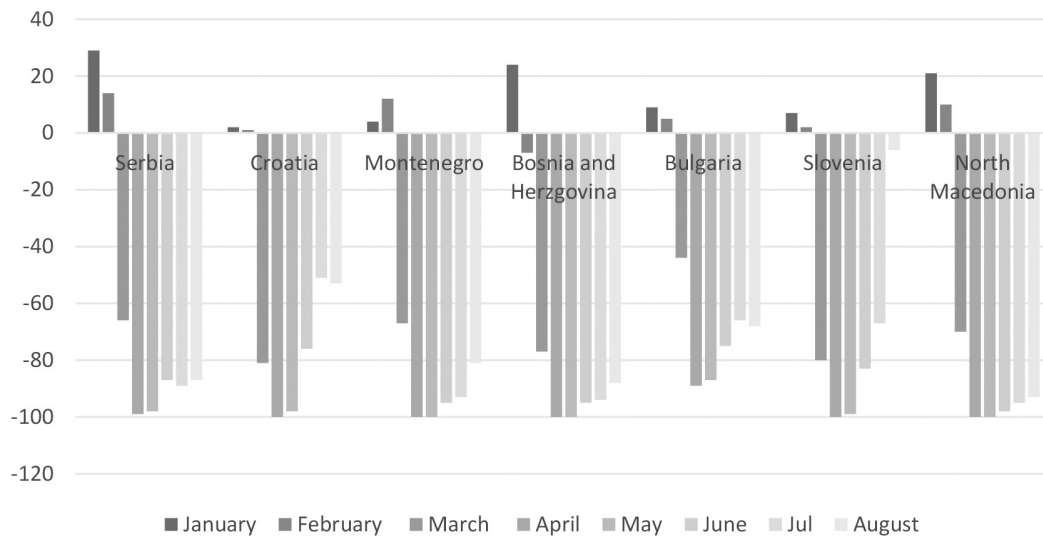
If we look at international tourist arrivals by region, the largest losses were recorded in the Asia-Pacific region, as can be seen from Figure 3.



**Figure 3.** International tourist arrivals on regional level in first eight months of 2020 [%]

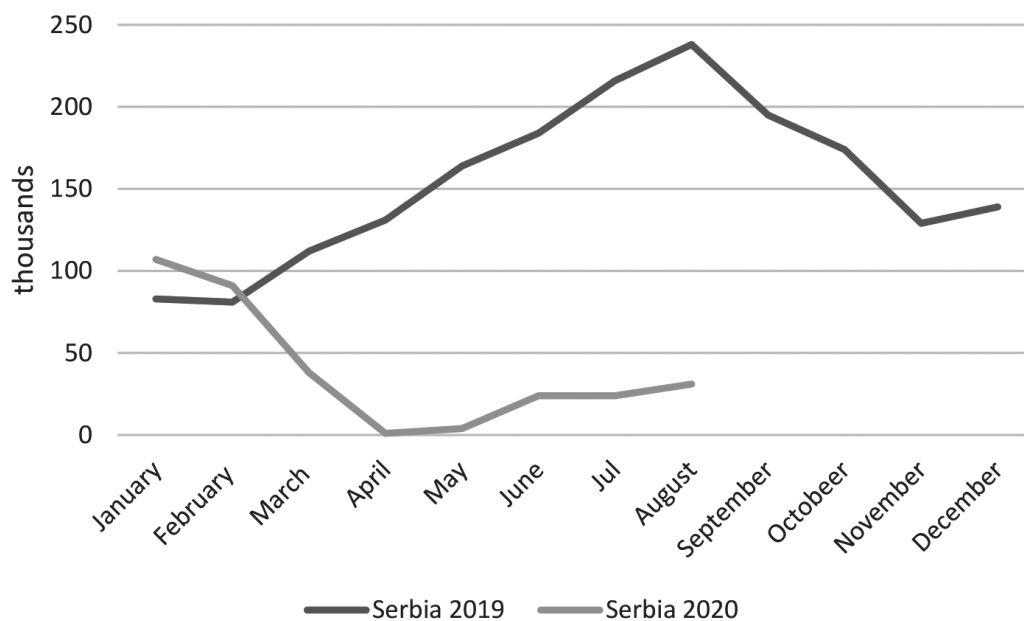
According to the UNWTO World Tourism Barometer, international arrivals plunged 81% in July and 79% in August, traditionally the two busiest months of the year and the peak of the Northern Hemisphere summer season. The drop until August represents 700 million fewer arrivals compared to the same period in 2019 and translates into a loss of US\$ 730 billion in export revenues from international tourism. This is more than eight times the loss experienced on the back of the 2009 global economic and financial crisis.

If we look at the percentage change in the number of tourists coming to the territory of the Republic of Serbia and the surrounding countries, we can see that the situation is more or less similar to global changes as can be seen in Figure 4. It can also be seen that the percentage change in the number of arrivals in the Republic of Serbia in the first two months is slightly higher than the number of arrivals in the surrounding countries. This situation can be justified by the fact that the Covid-19 virus was later registered in the territory of the Republic of Serbia concerning the surrounding countries, which led to the later closing of the borders. Also, because the pandemic abroad was already in full swing, the increase in the number of arrivals can be justified by the fact that Serbian citizens who are working abroad are returning.



**Figure 4.** International tourist arrivals for R. Serbia and surrounding countries in first eight months of 2020 [thousands]

If we compare the data for the same months during 2019 and during 2020 for the Republic of Serbia, there is an evident increase in the first two months of 2020 compared to 2019, which can be seen from Figure 5.



**Figure 5.** Comparison of # of international tourist arrivals for R. Serbia in 2019 and 2020.

As the data for 2020 are available ending in August, the period from August to December in Figure 4 is given only for 2019. Observed at the global level after the first wave and after the introduction of measures to combat the spread of the Covid-19 virus, some tourist destinations began to relax measures following the recommendations. The relaxing of measures was one of the ways to save the tourist season. At the same time, it can be said that most countries have maintained some form of restrictions despite pressures from the tourism sector. Some of the forms of restrictions were travel bans as well as a mandatory quarantine for people coming to the country. The data show that 69 tourist destinations kept the originally introduced measures regarding the closing of borders. The number of arrivals in these 69 tourist countries represents

57% of the total number of world tourist arrivals. In addition to the mentioned 69 tourist destinations, an additional 53 destinations introduced some other types of measures, such as the obligatory negative test for the Covid-19 virus. Observed in the number of arrivals of these 53 destinations, they represent approximately 14% of the world's tourist arrivals.

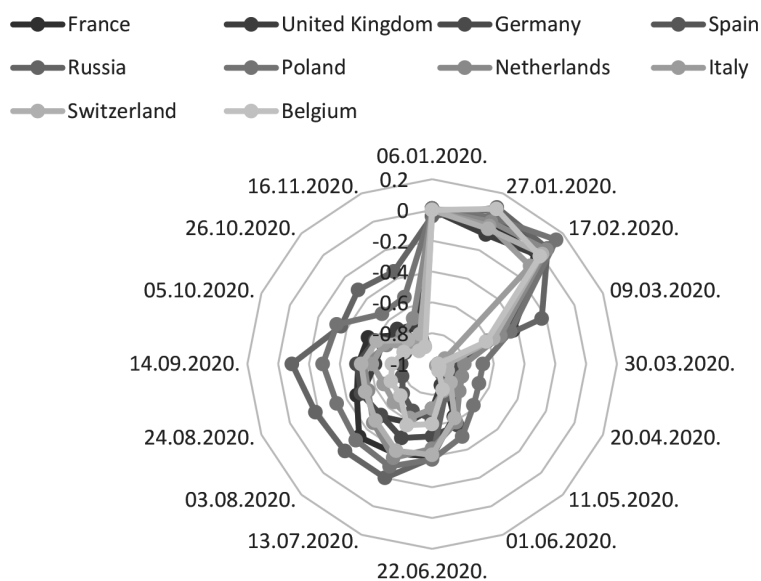
If we look at the regions, the countries of the European Union and tourist destinations belonging to the European Union recorded the largest easing of measures related to the closure of the border and the prohibition of tourist arrivals. For example, from the initial 92% of the total number of arrivals to the region of the European Union to 8% at the beginning of September. The European Union market was reopened at the end of May and June when the struggles of the tourist sector to save the season began. As for the Asia-Pacific region, the decline is also visible, but to a lesser extent. The percentage decline in the region was from 88% in April to 64% in September. The smaller decline compared to the European Union is caused by the fact that many destinations in the Asia-Pacific region are still closed. One of the still closed tourist destinations is certainly the cinema. The data show that complete closures in the territory of America dropped from 40% to 25% in the same period. This rate of decline is caused by the opening of the borders of some of the most popular tourist destinations, for example in the Caribbean. Although destinations such as the Caribbean followed, the United States and Canada remained closed due to a large number of infected people.

As for Africa and the Middle East, in contrast to the others already mentioned, the share of total closures increased between April and June. Following this increase, the share of closures fell during July and September. The subsequent increase in the share of closures and the introduction of measures can be explained by the later impact of the pandemic in this area, in relation to Europe and Asia. In the African region, the share of destinations with complete exclusion reached a maximum during June and amounted to 91%. As for the fall in the share, the biggest drop was to 63% in September. As for the Middle East, data show that the largest share reached 80% of closures during June. The decline in the Middle East was 49% during September. Observed since the beginning of September, Africa with 64% and America with 63% had the largest share of destinations with complete closure of borders and introduction of measures. Africa and America are followed by the Asia-Pacific region and Europe with 49% and 25% respectively. Within the Middle East, tourist destinations that have remained completely closed represent only 8% of the total number of arrivals in the region.

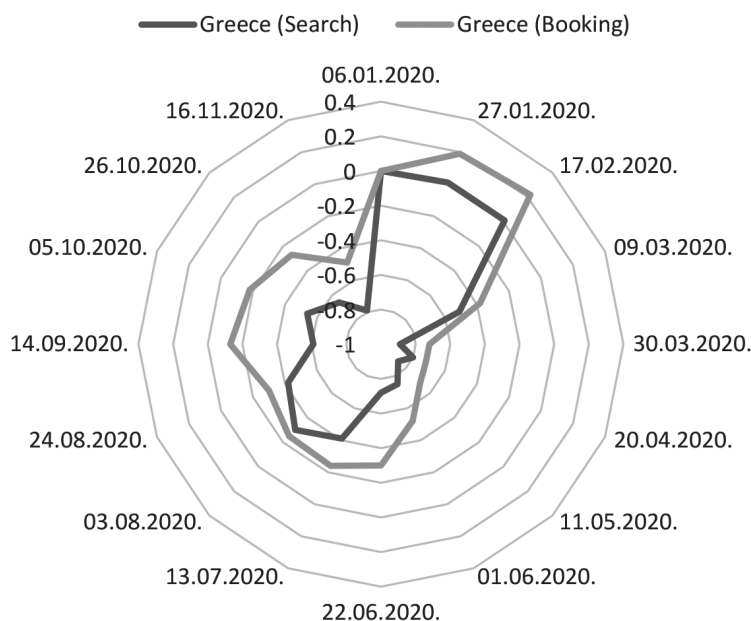
In addition to the number of tourist arrivals, an important parameter when assessing the impact of any crisis situation, and thus the impact of the Covid-19 virus on tourism, is certainly the number of reservations of accommodation units. Based on the data available on the portal Sojern<sup>7</sup> that collect and analyze travel data, including flight and hotel booking data, from 1,000s of partners all around the world, an indexed display of the number of reservations was created for some of the countries of the European Union. The mentioned graphic representation is given in Figure 5.

Also, based on the available data, an overview of changes in the number of searches of accommodation units and the number of reservations for Greece as one of the most popular destinations of the people from our area was created. A graphical representation of changes for Greece is given in Figure 6.

<sup>7</sup> Sojern's Real-Time COVID-19 Travel Data Insights Dashboard, Retrieved 05.11.2020, from: <https://www.sojern.com/covid-19-insights-eu/#report>



**Figure 6.** Indexed number of accommodation reservations during 2020



**Figure 7.** Indexed number of accommodation searches and reservations in Greece

In order to overcome the problem of closing the borders of countries around the world, which led to the closing of tourist destinations, cancellation of reservations and in many cases the impossibility of refunding money, each of the countries individually found a way to restart tourism, both international and domestic. If we take the Republic of Serbia as an example, at the initiative of the tour operator, the Government of the Republic of Serbia adopted the Decree on the offer of a replacement trip for a tourist trip that was canceled or not realized due to the Covid-19 disease. The Decree stipulates that tour operators can offer a replacement trip (which is paid in full or partially ending with 15<sup>th</sup> March 2020), which should be realized until 31<sup>st</sup> December 2021. The traveler then concludes a new travel contract that is insured in accordance with the Law on tourism<sup>8</sup>. Otherwise, the tour operator is obliged to return the money from 1<sup>st</sup> January 2022, within 14 days. From May 18 airline transport is restored. From May 22 the borders are

<sup>8</sup> Law on tourism, „Official Gazette of RS”, no. 17/2019



fully opened without mandatory testing for coronavirus and request for a 14-day quarantine. From May 22 all persons entering the territory of Serbia will be given health warnings and information issued by the Institute of Public Health of the Republic of Serbia.

When it comes to domestic tourism in 2020, the Government of the Republic of Serbia set aside 2.8 billion RSD for 560,000 tourist vouchers worth 5,000 RSD intended for (at this moment maximum) 560.000 citizens of Serbia who want to spend their vacation (or part of it) in the Republic of Serbia. Vouchers can be realized only in touristic facilities in the Republic of Serbia. In that way, domestic tourist traffic is encouraged, as well as support for the domestic hospitality industry.

#### 4. PERSONAL DATA PROTECTION DURING THE COVID-19

Due to its devastating consequences, the Covid-19 pandemic has taken on a global focus in all spheres of human life and work. Within the scope of their work, various institutions are trying to find solutions to reduce the spread of the pandemic and reduce its harmful effects on human lives, health and the global economy. Observed from the angle of collecting and publishing personal data in emergencies, there were problems with what is the data that can be collected and published, and what is the personal data that should certainly remain secret even in emergencies (Brouder, 2020). The issue of publishing personal data is especially important from the point of view of the health system. For example, the publication of personal data of Covid-19 positive persons or deceased persons as a result of this virus. Research has shown that collecting, using and sharing data can reduce the spread of viruses, and thus enable you to stop the infection faster as well as faster recovery. In particular, digital monitoring of covid-positive contacts stands out as a good way to combat the spread of the virus. Such data collection and processing, including digital contact tracing and general health surveillance, may include the collection of vast amounts of personal and non-personal sensitive data. This could have significant effects beyond the initial crisis response phase, including, if such measures are applied for purposes not directly or specifically related to the Covid-19 response, potentially leading to the infringement of fundamental human rights and freedoms<sup>9</sup>.

The collection, sharing and use of personal data, in particular digital data obtained by monitoring the movements of patients and persons with whom they have had contact, may in itself be a problem if it becomes a common practice even after the end of a pandemic. Precisely for these reasons, it is necessary to clearly define in which cases and for how long it is possible to collect such data. Also, any collection of data, as well as their processing by various organizations in terms of combating the spread of the Covid-19 pandemic, should certainly be in accordance with basic human rights, applicable international laws, personal data protection laws and privacy laws. If we look at the health care system, the principle of confidentiality of patient data can be applied here<sup>10</sup>.

Since these measures involve the processing of different types of personal data –including health data, privacy and data protection is critical in their rollout. Meaning that organisations should be aware that certain measures do have an impact on the privacy of individuals and that they have a choice where to draw the line between safety measures benefiting public health and invasive controls impacting the privacy of individuals. This last consideration should serve as

<sup>9</sup> World Health Organization, Joint Statement on Data Protection and Privacy in the COVID-19 Response, Retrieved 05.11.2020, from: <https://www.who.int/news/item/19-11-2020-joint-statement-on-data-protection-and-privacy-in-the-covid-19-response>

<sup>10</sup> Deloitte, Privacy and Data Protection in the age of COVID-19, Retrieved 12.10.2020, from: [https://www2.deloitte.com/content/dam/Deloitte/be/Documents/risk/be-risk\\_privacy-and-data-protection-in-the-age-of-covid-19.pdf](https://www2.deloitte.com/content/dam/Deloitte/be/Documents/risk/be-risk_privacy-and-data-protection-in-the-age-of-covid-19.pdf)

a catalyst for organisations to refute the idea of the inevitable trade-off between privacy and data protection on the one hand, and effective measures protecting public health on the other. The data protection principles and the technical tools that allow striking the right balance are available to privacy professionals.

As the situation caused by the Covid-19 pandemic requires the implementation of all possible measures, and therefore those that are not typical and unpopular, it was necessary to decide on the collection and use of personal data, as well as data containing information on whether or not someone was in contact with infected persons. As Italy is one of the first countries in Europe and the world to be affected by this virus, the problem of data collection and protection, as well as the possibility of publishing such data in order to combat the virus, was first solved by the state administration of this country. Therefore, the Italian DPA (the Garante) was the first one to deliver guidelines concerning Covid-19 on the 2<sup>nd</sup> March 2020. The Italian authorities envisage that the task of detecting and preventing the coronavirus is exclusively within the competence of the subjects of civil protection of citizens and professional health institutions, which do so following the prescribed instructions. Accordingly, employers are obliged to refrain from taking self-initiated measures regarding data collection. According to the adopted Garante “The investigation into and collection of information on the symptoms typical of Coronavirus and on the recent movements of each individual are the responsibility of healthcare professionals and the civil protection system, which are the entities tasked with ensuring compliance with the public health rules that were recently adopted.” The key takeaway from the Garante was that “employers must refrain from collecting, in advance and a systematic and generalised manner, including through specific requests to the individual worker or unauthorized investigations, information on the presence of any signs of influenza in the worker and his or her closest contacts, or anyhow regarding areas outside the work environment.”<sup>11</sup>

Just a few days after Italy, Belgium also adopted and published instructions for handling personal data during the Covid-19 pandemic. First, the DPA mentioned that companies and employers may not rely on the vital interest of the data subject ex Article 6(1)(d) GDPR as a legal ground for the processing. The DPA also mentioned that companies and employers may not rely on the public health processing ground ex Article 9(2)(i) GDPR concerning the processing of health data unless they are executing explicit instructions issued by the Belgian authorities. Organisations are thus advised against “systematic and generalized” monitoring and collection of data related to the health of their employees outside official requests and measures of public health authorities. Secondly, the DPA expressed that the processing of personal data collected through the measures implemented to prevent the spreading of Covid-19 must comply with all the fundamental principles of data processing of Article 5 GDPR<sup>12</sup>.

In order to regulate the protection of personal data in the digital world during the Covid-19 pandemic, the EU Directive on Privacy and Electronic Communications<sup>13</sup> was adopted, which explicitly stipulates that personal location data may be processed only after being made anonymous or with consent. persons to whom this data relates. However, if it is not possible to carry out processing anonymously, the Directive authorizes the EU Member States to prescribe special measures in national law to protect national and public security.

<sup>11</sup> Ibidem

<sup>12</sup> Ibidem

<sup>13</sup> Coronavirus/COVID-19 Data Privacy Guidance, Retrieved 12.10.2020, from: <https://www.cov.com/-/media/files/corporate/publications/2020/03/overview-of-covid-19-data-privacy-guidance.pdf>

The opportunity provided by the Directive has been used by many European countries, as well as some parts of Asia. For example, the Italian government has developed cooperation with mobile operators, who submit the collected location data to the Ministry of Health, thus providing them with information on the number of citizens who have disobeyed the prescribed measures of restriction of movement. Polish authorities have launched an application intended for citizens who are in quarantine. The application, from time to time, requires the phone owner to take a selfie with the geo-location included so that the competent authorities can be sure that the issued orders are respected. Interesting emergency measures have been issued in Hong Kong for citizens who have arrived from abroad - on arrival they are given a bracelet that records the movement of the person wearing it and sends a notification to the competent authorities if the isolation order is violated. In Singapore, all data on infected people was made public, after which an application was launched that allows tracking the location of the victims of the coronavirus. Needless to say - the legality of this measure is questionable<sup>14</sup>.

EU data protection law (“GDPR”) qualifies health data as a “special category of data”. Therefore, employers must ensure that no form of communication contains information about an employee who is absent for health reasons, including his or her symptoms (Bradford et. al. 2020). Employers are obliged to consider in detail whether certain information should still be disclosed, ie the identity of a specific employee should be revealed. If there is an employee within the work collective who has been confirmed to be infected with the virus, it is advisable to consider all other measures, in order to avoid naming that worker or his health problems. Given that health data belong to a „special category of data”, the GDPR provides for appropriate exceptions. Namely, a derogation from the prohibition on processing special categories of personal data is permitted if: (i) it is provided for by Union or Member State law, (ii) to protect personal data and other fundamental rights, (iii) when it is in the public domain. interest, and in particular in the interest of health protection (among other areas), including the prevention or control of infectious diseases and other serious health threats. Such derogations are permitted for health purposes, including public health and health system management<sup>15</sup>.

In this regard, Art. 6 and 9 of the GDPR provide a legal basis to allow employers and competent public health authorities to process personal data in the context of an epidemic, without the obligation to obtain the consent of the data subject. This applies, for example, when it is necessary for employers to process the data in question in accordance with the public interest in the field of public health, as well as to protect vital interests or fulfill a legal obligation. As more and more cases of coronavirus positives are detected daily, employers are obliged to monitor the spread of the epidemic and, if necessary, take steps to protect their employees. However, the exchange of information for these purposes must be proportionate to the risk and need for exchange, which should be assessed regularly and carefully. It is up to employers to decide what steps should be taken to ensure employee safety<sup>16</sup>.

In addition, Article 15 of the ePrivacy Directive allows the Member States to adopt legal measures to ensure national and public safety. In any case, these measures do not allow everyone open access to personal data, nor do they reflect the application of the principle of stronger

<sup>14</sup> Zunic Maric, T., & Djukanovic, J. (2020). Personal data protection (not) stayed because of covid-19. Retrieved 12.10.2020, from: <https://zuniclaw.com/covid-19-zastita-podataka/>

<sup>15</sup> Gecic, G., & Okiljevic, M., (2020). Virus COVID-19 does not care about the protection of personal data, Gecic Law, Retrieved 12.10.2020, from: <https://www.coronavirus.geciclaw.com/sr/virus-covid-19-ne-mari-za-zastitu-podataka-o-licnosti/>

<sup>16</sup> EDPD, Statement of the EDPB Chair on the processing of personal data in the context of the COVID-19 outbreak, Retrieved 12.08.2020, from: [https://edpb.europa.eu/sites/edpb/files/files/news/edpb\\_covid-19\\_20200316\\_press\\_statement\\_en.pdf](https://edpb.europa.eu/sites/edpb/files/files/news/edpb_covid-19_20200316_press_statement_en.pdf)

rule in the collection of this data<sup>17</sup>. As far as domestic law is concerned, no emergency measures have been introduced to make exceptions to the protection of personal data. Unlike the above-mentioned countries, the domestic authorities did not issue an explicit statement on this issue, except for the appeal to the citizens to act in everything in accordance with the instructions of the competent authorities. The question is whether the reaction was accidentally absent or the Serbian authorities did not see the need for such regulation. We hope for a response from the domestic state authorities as soon as possible. The Covid-19 virus pandemic will certainly greatly affect many aspects of life even after it is over, but that may not be the case with the protection of personal data. Employers must establish safety rules and procedures on time, in order to minimize the impact of the epidemic on labor relations. Employee identity data should remain protected to the greatest extent possible, all following the rules provided by the GDPR and the instructions of the competent authorities (Dwyer et. al., 2016).

In the Republic of Croatia recital 46 of the General Regulation provides as follows: “The processing of personal data should also be considered lawful if it is necessary to protect the interest necessary to preserve the life of the respondent or another natural person. The processing of personal data based on the vital interests of another natural person should in principle only be carried out if the processing clearly cannot be based on another legal basis. Some types of processing can serve both important public interest and vital interests of respondents, such as if the processing is needed for humanitarian purposes, including monitoring epidemics and their spread, or in humanitarian crises, especially in cases of natural disasters.”<sup>18</sup> The right to the protection of personal data is not an absolute right; it must be considered in relation to its function in society and it must be equated with other fundamental rights in accordance with the principle of proportionality. In this context, it should be emphasized that the processing of personal data on the health of respondents should be necessary and proportionate, and personal data appropriate, relevant and limited to what is necessary for the purposes for which they are processed, in accordance with the principles set out in Article 5 of the General Regulation.

## **5. PROPOSAL OF PERSONAL DATA MANAGEMENT SYSTEM IN TOURISM**

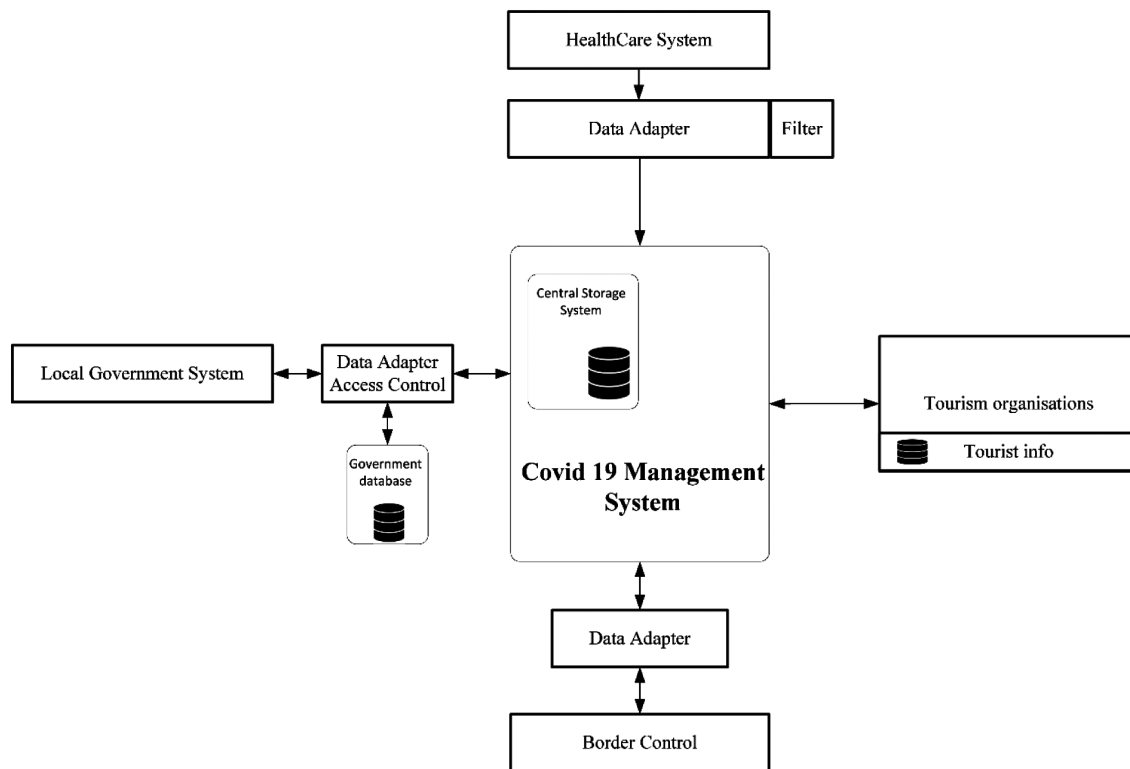
Preventing the spread of the Covid-19 virus in the previous months can be said to have been the main focus of almost all countries in the world. The big problem that was also worked on was how to preserve the economy in the period when there was a mass work stoppage. Tourism, as one of the branches of the economy that is directly dependent on the movement of people, travel to and mass gatherings can be said to have suffered the greatest economic losses, endangering the existence of a large number of families (Gretzel, et. al. 2020). Relaxation of measures in the tourism sector is possible only if the problem of spreading the pandemic is worked on jointly at a higher level within one state.

In this part, we give a proposal of a software system which on the one hand should enable better control of Covid-19 positive people, while on the other hand should enable improvement of conditions for the movement of people and further work of the tourism sector for people who are not virus-positive. they have no obligation to be in self-isolation due to contacts with

<sup>17</sup> Gecic, G., & Okiljevic, M., (2020). Virus COVID-19 does not care about the protection of personal data, Gecic Law, Retrieved 12.10.2020, from: <https://www.coronavirus.geciclaw.com/sr/virus-covid-19-ne-mari-za-zastitu-podataka-o-licnosti/>

<sup>18</sup> Processing of personal health data in the context of the emergency situation caused by the covid-19 virus, Retrieved 10.10.2020, from: <https://azop.hr/aktualno/detaljnije/obrada-osobnih-podataka-o-zdravlju-u-kontekstu-izvanredne-situacije-izazvan>

positive people. The actors of the proposed system are the health system, tourist organizations, local self-government and border administration. Their interconnection can be seen in Figure 7, which represents the architecture of the proposed software system.



**Figure 8.** Architecture of proposed software solution

Within the proposed system, a key role in terms of collecting personal data of patients belongs to the health system of each of the countries that are at the forefront of the fight against this virus (Zwitter & Gstrein, 2020). Practically, the role of the health system is to provide the data to the proposed system for persons who were tested and whose tests returned as positive. In this way, the proposed software solution would not additionally burden the already overburdened health care system, given the fact that data on patients who were tested are already recorded by healthcare professionals. The integrated management system would access the database of health professionals and create data tables only with persons positive to the virus. The central place in the system called management data system is the integration of data from multiple databases into one centralized register. In doing so, each of the actors in the system accesses only that part of the data that is important for their work. In this way, it will not unnecessary to share personal data of patients. By creating, testing and approving a vaccine against Covid-19 one of the current strategies for protecting the population is certainly mass vaccination. Mass vaccination reduces restrictions on population movements. Also observed from the point of view of the health system, two groups of potential tourists are created by vaccination: a hygiene-free group (vaccinated against Covid-19) and a risk group (not vaccinated).

Viewed from the point of view of travel agencies, their task is to create a central register of reservations. Practically when booking accommodation or a tourist tour, each tourist would be checked. The proposed system would allow checking the data of a particular tourist through an integrated management system in order to find potential matches. If it turns out that the person



requesting the reservation should be in home isolation because it is positive for the Covid-19 virus or has been in contact with infected people, the reservation will not be approved. Each of the checks would refer to the period of stay in a tourist destination. This practically means that a Covid-19 positive person can make a reservation if the period of stay that is booked is after the prescribed time that the person must spend in isolation. Also, such persons should, after the expiration of the isolation, submit a certificate from the health organization about the negative PCR test. As far as vaccinated tourists are concerned, they must submit to the age certificate a confirmation that they have performed both vaccination and revaccination. As the form of confirmation has not yet been officially created and as there is still no data on whether it will be in paper or some of the digital forms, it remains for the state system to be harmonized with the state systems of the surrounding countries.

The role of local self-government in the proposed system is reflected in the registration of residence for tourists who visit the tourist destinations in their organization. It is the legal obligation of every accommodation issuer to register each of its guests. When registering guests, it is necessary to provide personal data for each person, the beginning of the stay and the end of the stay. Based on the report made, the local self-government, as well as the local tourist organization, would check whether the person who registered on their territory is in the central management system of infected persons, or the person is vaccinated. If it turns out that there is such a person in the system and that he should be in home isolation, the local self-government can take measures to penalize such a person.

The role of the part of the system related to border control is to create a central register of entry and exit from the country. Of course, this part of the system is functional as long as there are no border closures. Practically, the border control would check every citizen on his / her departure from the country whether he/she is in the system of positive persons for the Covid-19 virus. If a person in his organization has gone abroad and if he is positive or if his period of isolation has not expired, the system informs the border control and the person is returned from the crossing. In this way, the possibility of reckless travel outside the borders of the country of those persons who have this virus is eliminated. As for the control of vaccinated tourists, the best possible approach is to create a universal document which confirms by the state administration of the country of which the person is a resident that it is vaccinated and revaccinated, so it is considered safe and able to travel. Such a document should be accepted by the border authorities of each of the countries, regardless of which of the vaccines the person has been vaccinated with.

The proposed system would be based on cloud architecture. The goal of such a system organization is data availability and at the same time data access control. Data Adapters at each of the system actors provide visibility of only the necessary data and at the same time reduce the possibility of intrusion into the central Covid-19 management system and data forgery (Fahey, 2020). A data adapter is a resource that specifies how and where to obtain data. Specifically, it is an object that contains information about how to connect to or retrieve the data, and the logic to do that. Data adapters are stored in XML files and simplify porting of the report configuration and data source creation between environments. Furthermore, they can be used to provide additional privacy policies among different user roles, or filtering data. The advantages of using such a system are reflected in the fact that the restrictions on the movement of potential tourists who are not positive for the Covid-19 virus are reduced. In this way, on the one hand, a safer environment is provided for tourists, while on the other hand, opportunities are opened for increasing the number of tourists in tourist destinations.

## 6. CONCLUSION

The tourist season during 2020 was marked by major problems caused by the Covid-19 virus pandemic. Closing borders, restricting movement, postponing mass gatherings, affected large economic losses. A large number of countries whose economies rely on tourism have tried to adapt to the current situation and save the tourist season as much as possible. One of the mechanisms was to keep records of Covid-19 positive patients and to manage the personal data of these patients. In order to prevent the misuse of health data, the countries of the European Union, as well as the countries outside the European Union, have adopted many regulations related to the collection and use of personal data during the pandemic. Within this paper, in addition to the economic and legal analysis of the state of tourism and the state of use of personal data, a proposal of a software solution was given that would enable the creation of conditions for the sustainability of tourism during the current pandemic. Future research will be focused on the development of the software solution itself and its testing in real conditions.

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# PERFORMANCE CHANGES OF THE TOURISM SECTOR IN THE CRISES

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**Abstract:** *Tourism represents a driver of economic growth and job creation all around the world. It has become one of the key factors of progress, not only of the individual destinations and regions but also the world economy. The paper aims to analyze the effects of different types of the crisis on the volume of tourism activities, tourism turnover, and revenues in the tourism sector. Despite occasional crisis situations and shocks, tourism has seen continued expansion and has shown great resilience. Having in mind that the COVID-19 pandemic has a major impact across world regions, as well as tourism is one the hardest-hit sectors, a special part of the paper analyzes the impact of the health crisis in Serbia and the global level. The intensive and deep impact of the pandemic on the tourism sector requires strong support at the national and global levels through the relevant institutions.*

**Keywords:** *Tourism sector, Crisis, COVID-19, Global level, Serbia, Supporting measures.*

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## 1. INTRODUCTION

Tourism belongs to a group of social systems that represent a specific combination of natural, technical, social, and economic elements/subsystems (Popesku, 2016, p. 24). The basic characteristics of tourism are variety, non-productive and seasonal character of the business, a high degree of elasticity of demand and supply inelasticity. Tourism has continued growth and is declared as one of the key development factors of the individual tourist destinations and countries, as well as the global economy. The reason for that is the favorable economic progress in the world, the increase in leisure and living standards.

Over the past six decades, tourism becomes one of the fastest-growing economic sectors in the world. The tourism sector has multiplier effects on the development of local destinations, individual countries, and regions, as well as the development of complementary activities (Ministry of Trade, Tourism and Telecommunications, 2016). The global spread of tourism in developed countries has produces different benefits in many related sectors.

Tourism represents a significant economic phenomenon that is in the constant and strong changes process. Despite occasional shocks, international tourist arrivals have shown continuous growth. The sector recorded 25.3 million participants in international tourism and 2 billion US\$ of revenues from tourism activities (Popesku, 2016, p. 3). Thirty years later, international tourist arrivals amounted to 277 million, in 1990 to 438 million, while in 2000 there were 680 million participants in international tourism (World Tourism Organization, 2011). An average annual growth rate of international tourism arrivals in the period 2010-2018 was 5% (World Tourism Organization, 2019).

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Improving the quality and flexibility of the institutional framework is a precondition for improving competitiveness, increasing efficiency, and productivity of the economy as well as economic sectors (Stevanović & Jovičić, 2016, p. 375). Over time, tourism has grown into a global phenomenon with a strong role in overall economic and social development. Tourism generated US\$ 1.5 trillion receipts in destinations and US\$ 256 billion in passenger transport, which was US\$ 1.7 trillion exports from international tourism in 2018 (World Tourism Organization, 2019). 2019 was another year of intensive growth for the global tourism sector. Approximately, 1,460 million international tourist arrivals and international tourism receipts in the amount of US\$ 1,482 billion were recorded in 2019 (World Tourism Organization, 2020a). The contribution of travel and tourism to the global economy GDP amounted to 10.3% in 2019, which was US\$ 9.8 trillion. About 330 million jobs or every tenth job belongs to the travel and tourism sector (World Travel & Tourism Council, 2020a).

Growth in international tourism arrivals and receipts continues to outpace the world economy. According to the data of the World Tourism Organization, travel and tourism GDP grew at the rate of 3.9% in 2018 outpacing the global economy for the eighth consecutive year – overall economy GDP growth was 3.2% (World Travel & Tourism Council, 2019). While the global economy GDP grew by 2.5%, tourism and travel grew significantly more at 3.5% in 2019 (World Travel & Tourism Council, 2020a).

According to estimates in the publication *Tourism Towards 2030* that covers the period 2010-2030, the number of international tourist arrivals will grow by an average rate of 3.3% (World Tourism Organization, 2016). However, tourism is strongly affected by the health crisis in 2020 that has caused major changes in social and economic activities, such as the problems in global trade, reduction of global GDP, border closures, as well as a sharp decline in tourism activities and sector's revenues.

This paper aims to analyze the effects of the current crisis and crises from the earlier period on the financial performances in the tourism sector. Our analysis includes desk research, and it is focused on the tourism sector on the global and national levels. The research is based on secondary data from international and national publications. This paper includes an introduction, four sections, future research directions and a conclusion. The overview of crisis situations in the tourism sector is presented in the first section, the impact of the COVID-19 pandemic on global tourism in the second, the state and perspectives of the Serbian tourism sector in the third, and fourth section contains measures for supporting tourism recovery.

## **2. CRISIS SITUATIONS IN TOURISM SECTOR**

Tourism is constantly facing crisis situations in the conditions of global tourist activities. Crisis in tourism can be defined as unexpected events that reduce the confidence of travelers in the destinations and disable the normal conduct of tourist activities. The existence of the crisis increases the risk, uncertainty, fear of travel and concern for safety that affects the reduction of tourist services demand. Each crisis leads to a slowdown or decline in tourism incomes and imposes the need for swift and adequate measures that will enable the normal conduct of activities, safety and satisfaction of tourists.

At the beginning of the 21<sup>st</sup> century, a more intensive study of the impact of the crises on the sector is noticeable as a direct consequence of the events that affected tourism turnover and



revenues. There are various types of crises and all of them have more or less negative implications on the tourism sector. The basic factors that can cause a crisis in the tourism sector are the economic, political, environmental factors, socio-economic, technical-technological factors, etc. (Popesku, 2016, p. 256). Table 1 provides an overview of the key factors that can cause crisis situations in the tourism sector.

**Table 1.** Key factors of the crises in tourism

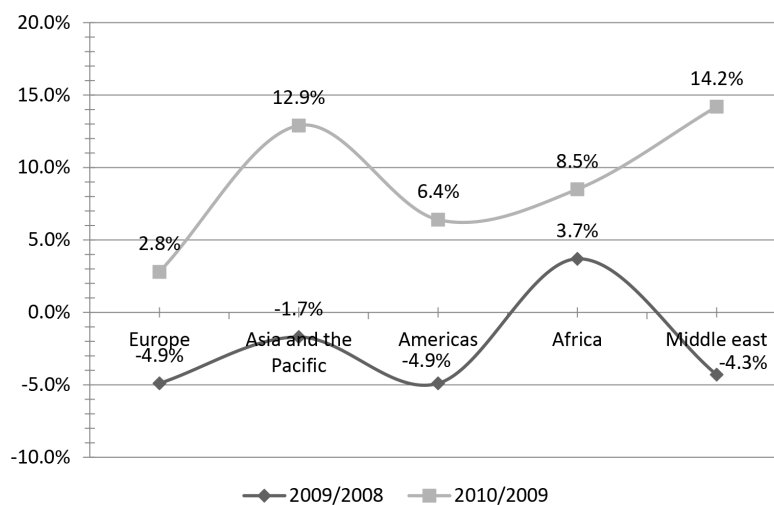
Factors/Causes of the crises in tourism		
Economic factors	Political factors	Environmental factors
Financial crises Recession	Instability Terrorism Anarchy Coups	Natural disasters Climate changes Environmental pollution

**Source:** Authors adopted from Popesku, 2016.

The political factors lead to instability, uncertainty and reduced attractiveness of a certain tourist destination. Anarchy, coups, wars, strikes are some of the examples that cause political instability, tourist insecurity and concern for personal safety. The first two decades of the 21<sup>st</sup>-century record examples of terrorist attacks that have increased fear and insecurity among tourists, which directly implies a decrease in the number of international tourist arrivals and income of the sector.

The global economic crisis belongs to a group of economic factors. The long-lasting economic crisis as well as the process of globalization, turbulent technological, and economic changes, has had a significant impact on the world economy. To overcome the consequences of the crisis and ensure economic growth and prosperity in the long term, states must choose appropriate strategies that would lead to the successful goals' achievement (Baranenko & Stevanović, 2013, p. 420).

Although the crisis started in 2008, intensive and strong impacts of the crisis on the tourism sector were noticed in 2009. Figure 1 shows the percentage changes in the number of participants in the international travel that refer to 2009/2008 and 2010/2009, i.e. in the years after the first impact of the world economic crisis. World tourism recorded 3.8% fewer tourists compared to 2008. Under the impact of the global financial crisis and the following economic recession, the number of international tourists declined in 2009 to 880 million (World Tourism Organization, 2011).



**Figure 1.** Percentage changes of international arrivals after the crisis in 2008

**Source:** Authors based on World Tourism Organization data, 2011 and 2012

Observed by tourist regions, the largest decrease in tourist arrivals was realized in Europe and America (both -4.9%), followed by the countries of the Middle East (-4.3%). Only Africa recorded a positive trend and a positive growth rate of 3.7% compared to 2008. The global crisis left significant negative consequences in various sectors in most national economies. However, international tourism rebounded strongly, and already in 2010, all tourist regions recorded an increase in the number of foreign tourists. International tourist arrivals raised 6.6% over 2009, to 940 million (World Tourism Organization, 2012). The highest growth was noticed in the Middle East, as well as in Asia and the Pacific (14.2% and 12.9%, respectively).

Many new tourism destinations have emerged alongside the traditional ones of Europe and North America. However, Europe was the most attractive region with a share in global tourism over 50%, while all other destinations had participation slightly less than 50%. Although tourism in Europe grew by 2.8% (from 461.7 million tourists in 2009 to 474.8 million in 2010), it did not reach the level from 2008 when 485.2 million international were registered. Table 2 shows realized receipts from international tourism in the period 2008-2010.

**Table 2.** International tourism receipts in the period 2008-2010 (in US\$ billion)

Year	Tourist region				
	Europe	Asia and the Pacific	Americas	Africa	Middle East
2008	473.7	208.9	188.1	30.2	39.7
2009	410.9	203.1	166.2	28.8	42.0
2010	409.3	255.3	180.7	30.4	51.7

**Source:** Authors based on World Tourism Organization data, 2010, 2011, 2012

Compared to 2008 when the total international tourism receipts reached US\$ 940 billion, the decrease was recorded in 2009 (total receipts amounted to US\$ 851 billion). Observed by the regions, Europe noticed the largest share in the total receipts in all years, although the reduction is noticeable in 2010. After more than a year of negative results, it is noticed the growth in international tourism in the last quarter of 2009.

Environmental factors that can lead to crisis situations in tourism include natural disasters (earthquakes, floods, hurricanes, etc.), climate changes and environmental degradation caused by human activities such as carbon dioxide emissions into the atmosphere (Milićević & Ervaćanin, 2016, p. 56). In addition to the above, it is important to emphasize the relevance of the health crisis for the tourism sector. The crises caused by H1N1 and SARS epidemic and the Ebola virus have affected the drop in the tourism sector, decrease in the number of travelers in the air traffic, reduction in tourism revenues in the affected destinations, as well as the decrease of incomes in the catering facilities.

### 3. THE IMPACT OF THE COVID-19 PANDEMIC ON THE GLOBAL TOURISM

Tourism has seen continued expansion and has shown great resilience despite occasional crisis situations and regardless of the factors that caused them. However, the health crisis caused by the COVID-19 pandemic abruptly interrupted the development of world tourism and led to a decrease in global sector activities and tourism revenues. The crisis has affected the enormous reduction in the number of foreign tourists, international tourist arrivals, overnight stays, and restaurant meals. The crisis as a result of the pandemic does not have an equal impact on all economic sectors. The countries hardest hit by the crisis are those that largely depend on tour-

ism, transport and other economic activities that have been most affected by the measures of restriction of movement. The catering and tourism sectors face serious problems, with a very possible scenario in which restricting the movement of people continues to prevent sector recovery and creates strong pressure on employment (Marjanović & Đukić, 2020, p. 102). The crisis can significantly affect seasonal workers who are generally employed abroad in the hospitality or service industry during peak times of tourism, and the unemployment rate could therefore rise even further (Pavlović et al., 2020, p. 7).

Data for the first eight months of 2020 indicate a decrease of 70% in the number of international tourist arrivals, while the reduction of 93% was recorded in June 2020 compared to the same period in 2019. Table 3 shows the total number of international tourist arrivals in the period 2017-2019, as well as the percentage changes over the same period of the previous years. Compared to 2017 when there were recorded about 1,332.4 million arrivals, the number of participants in international tourism in 2019 increased to 128 million arrivals or 9.6% (World Tourism Organization, 2020a).

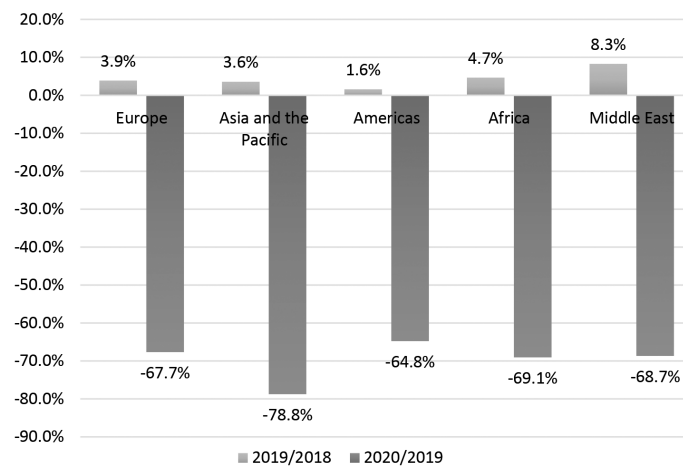
**Table 3.** International tourist arrivals and percentage changes

Tourist region	In millions			% change over the same period of the previous year		
	2017	2018	2019	2018/2017	2019/2018	2020/2019
Europe	676.6	715.8	743.7	5.8%	3.9%	-67.7%
Asia and the Pacific	324.1	347.7	360.1	7.3%	3.6%	-78.8%
Americas	210.8	215.9	219.5	2.4%	1.6%	-64.8%
Africa	63.3	68.7	71.9	8.4%	4.7%	-69.1%
Middle East	57.6	60.1	65.1	4.3%	8.3%	-68.7%

**Source:** Authors adopted from World Tourism Organization data, 2020a

The dominant position in the distribution of international tourism is occupied by European destinations, followed by Asia and the Pacific, as well as America. The great number of international tourist arrivals was recorded in Europe in all years of analysis (over 50%), followed by countries of Asia and the Pacific (on average about 24%). Europe represents the largest world region in terms of international visitor spending. According to the data of the World Tourism Travel Council, US\$ 619 billion of international visitor spending was noticed in Europe in 2019, which is 37% of global international spending in 2019 (World Travel and Tourism Council, 2020a). The European countries that have the most contributed to GDP are Germany, Italy, the United Kingdom, France and Spain. Figure 2 shows percentage changes in international tourist arrivals in five tourism destinations. The percentage changes refer to 2019/2018 and 2020/2019. The percentage change in 2020/2019 refers to the change in the period January - August 2020 compared to the same period of the previous year.

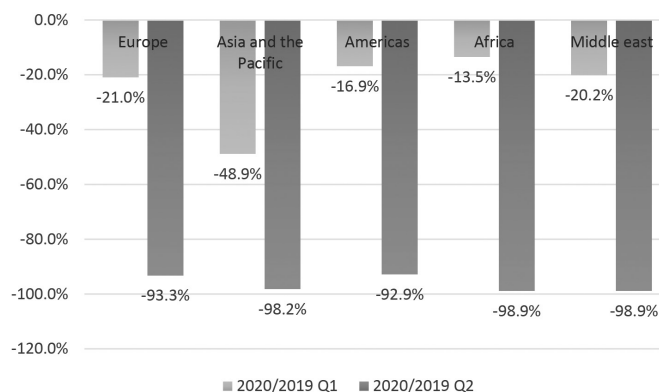
An enormous decrease in tourist activities was recorded in all tourist regions, which was a direct implication of the health crisis caused by a coronavirus. After a long series of years, the growing trend of international arrivals has been interrupted. International tourist arrivals decreased and ranged between 64 and 79% compared to the same period in 2019. Regions, Asia, and the Pacific as the first region to suffer the impact of COVID19, recorded a 78.8% decrease in international tourist arrivals in the first eight months of 2020. It is the biggest drop of all analyzed regions. The second hardest-hit region was Africa with -69.1%, followed by the countries of the Middle East (-68.7%). In Europe that is characterized as the most visited destination on the global level, there was a decrease of 67.6% compared to the period in 2019 (World Tourism Organization, 2020a).



**Figure 2.** Percentage changes of international tourist arrivals

**Source:** Authors based World Tourism Organization data, 2020a

The movement restrictions and closing borders in a great number of countries around the world led to a steep reduction in international tourist receipts. Figure 3 shows the percentage of changes in participants in international tourism in the first and second quarters of 2020 relative to the same period of the previous year. Although the first quarter shows a decrease compared to 2019, the strong effects of the crisis were mostly reflected in the period April-June. All regions recorded a steep decline ranging from -92.9% in America to -98.9% in the Middle East and Africa (World Tourism Organization, 2020a).



**Figure 3.** Percentage of quarterly changes of international tourist arrivals

**Source:** Authors based on World Tourism Organization data, 2020a

The latest data of the World Tourist Organization show that the massive drop in international travel demand over the period January-August of 2020 generated a loss of 770 million international arrivals compared to the same period in 2019, as well as about US\$ 730 billion in export revenues from international tourism. The losses due to the appearance of COVID-19 are more than eight times higher compared to the loss in tourism that occurred as a result of the global economic crisis of 2008 (World Tourism Organization, 2020a).

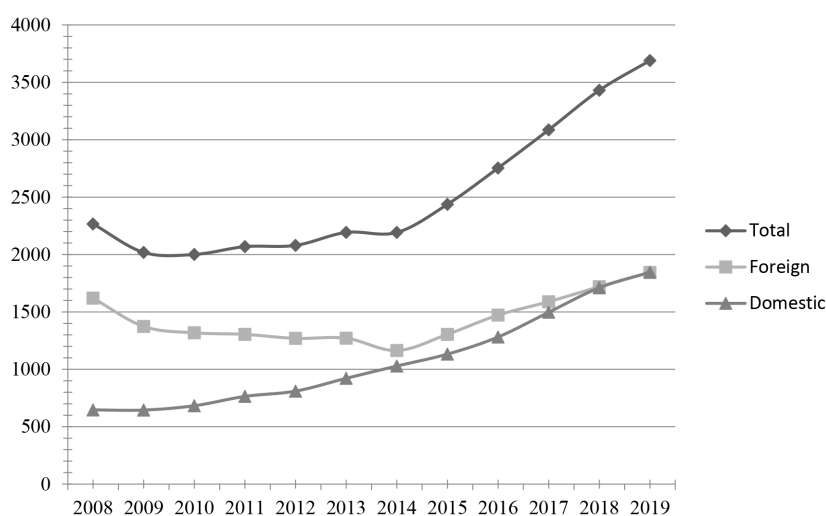
#### 4. THE STATE AND PERSPECTIVES OF TOURISM SECTOR IN SERBIA

As in other parts of the world, Serbian tourism is not immune to crisis situations. The crisis period of the Serbian economy began in the early 1990s. Serious restrictions on the growth of economic activity since that period, which relate to war events, problematic international

position, long transition process, financial difficulties, were accompanied by a decline in economic competitiveness and weakening of internal capacities of individual economic entities. Crisis situations result in a disruption of the financial structure of the national economy. The accumulated financial and structural problems of the Serbian economy are becoming even more pronounced after the world economic crisis (Stevanović, 2015, p. 347).

The global economic crisis has hit most economic areas, including tourism. Due to the reduced purchasing population power, the crisis has led to a decrease in the number of tourists and a drop in sector revenues. Although the beginning of the crisis is related to 2008, the strong effects of the global economic crisis were felt in 2009. The number of tourist arrivals decreased from 2,266 thousand in 2008 to 2,018 thousand participants in tourism in 2009 (Statistical Office of the Republic of Serbia, 2011). The number of domestic tourists decreased slightly, while the decline in tourist arrivals was predominantly caused by a decrease in international arrivals. 1,373 thousand international arrivals were recorded in 2009 that is 15% less than in the previous year. Although the crisis has affected various segments of economic activity, the tourism sector has shown significant resilience and recovered relatively quickly. Since 2011, the number of tourist arrivals has been gradually increased, with a significantly changed structure in terms of the number of foreign and domestic tourists.

The share of domestic tourists in the structure of total tourists' arrivals is gradually increasing in the period 2008-2019 (from 646 thousand in 2008 to 1,846 thousand arrivals in 2019). Figure 4 shows the number of tourist arrivals in the period 2008-2019.



**Figure 4.** Tourist arrivals in period 2008-2019 (in 000)

**Source:** Authors based on Statistical Office of the Republic of Serbia data, 2020a

There were 4,010 thousand nights spent by foreign tourists in 2019 (an increase of 9.6% compared to the previous year), while the number of overnight stays of domestic tourists amounted to 6,063 thousand the night that was 6.8% higher than 2018 (Statistical Office of the Republic of Serbia, 2020a).

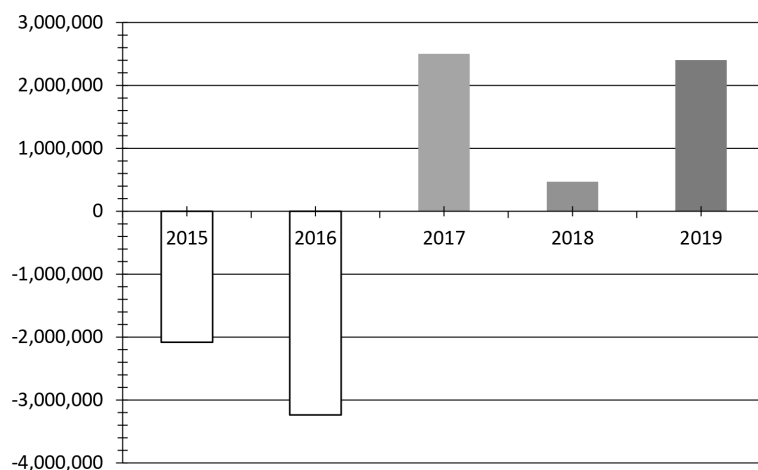
The tourism sector plays a significant role in the national economy by contributing to GDP, as well as to employment and jobs. According to the data of the World Travel and Tourism Council for 2019, the contribution of the travel and tourism sector to Serbian GDP was 5,9%. The sector employs 134.8 thousand employees that represent about 6.2% of the total number of employees



(World Travel and Tourism Council, 2020b). The data from macroeconomic announcements and the annual bulletin published by the Serbian Business Registers Agency – SBRA show that the largest part of gross domestic product was generated in non-tradable sectors, most in sector G – Wholesale and Retail trade, sector N – Transportation and storage and sector I – Accommodation and food service activities (SBRA, 2020).

According to the Regulation on Sector Classification, the sector named Accommodation and food service activities contains the providing of accommodation for shorter stays of visitors and other travelers, as well as the preparation of complete meals and drinks for direct consumption. This section of activities belongs to the sectors that record employment growth and increase in the number of business entities. The number of employees recorded an 8% increase in 2019 compared to the previous year (29,725 in 2018 and 32,191 employees in 2019), while the sector employs 9,571 people more in relation to 2015. The increase in the attractiveness of the sector is also visible through the enhancement of the number of business entities that perform the tourist activities – an increase from 3,204 in 2015 to 4,078 legal entities in 2019 (SBRA, 2017; 2020).

Publicly available publications, statistics, and registers provide insight into the achieved business and financial performances of individual entities, but also aggregate information for sectors and the whole economy (Marinković, 2019, p. 24). The total revenues in the Accommodation and food service activities sector are more than doubled compared to 2015 (64,829,795 thousand dinars in 2015 and 145,212,472 thousand dinars in 2019). Revenues growth was accompanied by expenditure growth. The total costs of the tourism sector increased in 2019 compared to 2015 by 113%. Figure 5 shows an achieved net financial results in the period 2015-2019 (SBRA 2016; 2017; 2018; 2019; 2020).



**Figure 5.** Net results in the sector Accommodation and food service activities (in 000 dinars)

**Source:** Authors based on SBRA data, 2016; 2017; 2018; 2019; 2020

The Accommodation and food service activities sector has shown negative net results for years. The tourism sector operated in the loss zone in 2015 and 2016 (2.0 billion dinars and 3.2 billion dinars, respectively), but achieved negative results are smaller compared with 2014 when the sector reported net negative financial results of 6.0 billion dinars (Marinković, 2018, p. 390). A series of negative financial performances were interrupted in 2017 when the sector recorded a net profit of 2.5 billion dinars. The trend of positive performances in the tourism sector continued in 2018 when the data from the aggregate income statement showed a net profit of 0.47 billion dinars, as well as in 2019 with 2.4 billion dinars (SBRA, 2020).

Except for the previous public available statements and bulletins that represent a good basis for monitoring sector development, the Serbian Business Register Agency leads the Register of Tourism established in 2010, aiming to monitor, analyzing and developing tourism. The key register's activity is to provide the main information about registered entities in the tourism sector, the tourist agencies and the tour-operators (Tourism Law, 2018). Ivanović et al. (2020, p. 97) analyze the Tourist Organization of Serbia as the official carrier of the institutional promotion of Serbian tourism.

The Statistical Office of the Republic of Serbia keeps statistics on catering and tourism. This institution monitors the total number of foreign and domestic tourists, the number of foreign and domestic overnight stays, arrivals and overnight stays on month and annual level, arrivals and overnight stays by regions, countries of origin, accommodation capacities, the structure of tourist receipts, etc. Data are collected by the monthly statistical reports issued by catering trades and business entities providing accommodation services or mediating in tourist services. The methodology is based on the European Union and World Tourism Organization recommendations for tourism statistics (Statistical Office of the Republic of Serbia, 2020a).

According to the data of the World Travel and Tourism Council, international visitor impact is expressed through the visitor spends that amounted to 205.9 billion dinars (7.0% of total exports). The sector characteristics show that 86% of total spending refers to leisure spending, while 14% is caused by business spending. If attention direct to spending by domestic or foreign tourists in 2019, the data confirm that 31% of spending refers to domestic spending and 69% to foreign spending (World Travel & Tourism Council, 2020b).

The health crisis caused by the coronavirus has interrupted the growing trend of tourist activities in Serbia, as well as in regions around the world. The first significant decrease in the number of domestic and foreign tourists, as well as the number of overnight stays, was recorded in March of 2020 when the first cases of the virus were registered and the Government made the decision to introduce a state of emergency. Table 4 shows the number of arrivals and overnight stays of domestic and foreign tourists during the period January-September 2020.

**Table 4.** Number of tourist arrivals and overnight stays (thousands)

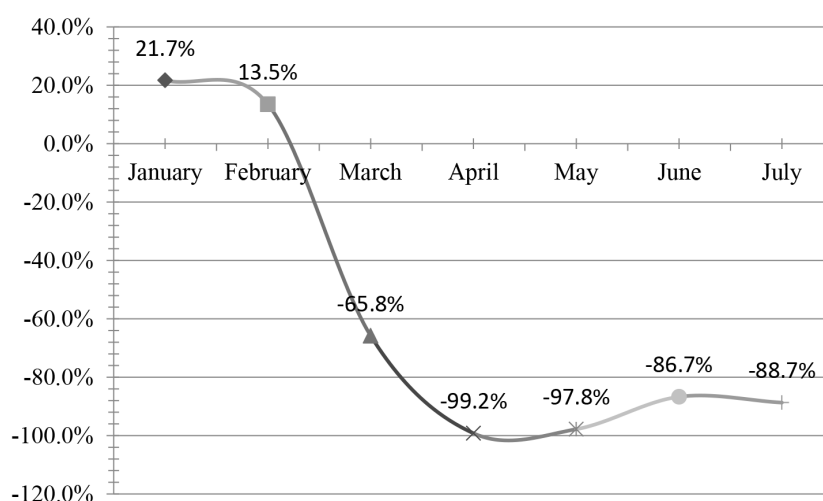
2020 Month	Arrivals			Overnight stays		
	All	Domestic	Foreign	All	Domestic	Foreign
January	220.7	174.4	46.3	689.6	393.0	296.6
February	233.0	141.6	91.4	729.7	494.0	235.7
March	102.6	64.3	38.3	344.6	237.2	107.4
April	6.3	5.2	1.1	41.7	29.7	12.0
May	47.7	44.1	3.6	170.7	151.9	18.8
June	170.4	146.0	24.4	560.2	501.9	58.3
July	193.9	169.6	24.3	737.4	670.2	67.2
August	294.3	263.7	30.6	1080.7	1000.5	80.2
September	195.6	162.2	33.4	698.1	603.9	94.2

**Source:** Authors based on Statistical Office of the Republic of Serbia data, 2020b

Compared to the first two months in 2020, a significant decrease in the number of tourist arrivals and overnight stays was noticed in March. It was expected as a direct implication of the spread of the coronavirus. The worst business performances were recorded in April (6.3 thousand arrivals and only 41.7 thousand tourist nights). But, there was a slight increase in the num-

ber of tourists and overnight stays in the following months. The latest data from the Statistical Office of the Republic of Serbia show that the number of participants in tourism decreased by 43.3% in September 2020 compared to the same period in 2019. At the same time, the number of overnight stays declined by 22.9% (Statistical Office of the Republic of Serbia, 2020c).

The percentage changes in the number of international tourists' arrivals are shown in figure 6. These changes refer to the period January-July of 2020. The negative rates have been recorded since the end of the first quarter and ranged from -65.8% in March to -99.2% in April.



**Figure 6.** Percentage monthly changes of international arrivals in 2020/2019

**Source:** Authors based on World Tourism Organization data, 2020a

Even before the health crisis, domestic tourism grew faster than international tourism. The closure of the borders of a great number of world tourist countries, as well as the fear for personal and family safety, are the reasons why a significant number opted for domestic tourist destinations. Cross-border travels have been reduced and domestic tourism is becoming an alternative to travel abroad. Domestic tourism occupies a dominant share in the structure of total tourist arrivals and the number of overnight stays. A great number of domestic tourists was noticed in August 2020. In August 2020, compared to August 2019, the number of overnight stays of domestic tourists increased by 23.1%, while the number of overnight stays of foreign tourists was by 83.7% lower (Statistical Office of the Republic of Serbia, 2020d) The latest data for September 2020 show that overnight stays of domestic travelers were by 18.8% greater, while the number of nights of tourists from other countries declined by 76.3% (Statistical Office of the Republic of Serbia, 2020c).

## 5. MEASURES FOR SUPPORTING TOURISM RECOVERY

The coronavirus pandemic poses enormous economic challenges. The economic impact of domestic containment measures has been compounded by external shocks such as lower commodity prices, depressed demand for exports across the board and disruptions to value chain linkages, as well as a collapse in tourism (EBRD, 2020).

The outbreak of an actual health crisis has impacted countries at different times and in different ways. The most common response to repress the COVID-19 pandemic was the shutdown of borders and travel restrictions. Most countries have responded quickly and strongly and their

governments adopted widespread measures stepping up over time (World Tourism Organization, 2020b). Across all regions, countries begin to apply measures to restart tourism activities and promote domestic tourism.

World Tourist Organization established the online dashboard covering 220 countries and territories and more than 30 international and regional institutions. 76% of the total number of covered countries and regions reported some measures to mitigate the effects of the COVID-19, as well as to support a sector recovery. Fiscal and monetary policies are the most popular in all regions, which is confirmed by the data – that 144 countries (65%) have adopted packages of fiscal and monetary measures (World Tourism Organization, 2020b). The widespread measures as a swift and strong response by governments around the world to the impact of coronavirus pandemic are shown in table 5.

**Table 5.** Main adopted measures to mitigate the effects of the crisis

Special measures	
<b>Fiscal</b>	Exemption, deferrals, and reduction of VAT and income tax Economic assistance for SMEs Investment programs
<b>Monetary</b>	New credit schemes Moratoria on loans Facilitate access to credit and finance Incentive program granted to airlines
<b>Jobs and skills</b>	Wage partially supported by the state Direct subsidies to business entities Reduction or deferral of contributions' payments Retraining and reskilling tourism workers

**Source:** Authors adopted from World Tourism Organization data, 2020b

The governments of a great number of countries in the world reacted quickly by introducing various fiscal measures such as exemption, deferrals and reduction of VAT and income tax, economic assistance, especially for SMEs and entrepreneurs, as well as investment programs. Fiscal stimulus packages are targeting the most impacted sectors and aiming at mitigating the immediate effects of the COVID-19. Monetary measures support tourism directly through new credit schemes, moratoria on loans and facilitate access to credit and finance. All programs aim to provide financial support to business entities and create good preconditions for sector liquidity. The different incentive programs granted to airlines are included in the group of monetary stimulus packages.

Packages are provided to sustain jobs, income and livelihoods related to wages subsidies, direct subsidies to business entities, as well as reduction or deferral of contributions' payments. In order to protect tourism workers and ensure employment retention, most countries especially adopted special measures, such as training and skills development, assisting tourism businesses digital transformation, as well as retraining and reskilling tourism workers (World Tourism Organization, 2020b).

In addition to the above, countries around the world are implementing specific measures that aim to accelerate recovery and help the tourism sector emerge stronger from the current health crisis. Some of them include the vouchers for trips canceled due to pandemics or amendments to laws to protect both customers and tour-operators. The establishment of health and safety protocols in tourist objects is extremely important due to the gradual return of trust in the tourism sector.

Although countries often focus on international tourism turnover and inflows on that basis, it should be kept in mind that domestic tourism can significantly contribute to generating employment and national economic growth. In the current circumstances, countries around the world have recognized the importance of domestic tourism and launched campaigns for their promotion, as well as adopted specific measures in aim to stimulate domestic tourism demand. The most common measures refer to provide vouchers as an incentive for citizens to spend their holidays in domestic destinations, as well as product development initiatives.

Because the tourism economy has been heavily hit by the COVID-19 pandemic, countries introduce different measures to support the tourism sector and tourism recovery measures. OECD (2020) notices that revised scenarios indicate that the potential shock could range between a 60-80% decline in the international tourism economy in 2020, depending on the duration of the crisis.

The Government of the Republic of Serbia has adopted the Program of financial support to economic entities for maintaining liquidity and working capital in difficult economic conditions caused by the coronavirus. The aim of this action is the regular settlement of obligations to business partners, employees and the state. The special credit conditions have been established for business entities whose predominant activity is in the field of tourism, catering and passenger transport. The program is implemented through the Development Fund of the Republic of Serbia until the funds from the program are spent, not later than December 10, 2020 (Development Fund RS, 2020).

Also, the Government has adopted a program of subsidies to support the hotel industry activities due to business difficulties caused by the COVID-19 pandemic. The aim is to preserve the hotel industry and the employees in that sector. Subsidies are a significant instrument of horizontal state assistance (Vukelić et al., 2014, p. 681). The Ministry of Trade, Tourism and Telecommunications has announced a public call for 350 euro subsidies per individual bed and 150 euros per accommodation unit. Categorized privately owned hotels are entitled to subsidies if they are not subject to the bankruptcy process, financial restructuring, or liquidation proceedings. According to the publicly available data by the Ministry, 312 hotels received subsidies (Ministry of Trade, Tourism and Telecommunications, 2020).

In order to protect travelers, a Regulation on Offering a Replacement Trip from 2020 was passed that regulates the alternate trip for unrealized tourist travel due to the health crisis caused by the pandemic. All customers who have fully or partially paid for the trip by March 15, 2020, have a right to alternate travel. The replacement trip can be realized within one year from the offer delivery and no later than by the end of 2021. In addition to vouchers for replacement trips, tourist vouchers issued by the Ministry of Trade, Tourism and Telecommunications represent a very important and specific measure that aims to improve domestic tourism, as well as an incentive for Serbian citizens to check their vacation at domestic destinations.

## **6. FUTURE RESEARCH DIRECTIONS**

The current health crisis caused huge changes in social and economic activities all around the world, resulting in bad financial performances in those sectors which were affected the most seriously. At the same time, fears for personal safety have increased. According to the WTO scenarios, the return to the 2019 level in terms of international tourist arrivals would take 2½ to four years (World Tourism Organization, 2020a).



The deep impact of the COVID-19 pandemic requires horizontal and vertical cooperation between relevant institutions on local, regional, and global levels. The governments of countries around the world are implementing specific measures that aim to accelerate sector recovery. The time will show which measures were most effective. In order to build sector resilience, it is essential to follow the effects of the implemented measures and elaborate a roadmap to respond to future shocks (World Travel & Tourism Council, 2020b). The main challenge would be strengthening the tourism sector on a global level. The creators of policies and relevant institutions have a significant task to ensure sector sustainability, prevent the bankruptcy process, and address liquidity shortage. At the same time, it is necessary to protect the health and personal safety, as well as to regain traveler confidence.

## 7. CONCLUSION

The tourism sector plays a significant role in all regions in the world by contributing to GDP and creating jobs. Travel & Tourism GDP growth outpaced the overall economy GDP growth for nine consecutive years. While the global economy GDP grew by 2.5%, tourism and travel grew significantly more at 3.5% in 2019.

Tourism is constantly facing crisis situations in the conditions of global activities. Despite occasional crises, regardless of the factor that caused it, tourism has seen continued expansion and has shown great resilience. Each crisis requires a swift and strong response by governments in order to mitigate the negative impact on tourist destinations, turnover and revenues, as well as the national economy.

However, the health crisis caused by the COVID-19 pandemic abruptly interrupted global tourism development and led to a steep decline in tourism activities and incomes. The tourism sector is one of the hardest-hit sectors, so it must have been at the center of each policy that has the aim of tourism recovery. The key measures related to fiscal relief and financial support to business entities, as well as to promote job retention. At the same time, domestic tourism will likely be a key driver in the recovery of the sector.

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# THE IMPORTANCE OF HUMAN RESOURCES FOR EFFECTIVE IMPLEMENTATION OF CRISIS MANAGEMENT TOOLS IN TOURISM AND HOSPITALITY INDUSTRY

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**Abstract:** *The objective of this paper is to foreground the connection between human resources and crisis management in the tourism and hospitality industry, particularly in the implementation of various management tools for successful crisis strategy. One of the most significant sources of competitive advantage in organizations is allocated in human resources, their knowledge and skills, and the way they are used. Modern business conditions have created a dynamic environment that imposes the need to accept the changes flexibly. Whether it is a matter of sudden or gradual changes, as well as whether they are of a positive or negative character, each of them has implications that can result in a crisis. Therefore, the need to understand the crisis and the role of crisis management in the process of crisis prevention, management and overcoming, becomes a necessary element of any business system. Tourism represents one of the fastest-growing sectors in the world, but since it is vulnerable to various risks and crisis, developing an effective crisis management response, consisting of highly skilled people and the use of adequate crisis management tools, can significantly lower the negative impacts on this industry.*

**Keywords:** *Human resources, Crisis management, Leadership, Crisis management tools, Tourism and hospitality.*

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## 1. INTRODUCTION

The incentive of this paper is to raise awareness of crisis management, which is of great importance at all levels and is present in all branches of business, and especially in the tourism and hospitality industry. Also, there is a strong emphasis on proactive action as fundamental for successful crisis management, and the use of various crisis management tools and techniques. It is pointed out that different situations require different solutions, but with a well-prepared crisis management team, leadership and skilled employees, it is much easier to overcome any crisis. Therefore, the key role and importance of human resources is essential for a well-planned and successfully implemented crisis management strategy.

The objective is to:

- a) determine the connection between human resources and crisis management in the tourism and hospitality industry,
- b) illustrate and propose a set of various management tools for successful crisis strategy.

**H1:** Human resources significantly contribute to effectiveness of crisis management strategy;

**H2:** The knowledge and competences of human resources about crisis management tools increase the success of their implementation.

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## 2. HUMAN RESOURCES AND HUMAN RESOURCE MANAGEMENT

One of the most significant sources of competitive advantage of a company lays in human resources, their knowledge and skills, and the way they are used. Global business trends, shaped by demographic change, the existing talent crisis and high rates of technological development, have a strong impact on organizational models and impose the need to change the requirements for human resource management.

Traditional sources of competitiveness such as production capacity, financial resources, raw materials, distribution channels, etc., are considered necessary but not sufficient for organizational success. Human resources, their knowledge, skills and competencies, as well as their synergy, have become a new source of wealth and a key factor of competitive advantage. As we live in a world where knowledge, rather than physical capital, is becoming increasingly important, we need competent and ambitious people who can achieve great things - increase productivity, create new products and services - faster (O'Reilly and Pfeffer, 2000, pp. 1). In a world where intellectual capital is critical to economic success, human resource management, which deals with recruiting, developing and retaining the best people, must show the ability to attract and retain talent and turn it into a competitive advantage.

As much as the society in the past period mainly relied on the exploitation of natural resources and physical work of human resources, the decades ahead will show that it will be based exclusively on the exploitation of the intellectual abilities of employees. In developed economies, jobs that require less skill will be automated or dislocated where they can be done at a lower cost through the hiring of inexpensive labor (Froy, 2009, p. 24). At the level of the European Union, it is widely accepted that in order to achieve higher rates of economic growth and competitiveness, compared to developed industrial nations, it is essential to improve the skills of the workforce. As the first step towards solving the problem of missing skills and knowledge, we emphasize the need to define those skills and knowledge that are needed to achieve business goals - competencies. These are the abilities of an individual to do the job in an appropriate way, which, in addition to professional knowledge and skills, also implies personal characteristics, abilities and attitudes. The model of enterprise development based on competencies is based on determining the knowledge and skills that directly contribute to the realization of the organizational goals of the company. Based on this model of competencies, it is possible to define the necessary training programs and a system for measuring staff development and general goals of the company.

Human resource management at the organizational level ensures the presence of competent workers who enable the company to build its competitiveness, employee motivation, development, etc. It follows that, in companies that want to successfully manage human capital and achieve competitiveness through people, the starting point is in the activities of the human resources department. Therefore, companies must invest in all phases of human resource management, but also constantly strive to improve human resource practices. This is important because it enables the management of major challenges faced by companies - personnel crisis issues with the necessary knowledge and skills, the impact of the crisis on employee involvement and human resource management issues of the so-called millennial generation. In an extremely challenging economic environment, organizations must put a lot of effort into nurturing and developing a younger workforce, because only this way will they be able to provide the missing talents that drive innovation, organizational effectiveness and competitiveness.

## **2.a. The importance of human resources in tourism and hospitality industry**

A systematic approach to human resource development at the national level is extremely important, given the growing demographic changes and projections of labor shortages in some countries and redundancies in others. Education and investment in skills development are more than ever critical points of a nation's competitiveness. The development and effective use of human skills and knowledge contribute to the wealth of a nation and are necessary for social and economic progress. The twenty-first century has opened a new chapter in human history where the future belongs to those societies that can organize to learn and apply acquired knowledge (Marshal & Tucker, 1992) and where workforce development through education and training becomes „key to competitiveness”. (Ashton & Geen, 1996, p. 1).

In the last few years, a significant amount of researches has emerged, that have considered the relationship between the use and development of human resources and skills at the organizational level and the economic performance of organizations and the economy, more broadly. Starting from the adopted understanding that people are the main source of competitive advantage of an organization, it follows that the quality of human resources determines organizational performance. The research that dealt with this relationship had different perspectives of observation, emphasizing the role of human resource management, the role of managers, and especially the managerial staff. One of the important topics is certainly the connection between leadership and organizational performance, with a focus on the leadership roles of executives. Their knowledge and skills are an important moment in the management of increasingly complex organizational processes.

Macroeconomic evidence suggests a positive link between human capital and economic growth (Krueger and Lindhal, 2003; Wilson and Briscoe, 2004). The impact of investment in education and further training is more significantly measurable at the level of the company or industry sector (Wilson and Briscoe, 2004). In the context of assessing the competitiveness of a country, according to the report of the World Economic Forum and the importance of human capital for competitiveness, it is important to define human capital indicators. According to a Cedefop report, human capital is broadly defined to include knowledge, skills, competencies and similar attributes (Westphalen, 2001), (Sabadie and Johansen, 2010).

Human potential is one of the elements that determine the value of a business in tourism and hospitality. When it comes to values and success, most would first think of financial indicators and profits, but the value of the company is increasingly seen through a new dimension, and that is the quality of employees and their comprehensive contribution. It encompasses and emphasizes the importance of people and their knowledge as a creative potential for business success, business organization, business innovation and customer relations.

Namely, in order to be able to compete, a company must have at least one more competitive advantage than other companies. Today, most companies have access to the same technologies, so technology alone is not enough to set one company apart from others. The management system and employees are usually a factor that can make a difference (Dessler, 2007). Given that employees are the part of the company that can give a competitive advantage over other companies, human resource management has a responsibility to acquire, select, motivate, educate and develop, reward and retain its employees. This first reflects the importance of human resources, and thus the importance and weight of their management and direction in the long run. It is important to note that people are the only intelligent, thinking resource in the organization, and

this is exactly what distinguishes the management of human resources in relation to other functions of the company (Čerović, 2011). People are, as already stated and supported by facts, a key business resource that requires more knowledge and skills in management than managing other resources, and is extremely important for organizational success. To ensure the optimal functioning of hotel companies, human resources are a key factor on which the quality of services depends. That is why the success of the company depends not only on investing in technological modernization but also on investing in human resources education. Only educated and professional staff can be a factor of competitive advantage (Stefanović, Blagojević, 2009).

In order to maintain and increase the value of intellectual capital and the overall quality of products and services, hotel companies invest in education, employ quality staff, establish a system of evaluating staff and performance, reward and improve staff quality. Nevertheless, the complex and heterogeneous structure of the hotel product requires the engagement of staff of different professional profiles, and therefore the hotel staff is characterized by a wide range of levels of education. (Kosar, 2008, p. 36).

Management in tourism and hospitality is a profound activity where human work occupies the most important place, and it will remain so in the future. The quality of services depends on the ability of employees, and thus the satisfaction of clients and their loyalty (Vlahović, 2007). The role of human resource management is reflected in the proper organization of the activities, which is then reflected in the engagement of the right person in the right place, so that employees have the opportunity to improve and progress, to be motivated and rewarded, properly coordinate all activities and achieve the best results (Djordjevic Boljanovic, 2009). Proper here means the best possible coordination for a given company, relying on the knowledge of the company's employees and extracting the maximum ability and potential for the most efficient and productive achievement of business results and goals. Human resource management in the tourism industry is a dynamic process; equal employees are in the first place, and guests are in the second place. The quality of services that will be provided to guests depends on human resources, which will lead to their satisfaction and the desired business results of the company (Vlahović, 2008). Human resource management is the key to the successful business of organizations and it is believed that in the future it will develop even more, and more will be invested in it.

In regards to practical implications for HRM in hospitality and tourism, research review by Hroust and Mohamed (2014) points to two important issues: the accomplishment of organizational objectives and human resources capability training. It shows that these issues are related to external factors (technological change, legislation and regulation, national culture, globalization) as well as to internal factors (size, industry, sector, organizational structure, strategy and established HRM practice). The analysis which was focused primarily on Malaysian tourism and hospitality industry behavior of the employees and front-line staff in particular, recommends provision of opportunities for capability building and establishment of working environment which promotes productivity, and points to the significance of organizational culture, internal relations in the organization, attitudes of employees, financial assets.

Tahiri et.al. (2020) performed research that analyses the successfulness of hotel management and tourist satisfaction from the perspective of management and employees. The survey which was conducted on the sample of 21 managers, 100 employees and 200 tourists in the highest ranked four hotels in Kosovo over 2-month period, determined the positive impact of the professional and well selected management in the hotelier sector and climate created by the workers

on their performance, satisfaction and motivation, and furthermore on higher satisfaction of the tourists with the services provided.

Thus, human resources are a crucial success factor in the tourism and hospitality sector. Human resource management must direct all its activities towards supporting and monitoring the business strategy in order to achieve the company's goals and gain a competitive position in the market. Human resource management combines jobs and tasks related to people - recruitment, selection, education and other activities to ensure and develop employees. They create products and services, control quality, market services, manage the financial resources of the company and determine the goals of the organization, as well as the strategy for achieving them. Without properly educated, trained and effective employees, a tourist organization would find it difficult to successfully achieve all its set goals. That is why the role of managers in hospitality and tourism is very complex and requires a lot of effort and knowledge in order to unite all the functions related to the successful operation of the hotel.

The daily all-day engagement of the management is important for the quality and functioning of tourist organizations since insufficient and poor communication with subordinates and making wrong decisions leads to failure. That is why the manager, with his highly developed ability of the organization, must influence the employees, in order to achieve positive changes. Fast decision-making is essential for success, and in order to maintain their position in the market for a longer period, managers must be able to meet the needs of touristic service users. The dominant position will be occupied by employees who are ready to learn continuously and to apply their knowledge in practice. Only with such human resources, organization can expect good business results and take a good position in the market.

## **2.b. Challenges of human resource management in crisis**

One of the biggest problems in human resource management at the organizational level and a pronounced global trend of human capital is the issue of personnel crisis with the necessary knowledge and skills. A survey by consulting firm PricewaterhouseCoopers (2012) indicates that 78% of CEOs plan to change their talent management strategy in response to a changed global business environment, and only 30% of CEOs are confident that they will find the talent they need in the near future. Respondents believe that limitations in terms of missing talents have already hampered innovation in the organization.

What further deepens the problem is the fact that as a result of the crisis, we have an increasing percentage of companies at the global level that turn to experienced staff, reducing the need to recruit young labor. This strategy had effects in the short term, but it further deepened the problem of hiring the necessary talents.

An important problem in human resource management at the organizational level is the problem of the impact of the crisis on employee engagement. Employees who were affected by the reduction of the labor force with the beginning of the world economic crisis became disappointed and excluded. This particularly affects the generation of young people who do not see enough chances to find jobs and develop a planned career path, further blocked by the elderly who can no longer afford the planned retirement. In addition, employees who are not fully involved in the activities are not sufficiently productive and committed to customers, resulting in higher employee turnover ratios and increased employment and training costs for employers.

If we reflect on the challenges imposed by the Covid-19 crisis, it is evident that the sector which has been significantly affected by the outbreak of the corona pandemic virus is certainly tourism. The tourism industry, together with related activities, is one of the most important in the whole of Europe - at the EU level it participates in the generation of as much as 10% of GDP. The World Travel and Tourism Council projects a global loss of 75 million jobs and \$2.1 trillion in revenue if the pandemic continues for several more months. Many predictions state that the tourism industry will not recover from the corona virus for years, especially due to smaller visits from China. In 2018 alone, the Chinese traveled abroad 150 million times, spending more than 277 billion dollars, according to the World Trade Organization ([www.wto.org](http://www.wto.org))

After the spread of the corona virus, the travel industry is in the greatest crisis. Airline ticket prices have fallen as companies have advised employees to avoid travel that is not necessary, conferences have been canceled, and people are avoiding both domestic and foreign vacation travel. Thousands of flights have been canceled around the world as airlines try to cope with falling demand due to the corona virus outbreak. Hotels are closing and downsizing becomes more frequent HR policy.

The recent reports by UN World Tourism Organization (2020) indicate that COVID-19 has caused undoubtable crisis for the tourism industry. International tourist arrivals are projected to plunge by 60 to 80 percent in 2020, and tourism spending is not likely to return to pre-crisis levels until 2024. Research by McKinsey & Company (2020) emphasizes the governmental role during the crisis and proposes that governments take the opportunity to rethink their role within tourism, potentially both assisting in the sector's recovery and strengthening it in the long term. McKinsey's research suggests few ways of involving governments more profoundly in the tourism sector in the context of COVID-19, through larger agility and closer interface between public and private entities, installing new financial mechanisms and innovative financial measures, higher transparency in communication, digital transformation in the tourism sector, etc.

### 3. CRISIS MANAGEMENT FRAMEWORK

The discipline of crisis management, with scientific and theoretical principles, is beginning to take on an increasing role in practice from the second half of the twentieth century. The actions of crisis management in history have been recognized even before the introduction of the term crisis management in the literature.

Table 1 gives insight into the literature published on the topics of crisis management in tourism in the period 1993 – 2016.

**Table 1.** Literature on Crisis Management in Tourism

Araña and León, 2008	Short-term impacts of a crisis
Blake and Sinclair, 2003	Role of the government in crisis management
Durocher, 1994	Importance of equal stakeholder integration
Ghaderi, et al.2014	Relevance of knowledge and organizational learning
Glaesser, 2003	Holistic approach for crisis management in tourism
Gundel, 2005	Classification of different types of crises
Hass, 2009	Importance of media and communication
Hayes and Patton, 2001	Significance of pro-active crisis management
Hystad and Keller, 2008	Distinction into three stages of crisis management
Joras et al., 2011	Importance of equal stakeholder integration and knowledge
Keown-McMullan, 1997	Importance of media and communication



Laws and Prideaux, 2005	Overview of literature about crisis management in tourism
Mair, et al. 2016	Focus on post-crisis recovery
Mathes, et al. 1993	Emphasis on the importance of effective communication
Neumayer, 2004	Focus on the impact of political crises
Reisinger and Mayondo, 2005	Impact of a crisis on tourist's risk perception
Ritchie, 2004	Distinction into seven stages of crisis management
Sausmarez, 2007a	Focus on post-crisis recovery
Sausmarez, 2007b	Focus on post-crisis recovery
Sausmarez, 2013	Distinction into three stages of crisis management
Scherler, 1996	Emphasis on the importance of effective communication
Scott, Laws and Prideaux, 2008	Literature review on crisis management in tourism
Sönmez and Graefe, 1998	Impact of a crisis on tourist's risk perception
Waller, Lei and Pratten, 2014	Importance of communication and task assignment
Wintersteiner et al., 2014	The role of tourists in crisis management and peace promotion
Xu and Grunewald, 2009	Distinction into three stages of crisis management

Source: Martens et al 2016, p.94

From the aspect of the organization, crises have been and remain an unavoidable phenomenon, while the role of managers is today considered an indispensable part of the process of crisis preparation and management, with the aim of ensuring the greatest possible readiness for change and minimizing possible consequences. Simply put, there are crises that we manage and those others that manage us. If managers plan and act proactively, it is very likely that the crisis situation will be controlled and overcome, on the contrary, any lack of attention and awareness of the crisis, usually leads to its escalation into serious business dangers. Crisis management occupies a special place in the field of management, as a type of applied management that follows the theory in practice in both for-profit and non-profit sectors from a wide range of areas. There are a number of variations when it comes to definitions of crisis management. One of them is that "crisis management can be defined as a set of functions or processes that aim to identify, study and anticipate possible crises and establish special ways that will enable organizations to prevent or cope with and overcome the crisis, while minimizing its consequences and returning to normal as soon as possible" (Kešetović, 2008, p. 75).

In the conditions of modern business, a large number of possible risks stand out, and the characteristic that the way of their manifestation changes, creates the need for different approaches in their identification and solution. The fact that crises as a phenomenon cannot be a permanently excluded category further emphasizes the need and importance of the existence of crisis management as a concept and function. Active crisis management is aimed at proactively predicting a future crisis, developing and implementing prevention measures and preparing an action plan for accurate steps in case of a crisis (Waller, Lei and Pratten, 2014).

### 3.a. Effective crisis management in tourism and hospitality

Crisis events require organizations to be managed efficiently, with a high degree of coordination and control of the system, respecting the timeliness and adequacy of such procedures. Under the influence of numerous factors from the environment in which the business takes place, the impulse given by the system itself and the constant instability threatened by the crisis, a great challenge is posed to the actors of crisis management. Certain principles have been recognized as an imperative for the effective operation of crisis management, which will be presented below: (Kešetović, 2008, p. 123)

- Facing reality,
- Fast and decisive action,

- Protection of people as an absolute priority,
- The presence of a leader at the scene,
- Open communication.

The effects of any crisis to any organization and industry can be stated in financial outcomes, corporate image, or reputation, which is specifically important in tourism since “every crisis receives the attention of the media and as a result draws the interest of the public, specifically from possible tourists” (Barton, 2003). This indicates the need for people’s awareness of the crisis and their responsibilities in dealing with crisis outcomes. Many people need to be conscious of the responsibilities and roles in times of crisis. Proactive philosophy concludes all organizations affected by the crisis, pointing out that it is essentially not enough just to provide crisis response, but it is necessary to establish a way to manage crises.

The crisis in the hospitality and tourism industry should be managed with specific care since most of the companies in that industry depend on the discretionary spending of their consumers (Bitner et al, 1990). This emphasizes the vulnerability of the organizations within the industry, since the product or service is not vitally essential for the end-clients and they can choose an alternative or cease making an effort to purchase touristic product/service. Tourism is not just the travel of tourists to destinations around the world, but it is a multiple economic activities that is an integral part of sustainable economic development. The crisis management process refers to the planning, organization and implementation of activities aimed at effective risk management, design and develops strategies for the destination or organization to maximize the potential for continued normal operations. Risks in tourism cannot be avoided, instead there exists the need to manage risks effectively and provide:

- Security for visitors, tourists and employees in tourism,
- Secure communication systems with all persons in the facility and within the destination,
- Provision of facilities, plants and equipment,
- Contribution of trained staff,
- Procedures for returning to normal business activities. (Regester, M., Larkin, J., 1998).

There are various significant attempts to propose a general framework for successful crisis analysis and responses in the hospitality and tourism industry. In this section, we highlight an integrated approach to the risk management model (illustrated in Figure 1) which provides a conceptual view of the risks a destination is exposed to and entitles managers to evaluate correlations between certain types of risks more effectively (Mikulic,et al, 2016).

Heath (1998, from Ritchie 2009) proposes the 4 R’s framework - reduction (risk management), readiness, response and recovery. Hystad and Keller (2006, from Ritchie 2009) offer a 4-stage concept which includes pre-disaster, disaster, post disaster and resolution. Hosie (Hosie, Phor 2009) presents theories on types of crises stating that 60% of crises can be identified before they reach large scale proportions and become out of control. He contends that effective crisis management requires integration into corporate cultures.

Tourism Risk and Crisis Management Frameworks Crises are periods of intense uncertainty characterized by unpredictability and loss of control over key functions of systems (Moreira, 2007). Generally, a crisis affecting tourism manifests as an event or set of circumstances that compromise or damage the market potential and reputation of a tourism business or an entire region (PATA, 2011). Crisis management consists of the “strategies, processes and measures

which are planned and put into force to prevent and cope with crisis” (UNWTO, 2011). Risk and crisis management is an integral component of overall tourism and hospitality management, practiced at the destination level by public sector agencies and communities, larger enterprises and by individual businesses. Effective risk management can prevent an issue from becoming a crisis. Poor understanding and management of risks can lead to a crisis. Risk management involves assessing the probability of negative events that may lead to the tourism sector being unable to operate normally. Six functions of risk management are identified by PATA (2011): 1. Identify: Identify risks or hazards before they become realities. 2. Analyze: Evaluate the probabilities, time-frames and potential impacts of each risk and then classify and prioritize them. 3. Plan: Formulate contingency action plans for mitigating the potential impact of each risk. 4. Track: Monitor the likely effectiveness of these plans by reviewing evolving risks. 5. Control: Revise the plans according to data from the monitoring stage. 6. Communicate: Ensure stakeholder buy-in and support in monitoring changes in the risk environment.



**Figure 1.** IRM framework

Source: Mikulic et.al, 2016

Faulkner (2001) proposed a six-phase framework for understanding the stages of a crisis and the responses necessary from stakeholders. This framework is often referred to as ‘Faulkner’s Tourism Disaster Management Framework’ which covers both natural disasters and human-induced crises:

1. Contingency planning,
2. Initiation of contingency plan,
3. Protective actions during the crisis,
4. Short-term needs addressed, clear communication strategy in place,
5. Restoring infrastructure, facilities, and tourist attractions, coordinated and sustained marketing response,
6. Review of actions taken to feed into further contingency plans.

### 3.b. Crisis management tools

One of the more referent sources on this issue, which we analyze in this section is the longitudinal research of the consulting company Bain, which has been conveying the thoughts of executives globally since 1993, regarding the tools they use. Particularly important are the researches in the period from 2008, which represent how the crisis has affected the changes in business priorities, and thus the tools that are employed in organizational management.

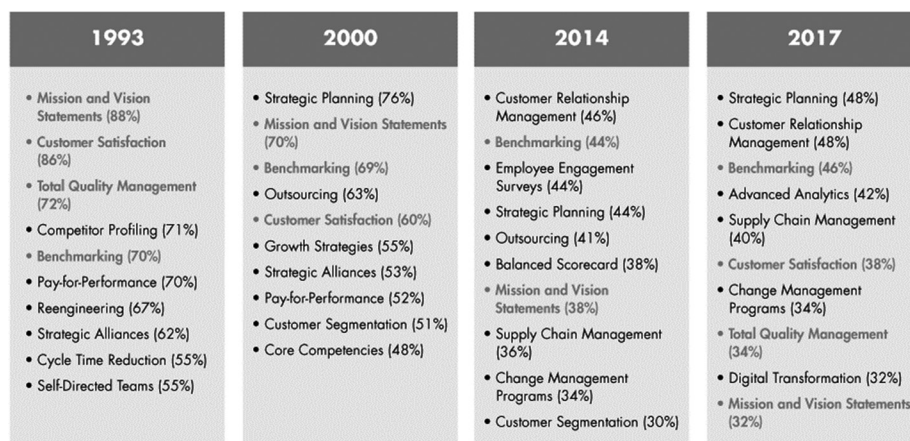
Table 2 provides an overview of the most popular management tools for the period from 2000 to 2012, according to research by Bain & Company (2013 from Masic, Dzunic, Nesic 2014)

**Table 2.** Overview of the most popular management tools for the period from 2000 to 2012

2000	2006	2008	2010	2012
Strategic planning	Strategic planning	Benchmarking	Benchmarking	Strategic planning
Mission and vision statement	CRM	Strategic planning	Strategic planning	CRM
Benchmarking	Customer segmentation	Mission and vision statement	Mission and vision statement	Employee engagement
Outsourcing	Benchmarking	CRM	CRM	Benchmarking
Customer satisfaction	Mission and vision statement	Outsourcing	Outsourcing	Balanced Scorecard
Growth strategies	Core competence	Balanced Scorecard	Balanced Scorecard	Core competence
Strategic alliances	Outsourcing	Customer segmentation	Change management programs	Outsourcing
Performance rewarding programs	Business process reengineering	Business process reengineering	M&A	Change management programs
Customer segmentation	Scenario and contingency planning	Core competence	Strategic alliances	Supply chain management
Core competence	Knowledge Management	M&A	Customer segmentation	Mission and vision statement

Source: Bain survey 2013, from Masic et.al 2014, p.237

The more recent Bain survey on management tools and trends compares the results from few years (1993, 2000, 2014, 2017) and indicates the popularity and usage of tools, as well as satisfaction from management and organizations in the implementation of the various tools. Figure 2 represents these findings.



**Figure 2.** Overview of the most popular management tools and percentage of their usage (1993, 2000, 2014, 2017)

Source: Bain Management Tools and Trends Survey (available at <https://www.bain.com/insights/management-tools-and-trends-2017> accessed October 29, 2020)

If we look at the picture of the wider use of management tools in times of crisis, taking into account the 25 most popular tools, an overview would be as follows in table 3 (the tools in the table are presented by alphabetical order of their names in English). We take into account the reports for 2013 and 2017 in order to look more objectively, from a somewhat significant distance look at the reactions of company executives at the global level, and to understand the reasons for the emergence of new management tools and the popularity of certain tools. The conditions of the crisis gained significance.

**Table 3.** The most popular management tools (2013 vs.2017)

1. Balanced Scorecard	1.Advanced analytics
2. Benchmarking	2.Agile management
3. Big data analytics	3.Balanced Scorecard
4. Business process reengineering	4.Benchmarking
5. Change management programs	5.Business process reengineering
6. Complexity reduction	6.Change management programs
7. Core competences	7.Complexity reduction
8. CRM	8.Core competences
9. Customer segmentation	9.Customer journey analysis
10. Tools for good decision making	10.CRM
11. Downsizing	11.Customer satisfaction systems
12. Employee engagement surveys	12.Customer segmentation
13. Mission and vision statements	13.Digital transformation
14. Mergers and acquisitions	14.Employee engagement systems
15. Open innovation	15.Internet of things
16. Outsourcing	16. Mergers and acquisitions
17. Price optimization models	17.Mission and vision statement
18. Managing satisfaction and loyalty	18.Organizational time management
19. TQM	19.Price optimization model
20. Scenario and contingency planning	20.Scenario and contingency planning
21. Social media programs	21. Strategic alliances
22. Strategic alliances	22.Strategic planning
23. Strategic planning	23.Supply chain management
24. Supply chain management	24.TQM
25. Zero based budgeting	25.Zero based budgeting

**Source:** Bain Management Tools and Trends Survey, 2013 and 2017 (from Masic et.al 2014, and <https://www.bain.com/insights/management-tools-and-trends-2017> accessed October 29, 2020)

We can remark that in times of crisis; with organizational goals and priorities changed, management of the organizations uses different tools than in harmonious times. The general impression is that in conditions of increased uncertainty, lack of necessary financial resources and other problems brought by the crisis, organizations are focusing on successfully resolving short-term financial pressures. In this context, executive decisions are motivated by short-term goals in terms of reducing operating costs, and the use of tools aimed at achieving these goals, such as benchmarking and outsourcing, has found its place among the top ten most commonly used crisis management tools. The research from 2013 emphasized the need to strengthen good relations with customers but through greater engagement of employees in the company, which is directly related to customer satisfaction and loyalty. Hence the great popularity of the management tool called Employee Engagement Surveys, which stands out as an equally used and important tool, as well as Strategic Planning and Customer Relationship Management. Also, the need to strengthen good relations with employees, especially members of the so-called millennial generations, requires a shift in organizational culture and process. The context of the increased use of social media programs, the need for adequate optimization and management of data obtained by companies, brought the popularity of a management tool called Big Data



Analytics. When we look at the data from the 2017 survey, it is evident that new approaches to business challenges have evolved, some using artificial intelligence and machine learning (Bain survey, 2017). Customer Satisfaction Systems, designed to improve retention of customers, employees and investors, and Digital Transformation, which integrates digital technologies into an organization's strategy and operations, hold considerable popularity (Bain survey, 2017).

If we consider not only the popularity of the usage of certain management tools but also the satisfaction and efficiency in their use, comparing the data from surveys 2013 and 2017, we can conclude that organizations show the greatest satisfaction with the use of approved management tools, which are a priority in all economic climates, such as Benchmarking, Strategic Planning, Mission Statement and vision, CRM, Balanced Scorecard, etc. The tools which are expected to continue increasing in usage and satisfaction of their usage, particularly in the field of organizational crisis strategies and responses, are Complexity Reduction and Scenario and Contingency Planning. In general, organizations are gradually or fundamentally changing responses to various business challenges, and focusing on a) reducing complexity and hierarchy, b) using digital technologies, c) strengthening corporate culture, and d) focusing on customers.

#### **4. FUTURE RESEARCH DIRECTIONS**

This paper combines:

- theoretical research about human resources and crisis management in tourism and hospitality with the aim to advance knowledge about the importance of human resources for tourist organizations in developing effective crisis strategy, and
- applied research which tackles the problem of implementation of crisis management tools in tourism with emphasis on proactive and professional management and leadership, and skilled and highly motivated employees.

The methodology used is descriptive, qualitative, critical and comparative. The role of crisis management is becoming an indispensable element in countering and overcoming crisis situations for people and organizations across industries; therefore, in tourism and hospitality should be integrated in a successful organizational strategy. The authors do not propose a single model or framework for crisis management in tourism and do not consolidate crisis management tools that are most effective for the tourism and hospitality industry. Moreover, it is suggested that instead of a universal approach to preparing for crisis and general solutions for overcoming the crisis, organizations prepare adequate crisis management strategies which rely on their competencies, internal corporate culture and climate, with the use of various business tools, techniques, scenarios and benchmarks.

The intention of the authors, within a broader empirical multi-industry study (tourism and hospitality involved) of management practices and industrial performances in Serbia, is to run a survey to investigate the familiarity of management and employees in organizations in Serbia with specific crisis management tools, to which extent and in which order they are applied, as well as satisfaction and estimated effectiveness in usage of these tools.<sup>3</sup>

The regional comparative analysis of the use of crisis management tools in tourism can also be of special importance.

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<sup>3</sup> The empirical study has been affected by Covid-19 situation, with extensive data collecting for sample segmentation analysis

Finally, the authors single out clusters as a specific form of development of tourism entities, enabling connections with research and educational institutions that can significantly contribute to strengthening the competencies of people and their ability to apply crisis management tools in tourism.

## 5. CONCLUSION

The role of human resources in the modern tourism world has changed significantly to adapt to different needs and developments in the workplace. Involving human resources in crisis management is one such event, which means that HR services must take an active role in planning and training. HR provides the skills and knowledge necessary for employees to contribute to the sustainability of the organization by participating in the crisis management process. The role of human resources in crisis management is becoming extremely important for any tourism organization that wants to maintain brand reputation, trust and customer loyalty. Human resources significantly contribute to the effectiveness of crisis management strategy. Good selection and management of human resources is considered key to the success of any organization, and human resources are the most important part of the organization. Investing in human resources is more profitable than investing in any other resource. Managing employee careers and investing in employees is a significant motivating factor. We could say that only an employee who is satisfied with his job, working conditions and position in the organization and who is, at the same time, appreciated and respected in his work environment, is motivated to perform his job responsibly and in a quality and professional way. As a result, it is considered that such an employee certainly contributes to the achievement of the goals of the organization. This largely suggests that awareness of the importance and value of human resources must certainly grow, acknowledging technological advances and innovations.

Crisis management is critically important for all tourism and hospitality industry organizations. An adequate way of management in the period when the system is not in its usual state dictates the speed with which the business will return to the state of normal functioning, with the least possible consequences. Crisis management measures and approaches are sometimes crucial, not only for preserving business but also for the issue of survival.

When it comes to the approach in model and application of crisis management tools related to tourism and hospitality, we consider a flexible crisis management process, that will respond in accordance with the given situation and needs when the crisis periods occur. Simulating the effects of the crisis periodically makes tourist organizations more volatile to implement effective crisis management. Crisis management tools are most effectively applied when organizations have enough time to ensure the preservation of core values that could be significantly disturbed during the crisis. The major shifts in organizational executive strategies worldwide are focused on digital technologies and transformation, innovative corporate culture development and improved customer experiences. In the tourism and hospitality industry, such changes are favorable for the usage of specific management tools to increase the readiness for crisis preparation, response and organizational renewal (e.g. Agile Management and Digital Transformation, Balanced Scorecard, CRM and Customer Satisfaction Systems, Employee Engagement and Core Competences). The knowledge and competencies of human resources about crisis management tools increase the success of their implementation.

The general conclusion is that people must be with appropriate knowledge and motivated, in order to realize their potential and act effectively in response to the crisis. Tourist organizations should continuously invest in the knowledge and skills of the employees, their motivation and behavior, as well as to maintain an appropriate structure and number of employees.

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# PECULIARITIES OF THE HUMAN RESOURCES MANAGEMENT PROCESS IN SERVICE ORGANIZATIONS - RESEARCH RESULTS

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**Abstract:** *Service organizations have, over the years, been constantly faced with increasing customer demand, growing competition, digitalization, and numerous changes in the business environment to which they must adapt in order to survive in the marketplace. As the main specificity of service organizations is reflected in the “intangibility” of their services, for customers who are participants in the service process and for employees who directly depend on the quality of service, service process and customer satisfaction, defining appropriate activities of Human Resources Management process, which manages employees, undoubtedly represents a priority that provides a competitive advantage. This paper will present the results of the research on the characteristics of eight selected sub-processes in the process of Human Resource Management in service versus production organizations of Rasina district, in order to define their specifics and point out their advantages and disadvantages.*

**Keywords:** *Human Resources Management Process, Service organizations, Rasina district.*

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## 1. INTRODUCTION

Being faced with all the difficulties of everyday life that today brings, caused by the global pandemic which, in addition to all health, social, economic consequences, limited movement and restrictions on the number of people indoors has resulted in many changes that need to be managed. One of the service activities within the industry that is most endangered is tourism, whose current way of doing business and providing services will most certainly change significantly. Certainly, people employed in the tourism sector have the biggest problem, both because of the characteristics of the service they provide and because of the great uncertainty of the business environment. Today, unfortunately, we do not have an answer as to how long this situation will last and it is very difficult to predict what losses the service sector will go through during this period. Current data from the Statistical Office of the Republic of Serbia for October show that the number of tourists in our country compared to the same period last year decreased by 43.1% while the number of overnight stays decreased by 22.9%. Also, the number of nights spent by foreign tourists decreased by 76.3%. The National Association of Tourist Organizations in Serbia points to the fact that the turnover within this activity dropped by 90% while 100,000 employees directly or indirectly depend on this activity, which is a major economic and social problem. What is certain is that, after creating the conditions for the return to the market, human resources in the entire service sector and especially in tourism will enable the survival and continuation of the business.

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The function within the organization in charge of this work is Human Resource Management. The Human Resource Management process itself is defined by a set of sub-processes with their activities. This paper will focus on the characteristics that are specific for employees in the service sector, as opposed to employees in the manufacturing sector. These features can be a signpost that indicates the possibility of overcoming the problem or the causes of the problem.

On this basis, the initial hypothesis of the paper was formulated: There is a statistically significant difference in the attitudes of respondents related to Human Resource Management activities in the service sector versus respondents from the manufacturing sector.

## **2. HUMAN RESOURCE MANAGEMENT**

As human labour was a subject of interest in ancient civilizations, the scientific field of Human Resource Management has developed in the broader context of social, industrial and economic development and is a response to the key changes that industrialization has had on society and work (Miller, FB, Coghill, MA, 1964). Human Resource Management is an area of organizational science that deals with the study of all aspects of employment in an organization (Dulebohn, J. H., Ferris, G. R., Stodd, J. T., 1995). The very name of the field of Human Resource Management had its development in the world and in our country, but it was primarily influenced by American literature in the early 1980s. The previous name of the area was Personnel or Personnel Management, whose role was administrative and advisory, with the primary goal of reducing labour costs and increasing productivity. The new term represented not only a change in the old name of a scientific field or management function, but also a change in business philosophy, from a focus on labour costs to a focus on understanding employees as a resource in achieving business results. This phase is characterized by detailed design and definition of Human Resource Management process activities, the growth of the importance of the function itself and its role in the organization and the understanding of the function as a means to achieve organizational strategy. The early 1990s were marked by numerous restructurings of organizations (downsizing, outsourcing, re-engineering, informatization, etc.), which initiated the development and another change in the role of Human Resource Management into Strategic Human Resource Management that sees employees as a source of competitive advantage and equal partners in realization of the organization's strategy.

As the basic role of the function of Human Resource Management is the development of processes and related activities in order to harmonize them with the strategy of the organization, most of the work in this paper is devoted to researching their impact on the performance of the organization.

Author West, M. et al. (1997) has been researching the types and impact of management activities on the performance of the company for five years, where he concluded that changes in profits are due to the application of different methods of selection, worker orientation, training, rewarding as well as business design and not strategic positions, investment in technology or quality.

In 1999, Watson Wyatt, creator of the Human Capital Index, in a study conducted in 400 organizations in the US and Canada identified 30 key activities in Human Resource Management that are associated with a 30% increase in the market value of the organization. Eleven years later, the same research resulted in the identification of the 43 activities, which W. Wyatt categorized into the 5 dimensions, given the impact in increasing the company's market value (reward-

ing performance, collegial and flexible workplace, recruiting, communicating, training, career management). Ten years later, a similar survey was conducted in 16 European countries, which identified 19 basic activities that are associated with a 26% increase in the market value of the company. Also, differences between European and American companies in Human Resource Management were identified, which initiated further research in the direction of comparative analysis between countries in which it was determined that the differences are primarily due to different cultures, norms, values, attitudes, as well as other characteristics of the workforce.

Research conducted in America (Gerhart, B., 2005) confirmed the correlation between employee's productivity and/or organizational performance with activities within the recruitment and selection sub-process (Koch, JM, McGrath, JM, 1996), employee education (Bartel, AP, 1994), impact assessments (McDonald, D., Smith, A., 1995), compensations and benefits (Gerhart, B., Trevor, CO, 1996; Gómez-Mejía, LR, 1992) and activities that support innovation (Delaney, JT , Huselid MA, 1996; Huselid, MA, 1995). Research has also shown that organizations that implement these sub-processes perform better than organizations that have not had formalized sub-processes within the same industry (Bartel, AP, 2004; Black, SE, Lynch, L., 2001, 2004; Ichiniowski, C., Shaw, K., Prensushi, G., 1997).

Based on the research, it can be concluded that the views, practices and processes of Human Resource Management differ in content, manner of performance and characteristics; however, the elements (sub-processes) and activities of the Human Resource Management process are performed in almost every organization regardless of its activity and size.

In the following parts of this paper, the focus will be on the detailed definition and explanation of selected sub-processes (elements) of C in the organization, as well as the definition of the activities of each sub-process.

## **2.1. Human Resource Management Process**

The process of Human Resource Management in the organization implies certain elements or sub-processes which in turn imply different activities. The selection of appropriate sub-processes and their activities are conditioned by a large number of factors, primarily internal, which include: the role of activities related to the human resources management subsystem in the organization, organization and status of Human Resources Management, number and structure of engaged human resources experts, level of development of other subsystems in the organization, goals of human resources strategy, corporate goals, principles and policies of human resources, activities of the organization, its size, the impact of the environment on the Human Resources Management process, attitudes of management and governing bodies towards human resources' activities, management expertise and its relationship to changes, the content of the concept of organization development, etc. In other words, the process of Human Resource Management is different in each organization, its structure (by which we mean processes and activities) depends on the aforementioned factors that serve as a guide in defining and adapting the process itself.

Over the years, various authors have defined the necessary elements of the Human Resource Management process that increase the performance of the organization (Torrington, D., (2004), Vujić, V., and Čamilović, S., (2007)) with differences that are conditioned in the way their observations, i.e., whether they view the function of human resources management as strategic or as an operational one. Within this paper, those elements or sub-processes were singled out, which, according

to the group of authors Noe, R., Hollenbeck, J., Gerhart, B., Wright, P. M., (2005), confirmed their influence on the performance of the organization. Thus, the management of the Human Resource Management process can be implemented by defining the following elements and their activities:

1. **Job analysis** – the process of collecting relevant information about jobs and defining the knowledge, skills and abilities needed to perform a particular job,
2. **Human resource planning** – a process in which, based on anticipated changes in the internal and external environment, human resource needs are predicted,
3. **Recruitment of human resources** – the process of attracting qualified candidates in such a number which will allow the organization to choose the best ones to fill vacancies,
4. **Selection of human resources** – a process in which a choice is made between the registered candidates for a particular job and a decision is made on employment, i.e., rejection of candidates,
5. **Motivation and job satisfaction** – the process of defining motivational factors, incentives and strategies that are built into the organizational environment in order to motivate employees, as well as defining factors that affect job satisfaction or dissatisfaction
6. **Human resources development and training** – the development process is aimed at creating learning opportunities to help employees in their personal development and prepare for future job and career development requirements, while the training process is focused on changes in specific knowledge and skills, attitudes and / or behaviour aimed at improving the performance of employees in their workplace,
7. **Performance management and rewarding employees** – a process in which the individual contribution of employees in achieving organizational goals in a defined period is assessed.

Within this paper, the Human Resource Management process is observed by examining the following elements: job analysis, human resource planning, human resource recruitment, human resource selection, development and education, job introduction and orientation, motivation and job satisfaction and performance appraisal and reward. Within each individual element, the necessary activities and their role will be briefly described in order to better understand their contribution to more efficient performance and competitive advantage.

### ***2.1.1. Job Analysis***

Although research related to job analysis is rare, we can still divide it into two basic groups (Siddique, M. C., 2004). The first group includes previous research focused on the content of job analysis, its role and connection with other activities in the process of Human Resource Management that resulted in the development of techniques, procedures and methods necessary for its quality implementation (McCormic, E., 1979; Cornelius, E., 1979; Ash, R., 1988) and another group to which recent research focuses on - the strategic role of job analysis as a Human Resource Management activity that contributes to increasing organizational performance (Cascio, FW, 1998; Bowin, RB, Harvey, D., 2001). Over the years, under the influence of numerous changes in the environment and the acceptance of empirical results that testify to the contribution of job analysis in increasing the performance of the organization, a foundation was created to study its impact on achieving competitive advantage of the organization (Anthony, WP, 2002; Dessler, G., 2002). The importance of job analysis primarily stems from the fact that many theorists and practitioners in the field of Human Resource Management view it as the basis for the realization of most activities in the process of Human Resource Management (Schuler, RS, Jackson, SE, 1996; Sherman, A., et al. 1998). Dessler, G., 1999). Thus, job analysis is a

basic prerequisite for quality planning, recruitment and selection of workers in the organization. Job analysis, as a basic prerequisite for the successful planning, includes the development of a detailed description of the tasks involved in the job, establishing relationships and relations that the job has with other jobs and determining the knowledge, skills and abilities that employees must have in order to successfully perform the job. The results of the job analysis are job descriptions and job specifications. A job description is a written statement about what a job holder does, how and why he/she does it. It should accurately outline the content of work, environment and employment conditions. Based on the analysis of work, the organization forms criteria for recruiting and selecting workers, and the quality of human resources that they will hire depends on its quality. In essence, the business analysis should be a continuous activity in organizations that is adjusted to all the changes in the environment, customer requirements, technology, etc. There are numerous methods for job analysis. Some of them are job-oriented and some are worker-oriented, but in each case, each method has its own disadvantages and advantages. From previous practice, it can be concluded that several methods can be used together in order to obtain the most valid and complete picture of work obligations, responsibilities and behaviour.

### ***2.1.2. Human Resources Planning***

Human resource planning as an element of the Human Resource Management process is also the most complex set of activities in the organization which, in addition to the basic tasks of analysing and predicting the need and supply of human resources, harmonizing needs and supply and defining plans are a strategic framework for decision making. In order for strategies to be successful, the organization must have the right number of people with the appropriate skills, knowledge and abilities to implement them (Bahtijarević Šiber, F., 1999). Approaches to human resource planning have also evolved over the years under the influence of various changes. Human resource planning was viewed as an adjunct to organizational strategy, as a completely separate planning process, and ultimately as an integrated strategic process in the organization (Smith, J. B., Boroski, W. J., Davis, E. G., 2006). Author Bramham, J., (1989) in his first book "Human resource planning" highlights the difference between the two approaches in human resource planning. Namely, he made a difference between workforce planning as a quantitative approach and human resources planning in organizations which, in addition to the quantitative approach, includes numerous planning and development activities such as motivation, employee attitudes, organizational culture, etc. In contrast, other authors (Bennison, M., Casson, J., 1984; Thomason, G., 1988) reject these differences, considering that workforce planning is part of human resource planning. It is obvious that workforce planning is defined as an activity aimed at determining the difference between the required and available number of workers, while human resource planning is defined as a process that should be harmonized or with which strategic decisions in the organization should be harmonized. Author Armstrong, M., (2008) views this difference as a hard and soft approach in human resource planning. Human resource planning, he believes, focuses on both quantitative (how many employees are needed) and quality (what employee characteristics are needed) approach.

From all the above mentioned, it can be concluded that despite the constant changes that increase the uncertainty of the planning process in today's business environment, it still represents the basis of good business, its control, decision-making framework and gaining a competitive advantage, but unlike the previous period in organizations that there is now an awareness of constantly adapting plans to changes in the environment. The period of adjustment of defined plans to current changes will depend on the industry in which the organization operates, their



activities and more. As the process of human resources planning in the organization is strategic, its impact on business and gaining the competitive advantage of the organization is more than significant. As it was already mentioned, there are different approaches in human resource planning, but the most commonly used process in organizations involves the following elements (Noah, R., Hollenbeck, J., Gerhart, B., Wright, P. M., 2005):

1. analysis of the environment (external: labour market, legislation, culture of society, economy; internal: management, size of the organization, stages of development of the organization, organizational culture),
2. forecasting human resource needs,
3. forecasting the market offer of human resources,
4. harmonization of needs and supply,
5. defining action plans and evaluations.

### ***2.1.3. Recruitment of Human Resources***

Recruitment of human resources is one of the activities in which organizations have direct contact with the environment. What it means and who decides who is the right candidate, whether there is a system in the organization to assess the need for recruitment, which recruitment activities can improve or damage the image of the organization, what are the costs of recruitment and how we can manage them, are just some of the issues organizations are facing. The importance of answering the questions is seen in the growing number of studies over the years focused on studying the impact of elements of this process on the organization (Billsberry, J., 2007; Breaugh, J. A., Macan, T. H., Grambow, D. M., 2008).

According to the author Bahtijarević Šiber, F., (1999), recruitment is defined as „the process of attracting candidates for vacancies, who have the necessary abilities, skills and characteristics to successfully perform jobs and achieve goals.” The process itself includes a series of activities and procedures that determine the characteristics of the candidates who apply to job vacancies, and these activities are later applied in the selection process. One of the same author’s definitions, which explains the recruitment process as „the process of aligning the professional preferences and goals of individuals with the goals of the organization”, best describes the modern approach to Human Resource Management that views employees as an inexhaustible renewable resource for which, if we want maximum results, we need to create conditions that will be able to meet their needs, expectations and ambitions.

According to the authors Noah, R., Hollenbeck, J., Gerhart, B., Wright P. M., (2005) human resource recruitment is also defined as a practice or activity that an organization carries out in order to identify and attract potential candidates.

Human Resource Management experts define the recruitment process in similar ways and fully agree with the fact that the purpose of the recruitment process itself is to attract enough quality candidates to be able to choose the best ones.

Therefore, based on the above mentioned, it can be concluded that recruitment is a process of gathering candidates with certain qualifications, skills, abilities and knowledge that will achieve organizational goals by performing jobs. A recruited set is a set of candidates from which the one that best meets the requirements of the job is selected and which must have three characteristics:

1. large enough to have a sufficient number of quality candidates,
2. small enough to be managed well (you don't want to have several hundred candidates for a particular job), and
3. quality oriented.

The process of human resources recruitment, according to the author Dessler, G., (2002) implies the following elements:

1. identification of the target labour market (place of recruitment),
2. selection of recruitment sources, and
3. control and evaluation of the recruitment process.

So, in order to have quality workers at all, you have to find them first. Employers today are aware of the fact that the success of the organization depends on the quality of human resources at their disposal, moreover, in many sectors of the labour market there is a real war for the best people. With quality and efficient recruitment and selection, you can reach professionals who will be able to successfully perform the jobs required by certain positions, who will have appropriate development conditions and who will be satisfied in the workplace. The great contribution of the process of recruitment and selection of human resources in improving the performance of the organization has been confirmed by many empirical studies (Patterson, M., West, M., Lawthorn, R., Nickell, S., 1997).

Recruitment and selection processes are aimed at identifying, attracting and selecting suitable candidates who will meet organizational expectations. Recruitment and selection are inseparable processes "where recruitment stops selection begins" (Anderson, C., 1994). Regardless of their inseparability, it is important to distinguish between these two activities.

#### *2.1.4. Human resource selection*

The author Bogićević Milkić, B., (2006) defines the selection process as a set of activities that select between available candidates for a particular job and make a decision on their employment or rejection, while the author Bahtijarević Šiber, F., (1999) defines selection as a procedure by which by applying pre-established and standardized methods and techniques for a particular job, and those who best meet its requirements and become selected. Although there do not seem to be significant differences in defining the concept of selection between different authors, we can see that the author Bahtijarević Šiber, F., (1999) by defining the selection process, emphasizes the importance of job analysis on which the criteria for methods and techniques that are unique to each organization are defined. He also emphasizes that the goal of the selection process is to forecast the maximum future of both work and organizational success, which indisputably emphasizes the importance of the role of each individual in achieving organizational goals. It is up to the organizations to select candidates with a systematized approach who will contribute to the achievement of organizational goals through their work. The core of quality selection means achieving maximum compliance between job requirements and individual characteristics, i.e., identifying those candidates who, with their characteristics and potentials, fully meet the requirements of the job (Bahtijarević Šiber F., 1999).

The first step in the selection process is to **define the selection criteria and the specification of the candidates**. If the criteria by which candidates are categorized are not clear, it is impossible to reach reliable decisions when designing an appropriate selection process. Selection criteria

are usually presented in the form of specifications, i.e., a description of the person representing the ideal candidate. Lewis, C., (1985) singles out three selection criteria:

- a) **organizational criteria** – are those characteristics of workers that the organization values,
- b) **functional (departmental criteria)** – which include e.g. defining the appropriate interpersonal skills of all members of the human resources department, or the marketing, research and development department, etc.
- c) **individual job criteria** – are contained in the job description and specification and the description of the person performed based on job analysis.

Based on the above criteria, it can be concluded that for their definition, the cooperation of a team of experts (a member of the human resources sector, a member of the sector looking for an employee, a member of top management, and a psychologist) is necessary.

The second step in the selection process is **choosing the selection methods**. The purpose of selecting appropriate methods is to collect information whose analyses are used to predict the work success of an individual and to determine the degree of compliance between job requirements and individual characteristics of potential candidates (Torrington, D., Hall, L., Taylor, S., 2004).

What methods will be used depends on the job, i.e., the position for which we select candidates, general employment policies and strategies, the expertise of people dealing with human resources, philosophies and attitudes of management, etc. In essence, the information gathered and the methods chosen are the basis for deciding on the candidate selection process.

The third and final step in the selection process is to decide on the selection of candidates. Decision-making involves evaluating each candidate according to the selection criteria defined in the person's specification, and not comparing one candidate with another. Also, making the final decision represents a critical stage in the selection process, given that a choice must be made between several candidates applying for a given job. What is important for the decision on the election is what the candidate can do and what the candidate wants, given that these two factors directly affect the candidate's performance.

### ***2.1.5. Induction and Orientation***

Induction (introduction to work) and orientation, as an element of the Human Resource Management process, if it exists in organizations, is most often neglected (Brown, S. P., 1996). However, as numerous studies (DeCenzo, AD, Robbins, PS, Verhulst, LS, 2010) have shown over the years, the process of induction and orientation of workers is the right mechanism primarily set to reduce initial costs of possible mistakes that new employees make, to reduce anxiety and setting a framework of desirable behaviour, to reduce employee turnover due to feelings of inferiority, to make superiors spend less time in explaining work to new employees, to develop realistic job expectations, increase job satisfaction, etc., and nowadays more and more time and resources are invested in organizations into its design. According to a study by the Salvesten Stetson Group (Amble, B., 2006), about two-thirds of U.S. organizations believe that improving orientation programs is necessary in order to improve motivation, job satisfaction, and employee retention, or to enhance and retain the human capital that is the basis for gaining competitive advantage.

According to the authors Klein, H. J., and Weaver, N. A., (2000) the process of employee orientation is viewed as an integral part of training designed to introduce new employees to their new roles and responsibilities, to colleagues and the organization as a whole. Well-designed orientation programs result, the authors believe, in higher productivity, loyalty, and employee contribution. According to French, J. R. P., (1994) orientation is the process of introducing new employees to organization and work. Authors Werner, M., and Randy, L. D., (2009) view the orientation process as part of socialization. Authors Gregg, P., and Wadsworth, J., (1999) in their analyses show that out of 870,000 workers who started a new job in 1992, 17% of them left the job in three months and 42% in twelve months, as a result of poor adjustment of expectations with the job itself and inefficient introduction to the job.

According to the authors Torrington, D., Hall, L., Taylor, S., (2004) the introduction of new workers into work has several goals and all are aimed at preparing these new workers for more efficient work in new jobs in the shortest possible time. New employees must learn in the shortest possible time what is expected of them, what they can expect from other employees, as well as the adoption of values, culture and norms of behaviour in the organization.

As orientation and introduction to work are important for new workers, they are equally important for existing workers who have been transferred to another job. Although there is no universal orientation process, most are aimed at getting to know the job, organization, department, procedures and rules, organizational culture and employee development, in order to improve employee performance and prevent the outflow of human capital (Ganser, T., 2000).

According to authors Mondy, R. W., et al. (2002) the basic elements of the orientation process are:

- a) Situation related to employment – implies acquaintance with basic information about the job and its role in achieving the goals of the department and organization,
- b) Procedures and rules – means getting acquainted with the basic procedures and rules that are, in most organizations, written in the manual for employees,
- c) Compensation and benefits – means getting acquainted with the reward system in the organization,
- d) Organizational culture – means fitting into the system of values, beliefs and norms of behaviour characteristic of a particular organization,
- e) Teamwork – means emphasizing the importance of teamwork between employees within the department but with employees in other departments in order to understand or experience the organization as a whole,
- f) Employee development – means getting acquainted with the need for continuous improvement of knowledge, skills and abilities of employees in the role of the organization in supporting employees in achieving development goals,
- g) Socialization – means the process in which the newly employed worker adjusts and adapts to the working environment and business rules of the entire organization.

### ***2.1.6. Motivation and Job Satisfaction***

Motivation and job satisfaction as two factors that have a significant impact on the efficiency and effectiveness of the organization have been topics of study and research for years. It is important to point out that motivation and job satisfaction are two different factors and as such contribute to different influences on employee behaviour. According to the author Carr, G., (2005) motivation is the result of expectations in the future while job satisfaction is the result of past events. In the

context of organization, motivation can be viewed from two aspects (Bahtijarević Šiber, F., 1999). From the aspect of an individual, motivation is an internal state that leads to the achievement of a goal. From the manager's point of view, motivation is an activity that ensures that people strive for set goals and achieve them. Both aspects have a common meaning and the investment of efforts to achieve goals, i.e., it is seen as a process of initiating and directing efforts and activities in order to achieve individual and organizational goals. According to the author Bahtijarević Šiber, F., (1999), the system of motivation is comprised of the comprehensiveness of motivational factors, incentive measures and motivation strategies that are consciously or unconsciously incorporated into the organizational environment in order to motivate employees. A quality system, according to the author, must provide four types of behaviour: attracting and retaining the best people, quality execution of tasks and realization of set goals, encouraging creativity, solving current and development problems, creating new products/services, and identification of employees with the organization. The motivation system in the organization must be comprehensive and, in addition to the above, take into account the individual needs and aspirations of each individual employee, by creating numerous mechanisms to meet them and encourage various forms of behaviour that affect the success of the organization. The basic step in creating a system of motivation is certainly the goals that the organization strives to achieve with the basic rule of rewarding of what we want to achieve and what we want to be more of (Bahtijarevic Shiber, F., 1999). Motivation strategies such as material stimulation, redesign and enrichment of work, management style, employee participation, goal management, flexible working hours, organizational culture, recognition and praise, training and career development aim to increase motivational potential on the both individual and functional level, as well as in the organization as a whole.

Job satisfaction, according to the author Bloisi, W., (2003), refers to the attitude and level of satisfaction in all aspects of work. Respectively, according to the authors Devadoss, P., and Pan, S., (2007), job satisfaction is an individual's attitude based on his or her subjective assessment and feelings towards the level of satisfaction with job-related factors. The author Locke, E. A., (1976) views job satisfaction as a positive feeling after a job is done, that has met an individual's expectations. According to the author Armstrong, M., (2008) job satisfaction is primarily influenced by intrinsic and extrinsic factors of motivation, quality of supervision/control of work, social factors and the degree of success/failure in work. Authors Purcell, J., et al., (2003) in their research of job satisfaction factors singled out the possibility of advancement, the importance of work, teamwork and job challenge as factors of significant influence. Job satisfaction according to the author Mullins, JL, (2005) is influenced by numerous factors: Individual factors (personality, education, abilities) Social factors (relationships with colleagues, group norms), Cultural factors (basic attitudes, beliefs and values), Organizational factors (structure, policy, nature of work, leadership) and environmental factors (economic, social, government influence). Each of these factors can affect the individual and his job satisfaction, i.e., the individual may be satisfied with one and dissatisfied with another factor. In order to determine which aspects of the job an individual is satisfied or dissatisfied with, structured questionnaires, interviews, a combination of questionnaires and interviews and a focus group are used.

Job satisfaction research has involved a large and complex survey of a large number of employees across the United States (Grubić Nešić, L., 2005). According to the structured sample, 15,000 employees of all levels of management structures were surveyed, of which 91% were employed full-time, with an average age of about 33, and both sexes were proportionally represented. According to the results of the research, six factors have been identified that have a decisive influence on job satisfaction, namely:



- Opportunities provided by the job (participation in interesting projects, a challenge that is not a “simple promotion”, or a healthy need for an individual to be realized in the work he does),
- Stress (when stress is continuous, job satisfaction decreases),
- Leadership (employees are more satisfied if their managers do a good job, which means that they know how to motivate employees and that there is mutual trust),
- Labour standard (employees are more satisfied with their work if the relations in the working group are better and if mutual success is valued as significant),
- Appropriate and fair relationship (represents the knowledge that there is greater employee satisfaction, but also their performance if they are confident in the relationships that govern the organization), and
- Use of adequate authority (implies relations between employees related to decision-making, participation in decision-making relevant to the business and insight into the results of such decisions).

### ***2.1.7. Performance Assessment and Rewarding***

Research on performance appraisal and employee rewards began in the 1920s and continues to this day (DeNisi, A., 2008). According to the authors Foot, M., and Hook, C., (2011) the ultimate goal of performance management is to motivate employees to achieve organizational goals. Author DeNisi, A., (2000) views Performance Management as a set of activities by which an organization seeks to increase the performance of individuals and groups with the ultimate goal of increasing the performance of the organization as a whole. Similarly, authors Armstrong, M., and Baron, A., (1998) define Performance Management as a process that focuses on increasing an organization’s performance by improving performance and developing the capabilities of individuals and teams, thus emphasizing the strategic and integrated role of the process itself. Performance Management can be defined as a complex process of improving the performance of an organization by developing the performance of individuals and teams (Armstrong, M., 2008). In other words, performance management is an instrument for understanding and managing performance based on an agreed framework of planned goals, standards, and required competencies (Armstrong M., 2008). The main purpose of defining a performance management process is to build a common understanding of goals and develop human resources in such a way that will increase the likelihood that those goals will be achieved.

Authors studying the elements of the performance management process differ in the way of observation as well as the number of sub-processes that are necessary for efficient management (Aguinis, H., 2007, Pulakos, D. E., 2009).

In the following text of this paper, the process of performance management will be explained, according to the classification of the authors Foot, M., and Hook, C., (2011), by the following elements:

- 1. Statement of mission and vision** – The statement of vision determines the direction; the mission defines future goals and ways of their realization, while values define beliefs. If employees at all levels in the organization do not understand the vision, mission and values as well as how their specific job contributes to their realization according to the author Naisby, A., (2002) performance management system will not achieve the expected results.

2. **Competence analysis** – Competencies include the knowledge, skills and abilities that are necessary for an individual to be able to perform a particular job. They are also used as performance measurement standards.
3. **Performance rewarding** – performance rewarding is defined as feedback on the achieved performance because it shows the commitment of top management and managers to employees, increases morale and strengthens two-way communication and connects organizational with individual goals.
4. **Defining performance goals and standards** – A successful performance appraisal system is based on an organization's ability to measure and develop employee's performance by setting appropriate goals and standards (Naisby, A., 2002).
5. **Assessment of personal development** – implies regular checking of the achieved performance of employees as well as providing feedback on the current performance. The frequency of assessments will depend on the needs of the organization but should not be performed less than four times a year (Naisby, A., 2002).
6. **Impact assessment** – is the process of providing feedback on the achieved performance, setting future goals and plans for their implementation. According to the author Naisby, A., (2002) performance assessment shows the commitment of top management and middle management to employees, increases morale and strengthens two-way communication and also connects the individual with organizational goals.
7. **360-degree evaluation** – Ward, P. T., (1994) defined a 360-degree feedback approach as a systematic collection of information about the performance of individuals and teams by all stakeholders involved in business processes.
8. **Cultural aspect** – implies harmonization with the culture of the country in which the system is developing. (Mendonca, M., & Kanungo, N.R., 1996).

#### ***2.1.8. Human Resources Development and Education***

Today, the concept of continuing education in the workplace is becoming one of the most important elements of Human Resource Management and development in an organization. Employee development is a continuous process that includes formal education, work experience, relationships with other people and assessment of personality and abilities, which allows the employee to prepare for future jobs (Bogićević Milkić, B., 2006). As training and education are given increasing strategic importance, it is very difficult to draw a clear line between training and employee development. While employee development is focused on adapting to future job needs, training is focused on adapting to current job needs (Jackson, S. E., & Schuler, R. S., 1995).

For a long time, employee training and education, as well as the function of Human Resource Management, have been viewed as a cost rather than an investment, while reduction of the workforce remains one of the main cost reduction strategies (Uchitelle, L., Kleinfeld, N., 1996). The most comprehensive study on the impact of training and education of employees on business results is certainly the study by Hansson, B., (2001), where he conducted research in 6000 organizations in 26 different European countries and proved their positive impact on reducing turnover, increasing performance, profit and stock price increase. Another important study on the impact of training and education on the organization's business is a study conducted in the UK (Tamkin, P., et al., 2004) in which it was proven that investing in employee education by profit funds exceeds the cost per worker, and it was also proven that more efficient organizations employ more educated workers and that different types of training affect the improvement of different results. Many studies over the years have shown that practices in Human Resource Management and

development significantly affect organizational outcomes (Miles, RE, Snow, CC, 1984; Schuler, RS, Jackson, SE, 1987; Lengnick-Hall, Lengnick-Hall, 1990; Baird, L., Meshoulam, I., 1988; Schuler, RS, Jackson, SE, Rivero, JCR, 1989; Wright, PM, Snell, SA, 1998; Jackson, SE, Schuler, RS, 1995; Wright, PM, Smart, DL, McMahan, GC, 1995; Delery, JE, 1998; Barney, JB, Wright, PM, 1998; Kepes, S., Delery JE, 2007; Shih, HA, Chiang, YH, Hsu, CC 2006), but the problem of adapting these practices to the conditions in which the company operates and the characteristics of the workforce at its disposal remains unsolved.

For an average employee, additional training means improving skills, job satisfaction and increasing their own value in the labour market. For organizations, the best response to future challenges is highly trained and motivated workers. One of the ways in which the human resources department can contribute to the creation of competitive advantage is by defining employee training and education programs in order to create intellectual capital (Noah, R., et al., 2000).

The concept of development of education of both individuals, as members of society, and employees, as members of the organization, becomes one of the key factors for gaining a competitive advantage in today's knowledge economy and a condition for the survival of organizations (Swanson, A. R., Holton, E. F., 2001). The development of human resources in the organization, education and training in the workplace, is one of the ways to achieve this goal. All these data lead to the conclusion that organizations are becoming the most important educational institutions today.

All of the above leads us to the need for systematic monitoring and improvement of knowledge at the organizational level, and the following model of the process of human resources development in organizations can help us, which contains the following elements (Bahtijarević - Šiber, F., 1999):

1. **Determining the educational needs of the organization** – the main task of this phase is to determine what knowledge, skills and abilities employees should have to successfully perform tasks and achieve organizational goals, which employees do not have knowledge of or do have insufficient knowledge and skills and whether education will address these shortcomings. In order to answer these questions, it is necessary to conduct detailed analyses on three levels: analysis of the organization, analysis of the work and analysis of the executor of the work, i.e., an individual.
  - a. **the analysis of the organization** provides a general framework, direction and needs for education. It is aimed at identifying educational needs from the perspective of the organization, its goals, business strategy, organizational units, culture, change, resources and educational opportunities.
  - b. **job analysis** can be defined as “the process of gathering relevant job information and specifying the knowledge, abilities, skills, and other requirements necessary to perform a particular job” (Schuler, R. S., 1995).
  - c. **the analysis of the individual** provides an answer to the question of who needs education, as well as what knowledge should be the subject of training. The basis for determining individual educational needs is the analysis of the harmonization of necessary and available knowledge, skills and abilities to perform a certain job. The education of individuals is necessary when it comes to changing work requirements, changing technology, changing standards, etc.
2. **Determining the goals of education** – Goals are the starting point for the design of educational programs but also the basis for determining the criteria for assessing their success.
3. **Determining the content and programs of education** – the contents and programs of education are related to the needs and goals that arise from them. There are several lev-

els and types of educational needs in organizations that determine the specific contents of individual educational programs. The first level of needs is aimed at training employees for current jobs and eliminating the gap between expected and actual success that usually arises as a result of the discrepancy between the job requirements and the educational profile of the executor. The second level of educational needs is related to the expansion of knowledge of individuals and thus increase the ability to perform more complex and diverse tasks within the same organizational level. The third level of organizational needs is related to individual career development, realization of succession plans, etc., i.e., preparation of employees for performing more complex and demanding jobs. The fourth level of educational needs is related to the future. It includes education and training programs based on a predicted picture of the knowledge and skills needed to achieve a particular strategy. Each level of educational needs sets different requirements in terms of educational programs and content.

While the levels of educational needs indicate the intensity and depth of the required education, the types of educational needs indicate its content, i.e., which skills and knowledge should be focused on. Based on Katz's categorization of skills and knowledge within the organization, we can categorize four types of educational needs (Katz, R. L., 1974):

1. basic knowledge and skills,
  2. technical, professional skills,
  3. interpersonal skills, and
  4. conceptual, strategic skills.
- 4. Selection of methods and techniques of education** – Different methods are linked to specific goals and programs of training and education. In general, all methods can be divided into two groups, i.e., on-the-job education methods and off-the-job education methods. The choice of the appropriate method depends on the educational program and its goals. The key question is what should be learnt.
- 5. Evaluation of educational programs** – represents the final phase in the process of education and development of educational programs in which it is examined to what extent the set educational goals have been achieved and realized. The evaluation of educational programs in principle has two purposes: to determine whether the program has achieved its goals and whether there has been a transfer of the learnt to work, or change of work behaviour and success, and to determine the quality of organization, the content and implementation of programs for further improvement.

### 3. THE RESEARCH

The problem of this paper in the empirical part is to determine the differences in the application of Human Resource Management process activities represented in service and production organizations. The goals of the theoretical part of the paper were to analyse the content of contemporary literature in the field of Human Resource Management and defining the activities of the human resources management process, while the empirical goals of the paper were aimed at determining differences between organizations of different activities (service and production).

As it is defined in the introductory part, the initial hypothesis of the paper is:

**H:** There is a statistically significant difference in the attitudes of respondents related to human resource management activities in the service sector versus respondents from the manufacturing sector.

The questionnaire, which was conceived for one larger research volume (Savić Tot, T., doctoral dissertation 2016), examined managers employed at all three management levels of economic entities in the Rasina district. The research instrument is conceived in the batteries of issues related to human resources management activities in the following sub-processes:

- job analysis,
- human resource planning,
- recruitment of human resources,
- selection of human resources,
- introduction to work and orientation,
- motivation and job satisfaction,
- performance appraisal and rewarding employees, and
- human resource development.

The questionnaire used a five-point Likert scale in which the respondents, by circling one of the offered alternatives, state the degree of agreement or disagreement with what is the content of the question for the following values:

- 1 – I don't agree at all,
- 2 – I partially disagree,
- 3 – I don't know,
- 4 – I partially agree, and
- 5 – I completely agree,

as well as closed-ended questions in which the respondents had the opportunity to complete one or more offered answers, as well as an alternative to writing additional answers if it was not provided by the questionnaire.

The Alpha coefficient was applied for the reliability of the Questionnaire. Considering that the reliability of the Alpha coefficient ranges from 0 to 1, based on the obtained result, it can be concluded that the reliability of the Questionnaire is high.

In the realization of the research, the following statistical methods were applied:

- a) Mann-Whitney test – Mann-Whitney U-test is equivalent to the parametric t-test, because it compares two groups of data, but over the median.
- b) Spearman's correlation rank - Spearman's correlation coefficient (product of correlation rank) is used to measure the relationship between variables in cases where it is not possible to apply Pearson's correlation coefficient. It is based on measuring the consistency of the relationship between variables, and the form of the relationship (e.g. the linear form which is a prerequisite for using the Pearson coefficient) is not important.
- c) Pearson's chi-square test - The most common non-parametric estimate used is the  $\chi^2$  test.  $\chi^2$  distribution is used in scientific research when it should be determined whether a distribution of the obtained measurement results deviates significantly from another distribution or if they match.

The research sample consisted of 127 respondents, members of the management of the first, second (functional) and third (top) management level from 86 economic entities of Rasina district. The selection of organizations was made based on business success and geographical affiliation of the Rasina district in which the research was conducted.



**Table 1.** Sample structure in relation to the activity of the organization

Field:	No. of respondents	%
Production	58	46,03%
Service	68	53,97%
Total	126	100%

### 3.1. The Results of the Research

The following results were obtained by analysing the representation of the activities of the sub-process of job analysis in relation to the activities of the organization:

- a) In relation to the activities of the organization, Mann -Whitney test found that respondents employed in service organizations with a higher score and degree of agreement rated the following activities unlike the respondents employed in production:
- You had the opportunity to discuss a description of your job with your superiors (U=1618.00, z=-1.993, p<0.05),
  - Job descriptions clearly specify education and qualifications needed (U=1637.000, z=-2.190, p<0.05).

For other items, the Mann-Whitney test did not indicate significant differences.

**Table 2.** Testing the differences between respondents employed in production and service organizations in relation to the representation of the activities of the job analysis process using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
You had the opportunity to discuss a description of your job with your superiors	1618.000	-1.993	.046*
Job descriptions clearly specify education and qualifications needed	1637.000	-2.190	.029*

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

Pearson's  $\chi^2$  test determined the differences between the respondents employed in organizations with different activities in the answer who does the systematization of jobs ( $\chi^2 = .900$ ,  $p = 0.638$ ). In service organizations, the systematization of jobs was done by the human resources department, while in production organizations the systematization was done by the legal department of the organization.

The analysis of the representation of the activities of the human resources management planning sub-process in relation to the activities of the organization brought **the following results:**

- a) In relation to the activity of the organization, the Mann-Whitney test established that the respondents employed in service organizations rated the following activities with a higher grade and degree of agreement than the respondents employed in production organizations:
- In your organization there is a continuous monitoring of retirement of employees for a period of 5 years (U = 1451.50, z = -2.825, p <0.01),
  - In your organization there is a systematization of jobs (U = 1699.50, z = -2.110, p <0.05).

**Table 3.** Testing the differences between respondents employed in production and service organizations in the representation of human resource planning process activities using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
In your organization, there is a continuous monitoring of employee retirement for a period of 5 years	1451.500	-2.825	.005**
There is a systematization of jobs in your organization	1699.500	-2.110	.035*

Grouping variable: type of activity

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

**By analysing the representation of the activities of the recruitment sub-process in relation to the activities of the organization** – the following results were obtained:

- a) **In relation to the activities of the organization** Mann-Whitney test found that respondents employed in service organizations with a higher score and degree of agreement rated the following activities than respondents employed in production organizations:
- When the need arises for a new job, you hire potential candidates by selecting people from outside the organization (U=1106.00, z=-2.418, p<0.05),
  - If the registered candidates do not meet the requirements of the competition, your organization informs them that they have been rejected (U=1504.500, z=-2.192, p<0.05).

For other activities, the Mann-Whitney test did not indicate significant differences.

**Table 4.** Testing the differences between respondents employed in production and service organizations in relation to the represented activities of the process of recruiting human resources using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
When the need arises for a new job, you hire potential candidates by selecting people from outside the organization	1106.000	-2.418	.016*
If the registered candidates do not meet the requirements of the competition, your organization informs them that they have been rejected	1504.500	-2.192	.028*

Grouping variable: type of activity

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

The following results were obtained by **analysing the representation of the activities of the selection sub-process in relation to the activities of the organization**:

- a) **In relation to the activities of the organization** Mann-Whitney test found that respondents employed in service organizations with a higher score and degree of agreement rated the following activities differently from respondents employed in production:
- Your organization uses knowledge tests to select employees (U=1662.50, z=-2.312, p<0.05),
  - Your organization uses personality tests to select employees (U=17800, z=-2.111, p<0.05).

**Table 5.** Testing the differences between respondents employed in production and service organizations in the representation of human resource selection process activities, using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
Your organization uses knowledge tests to select employees	1662.500	-2.312	.021*
Your organization uses personality tests to select employees	1780.000	-2.111	.035*

Grouping variable: type of activity

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

Pearson's  $\chi^2$  test determined the differences between respondents employed in production and service organizations in naming the person interviewing with candidates ( $\chi^2 = 13,526$ ,  $p < 0.01$ ), in production organizations it is done by the director of human resources, and in service teams it is done by the experts. Pearson's  $\chi^2$  test did not identify differences between respondents employed in manufacturing and service organizations in stating who makes the final decision on hiring workers and who creates job advertisements in the organization.

The following results were obtained by analysing the representation of the activities of the sub-process of orientation and introduction to work in relation to the activities of the organization:

- a) **In relation to the activity of the organization**, the Mann-Whitney test found that the answers of respondents employed in service organizations do not differ from the answers of respondents employed in production organizations, but Pearson's  $\chi^2$  test found differences between respondents employed in production and service organizations regarding the person who is assigned to be a mentor to trainees ( $\chi^2 = 9,960$ ,  $p < 0.041$ ) - in production organizations the mentor is a fellow associate, while in service organizations it is trainees' direct superior.

**Table 6.** Cross-tabulation with a presentation of the distribution of the answers to the representation of the activities of the process of orientation and introduction to work, depending on the type of activity of the organization in which the respondent is employed

The person who is assigned to be a mentor to trainees	Type of activities			
	Production		Service	
	Count	Column N %	Count	Column N %
Direct superior	13	22.8%	32	49.2%
Superiors and colleagues	4	7.0%	3	4.6%
Fellow associate	25	43.9%	19	29.2%
It is determined arbitrarily	12	21.1%	7	10.8%
There is no mentor to do the internship	3	5.3%	4	6.2%

The following results were obtained by analysing the representation of the activities of the sub-process of performance evaluation and rewarding employees in relation to the activities of the organization:

- a) **In relation to the activities of the organization** Mann-Whitney test found that respondents employed in service organizations with a higher score and degree of agreement rated the following activities than respondents employed in production organizations:
- In the organization in which you are employed there is a person in charge of controlling your work ( $U = 1506,500$ ,  $z = -2,398$ ,  $p < 0.05$ )

- After evaluating your results, you receive feedback on whether or not you met the set goals (U = 1444.500, z = -2.764, p <0.01)
- Your work evaluates compliance with procedures and rules (U = 1658.000, z = -1.920, p = 0.05),
- In your organization, the success of the work is measured by submitting periodic reports of employees (U = 1262,000, z = -4,364, p <0.01),
- Rewarding is applied through attending courses / seminars (U = 1756.500, z = -2.117, p <0.05),
- Improvement in your organization depends on the personal connections (U = 1617.000, z = -2.835, p <0.01),
- Rewarding is applied through the possibility of choosing work tasks (U = 1856.000, z = -2.083, p <0.05),
- Rewarding is applied through promotion (U = 1568.500, z = -2.620, p <0.01),
- Rewarding is applied through written acknowledgments (U = 1711.000, z = -3.009, p <0.01),

while the respondents who are employed in production organizations rate the following activities with a higher grade and the degree of agreement than the respondents employed in service organizations:

- Estimation of your results in work affects earnings (U = 1337,500, z = -1,997, p <0.05),
- Your organization has an appropriate performance appraisal system (U = 1337.500, z = -3.101, p <0.01),
- There is an appropriate reward system in your organization (U = 1412,000, z = -2,959, p <0.01),
- Accuracy is evaluated in your work (U = 1642.500, z = -2.188, p <0.05),
- Your work evaluates compliance with deadlines (U = 1612.500, z = -2.191, p <0.05),
- In your organization, the success of the work is measured by comparing the set and achieved goals in a given period (U = 1671,500, z = -1,996, p <0.05),
- Rewarding is applied through monthly incentives (U = 1387.500, z = -3.468, p <0.01).

**Table 7.** Testing the differences between respondents employed in production and service organizations in relation to the representation of the activities of the process of performance evaluation and rewarding using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
In the organization you are employed in, there is a person who is in charge of controlling your work	1506.500	-2.398	.016*
After evaluating your results, you receive feedback on whether or not you have met the set goals	1444.500	-2.764	.006**
Evaluating your work results affects earnings	1551.000	-1.997	.046*
There is an appropriate performance appraisal system in your organization	1337.500	-3.101	.002**
There is an appropriate reward system in your organization	1412.000	-2.959	.003**
Accuracy is evaluated in your work	1642.500	-2.188	.029*
Your work evaluates compliance with procedures and rules	1658.000	-1.920	.055*
Compliance with deadlines is assessed in your work	1612.500	-2.191	.028*
In your organization, job performance is measured by submitting periodic employee reports	1262.000	-4.364	.000**
In your organization, the success of doing business is measured by comparing set and achieved goals in a given period	1671.500	-1.996	.046*

Rewarding is applied through monthly incentives	1387.500	-3.468	.001**
Rewarding is applied through attending courses / seminars,	1756.500	-2.117	.034*
Rewarding is applied through the possibility of choosing work tasks	1856.000	-2.083	.037**
Rewarding is applied through promotion	1568.500	-2.620	.009*
Rewarding is applied through written acknowledgments	1711.000	-3.009	.003*
Advancement in your organization depends on the connection	1617.000	-2.835	.005*

Grouping variable: type of activity

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

The following results were obtained by analysing the representation of the activities of the sub-process of job satisfaction and motivation in relation to the activities of the organization:

- a) **In relation to the activities of the organization** Mann-Whitney test found that respondents employed in service organizations rated the following activities with a higher score and degree of agreement than respondents employed in manufacturing organizations:
- You think you would do a better job if interpersonal relationships were better (U=1586.500, z=-2.327, p<0.05)
  - Too much administration makes your work difficult for you (U=1366.000, z=-2.978, p<0.01)

**Table 8.** Testing the differences between respondents employed in production and service organizations in relation to the represented activities of the process of job satisfaction and employee motivation using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
Too much administration makes your work difficult for you	1366.000	-2.978	.003**
You think you would do a better job if interpersonal relationships were better	1586.500	-2.327	.020*

Grouping variable: type of activity

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

The following results were obtained by analysing the representation of the activities of the sub-process of human resources development, in relation to the activities of the organization:

- a) **In relation to the activity of the organization**, the Mann-Whitney test established that the respondents employed in service organizations rated the following activities with a higher grade and higher degree of agreement than the respondents employed in production organizations:
- Your organization organizes training and development for employees (U=1357.000, z=-2.994, p<0.01)
  - During training and specialization, the organization offers opportunities: Payment of education costs (U= 1562.500, z=-2.575, p<0.01),
  - During training and specialization, the organization offers opportunities: Part-time work (U= 1743.000, z=-2.378, p<0.05),
  - You feel that additional training would improve your efficiency in the work you do (U= 1481.000, z=-2.453, p<0.05),
  - There is a budget in your organization for training and education of employees (U=1325.000, z=-3.146, p<0.01).



**Table 9.** Testing the differences between respondents employed in production and service organizations in relation to the represented activities of the human resources development process, using the Mann-Whitney test

	Mann-Whitney		
	U	Z	p
Your organization organizes training and development for employees	1357.000	-2.994	.003**
You feel that additional training would improve your efficiency in the work you do	1481.000	-2.453	.014**
There is a budget in your organization for training and educating workers	1325.000	-3.146	.002**
Have you had training in the last period	1289.000	-3.610	.000**
During training and specialization, the organization offers opportunities: Part-time work	1743.000	-2.378	.017*
During training and specialization, the organization offers opportunities: Payment of education costs	1562.500	-2.575	.010**

Grouping variable: type of activity

Meaning:

\* Significance at a level less than 0,05

\*\* Significance at a level less than 0,01

The respondents employed in production organizations rated the following activities with a higher grade and higher degree of agreement than the respondents employed in service organizations:

- During training and specialization, the organization offers opportunities: Payment of education costs (U= 1562.500, z=-2.575, p<0.01),
- During training and development, the organization offers opportunities: Part-time work (U= 1743.000, z=-2.378, p<0.05).
- The Mann-Whitney test indicated that respondents employed in production organizations had more training time (U= 1289.000, z=-3.610, p<0.01).

#### 4, RESULTS-RELATED DISCUSSION

The analysis of the differences between service and production organizations in the application of the activities of the human resources management process has established that:

1. **Within the process of job analysis in service organizations, statistically significant differences showed that** employees were more often able to discuss their job descriptions with their superiors, and that job systematization was done by the human resources department, while in production organizations the systematization was done by the legal department. The possibility of discussion of a job description indicates a less formal process of job analysis in service organizations that allows employees to clarify any possible ambiguities related to business goals, defined criteria and to indicate possible inconsistencies between job description and what is really done, in such a way that enables continuous updating of the job description as a basic document in the upcoming human resources management sub-processes. The difference in the responsibility for job systematization in service organizations left to the human resources department indicates a positive step that organizations have taken in managing their human resources by forming a department whose main job is to define activities and processes of employee management as opposed to production organizations, which still leave it to the legal department, which deals exclusively with administrative matters related to employees.

2. **Within the process of human resources planning in service organizations, statistically significant differences showed** that there is continuous monitoring of employee retirement for a period of 5 years and that there is a systematization of jobs, which indicates that service organizations plan long-term employee movements, which enables them a solid starting point for defining a specific human resources plan or strategy that will be implemented in the coming period. The only thing that needs to be taken into account is that the defined human resources plan is harmonized with the strategic goals of the organization.
3. **Within the process of recruiting human resources in service organizations, statistically significant differences showed that** when there is a need for a new job, potential candidates are hired primarily by selecting people from outside the organization and that if applicants do not meet the requirements of the competition, the organization informs them that they have been rejected. The selection of people outside the organization indicates a low utilization of internal sources of recruitment as well as their advantages in motivating employees, reducing the cost of external recruitment, the cost of „vacancies” and creating a clear system of employee promotion. Only when the organization has exhausted the possibilities of internal recruitment of candidates should it apply the sources of external recruitment. The answer to the rejected candidates provides the opportunity to create a good image of the organization in the market, because one of the biggest objections of the rejected candidates is getting feedback on the reasons for non-compliance with a particular job. Also, organizations are given the opportunity to gain insight into the ranking of the desirability of their organization in the environment and in relation to the competition, based on monitoring the qualifications of candidates.
4. **Within the process of human resources selection, statistically significant differences showed that** in service organizations, knowledge tests and personality tests are used when selecting employees, while a team of experts is in charge of interviewing candidates. These tests as a chosen method of selection indicate the specificity of the service sector in which the personality of employees is crucial in jobs that involve direct contact with clients, and who are in charge of assessing the quality of service provided. As the team of experts is in charge of the selection process, it can be concluded that the criteria of the selection process are defined at three levels (organization, function and job), which allows a higher degree of fit of the candidate with job description and job requirements as well as a greater probability of selecting the needed candidate and not the available one.
5. **Within the process of orientation and induction in service organizations, statistically significant differences showed that** the person in charge of the training of trainees in service organizations is their direct superior, while in production organizations it is a colleague who is also an associate, which indicates the specificity of employees in the service sector, who, due to the intangibility of their services, need to be involved in the entire service process in the organization. Cooperation with the immediate superior enables new employees to get all the necessary information about their job, its connection with other jobs, goals and tasks, etc.
6. **Within the process of performance evaluation and remuneration in service organizations, statistically significant differences showed that** there is a person in charge of controlling the work of each employee, that employees receive feedback after evaluating the results of work on whether or not they met the set goals, that their work is evaluated by whether they are following procedures and rules, that the success of work is measured by submitting periodic reports of employees, that rewards are applied through attending courses/seminars, but also that work promotion depends on personal connections, that

rewards are applied through the possibility of choosing work tasks, through promotion and written acknowledgments. All activities singled out by the respondents in service organizations indicate that the system of rewards is not well defined, because it is expected that the system would be assessed as appropriate if the results would affect earnings as a basic material reward, if parameters such as deadlines, accuracy, timeliness, etc. would be assessed, if that success is measured by comparing set and achieved goals, if there are monthly incentives, etc. Insufficiently well-defined reward system affects motivation and job satisfaction as well as interpersonal relationships, which in the service sector, that is in direct contact with customers, primarily affects the quality of service and customer satisfaction and also results in poor performance of the organization.

7. **Within the process of motivation and job satisfaction in service organizations, statistically significant differences showed that** employees in service organizations would do a better job if interpersonal relationships were better and that their work was made more difficult by too much administration. Poor interpersonal relationships negatively affect all aspects of business, especially in service organizations. Sources of employee dissatisfaction can be numerous and the basic task of the human resources department is to determine the sources of dissatisfaction and define ways to overcome them. Too much administration in service organizations primarily affects the flexibility and speed of providing service to customers. The possibility of creating databases and computerization of business greatly facilitates the management of administration that is necessary for doing business in any organization.
8. **Within the process of development and training of human resources in service organizations, statistically significant differences have shown that** in service organizations training and development of employees are organized more often, that during training and development the organizations offer opportunities: payment of education costs and part-time work, also, that there is a budget in the organizations that is intended for training and education of workers, and that employees believe that additional training improves their efficiency in the work they do. The obtained results are certainly encouraging because they primarily indicate that service organizations plan the budget for employee development and training in advance, that they apply methods of stimulating employees in the training process and that employees view additional education as a tool that enables them to do their jobs better. What should be taken into account is that the goals of development and training of employees are in line with the strategic goals of the organization, that the choice of educational methods is aligned with the capabilities of the organization, that training is available to employees at all levels to provide equal opportunities and avoid bad interpersonal relations as well as to connect additional training and education with the system of rewarding employees. The development and training process is recognised as the key driver for gaining competitive advantage (Armstrong, M., Baron, A., 2005). Insight in this important process in service organizations in Rasina district was a subject of research (Tot, V., Savić Tot, T., Aleksić, S., 2019) and the results indicated the most important characteristics that can be implemented in service organizations.

## 5, CONCLUSION

The hypothesis set in the paper was confirmed because as shown in the research results in each sub-process of the Human Resource Management process there is a statistically significant difference related to human resource management activities in service organizations versus production organizations.

Considering the specifics of the service process itself, which is based on a much closer relationship with customers, creating a service in front of the customer, more realistic and larger turnover, it was to be expected that human resource management activities of service organizations in some segments are much more developed than in the manufacturing sector. It is as if the role and place of Human Resource Management is better defined and more purposeful, because employees are realistically a key resource of service organizations. Instead of a conclusion, we give an overview of the significant results of each sub-process of Human Resource Management as well as a recommendation due to the new situation.

In the analysis of the work, the systematization was done in closer cooperation between superiors and executors, and that work was done by the human resources department. However, today's business requires redefining jobs in the service sector, observing them through the prism of the application of information technology, in order to adapt to the impact and consequences of the pandemic. Only human resource planning in service organizations marks continuous monitoring of employee retirement as well as long-term human resource planning, but today we have a redefining of strategic goals and the planning must be aligned with them. The results of the research indicate the need to change the focus on internal resources in the recruitment sub-process.

The selection of human resources is well organized, and it should include the verification of new knowledge that is a consequence of the pandemic and the changed systematization of jobs.

Introduction of employees to work (induction) as the result of the research, showed the role of the superior in the service organizations, and our recommendation is to raise it to a higher level, i.e., to mentoring in the sub-process of induction and to connect it with building a system of remuneration and evaluation performance, which, among other things, means that both mentors and new employees have benefits, as well as sanctions.

The reward system, especially nowadays, must be transparent, because the service sector is facing serious business cuts. Unfortunately, the activities singled out as significant by the respondents in service organizations indicate an insufficiently well-defined reward system, because it would be expected that the system would be assessed at least as appropriate, that the results would affect earnings as a basic material reward, and parameters such as deadlines, accuracy, timeliness, etc., also that success is measured by comparing set and achieved goals, that there are monthly incentives, etc. Insufficiently well-defined reward system affects motivation and job satisfaction, as well as interpersonal relationships, which in the service sector, that is in direct contact with customers, primarily affects the quality of service and customer satisfaction and results in poor performance of the organization.

According to the respondents, the motivation and satisfaction of employees in service organizations today are burdened with too much administration and bad interpersonal relations, which will only be more pronounced with the crisis, and therefore the administration process should be automated and digitized as much as possible, while at the same time it should be worked on the cohesion of employees as much as possible, as well as on creating clear goals necessary for the functioning of the organization itself.

The process of employee development and training must be in line with the acquisition of the necessary knowledge and skills, caused by the two key factors of today's pandemic business and the digitalization of the entire business.

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# TOURISM PROVIDERS, ACHIEVEMENT, CULTURE AND JOB SATISFACTION IN SERBIA

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**Abstract:** *This paper aims to investigate the relationships between GLOBE national culture dimensions, the facets of job satisfaction and the need for achievement relation in Serbian tourism providers. The sample consists of 120 managers in the Serbian service sector/tourism providers in Serbia (transportation, utility companies, telecommunications, and banks). The results obtained proved that national culture dimensions are significant predictors of all facets of job satisfaction and that the relations between some organizational culture dimensions and the facets of job satisfaction are moderated by the need for achievement variable. Our results may be of interest to human resources managers in the Serbian tourism service providers.*

**Keywords:** *National culture, Job satisfaction, Need for achievement, Gender, Tourism providers, Serbia.*

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## 1. INTRODUCTION

The last two decades were the time of political and economic changes in Serbia and many Eastern European countries. Transitional societies have significant cultural differences that are based on different histories and transitional pathways (Mebrahtu et al., 2000). Joint political programs, the power, and the mobility of transnational capital, as well as the impact on the individual national system, are comprehensive evidence that social systems fundamentally converge in terms of the functioning of the regulatory system, and the knowledge from the organizational level clearly indicates that national differences are what moderate the factors that affect the way organizations work (Blyton, 2001). Feichtinger and Fink (1998) argue that cultural and similar processes in transition countries that have a communist legacy produce a „cultural shock”. In transition countries, culture shock is the product of complex economic, social, and political forces, and an important conceptual tool for managers who are responsible for international strategy in transition countries, as established by Fink and Holden (2002). Managers must be aware of the cultural differences and similarities in order to be successful in working with people from other cultures (Javidan, House, 2001; Gerhart, 2008), this is of particular importance to the service sector.

Globalization has also affected changes in the service sector. Due to the changes, but also due to the development of tourism, an important factor in the quality of the tourist destination is tourism providers. On the other hand, according to Kirin & Gavrić (2017), the main problems of the tourism sector in Serbia relate to tourism providers (e.g. road infrastructure, renovation of facades, traffic jams, etc.) which require large human and material resources. Zouni & Kouremenos (2008) emphasize the importance of effective inclusion of local factors (main destination stakeholders) in the successful operation, sustainability, and long-term viability of a tourist destination. The authors indicate that destination competitiveness can be improved by coordi-

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nation of evaluations between the most directly involved parts of destination, tourists (tourism demand), and tourism professionals (tourism supply). The research regarding resident attitudes to tourism development shows positive results towards the provision of the community facility, job creation, and the promotion of the area for tourism (Mason, Cheyne, 2000).

This paper aims to investigate the relationships between GLOBE national culture dimensions, the facets of job satisfaction and the need for achievement and gender in tourism service providers in Serbia (transportation, utility companies, telecommunications, and banks).

Hofstede (1980) has investigated cultural dimensions in some Yugoslav republics (Slovenia, Croatia and Serbia). After the break-up of Yugoslavia, it was determined that in Serbia power distance (86) and uncertainty avoidance (92) indexes were very high, and individualism (25) and masculinity indexes (43) were very low (Hofstede, 2001, p 501). Hofstede (2010) stated that all organizations are embedded within societal cultures, which are likely to have an ambient influence on the organizations embedded within them. GLOBE project accepts Hofstede's model and paradigm but also presents an important point in the development of Hofstede's doctrine.

According to Morris et al. (1994), individualism/collectivism is an important factor in understanding entrepreneurial behavior in the organization, but it can be assumed that corporate entrepreneurship depends more on collective actions and cooperative spirit than on independent/individualistic actions (Finkelstein, 2011). The findings from Tiessen (1997) show that individualism and collectivism neither encourage nor discourage entrepreneurship, they influence how its functions are accomplished - individualists produce breakthroughs that collectivists implement and improve. He suggests the best entrepreneurs need to connect with others and with the help of others make their ideas better and achieve their goals. It can be assumed that the same refers to intrapreneurs. National cultures are especially important for intrapreneurship in the tourism industry, particularly for tourism providers, in order to maximize the quality of the tourist destination. Wakkee et al. (2010) point out that in the long run entrepreneurial behavior within existing organizations (intrapreneurship) has a positive effect on the financial performance of organizations, and that the creation of entrepreneurial employees is important in traditional service sectors. Intrapreneurship can be developed in firms of different sizes, including tourism and trade and it should be promoted as the key for business success (Auer Antoncic & Antoncic, 2018). Due to all the above facts, we investigate national culture as a predictor of job satisfaction and moderating effect of need for achievement on the relation between national culture (as an independent variable) and job satisfaction (as a dependent variable) in the tourism service providers in Serbia.

## **2. NATIONAL CULTURE, JOB SATISFACTION AND NEED FOR ACHIEVEMENT**

### **2.1. National culture**

Among the first researchers who recognized the importance of national culture and its impact on organizations were Kluckhohn and Strodtbeck (1961). Besides them, numerous other researchers were dedicated to defining the cultural dimensions and their influence on the organization (Hall, 1976; Triandis, 1995; Hofstede, 1980, 2001; Trompenaars & Hampden-Turner, 1997; House et al., 2004; Dimitratos et al., 2011; Gerhart, 2008; Dickson et al., 2003, etc.). One of the reasons why national culture is important is the assumption that it is a constraint on man-



agement practices and organizational culture (Gerhart, 2008). Besides, culture is an important factor that determines the profile of individual values, but also the values of the organizational culture of the companies operating within it and significantly affects the organizational culture (Hofstede 1980, 2001; Trompenaars & Hampden-Turner, 1997). National culture can be a significant variable that influences the development of cognitive style and perception of managers (Dimitratos et al., 2011). Dickson et al. (2003) point out that the GLOBE dimensions of culture (Javidan & House, 2001) serve the needs of global managers to have the cultural ability or to be sensitive to cultural differences.

Knowing the cultural dimensions and the characteristics of different cultures can help managers in tourism and organizations from other sectors to create a culture that contributes to employees being motivated and satisfied (Paunković & Jovanović 2016). Researchers emphasize the importance of culture in the service sector. Nazarian et al. (2017) examine the impact of national culture on the hotel industry. The results obtained show that culture is an important factor for achieving a balanced organizational culture and that has an influence on performance. Studies conducted by Hui et al. (2004) in hotel employees show that power distance has a moderate effect on the relationship between empowerment and job satisfaction. Merritt (2000) indicates that national culture has a greater influence than the professional culture of airline pilots. Alajmi et al. (2011) found that national culture dimensions, power distance and uncertainty avoidance affect the information flow and communication policy in the service sector. Pavluković et al. (2017) examined the impact of national culture on local residents' attitudes towards tourism. Based on previous studies, in the service sector in Serbia, culture dimensions are predictors of the dimensions of entrepreneurial orientation (Nedeljković Knežević & Pavluković, 2020).

For this study, we used the GLOBE model. The initial aim of the GLOBE (Global Leadership and Organizational Behavior) research project was the development of national and organizational measures of culture and leadership applicable to cross-cultural research. The GLOBE cultural dimensions are based on several studies (Hofstede, 1980; 2001; House et al., 1999; Dickson et al. 2000). The GLOBE project has empirically established nine cultural dimensions (for national and organizational culture) that were covered by 78 survey questions, half of them asking subjects to describe their culture ('as is') and the other half refers to what should be ('should be'). GLOBE is a multi-phase, multi-method, and the nine "as is" GLOBE cultural dimensions are (House et al., 2002; House et al., 2004; Vukonjanski et al., 2012):

1. Uncertainty Avoidance: The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events.
2. Future Orientation: The degree to which a collective encourages and rewards future-oriented behaviors such as planning and delaying gratification.
3. Power Distance: The degree to which the members of a collective expect power to be distributed equally.
4. Collectivism I (Institutional): The degree to which organizational and societal institutional practices encourage and reward the collective distribution of resources and collective action.
5. Humane Orientation: The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others.
6. Performance Orientation: The degree to which a collective encourages and rewards group members for performance improvement.
7. Collectivism II (In-Group): The degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.

8. Gender Egalitarianism: The degree to which a collective minimizes gender inequality.
9. Assertiveness: The degree to which individuals are assertive, confrontational, and aggressive in their relationships with others.

## **2.2. Job satisfaction**

There are many definitions of job satisfaction. Job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences (Locke, 1976). Also, job satisfaction is an attitude reflecting how well people like or dislike their job, a person's evaluation of his/her job, and work context (Spector, 1997). Job satisfaction is viewed as an attitude to the job in terms of global satisfaction or terms of facet of satisfaction including the pay, work itself, supervision, promotion opportunities, benefits, rewards, procedures, communication and coworkers. In this paper, Spector's definition will be applied.

According to Spector (1997), there are three reasons for the evaluation of the employees' job satisfaction. First, employees should be respected as individuals that could contribute to general organizational success. Second, evaluation of the employees' job satisfaction could serve as an indicator of the business effectiveness among the employees. Third, the job satisfaction of the employees might cause positive effects on the general fulfillment of the organizational goals. Job satisfaction is linked to the motivation, productivity, efficiency, and work-related satisfaction of employees (Hwang & Chi, 2005). On the other hand, job dissatisfaction can significantly affect the behavior of employees resulting in absence from work, complaints and grievances, and termination of employment (Sempane et al., 2002). To create value for companies and society, employers need to generate job satisfaction because of its importance at the individual, organizational, and societal levels, including employees' perception of their job satisfaction (Díaz-Carrión et al. 2020).

Job satisfaction is one of the predictors of various significant organizational outcomes, including job performance (Judge et al., 2001). One of the most significant research in this area (Judge et al., 2001), has led to a series of conclusions about the relationship and the influences between job satisfaction and productivity. This research shows that the greatest impact has factors related to organizational culture and personal determinants. Hwang & Chi (2005) findings show significant correlations between employee job satisfaction, internal marketing and performance of international hotels. Fargher et al. (2008) investigated the relationship between culture and job satisfaction in Eastern and Western European countries. The study points to the strong influence of national culture on an individual's attitude towards job satisfaction, and significant differences between employees in Eastern and Western Europe are observed, which are primarily caused by the importance of family and religion. Sempane et al., (2002) establish a significant relationship between the variables of job satisfaction and the organizational culture of employees within a service organization. Job satisfaction in the tourist sector in Europe varies based on the model of working conditions. (Díaz-Carrión et al. 2020). Job satisfaction in service industries varies in different countries, occupations, employment contracts and earnings levels (Bednarska & Szczyt, 2015). The same authors summarized that gender, tenure, age and sector do not affect job satisfaction.

## **2.3. Need for Achievement**

The need for achievement refers to a person's responsibility for involvement in activities to achieve the desired outcome, and it is associated with a positive mood, task interest, and organizational spontaneity (Eisenberger et al., 2005). Finogenow (2017) defines the need for achieve-

ment as a consistent concern for doing things better and a desire to accomplish excellent results in conditions of high expectations. High achievement individuals are highly motivated by competing and challenging work and they look for promotional opportunities and have a strong urge for feedback on their achievement (McClelland, 1961). High need for achievement employees base on their self-esteem, successful development and the utilization of their skills and talents (Eisenberger et al., 2005; McClelland, 1961). In case of low need for achievement, employees are less interested in the activities that provide high skill and challenge at work and try to avoid competence assessment (Eisenberger et al., 2005).

In recent years the need for achievement has gained importance in the study of entrepreneurship. Based on the research that highlights the importance of matching the need for achievement and business goals, the need for achievement is positively related to entrepreneurial persistence and business goals are moderators on the relationship between the need for achievement and persistence (Wu et al., 2007). Auer Antoncic & Antoncic (2018) indicate positive relationships between the need for achievement of the female entrepreneur and intrapreneurship, and between intrapreneurship and firm growth.

Within this study we hypothesize:

**H1:** National culture dimensions significantly predict facets of the job satisfaction.

**H2:** The need for achievement moderates the regression between national culture dimension and the facet of job satisfaction.

**H3:** Gender moderates the regression between national culture dimension and the facet of job satisfaction.

### 3. METHOD

#### 3.1. Participants and data collection

The research was carried out in organizations in Serbia (Vojvodina, Belgrade, Sumadija, Southern, Eastern, and Western Serbia). The survey was conducted by the respondents completing the questionnaire by using the standard pen-and-paper procedure. The sample consists of 120 managers from the service sector in Serbia (transportation, utility companies, telecommunications, banks). 65 of the respondents are male and 55 are female. According to respondents' age levels, results are presented in Table 1.

**Table 1.** Respondents age levels

Age	%	Male	Female
< 29	17%	60%	40%
30-39	33%	67%	33%
40-54	40%	47%	52%
59 >	11%	31%	69%

**Source:** Authors calculation

This sample is part of a wider study that included 340 respondents (managers) from different sectors - Industrial, Trade, Service sector, Public administration, Agriculture (demographic question). Collected data were analyzed by using the Statistical Program for Social Sciences. Statistical analyses were primarily focused on determining the moderator's effects of the Need for Achievement on the correlation between the national culture dimensions and job satisfaction, as the main constructs of the research.

### 3.2. Survey instruments

Standard instruments are used to measure national culture, job satisfaction and need for achievement.

We used the GLOBE project instrument for measuring the national culture dimension “as is” since the GLOBE project presents an additional, expanded model of cultural measures (Venaik/Brewer 2008). The “should be” part of the instrument is used only in order to compare the values obtained from this part of the GLOBE instrument with the values from the “as is” part of the instrument. The GLOBE questionnaire has 34 items and the answers are measured on the 7- point Likert scale. These instruments measure nine organizational culture dimensions: Uncertainty Avoidance, Future Orientation, Power Distance, Collectivism 1, Humane Orientation, Performance Orientation, Collectivism 2, Gender Egalitarianism and Assertiveness (House et al. 1999, 2002, 2004).

Job satisfaction is measured by the Job Satisfaction Survey (Spector 1985). The questionnaire has 36 items related to nine facets of job satisfaction, and answers are measured by a 6-point Likert scale. Dimensions of job satisfaction are defined and described in the following way (Spector, 1985; Vukonjanski et al., 2012): JS1– Pay (Pay and remuneration), JS2 – Promotion (Promotion opportunities), JS3 – Supervision (Immediate supervisor), JS4 – Fringe Benefits (Monetary and nonmonetary fringe benefits), JS5 – Contingent Rewards (Appreciation, recognition, and rewards for good work), JS6 – Operating Procedures (Operating policies and procedures), JS7 – Co-workers (People you work with), JS8 – Nature of Work (Job tasks themselves), JS9 – Communication (Communication within the organization).

We used the Need for Achievement Questionnaire (Wu et al., 2007), measured by a 5-point Likert scale. Need for Achievement instrument measures: need to face challenges, need to learn constantly, need for personal growth and need to succeed.

## 4. RESEARCH RESULTS

The descriptive statistics for the items and the dimensions of the observed questionnaires: “as is” dimensions of the national culture (NC<sub>i</sub>, i=1,2,3,4,5,6,7,8,9), the facet of job satisfaction (JS<sub>j</sub>, j=1,2,3,4,5,6,7,8,9) and Need for Achievement (NA) are shown in Table 2. The table shows the names of all dimensions, abbreviation for each dimension that we shall use later in the paper, mean, standard deviation of all the items and dimensions, as well as Cronbach’s alpha for each dimension. The Cronbach’s alpha values vary in the range from a  $\alpha = 0.606$  to  $\alpha = 0.874$ .

**Table 2.** Descriptive Statistics

	Abbrev.	N	Min.	Max.	Mean	Std. Deviation	$\alpha$
<b>Uncertainty Avoidance</b>	NC1	120	1.00	6.75	3.1437	1.29708	.723
<b>Future Orientation</b>	NC2	120	1.00	6.40	2.2767	1.02414	.771
<b>Power Distance</b>	NC3	120	3.40	7.00	6.1617	.83748	.725
<b>Collectivism 1</b>	NC4	120	1.00	6.25	3.6375	1.06602	.699
<b>Humane Orientation</b>	NC5	120	1.00	6.80	3.2867	1.27411	.801
<b>Performance Orientation</b>	NC6	120	1.00	6.67	3.0694	1.31066	.736
<b>Collectivism 2</b>	NC7	120	2.50	7.00	5.2271	.92070	.653
<b>Gender Egalitarianism</b>	NC8	120	1.60	5.20	3.3667	.78701	.655
<b>Assertiveness</b>	NC9	120	2.00	7.00	4.0500	.81610	.606

Pay	JS1	120	1.00	6.00	2.9187	1.28467	.788
Promotion	JS2	120	1.00	6.00	3.3583	1.17338	.680
Supervision	JS3	120	1.00	6.00	3.5583	1.31520	.746
Fringe Benefits	JS4	120	1.00	5.50	2.8667	1.17972	.736
Contingent Rewards	JS5	120	1.00	6.00	2.9979	1.31671	.780
Operating Procedures	JS6	120	1.00	6.00	3.2646	.94062	.649
Coworkers	JS7	120	1.00	6.00	4.3250	1.13417	.767
Nature of Work	JS8	120	1.00	6.00	4.4542	1.26979	.834
Communication	JS9	120	1.00	6.00	3.8000	1.30634	.764
Need for Achievement	NA	120	1.00	5.00	4.0896	.90505	.874

Source: Authors calculation

The national cultural dimension NC3 (Power Distance) has the highest value (6.16), followed by NC7 (Collectivism 2, 5.22), and the lowest value has NC2 (Future Orientation, 2.27). In terms of job satisfaction, the highest value has dimension JS8 (Nature of Work, 4.45), followed by JS7 (Coworkers, 4.32), and Dimension JS1 (Pay, 2.9) has the lowest value.

In Table 3 we give the average values of the “as is” and the “should be” dimensions of national culture in Serbia (tourism providers) and for the overall GLOBE Data (Javidan & House 2001).

Table 3. National culture dimensions

	Tourism providers		Overall GLOBE Data (Javidan & House, 2001)			
			As Is		Should Be	
	As Is	Should Be	Highest score	Lowest Score	Highest score	Lowest Score
Uncertainty Avoidance	3.14	5.60	5.37	2.88	5.61	3.16
Future Oriented	2.28	6.23	5.07	2.88	6.20	2.95
Power Distance	6.16	2.98	5.80	3.89	4.35	2.04
Collectivism 1	3.64	4.88	5.22	3.25	5.65	3.83
Humane Orientation	3.29	6.28	5.12	3.18	6.09	3.39
Performance Orientation	3.07	6.52	4.90	2.88	6.58	2.35
Collectivism 2	5.22	5.75	6.03	3.53	6.52	4.06
Gender Egalitarianism	3.37	4.97	4.08	2.50	5.17	3.18
Assertiveness	4.05	2.72	4.73	3.38	5.56	2.66

Source: Authors calculation

Table 4 presents gender differences in perception of national culture and job satisfaction of tourism providers in Serbia.

Table 4. Gender differences

National culture	Male	Female	Job satisfaction	Male	Female
Uncertainty Avoidance	3.23	3.04	Pay	3.27	2.50
Future Oriented	2.41	2.12	Promotion	3.54	3.15
Power Distance	6.14	6.19	Supervision	3.76	3.32
Collectivism 1	3.77	3.48	Fringe Benefits	3.07	2.62
Humane Orientation	3.46	3.08	Contingent Rewards	3.38	2.55
Performance Orientation	3.39	2.69	Operating Procedures	3.34	3.17
Collectivism 2	5.23	5.22	Coworkers	4.46	4.16
Gender Egalitarianism	3.28	3.47	Nature of Work	4.60	4.28
Assertiveness	3.99	4.12	Communication	3.86	3.73

Source: Authors calculation



In Table 5 we give the Pearson coefficients of the correlation between national culture dimensions and the facet of job satisfaction.

**Table 5.** Pearson coefficients of the correlation between national culture and job satisfaction

	NC1	NC2	NC3	NC4	NC5	NC6	NC7	NC8	NC9
JS1	.383**	.404**	-.390**	.289**	.345**	.525**	.117	-.033	-.035
JS2	.198*	.301**	-.328**	.373**	.299**	.327**	.129	.045	.024
JS3	.308**	.379**	-.413**	.203*	.354**	.343**	.160	.071	-.033
JS4	.404**	.385**	-.262**	.202*	.299**	.414**	.205*	-.113	.120
JS5	.370**	.326**	-.361**	.325**	.433**	.439**	.141	.132	.055
JS6	-.011	-.039	-.036	.125	.084	.035	-.149	.079	-.126
JS7	.230*	.238**	-.191*	.235**	.282**	.248**	.200*	.159	.000
JS8	.185*	.213*	-.089	.070	.116	.212*	.231*	.135	.080
JS9	.341**	.267**	-.364**	.189*	.321**	.395**	.369**	.036	.057

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Source:** Authors calculation

By the multiple regression method, we also investigated the contribution of all the independent variables of national culture dimensions to the total R-square in the regression with the facet of job satisfaction as a dependent variable. The dimensions of the national culture are the best predictor for Pay ( $R^2=0.336$ ). This tells us that 34% of the variation in pay can be predicted using GLOBE dimensions of national culture. National culture is not a predictor of JS6 (Operating Procedures) and JS8 (Nature of Work). Multiple regression analysis is presented in Table 6 and Figure 1.

**Table 6.** Multiple regression analysis

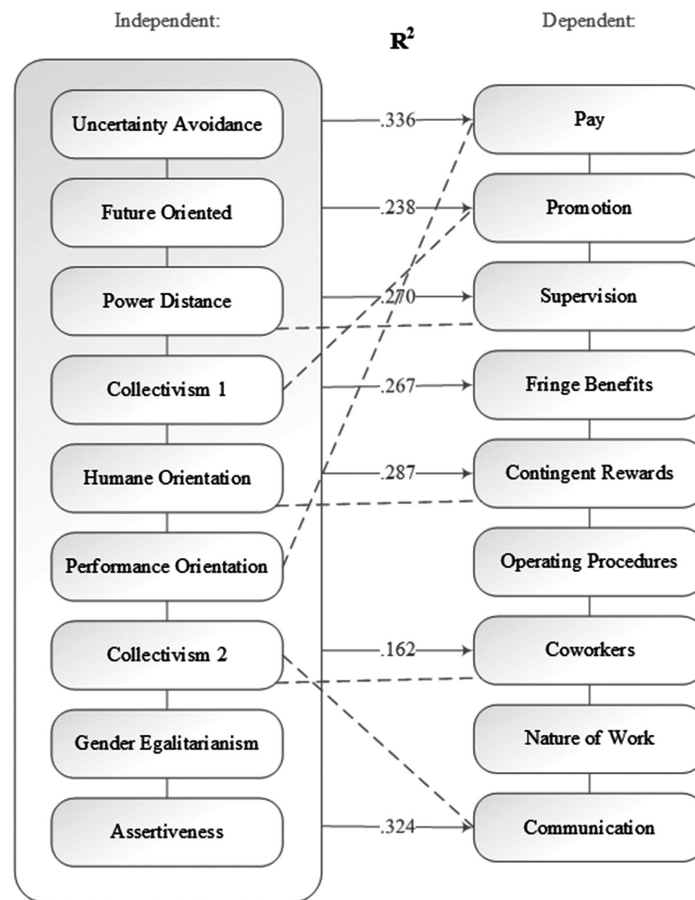
Dependent	Independent	$\beta$	t	Sig.	R <sup>2</sup>	F	Sig.
JS1	NC1	.071	.654	.514	.336	6.198	.000
	NC2	.102	.951	.344			
	NC3	-.132	-1.182	.240			
	NC4	.067	.751	.454			
	NC5	.021	.207	.837			
	NC6	.337	2.879	.005			
	NC7	.038	.465	.643			
	NC8	-.105	-1.276	.205			
	NC9	-.158	-1.964	.052			
JS2	NC1	-.160	-1.369	.174	.238	3.822	.000
	NC2	.064	.557	.578			
	NC3	-.261	-2.177	.032			
	NC4	.283	2.952	.004			
	NC5	.086	.798	.427			
	NC6	.058	.462	.645			
	NC7	.129	1.461	.147			
	NC8	-.020	-.225	.822			
	NC9	-.042	-.484	.629			
JS3	NC1	.000	-.002	.998	.270	4.521	.000
	NC2	.176	1.570	.119			
	NC3	-.333	-2.842	.005			
	NC4	.013	.141	.888			
	NC5	.129	1.213	.228			
	NC6	-.038	-.309	.758			
	NC7	.174	2.011	.047			
	NC8	-.027	-.316	.753			
	NC9	-.135	-1.607	.111			

JS4	NC1	.192	1.679	.096	.267	4.453	.000
	NC2	.159	1.419	.159			
	NC3	-.016	-.134	.893			
	NC4	-.031	-.327	.744			
	NC5	.040	.375	.708			
	NC6	.182	1.481	.141			
	NC7	.114	1.319	.190			
	NC8	-.158	-1.835	.069			
	NC9	.011	.136	.892			
JS5	NC1	.064	.564	.574	.287	4.919	.000
	NC2	-.045	-.406	.686			
	NC3	-.091	-.783	.436			
	NC4	.140	1.504	.136			
	NC5	.215	2.048	.043			
	NC6	.193	1.589	.115			
	NC7	.107	1.252	.213			
	NC8	.076	.896	.372			
	NC9	-.047	-.568	.571			
JS6	NC1	-.034	-.264	.792	.079	1.050	.406
	NC2	-.142	-1.129	.261			
	NC3	.025	.190	.850			
	NC4	.157	1.491	.139			
	NC5	.095	.801	.425			
	NC6	.085	.619	.537			
	NC7	-.149	-1.536	.127			
	NC8	.066	.683	.496			
	NC9	-.127	-1.343	.182			
JS7	NC1	.025	.208	.836	.162	2.363	.018
	NC2	.032	.264	.792			
	NC3	-.020	-.156	.876			
	NC4	.117	1.164	.247			
	NC5	.151	1.332	.186			
	NC6	.049	.374	.709			
	NC7	.195	2.102	.038			
	NC8	.149	1.620	.108			
	NC9	-.065	-.716	.475			
JS8	NC1	.055	.439	.661	.127	1.773	.081
	NC2	.137	1.119	.265			
	NC3	.105	.818	.415			
	NC4	-.056	-.548	.585			
	NC5	-.024	-.203	.840			
	NC6	.151	1.126	.263			
	NC7	.201	2.133	.035			
	NC8	.165	1.752	.083			
	NC9	.030	.326	.745			
JS9	NC1	.090	.817	.416	.324	5.848	.000
	NC2	-.065	-.602	.549			
	NC3	-.289	-2.559	.012			
	NC4	.022	.248	.804			
	NC5	.100	.980	.329			
	NC6	.087	.740	.461			
	NC7	.373	4.484	.000			
	NC8	-.013	-.157	.876			
	NC9	-.048	-.590	.556			

Source: Authors calculation

The variable NC6 (Performance Orientation) has the greatest influence on variable JS1 (Pay). The variable NC4 (Collectivism 1) has the greatest influence on variable JS2 (Promotion). The

variable NC3 (Power distance) has the greatest influence on variable JS3 (Supervision). The variable NC5 (Humane Orientation) has the greatest influence on variable JS5 (Contingent Rewards). The variable NC7 (Collectivism 2) has the greatest influence on variables JS7 (Coworkers) and JS9 (Communication).



**Figure 1.** Multiple regression

Source: Authors calculation

Further results reveal that the correlation coefficient between national culture dimensions and the facet of job satisfaction in low Need for Achievement (NA) and high Need for Achievement sub-samples. In Table 7 we give the Pearson coefficients of the correlation.

**Table 7.** National culture dimensions and the facet of job satisfaction in low and high Need for Achievement sub-samples

Need for Achievement		NC1	NC2	NC3	NC4	NC5	NC6	NC7	NC8	NC9
Low NA	JS1	.300*	.353**	-.360**	.075	.381**	.408**	.085	-.028	-.172
	JS2	.173	.318*	-.148	.061	.380**	.198	.173	-.058	.015
	JS3	.295*	.381**	-.430**	-.026	.426**	.321*	.145	-.009	-.171
	JS4	.299*	.237	-.159	.017	.300*	.122	.213	-.183	.048
	JS5	.293*	.189	-.343**	-.073	.429**	.276*	.027	.119	-.070
	JS6	-.061	-.059	-.100	.106	.300*	.112	-.241	.140	-.184
	JS7	.155	.053	-.153	-.088	.234	.143	.050	.088	-.050
	JS8	.145	.145	-.089	-.128	-.039	.181	.120	.211	.005
	JS9	.392**	.185	-.314*	-.182	.354**	.311*	.409**	.050	.086

<b>High NA</b>	JS1	.441**	.425**	-.400**	.433**	.300*	.589**	.289*	-.023	.124
	JS2	.211	.282*	-.486**	.601**	.234	.407**	.141	.132	.041
	JS3	.335**	.406**	-.427**	.469**	.310*	.404**	.140	.149	.143
	JS4	.477**	.489**	-.357**	.343**	.294*	.629**	.254	-.053	.207
	JS5	.422**	.420**	-.382**	.635**	.435**	.559**	.314*	.147	.191
	JS6	.016	-.047	.056	.114	-.104	-.058	.016	.040	-.059
	JS7	.300*	.410**	-.268*	.550**	.349**	.376**	.343**	.214	.044
	JS8	.240	.315*	-.135	.314*	.301*	.302*	.324*	.045	.167
	JS9	.321*	.347**	-.454**	.498**	.324*	.497**	.323*	.018	.022

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Source:** Authors calculation

In Table 8 we give the Pearson coefficients of the correlation between national culture dimensions and the facet of job satisfaction for gender, men and women sub-samples.

**Table 8.** National culture dimensions and the facet of job satisfaction for men and women sub-samples

<b>Gender</b>		<b>NC1</b>	<b>NC2</b>	<b>NC3</b>	<b>NC4</b>	<b>NC5</b>	<b>NC6</b>	<b>NC7</b>	<b>NC8</b>	<b>NC9</b>
<b>Men N=65</b>	JS1	.467**	.469**	-.412**	.233	.311*	.465**	.180	-.084	-.170
	JS2	.131	.290*	-.097	.384**	.228	.159	.196	-.094	-.097
	JS3	.328**	.391**	-.398**	.108	.337**	.288*	.261*	.012	-.220
	JS4	.436**	.315*	-.143	.064	.221	.226	.259*	-.171	.003
	JS5	.386**	.287*	-.216	.309*	.361**	.266*	.232	.089	-.070
	JS6	-.103	-.147	-.076	.144	.113	.029	-.177	.106	-.180
	JS7	.240	.218	-.093	.195	.168	.162	.267*	-.022	-.083
	JS8	.241	.211	.036	.218	.048	.141	.349**	.063	.063
	JS9	.368**	.369**	-.214	.186	.193	.310*	.448**	-.019	.057
<b>Women N=55</b>	JS1	.272*	.244	-.392**	.309*	.334*	.514**	.005	.120	.190
	JS2	.259	.276*	-.597**	.344*	.355**	.495**	.017	.260	.192
	JS3	.272*	.322*	-.449**	.286*	.343*	.360**	-.038	.210	.244
	JS4	.358**	.457**	-.420**	.318*	.371**	.640**	.109	.011	.316*
	JS5	.357**	.326*	-.609**	.315*	.507**	.613**	-.035	.327*	.311*
	JS6	.078	.077	.014	.090	.017	-.012	-.112	.074	-.055
	JS7	.207	.234	-.278*	.242	.383**	.298*	.117	.373**	.097
	JS8	.103	.180	-.225	-.105	.171	.253	.040	.260	.124
	JS9	.308*	.116	-.532**	.188	.483**	.519**	.246	.115	.066

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Source:** Authors calculation

We used hierarchical regression analysis in order to investigate the moderating effect of Gender and Need for Achievement on the regression between dimensions of national culture (as an independent variable) and the facet of job satisfaction (as a dependent variable). The hierarchical regression analysis consists of three steps. In the first step, national culture is a predictor, in the second step national culture and moderator (Gender or Need for Achievement) are predictors, and in the last step, an interactive variable is added into the model. The moderating effect was tested by examining the change in the R-squared attributable to the interaction term. If the interaction term added at the final stage of the regression analysis produced a significantly increased amount of variance explained in the outcome variable (R-squared), we could say that the moderator effect occurs between national culture dimensions and facet of job satisfaction.

Table 9 shows the results of the examination of the moderator effect of Need for Achievement on the influence of dimensions of national culture and facet of job satisfaction. In Table 9, only the results related to R- square and F-change statistics that support H3 are presented.

**Table 9.** Hierarchical regression analysis (R square and F-change) for Need for Achievement

Independent variables		Dependent variables								
		JS1	JS2	JS3	JS4	JS5	JS6	JS7	JS8	JS9
1	NC2					.106		.057		
	R2					14.035**		7.114**		
	F ch									
2	NA					.107		.103		
	R2					.053		6.028*		
	F ch									
3	Interac_NA					.139		.140		
	R2					4.403*		5.014*		
	F ch									
1	NC3		.108							
	R2		14.263**							
	F ch									
2	NA		.116							
	R2		1.057							
	F ch									
3	Interac_NA		.159							
	R2		6.016*							
	F ch									
1	NC4	.084	.139	.041		.106		.055	.005	.036
	R2	10.781**	19.024**	5.085*		13.935**		6.877**	.579	4.383*
	F ch									
2	NA	.098	.142	.049		.106		.096	.055	.055
	R2	1.801	.429	.955		.001		5.231*	6.251*	2.349
	F ch									
3	Interac_NA	.132	.219	.100		.235		.203	.140	.183
	R2	4.559*	11.358**	6.551*		19.675**		15.716**	11.370**	18.244**
	F ch									
1	NC5						.007			
	R2						.834			
	F ch									
2	NA						.035			
	R2						3.401			
	F ch									
3	Interac_NA						.075			
	R2						5.019*			
	F ch									
1	NC6				.171					
	R2				24.423**					
	F ch									
2	NA				.172					
	R2				.040					
	F ch									
3	Interac_NA				.220					
	R2				7.235**					
	F ch									

Source: Authors calculation

Need for Achievement is the moderator of relations between NC2 (Future Orientation) and JS5 (Contingent Rewards) and JS7 (Coworkers); NC3 (Power Distance) and JS2 (Promotion); NC4 (Collectivism 1) and JS1 (Pay), JS2 (Promotion), JS3 (Supervision), JS5 (Contingent Rewards), JS7 (Coworkers), JS8 (Nature of Work) and JS9 (Communication); NC5 (Humane Orientation)



and JS6 (Operating Procedures); NC6 (Performance Orientation) and JS4 (Fringe Benefits) in the tourism service providers in Serbia.

The results of the examination of the moderator effect of respondents' gender on the influence of dimensions of national culture and facet of job satisfaction are shown in Table 10. In Table 10, only the results related to R-square and F-change statistics that support H4 are presented.

**Table 10.** Hierarchical regression analysis (R square and F-change) for Gender

Independent variables		Dependent variables								
		JS1	JS2	JS3	JS4	JS5	JS6	JS7	JS8	JS9
1	NC2									
	R2		.108							
2	F ch		14.263**							
	NA									
1	R2		.154							
	F ch		6.343*							
1	NC2									
	R2		.107		.171					
2	F ch		14.086**		24.423**					
	NA									
1	R2		.137		.206					
	F ch		4.105*		5.060*					
1	NC2									
	R2							.025		
2	F ch							3.046		
	NA									
1	R2							.065		
	F ch							4.940*		

Source: Authors calculation

Gender is the moderator of relations between NC3 (Power Distance) and JS2 (Promotion); NC6 (Performance Orientation) and JS2 (Promotion) and JS4 (Fringe Benefits); NC8 (Gender Egalitarianism) and JS7 (Coworkers) in the tourism service providers in Serbia.

## 5. DISCUSSION

The main goal of this research was to investigate the contribution of all the independent variables, dimensions of National Culture, to the total R-square in the regression with the aspect of Job Satisfaction as a dependent variable, and the moderating effect of Gender and Need for Achievement in the relation between National Culture and Job Satisfaction in the tourism service providers in Serbia. The results obtained confirm that dimensions of national culture are predictors of job satisfaction (**Hypothesis One**). Also, the results confirm that the Need for Achievement (**Hypothesis Two**) and Gender (**Hypothesis Three**) are moderators on the relations between National Culture dimensions and the aspect of Job Satisfaction in the tourism service providers in Serbia. These findings are discussed in more detail below.

### 5.1. National culture as a predictor of job satisfaction in tourism service providers

GLOBE national culture is a significant predictor of all facets of job satisfaction except Operating Procedures (JS6) and Nature of Work (JS8). Pay and remuneration satisfaction is in direct proportion to the degree to which a collective encourages and rewards tourism service provider employees for performance improvement and high standards. The greatest influence on promotion opportu-

nities satisfaction has the degree to which organizational and societal institutions encourage and reward tourism provider employees' integration into groups and collective actions. The greatest influence on immediate supervisor satisfaction has the degree to which tourism provider employees accept an unequal distribution of power and status privileges. The greatest influence on satisfaction with appreciation, recognition, and rewards have the degree to which a collective encourages and rewards tourism provider employees or fairness, kindness, generosity, and altruism. The greatest influence on co-workers' satisfaction and job tasks themselves have the degree to which tourism provider employees express pride, loyalty, and cohesiveness in their organizations or families.

## **5.2. Uncertainty avoidance**

In the general sample "as is" value of Uncertainty Avoidance (NC1) is 3.80, and "should be" is 5.60. Taking into consideration the values of Overall GLOBE Data, tourism provider employees' values are similar to "as is" lowest score and "should be" highest score. Tourism provider employees strive to a higher level of uncertainty avoidance, as part of national culture. It can be concluded that there is a strong tendency towards a system that is more orderly and system-oriented towards planning and moderate risks. On the other hand, this situation is probably a consequence of a long period of socialism. It is possible that for this reason employees rely on the past, the period when there was a sense of security, orientation towards rules, and social order (Grachev et al., 2007). Uncertainty avoidance has statistically positive and significant correlations with all facets of job satisfaction, except Operating Procedures (JS6). Hence, the increase of the perception of Uncertainty Avoidance is accompanied by the increase of satisfaction with all aspects of the job, except satisfaction with operating policies and procedures.

## **5.3. Future orientation**

In the general sample "as is" value of Future Orientation (NC2) is 2.28, and the "should be" value is 6.23. Based on Overall GLOBE Data, tourism provider employees' value "as is" is lower than the Overall lowest score and the "should be" value is similar to the highest Overall score. In the general sample, Future Orientation has the lowest value of all national culture dimensions. The future orientation dimension is a reflection of the internally consistent set of practices and values that influence the way the society defines success and adapts to external challenges and the way the society manages relationships with its people (Jesuino, 2002). Weaker Future Orientation societies value instant gratification and place higher priorities on immediate rewards. Organizations have a shorter strategic orientation, emphasize leadership that focuses on repetition of reproducible and routine sequences (House et al., 2004), and that influence intrapreneurship. Accordingly, reflections of tourism provider employees on the desired state in the future are reflected in planning, visionary leadership, long-term success, organizations with a long-term strategic orientation, collective safety nets (House et al., 2002; House et al., 2004). The significant difference between "as is" and "should be" values indicates that tourism provider employees do not expect fast results, but they are ready for change and investments for future payoffs over immediate consumption. Future Orientation has statistically significant and positive correlations with all facets of job satisfaction, except Operating Procedures (JS6). The increase of the perception of Future Orientation is accompanied by the increase of satisfaction with all aspects of the job, except satisfaction with operating policies and procedures.

We obtained that the Need for Achievement moderates the relation between Future Orientation and Contingent Rewards (JS5) and Coworkers (JS7). In the high Need for Achievement sub-sample,

relations between Future Orientation and Contingent Rewards (.420\*\*) and Coworkers (.410\*\*) are significant and positive and in the low sub-sample coefficients are positive, but not significant. A high value of the Need for Achievement can help managers in the tourism service providers in Serbia to be more motivated to face the challenges and to learn, which may help them to achieve success. Also, it can encourage tourism provider employees to perform future-oriented behaviors such as planning and delaying gratification. High achiever tourism provider employees pursue opportunities to create long term competitive advantages that enable intrapreneurship, appreciation and recognition from coworkers and supervisors, and rewards, as a measurement for accomplishments.

#### 5.4. Power Distance

In the general sample “as is” value of Power Distance (NC3) is 6.16, and the “should be” value is 2.98. Based on Overall GLOBE Data, tourism provider employees’ value “as is” is higher than the Overall highest score and the “should be” value is similar to the lowest Overall score. In the general sample, Power Distance has the highest value of all National Culture dimensions. Hofstede (1981; 2001) first identified a high-power distance in Serbia. Serbia, and other countries with a high value on power distance, are characterized by social, economic, and political stratification, and those in power expect and accept obedience (Javidan et al. 2006). Societies with high Power Distance have a large middle class and higher public corruption, do not ensure equal opportunities and the power is seen as a source of corruption, coercion, and dominance (House et al., 2004). Power Distance has statistically significant and negative relations with all facets of job satisfaction, except Operating Procedures (JS6) and Nature of Work (JS8) where coefficients are negative, but they are not significant. The increase of the perception of Power Distance is accompanied by the decrease of satisfaction with all aspects of the job, except satisfaction with operating policies and procedures and satisfaction with job tasks themselves.

Multiple regression shows that Need for Achievement is a moderator of relations between Power Distance (NC3) and Promotion (JS2). In the high Need for Achievement sub-sample, the coefficient between Power Distance and Promotion (-.486\*\*) is negative and significant and in the low sub-sample coefficient is negative, but not significant. In the high value Need for Achievement sub-sample, the increase of the perception of power distance is followed by a faster decrease of satisfaction with promotion opportunities than in the low Need for Achievement sub-sample. In tourism service provider in Serbia, especially in the utility companies (state owned), promotion opportunities partly depend on personal connections and political authorities in the broader community. This practice has a long tradition in Serbian organizations since the period of socialism. High achiever tourism provider employees prefer conditions that will enable their need to face challenges, to learn constantly and to succeed as a measurement for accomplishments, and as a result, they will be more satisfied with equal promotion opportunities.

Multiple regression shows that Gender is a moderator of relations between Power Distance and Promotion (JS2). In the Female sub-sample, the correlation coefficient is negative and significant (-.597\*\*), and in the Male sub-sample coefficient is negative but not significant (-.097). Promotion satisfaction of women tourism provider employees depends on equal promotion opportunities. In Serbia, men are more involved in politics and probably have/rely more on social connections than women. It could be assumed that men in Serbia value social and political connections and even support such a grounded system that affects social status and prestige; unlike women who do not support inequalities and believe that promotion opportunities should depend on results and achievements.

## 5.5. Collectivism 1

In the general sample “as is” value of Collectivism 1 (NC4) is 3.64, and the “should be” value is 4.88. Taking into consideration the values of Overall GLOBE Data, the values of tourism provider employees are similar to “as is” lowest score and “should be” highest score. Serbia is considered to be a collective society, but values “as is” show differently. Based on “should be” tourism provider employees’ traditional institutional values are still important (which have roots in socialism). In their opinion, goals and group interest “should be” over individual goals and interests and important decisions „should be” made by the group (Javidan, House, 2001). Collectivism 1 has statistically significant and positive correlations with all facets of job satisfaction, except Fringe Benefits (JS4) and Operating Procedures (JS6) where coefficients are not significant. The increase of the perception of Collectivism 1 is accompanied by the increase of satisfaction with all aspects of the job, except satisfaction with monetary and nonmonetary fringe benefits and operating policies in tourism provider employees.

Multiple regression shows that Need for Achievement is a moderator of relations between Collectivism 1 and Pay (JS1), Promotion (JS2), Supervision (JS3), Contingent Rewards (JS5), Coworkers (JS7), Gender Egalitarianism (NC8), Assertiveness (NC9). In the high value Need for Achievement sub-sample, the increase of the perception of institutional collectivism is followed by a faster increase of satisfaction with Pay, Promotion, Supervision, Contingent Rewards, Coworkers, Gender Egalitarianism, and Assertiveness than in the low Need for Achievement sub-sample. Under the increase of institutional collectivism, high achieve tourism provider employees feel the responsibility to achieve good relationships and communication with supervisors and all coworkers with modesty and tenderness. They tend to promote intrapreneurship to achieve opportunities and rewards as an organization. Their expectations of pay are related to the Serbian economy.

## 5.6. Humane Orientation

In the general sample “as is” value of Humane Orientation (NC5) is 3.29, and the “should be” value is 6.28. The “as is” value is similar to the lowest Overall GLOBE Data and the “should be” value is higher than Overall highest score. Kabasakal & Bodur (2004) indicate that social culture based on bureaucratic practice, formal relationships, and formalized procedures is typical in cultures with low human orientation. According to the opinion of tourism service provider employees, the well-being of others “should be” individual responsibility, and has high value towards altruism, kindness, love, and generosity in society (Triandis, 1995). Humane Orientation has statistically significant and positive correlations with all facets of job satisfaction, except Operating Procedures (JS6) and Nature of Work (JS8) where coefficients are positive but not significant. The increase of the perception of Humane Orientation is accompanied by the increase of satisfaction with all aspects of the job, except satisfaction with operating policies and job tasks in tourism provider employees in Serbia.

Multiple regression shows that Need for Achievement is a moderator of relations between Humane Orientation and Operating Procedures (JS6). In the low value Need for Achievement sub-sample, the increase of the perception of Humane Orientation is followed by a faster increase of satisfaction in tourism provider employees. In the high Need for Achievement, the sub-sample relation is negative and not significant. The increase of Humane Orientation in low achieve tourism provider employees is accompanied by the increase of satisfaction with Operating Procedures. These results can be explained based on high achievers’ ambition, goal-orientation, task-orientation.

tation, and tendency to succeed in a competitive environment. In relation to a set of standards, they tend to overachieve and push limits. At some point that can mean they are less human-oriented. Required rules and procedures can affect intrapreneurship. Also, they want to compete with others, more than to help others to achieve. In case of low need for achievement, employees are less interested in the activities that provide high skill and challenge at work and try to avoid competence assessment (Eisenberger et al., 2005). That makes them more human-oriented and ready to help others and to receive help if needed. Required rules and procedures ensure security, and predictability, give them a sense of stability and that affects their satisfaction.

### 5.7. Performance Orientation

In the general sample “as is” value of Performance Orientation (NC6) is 3.07, and the “should be” value is 6.52. “As is” value is higher than lowest Overall GLOBE Data and “should be” value is lower than Overall highest score. Tourism service provider employees think that collective „should” encourage more and reward members for performance improvement. Based on the current situation, social and family relations and seniority and experience are more important than results, education and learning and taking initiative (House et al. 2004). Performance Orientation has statistically significant and positive correlations with all facets of job satisfaction, except Operating Procedures (JS6). The strongest relation is with Pay (JS1, 0.525\*\*) and the weakest with Nature of Work (JS8, 0.212\*).

Multiple regression shows that Need for Achievement is a moderator of relations between Performance Orientation and Fringe Benefits (JS4). In the high Need for Achievement sub-sample, the relation between Performance Orientation and Fringe Benefits (.629\*\*) is positive and significant and in the low sub-sample coefficient is positive, but not significant (.121). In the high value Need for Achievement sub-sample, the increase of the perception of Performance Orientation is followed by a faster increase of satisfaction with monetary and nonmonetary fringe benefits. High achievement tourism provider employees expect that organization invests in training and education, to promote performance improvements and intrapreneurship. They are more satisfied in organizations that give performance feedback and reward performance with monetary and nonmonetary fringe benefits.

Multiple regression shows that Gender is a moderator of relations between Performance Orientation and Promotion (JS2) and Fringe Benefits (JS4). In the female sub-sample, Performance Orientation is followed by a faster increase of satisfaction with promotion opportunities and monetary and nonmonetary fringe benefits. In the male sub-sample, the relation is positive, but not statistically significant. Also, in the male sub-sample the value of culture dimension Performance Orientation (3.39) is higher than in the female sub-sample (2.69). In this case, encouragement and rewards for performance improvement do not affect male satisfaction. That could mean that they simply do as best as they can, in any conditions. On the other hand, females are ready to improve their performance. If the organization encourages and rewards results, they expect promotion opportunities and fringe benefits for their efforts. A tourism service provider organization that rewards performance has more satisfied female employees.

### 5.8. Gender Egalitarianism

In the general sample “as is” value of Gender Egalitarianism (NC8) is 3.37, and the “should be” value is 4.97. “As is” value is between lowest and highest Overall GLOBE Data and “should be” value is lower than Overall highest score. Tourism service provider employees value equal opportunities for all and more women in positions of authority.



Multiple regression shows that Gender is a moderator of relations between Gender Egalitarianism and Coworkers (JS7). In the female sub-sample this relation is positive and significant (.373\*\*) and in the male sub-sample, the relation is negative and not significant (-.022). In the female sub-sample increased perception of Gender Egalitarianism is followed by increased satisfaction with Coworkers. Women in tourism service provider organizations, where there is a lack of gender barriers, feel safer and more satisfied with the people they work with.

## 6. CONCLUSION

This paper has investigated the influence of national culture on the facets of job satisfaction in tourism service provider managers. Our results provide empirical evidence that GLOBE national culture is a predictor of all facets of job satisfaction except Operating Procedures and Nature of Work. National culture dimensions influence all facets of job satisfaction except Operating Procedures. In the general sample, dimensions of national culture that do not influence the facets of job satisfaction are Gender Egalitarianism and Assertiveness. GLOBE national culture value "should be" is an important factor that influences the job satisfaction. Results also prove that the Need for Achievement is a moderator of some relations between the national culture dimension as an independent variable and job satisfaction as a dependent variable. Also, high value of Need for Achievement increases the level of satisfaction with many facets of the job and it is very important for intrapreneurship development. Low value of Need for Achievement increases the level of satisfaction only with Operating Procedures. We prove that Gender is a moderator of some relations between the national culture dimension as an independent variable and job satisfaction as a dependent variable. Women in tourism service provider organizations have a higher level of satisfaction with facets of the job.

In modern conditions of constant changes, the increased need for the development of the service sector and destination competitiveness, an important factor in the quality of the tourist destination and one of the main destination stakeholders are tourism providers. National culture is especially important for intrapreneurship in the tourism industry, particularly for tourism providers, in order to maximize the quality of the tourist destination. This paper, among other things, provides insight into the possibilities and conditions for the development of intrapreneurship in the tourism sector providers. Besides that, managers should take into consideration that there are no applicable actions to eliminate national culture influence on the job satisfaction. The influence could be managed to some extent with organizational culture.

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# ARE SOCIAL NETWORK WEBSITES EFFECTIVE TOOLS FOR RECRUITMENT AND SELECTION IN TOURISM SECTOR? AN EXPLORATORY CASE STUDY

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**Abstract:** *This chapter is aimed at obtaining empirical data with regard to the research question, how both recruiters and job seekers take advantage of the integration of social network websites and recruitment & selection processes. Two major social network websites, LinkedIn and Facebook, have been examined due to the fact that they are mostly being used by human resources professionals and job seekers. Qualitative content analyses have been carried out by collecting data via in-depth and focus group interviews with recruiters of a holding that also operates in the tourism sector and with job seekers looking for a job in this sector. It has been observed that the purpose of job seekers' usage of social network websites is to build networks, connections and reach new job opportunities. Likewise, businesses also aim to reach and attract candidates and communicate at the beginning of the recruitment process.*

**Keywords:** *LinkedIn, Facebook, Digital human resources management.*

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## 1. INTRODUCTION

The quality of the population changes along with their quantity in the world. A generation that has never experienced a world without the internet and mobile technologies exists in working life. In parallel with this, the recruitment strategies of businesses are changing in order to reach and attract the aforementioned generation. While the opportunity arises for businesses to strengthen and spread employer brands through recruitment strategies, the use of new technologies for job seekers facilitates the job search process.

In this context, social network sites have become one of the important social dynamics of social life with billions of users. For this reason, it appears to have an impact on many issues, including working life. This situation has made social networking sites the center of attention of businesses and academic research. In recent years, it is seen that the use of social networking sites has increased in order to get the parties to know each other in business life. Academic researchers and experts argue that social networking sites are a useful tool especially for businesses in the recruitment process (Doherty, 2010: 12, Nikolaou et al., 2015: 93, Hartwell, 2015: 33-34). This situation frequently encountered in human resources management practices, especially during the recruitment process; it emerges as a phenomenon that needs to be explored and based on scientific foundations. In this way, it will be possible to use the current state of affairs supported by scientific evidence more effectively and efficiently. In addition, both career seekers and human resources workers; for both parties, it will be able to reveal the opportunities and threats accompanying it. While there are more studies in the literature dealing with the aspects of this issue related to businesses, the scarcity of studies on job seekers draw attention.

Thus, revealing the opportunities and threats in the use of social network sites will contribute to the positioning of this new subject within the human resources management discipline. The

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subject, which was mostly examined by business or job seekers in previous studies (Micik and Eger, 2015: 271 Bohmova and Pavlicek, 2015: 28), will fill the gap in the literature in the context of examining the views of both sides together in an exploratory qualitative research design. Based on this, it has been determined that social network sites are effective in the recruitment process, its usage has strengthened communication, time and cost advantages. On the other hand, it has some disadvantages about having negative image and unethical use.

## **2. RECRUITMENT PROCESS IN HUMAN RESOURCES MANAGEMENT**

The recruitment function of human resources management discussed in this study includes the stages of recruitment and selection. Traditionally, recruiters have options to search for new candidates; newspaper advertisements are in the form of purchasing databases from external sources or getting support from specialized human resources consultants who are headhunting to reach suitable candidates. However, it has recently become possible to use online tools. There are six basic methods to search for staff in a virtual environment. These are job posting sites, job posting collectors (gathering job postings from different platforms on a single platform), job and employment agencies, businesses' websites, specialized interview forums and social networking sites (Bohmova and Pavlicek, 2015: 24).

The selection phase should be organized in a way that it allows businesses to identify people with the necessary knowledge, skills, abilities and other qualifications. Such a strategic approach requires measuring the effectiveness of selection tools. The scientific evaluation criteria of selection methods appear as follows:

- The method should provide reliable information.
- The method should provide valid information.
- Selection criteria should be legal (Noe et al., 2011: 158-160).

However, while evaluating selection methods, criteria such as cost, speed, diversity and efficiency should also be taken into account. While reducing costs without sacrificing quality remains a managerial concern, how quickly the process takes place is another important criterion. Since different methods used in the recruitment process will reach different subgroups in different labor markets, the selection of the recruitment method of the enterprise may have important consequences in terms of the diversity of the candidate pool (Kulik T. C., 2004: 29-30). While the recruitment phase is the process of attracting people who fit these characteristics, the selection phase is to measure the differences between these candidates in order to find the person with the profile that best suits the person characteristics determined by their job description or characteristics. After all these contents are defined and decided, evaluation tests and interview methods are applied to candidates associated with their skills and personalities. The key point emerges as to find selection methods with valid and reliable characteristics that can distinguish good from bad employees (Newell, 2005: 116-127).

The interviews held during the selection phase are divided into two as pre and post interviews and their number varies from business to business. Here, it is suggested to the businesses that the interviewed candidate leaves the interview room at the end of the interview with positive feelings and thoughts about the business and a stronger desire to work. Otherwise, the candidate may damage the image and reputation of the business by sharing his negative views about the business in social and digital environments. In order to prevent this from happening, the candidate must be informed about the result in detail at the end of the interview with justifications. In the resume research conducted after all these stages are completed, it is aimed to avoid the costs that may arise from the recruitment

of the wrong person and to complete the process healthily. Previously, the only way for businesses to protect themselves from resume frauds and fake competency information was to request verification or proof from candidates before or after hiring (Mathis and Jackson, 1997: 268-270); today, such cross-checks can be performed using the facilities of social networking sites. Businesses also examine social network site profiles at this stage in order to observe the social behavior of candidates and obtain information that can support election decisions. Providing up-to-date information about the candidate, especially beyond the static resume, makes it attractive for businesses to choose to use these platforms at the selection stage. This usage also varies according to national and local legal regulations.

However, at this stage, businesses want to gain time and cost opportunities by using social network sites both for actions such as resume research and to conclude the recruitment process as soon as possible.

How the recruitment process is perceived by candidates also plays a critical role. Candidates can react very negatively to rejection decisions, regardless of how healthy and objective the election decisions are made. At the end of the selection phase, many people with negative outcomes may remain and many of them attribute this situation to the process rather than themselves. Businesses can reduce the negative perceptions of the process, but they cannot completely eliminate the negative feelings of rejected candidates. In this context, it is recommended for businesses to regularly observe the data that reveal their perceptions of recruitment tools. Maintaining interest in businesses is not only dependent on the efforts of the recruiters who are effective in the recruitment process of the businesses and the appearance validity of the procedures, it is also related to the actions of the competing companies in these matters (Farr and Tippins, 2010: 129-143). However, social networking sites, which play a key role in conveying the employer brand, which means the image created by business activities, to potential candidates in the labor market, also have a strategic importance. Just like the social influencers of society, the digital world has its own digital influencers. Users who can create active content on these platforms can create and spread positive and negative images about businesses by sharing their views in the digital world. The messages of digital influencers can affect the public more in terms of quantity and quality, as they are more sincere and attractive to people than corporate messages created and shared by businesses. In this context, enterprises consider the messages of digital influencers as part of their strategic communication processes and want to include social network site users in this process in order to increase the attractive effect of their corporate brands and images on potential candidates (Maden, 2018: 71-86). In summary, the image of businesses clearly affects the activities that attract potential candidates in the recruitment and selection process (Breugh and Starke, 2000: 410-431).

There is also a social aspect that does not appear in the evaluations of the candidate such as resume, test and interview. Today, social networking sites are used to monitor the social behavior of candidates. This use not only provides up-to-date information about the candidate and simultaneously with the recruitment process, it also improves and spreads the image of the business (Doğan, 2011:58).

### **3. MAJOR SOCIAL NETWORKING SITES AND ITS FEATURES**

Social networking sites, which first appeared in 1997, are websites where people freely communicate, share and discuss information about each other and their lives (including multiple media in the form of personal information, pictures, videos and sounds) (Sharp, 2013: 6). According to another definition, they are internet-based applications that are built on the ideological

and technological foundations of Web 2.0 technology (the technology that allows everyone to shape websites) and based on the creation and exchange of user-generated content (Kaplan and Haenlein, 2009: 61). Most social networking sites also provide a mechanism for users to post messages on their friends' profiles. This salient feature is typically called „leaving comments” (Boyd and Ellison, 2008: 211-213). Users are encouraged to complete their profiles with praise and approval comments from their colleagues and customers about their performance or abilities (Chiang and Suen, 2015: 517).

Established in 2002 and started operating in 2003, LinkedIn has become the strongest among professional social networking sites and maintains this position today. Facebook was established in 2004 only for Harvard University members; it was made available to high school students in 2005, and finally to everyone in 2006. Twitter was established in 2006, allowing users to express themselves with short messages limited to a few sentences. With the increasing popularity of social networking sites around the world, many businesses supported social network sites, gave advertisements, and invested money and time (Boyd and Ellison, 2008: 213-218). According to the number of active monthly users in April 2018, the main social network sites available are; Facebook (~2.2 billion), YouTube (~1.5 billion), Instagram (~810 million), Tumblr (~780 million), Twitter (~330 million), LinkedIn (~260 million), Snapchat (~255 million), Pinterest (200 million) and Google+ (Statista, 2018). The total number of active users of social networking sites in the world, 3.1 billion, stated that the average prevalence is 42% compared to the population; Turkey is ranked twenty third with 63% (Reporter Global Digital Yearbook 2018: 51-54). In Turkey, the number of people between the ages 16 and 64 is 51 million, who are active users of social networking sites as specified. In a survey, occupancy rates of these users with social networking sites comprise Facebook 53%, Twitter 36% and LinkedIn 20% (Digital in Western Asia, 2018: 199). If a brief preliminary examination is made, it is seen that Facebook focuses on expressing and promoting itself, and LinkedIn is focused on professional performance and experience. If a user keeps his LinkedIn profile active while sharing very little personal information on Facebook, it is possible to say that he/she attaches importance to their privacy (Dijck, 2013: 211-212). In the light of this information, it seems possible that platforms such as LinkedIn, Facebook can be used to observe the social behavior of employees and thus to evaluate their professional values. Below, the two main social network sites LinkedIn and Facebook will be briefly introduced as they are the common intersection point of the most commonly used sites in the recruitment process of recruiters and job seekers.

### **3.1. LinkedIn**

Established in 2003 to create a professional business network, LinkedIn today continues to exist as the world's most used professional network among social networking sites with more than 550 million users in approximately 200 countries. At least one senior manager of each of the businesses on the Fortune 500 list is among its users. LinkedIn is an American-based enterprise, with nearly ten thousand staff and offices around the world, serving in twenty-four languages. Businesses upload job postings, job-seekers' job experiences, formal and vocational training, skills and abilities, and their resumes to the system. Thus, LinkedIn allows its users to make connections with each person in the social network where they can showcase their professional relationships in the real world. Users view the information of their connections and their connections, to question whether these connections work in a business they are interested in, to view the job opportunities suggested by the people in their connections, to review the profiles of the recruiters in their connections, to search businesses' pages to see female/male employee

ratios, the percentage of the most used titles and positions and current and former employees, and appreciating and congratulating the current developments on the job status of their contacts and their new positions. Since 2011, LinkedIn has allowed businesses to add an “Apply with LinkedIn” button on their job posting pages. Thus, potential employees were allowed to apply for open positions using their LinkedIn profiles as their resumes. Since 2012, a feature has been added that allows users to validate others’ abilities and skills. This feature also encourages users to create links by enabling them to effectively support comments on other users’ profiles. LinkedIn also has special platforms for job seekers and recruiters. Global businesses such as Nestle, Siemens, Amazon and Dropbox are working in connection with these platforms of LinkedIn (LinkedIn, 2018). The exposed personality traits of a LinkedIn user who is well connected, social, and also multi-skilled go far beyond what the simple qualities of a resume tell. In this context, recruiters are committed to finding the best future employee; and to employees as a new way to keep their eyes open for many open job positions and professional opportunities (Papakonstantinidis, 2014: 47).

### **3.2. Facebook**

Facebook, which was established in 2004 in the United States by Marc Zuckerberg and his friends as a platform for Harvard University students, was soon opened to the use of other major universities such as Stanford, Columbia and Yale. The number of users of the site, which became available to everyone in 2006, reached a billion worldwide in 2012, and its administrators also bought Instagram, another popular platform among social networking sites. In 2015, it became a site where forty million small and medium-sized businesses have an active profile page and are used by approximately one billion people a day. In 2016, the messaging program alone was used by more than a billion people a month. In the same year, its application for businesses (Workplace for Facebook) was launched. As of the end of 2017, with more than twenty-five thousand employees, an average of 1.4 billion daily and 2.1 billion monthly active users and thirteen offices in the United States and forty-two offices in other countries, it has a dominant position as the most popular platform among social networking sites. Facebook has twenty-seven thousand employees worldwide (Facebook, 2018). 58% of approximately 2.1 billion users are between the ages of 18-34 (We Are Social, 2018). In a study conducted in fifteen countries with 1388 white-collar employees between the ages of 18-30, 1524 white-collar employees between the ages of 31-50 and 827 human resources employees, it was seen that the most preferred application for smartphones was Facebook (Cisco, 2014). According to „Facebook.com” statistics, more than half of active users regularly connect to Facebook every day. On average, every Facebook user has at least 130 friends and users spend more than seven hundred million minutes a month on the site (Facebook, 2017).

## **4. RECRUITMENT PROCESS AND SOCIAL NETWORKING SITES**

Social networking sites aim for combining the needs of their users to express and promote themselves. There are three stakeholders in the operation of social networking sites. Users build connections, showcase their skills and talents to different audiences; businesses obtain accurate information about the behavior of potential candidates and monitor the online behavior of their current employees; platform owners also want the connections to be maximized. Businesses use social networking sites for recruitment process and business communication purposes. Recruiters, on the other hand, want to be able to select prospective employees more accurately by going beyond static resumes. Naturally, businesses also use these various posts of social network



site users effectively when evaluating candidates for employment (Dijk, 2013: 211-212). It is necessary to understand that the presenting present on social networking sites today is not just a static situation similar to a store window like in the times of old internet technologies called „Web 1.0”. On the contrary, internet technologies called „Web 2.0” enable interaction during the recruitment process, and two-way communication is encouraged and supported. One of the main purposes of using social network sites is to ensure the continuity of business-related information and images (Micik and Eger, 2015: 271).

In order to provide an overview, the following table shows the use of traditional methods and social network sites in the recruitment process; nature of the interaction, talent pool and networking.

**Table 1.** Changes in Recruitment Practices

	<b>Traditional Way</b>	<b>New Way</b>
Nature of Interaction	Two-way communication (applicants send in resume, organizations sends feedback through hiring decision)	One-way communication (applicants send out a variety of signals that “cue” organizations to make decisions)
Talent Pool	Employers use geographically limited talent pool	Social media allows organizations to recruit from a geographically dispersed talent pool
Networking	Employers rely on word-of-mouth, recommendations or reputations to learn “true nature” of job candidates	Employers use social media to gain valuable information about job seekers, including attitudinal and individuating information

**Source:** Wade, 2015:4.

Below, different methods in the recruitment process and the advantages and disadvantages of these methods are compared.

**Table 2.** Comparing the Different Means of Recruitment

	Job board (jobs.cz)	FB	LinkedIn	Corporate websites
Kind of employees	junior and senior management, graduates	young people, graduates	specialists, senior and top management	active jobseekers
Advantages	many responses CV database seeking, almost non-limited advertisement	existence of digital footprint, increasing visitors of corporate FB page	CV presentation, references, circles of friends, interest groups	responses of active individuals who are interested in a particular company
Disadvantages	price, a large number of irrelevant responses	uncertainty that someone replies distrust in FB	activity must make HR	limited distribution low response

**Source:** Bohmova and Pavlicek, 2015: 29.

There is no doubt that social networking sites will continue to exist. For this reason, businesses need to understand fully the potential benefits and pitfalls. Thus, businesses and recruiters will be able to use the right social network tools that can meet their employment needs (Doherty, 2010: 12).

#### 4.1. The Prevalence of Social Networking Sites

With the publication of the first articles on internet use in recruitment since the early 2000s in the academic literature, many things have changed in the field, which has significantly encouraged scientific research and business practices related to the recruitment process. While this situation causes many problems that still seem more important such as security, privacy, documentation, evaluation conditions control and access equality; with the emergence and increasing use of Web 2.0 technologies such as blogs, micro-blogs and other social networking sites, many other problems have surfaced. The main feature of applying these technological advances to the recruitment process is that these innovations allow a high degree of interaction between potential intermediaries such as businesses, recruiters, job seekers and third-party suppliers, and the parties can be highly involved in this online assessment (Nikolaou et al., 2015: 87).

Many studies have been conducted to determine the prevalence of social networking sites in the recruitment process of businesses. Valuable information and results have emerged from the research conducted by global management and consultancy institutions such as SHRM, Adecco, Randstad, Jobvite, Wilson HCG in the last decade. According to the research conducted by Adecco with seventeen thousand job seekers and fifteen hundred recruiters in twenty-four countries, five out of ten job seekers use social network sites to search for jobs, while seven out of ten recruiters use social networks for daily human resources activities. 29% of job seekers contacted human resources employees at least once through social network sites, and 9% received a job offer. LinkedIn (68%) and Facebook (52%) are among the most used social networking sites. Approximately 30% of human resources employees who use social network sites for recruitment have attended training courses on the subject (Adecco Group, 2017).

Jobvite conducted a survey in 2016 with 1600 recruiters from various sectors. According to the results, social networking sites are among the new methods to be invested to reach talented employees. As can be seen in the table below, in the expenditure budget allocated for the recruitment process, recruitment activities via social network sites appear as the third priority area to invest with a rate of 29%.



**Figure 1.** Where Recruiters Are Investing?

According to another study conducted among 2380 recruiters, 57% of the participants were less likely to call a candidate who does not have any social networking site membership, 54% decided not to hire a candidate based on the profile of the candidate on social networking sites. While half of their current employees check their social networking sites profiles, more than one third of them warned or fired their employees for inappropriate content on the social network sites, while 70% of the participants stated that they use social networking sites to eliminate candidates (Careerbuilder, 2017). In a study conducted with three hundred recruiters, 91% of the participants used Facebook (76%), Twitter (53%) and LinkedIn (48%) platforms to eliminate candidates during the recruitment process; 47% of them used after the application was received and 27% used it after the first interview with the candidate; while 69% stated that they rejected the candidates at least once based on the information they obtained from social networking sites, 26% stated that they never rejected; based on the information they obtained from social networking sites, 68% stated that they hired candidates at least once and 27% stated that they never recruited in this way (Reppler, 2011).

In a study in which 286 recruiters in the Czech Republic were asked „How do you reach new employees that you will recruit to your organization?“, 87% of the participants use job advertisements, 75% use the websites of their businesses, 61% are recommendations received through acquaintances; it was stated that 37% of them reached through internet research, 30% through advertisements they posted on social networking sites, and 28% advertised in the newspaper (Bohmova and Pavlicek, 2015: 28).

#### **4.2. Antecedents and Outcomes of Using Social Networking Sites**

The attitudes of the young generation towards work change with information technologies. Just as the needs and priorities of the next generation of employees affect the development of the labor market, how they adapt to these trends will affect the competitiveness of businesses in their struggles for talented employees in the future. Today, those born in 1980 and after, who use the Internet, mobile and information technologies quite often that even make them a lifestyle, work in middle and senior management positions and are the numerical majority in the labor market; it shapes the dynamics of the market according to the way this generation lives. Since the generation in question has never experienced a world without internet, information technologies are indispensable for them (Cisco, 2014). Another issue is that businesses want to save time and money is among the objectives of the recruitment process. However, this austerity policy does not affect the quality of job applicants. For this reason, it is the smart use of social network sites where more information is disclosed than that revealed in interviews and traditional recruitment process methods in order to ensure the continuity of the quality level of the candidates, although the costs that companies should focus on will decrease (Bohmova and Pavlicek, 2015: 24-25).

Another example of the use of social networking sites to reveal information is that they can be used for macro-scale labor market analyzes, just like data mining. This situation occurs in terms of businesses as monitoring the labor market and using it in the decision-making processes of the business (Seçer and Seçer, 2017: 1091, 1101). In another study conducted with sixteen recruiters from six different countries, as a result of semi-structured interviews with the participants, four main factors were revealed as the factors affecting the use of social network sites in the recruitment process: organizational predisposition, adaptation to change, competition and individual motivation of human resources employees. The research participants had an interest in the use of social networking sites in the recruitment process and this interest increased as they read about human resources, the recruitment process and social network sites. They found many interesting ways to

search for candidates with social network sites by writing their own experiences and stated that these are slowly shifting themselves to the use of social networking sites in the recruitment process. In the process of adaptation to social network sites, the decisions of businesses to use social network sites are taken to determine the legitimacy of businesses in social networks in the labor market with the change in the technological habits of job seekers who use these sites and expect recruiters to use them (Quirdi, 2016: 54). In addition, the legal regulations and legislations of the countries regarding social network sites are among the important determinants affecting the usage.

In addition, recruiters were asked what the positive and negative consequences of using social network sites during the recruitment process were, and in line with the answers given, the results were divided into two categories as operational and relational. Time and cost, the opportunity to reach the targeted wider audience and the quality of the candidates were determined as operational results. Besides; they reported three relational results, such as proximity to candidates, social orientation of employees, and the emergence of negative reputational risks (Cisco, 2014: 5-13. Bohmova & Pavlicek, 2015: 24-25. Seçer and Seçer, 2017: 1091,1101. Quirdi, 2016: 54. Kroeze, 2015: 8,9. Quirdi, 2016: 58-60. Nikolaou et al., 2015: 88. Bohmova & Pavlicek, 2015: 28. Kluemper, 2013: 1-11. Kroeze, 2015: 8,9).

#### **4.3. Opportunities and Threats of Using Social Networking Sites**

Issues arising from the use of social network sites during the recruitment process are in a wide range of privacy, discrimination, negligent hiring, validity, reliability, generalizability, impact management, candidate responses and relevance. The problem of criterion validity regarding which criteria will be interpreted, in other words, how to predict unobserved and unknown situations from observed and analyzed situations is also one of the discussed topics. There is a need for academic research to study this phenomenon in order to discover whether the use of social network sites in the recruitment process is valid or not. Recruiters should also be aware that there is little evidence available on this important issue. Recruiters intuitively use social networking sites, but their approach does not yield valid and legally defensible results; therefore, this situation acts like a warning. There are also various issues such as lack of reliability, low generalizability and impact management that could undermine the scientific validity of this method. For example, some candidates may have used personal branding and designed their profiles for networking for business opportunities. This is about impact management and can be detrimental to validity. There may be negative reactions of candidates due to informational, procedural, sociocultural and individual factors regarding the use of social network sites during the recruitment process. As a result, negative organizational consequences such as low job acceptance rates, tendency of candidates to resort to legal remedies and damage to the image of the company may occur (Kluemper, 2013: 1-11).

One of the main advantages of social networking sites for recruiters is that they provide the opportunity to reach and attract passive candidates. With the presence of LinkedIn, passive candidates, like active job seekers, create and update their professional profiles, hoping that this will bring them closer to recruiters and job opportunities, even if they are not actively seeking jobs or responding to job opportunities (Nikolaou, 2014: 179). It is wise for businesses to standardize their evaluations and use multiple evaluators in the use of social networking sites during the recruitment process as that will help to provide more validity (Ballweg et al., 2018: 176). Checking the validity of the information obtained through social networking sites during the recruitment process is another smart method to do. No research so far has examined the content validity of information collected by businesses. Without validity provided by well-documented evidence,

profile scans of recruiters will remain vague on an unreliable basis. Moreover, this may lead to undocumented discriminatory behaviors (Kroeze, 2015: 8).

In another study, the participants stated that they found social networking sites useful because they allowed them to „get to know the candidate beyond the resume”. This situation says, “What happens on social networking sites tells a lot about who you are as an individual, what you tweet, write, and share. Your paper resume is what you do; however, your social background is detailed with the view of who you are. This social resume enables recruiters to evaluate closely the culture of the business and candidate compatibility, thus positively affecting the retention of employees in the following periods. Some of the participants stated their opinions as, „It has been determined that the candidate is more likely to work for a longer period in the business than other employment methods due to cultural adaptation in such recruitment through social channels.” Participants have limited reach to a specific target audience of recruiters, due to the difficulty of identifying suitable candidates within the right social networking sites, or because excessive use of social networking sites can affect visibility to a small and targeted audience amongst the flow of content generated by a large user base. (Quirdi, 2016: 54,55,60).

The use of this information in decision-making processes has raised the question of whether it will lead to unethical use against candidates who have widely available information such as race, gender and religion preferences on these sites (Kluemper and Rosen, 2009: 567). In his study, Kroeze mentions that there are opinions that persons lose their privacy rights when they send their information to social network sites (Kroeze, 2015: 4), which seems to be valid for Turkey as well. In Turkey, according to Law, No. 6698 issued in 2016, on Personal Data Protection of Personal Data, if their information is made public by themselves, it can be processed without requiring explicit consent. The word „public” is in the article of the law; since it is defined as „Open, in the middle, in the square, in the public” in the Current Dictionary of the Turkish Language Association, it is concluded that the information shared through social network sites became public (Official Gazette, 2017; Turkish Language Association/TDK 2019). For this reason, it seems possible to process all kinds of information of candidates on social network sites without the consent of the person during the recruitment process. As a result, there is a need for research on the ethical consequences of the possibility of recruiters’ use of social networking sites as a discriminatory tool, because many social network site profiles contain illegal information to be questioned during job interviews (Vicknair et al., 2010: 10).

## **5. METHODOLOGY**

### **5.1. Aim**

In the study, it is aimed to discover to what extent and how new techniques are involved in the use of social network sites in the recruitment process for sustainable competitive advantage, in one of the leading businesses in the tourism sector. With the aim of providing empirical data on the question of how businesses and job seekers can benefit from the integration of social networking sites into professional recruitment processes, the following assumptions have been made:

Assumption 1: Social networking sites are effective in the recruitment process.

Assumption 2: The use of social networking sites in the recruitment process has advantages in strengthening communication, time and cost.

Assumption 3: The use of social network sites in the recruitment process has negative image and unethical usage disadvantages.

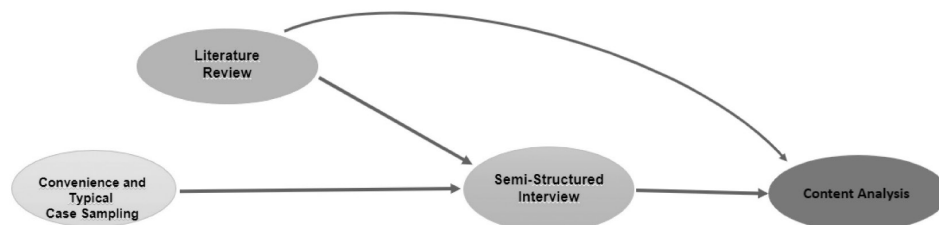


## 5.2. Sampling, Data Collection and Analysis

Qualitative research methods were used in the study. As seen in previous studies on social networking sites and the recruitment process (Nikolaou, 2014; Papakonstantinidis, 2014 and Quiridi, 2016), the primary data were obtained with a research design consisting of two parts: 1) Focus groups, 2) In-depth interviews, using the non-probabilistic purposeful sampling method, as seen in many qualitative studies; for the individuals to be interviewed, the criterion of whether they are related to the research subject or not was considered. Purposeful sampling rather than representing the universe allows in-depth studies of situations that have rich content. While the focus group interview was conducted as a convenience sampling, in-depth interviews were conducted using the typical case sampling method. In this context, with semi-structured interview forms prepared in the light of literature research, two focus group interviews were conducted with eight people who use social network sites at an average at national level (almost every day) and who have been looking for a job in the labor market including the tourism sector for an average year. 75% of participants were female and groups' average age was 26. All of them had bachelor's degree and were about to finish their master's degree. They were looking for a job in human resources department related to their higher education. Job seekers were asked which elements they pay attention on social network websites' corporate pages and how they are used in the job search process. In these interviews, it was tried to reveal which subjects the job seekers focused on while obtaining information about businesses on social networking sites and what they were paid attention to with content analysis. Besides, in-depth interviews were conducted with two human resources managers of one of the biggest holdings of Turkey (selected by typical case sampling based on the number of employees size group; businesses with two hundred and fifty employees or more) that has tourism & travel agency, is a member of TÜRSAB (Turkey Travel Agencies Association) and IATA (International Air Transport Association), and the collected data were subjected to content analysis. Qualitative methods are seen as the ones that will lead to the most appropriate result in studies where the main thing is the situation studied (Yıldırım and Şimşek, 2011: 51).

The triangulation method was made by using more than one method in order to contribute to its validity and reliability and to be closer to objectivity. The qualitative data obtained as a result of these methods were analyzed with Maxqda 12 software program. The coding process was carried out by two independent researchers. Consensus between coders; it is calculated as ~ 75.86% for in-depth interviews and ~ 87.93% for focus group interviews. The agreed code list was sent to an associate professor at the university for review.

The methodology followed is shown schematically in the figure below.



**Figure 2.** Research Method

The two major social network sites are the common intersection points of the most widely used sites in the world in the recruitment process and the most frequently used by job seekers in the job search process; LinkedIn and Facebook have been studied.

## 6. FINDINGS

After coding, the following themes about the use of social network sites in the recruitment process were reached by the researcher.

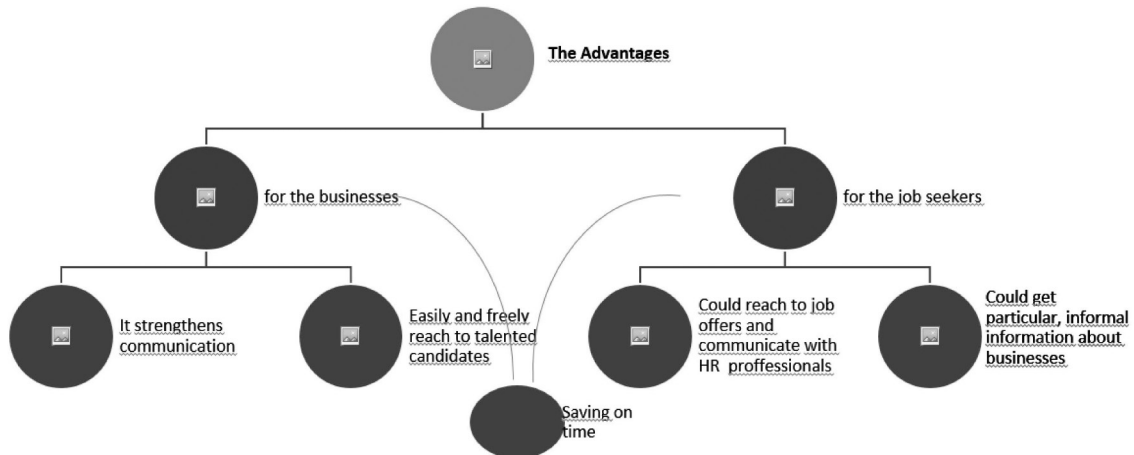


Figure 3. The Theme of Advantages

Under the theme of benefits, the following answers were taken from the recruiters in the in-depth interviews:

*“... it can be much easier to open yourself up to all of your stakeholders, that is, to strengthen communication and reach them. As I said in the Human Resources section, I have a project team, and a friend at the head of corporate communication, they do very good things. Really, if you go to LinkedIn and follow something, we have a lot of following. No ads, nothing, I don't allocate a budget, but we have a lot of followers and we are good at that. Upon that, our recruitment and stuff got stronger as an employer brand... ,”*

*“... We think it is a low cost and fast way.”*

*“... We use social media to reach candidates about our vacancies and to direct them to the application platform by giving brief information about the position. In addition, we share perception enhancing issues about our brand, such as the awards we have received and our achievements, with our followers through these tools...”*

Coding was made about strengthening communication, providing easy and free access to talented employees and saving time.

Also, given in the focus group meeting with job seekers:

*“... Because posts spread faster, they can be reached more quickly on social media, everyone can reach them, and we have the opportunity to see them immediately. We get to know the companies better in that respect...”*

*“... Because their posts spread spontaneously on social media, they come before us spontaneously...”*

“... LinkedIn is a lot on that subject, so you see all the managers where they work. If we wish, we can also ask questions via messaging...”

“... There are posts, for example, they post their views or something. You can also notice what kind of opinion he has, which is actually a nice thing...”

“... We use it effectively. The job postings section of LinkedIn is a good opportunity to reach different open positions...”

In the light of his views, coding has been carried out to provide access to job postings, contact with recruiters and access to specific and distinctive information about businesses. In this context, it is seen that the findings obtained support the first and second assumptions of the research.

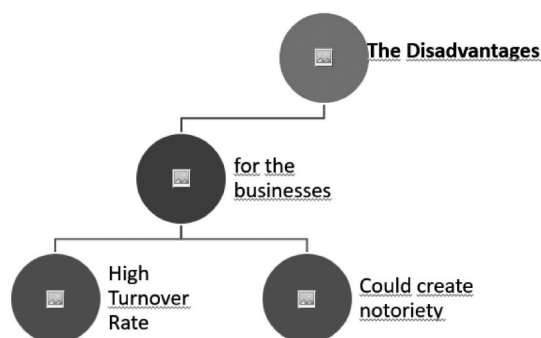


Figure 4. The Theme of Disadvantages

While there is no negative opinion about job seekers in coding under the disadvantages them, coding such as the formation and spread of bad reputation related to businesses,

“... You manage the perception, or you actually post a truth on a social media, but the power of the media is so great that it is a very serious power now. It is a very powerful tool for accessing information. There may be things you do not want in perception management...”

“... social media is also a very dangerous thing, in terms of its spread...”

was carried out in the light of opinions. In the light of these findings; it was concluded that the third hypothesis of the research is partially confirmed.

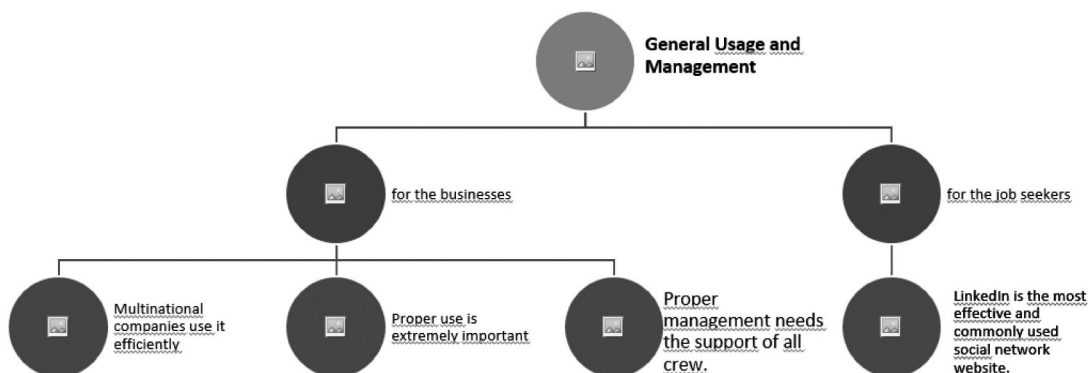


Figure 5. The Theme of General Usage and Management

The current situation under the theme of management and general use is that correct use and management is very important for businesses such as:

*“... or even if you allocate this budget, if the organization cannot carry the profiles that manage it correctly, it is not enough to have an account there. I’m telling you again, you have to manage them correctly. In order to manage these places correctly, they must be at the top and bottom of your institution. So, what do I mean? It’s the right process in the head of the founder or general manager, CEO, so you go out and say my company is doing this and that, you can say because you see a path in front of it. When you say without seeing it, there is a possibility that this time „he said this, but it happened like this...”*

*“... Therefore, you should not only have an account, but also be able to manage that social media properly. It is possible with the right staff and the right things. I mean, imagine that you did a mass layoff after two months saying that we are doing very well or something.”*

*“... I think that behind a perception must be managed with real projects and knowledge...”*

while being coded by means of expressions, for job seekers, LinkedIn is the most used social network site,

*“... Since it is a very official site, such a supplement application is useful... There is a lot of redundant information on other sites, but because there are higher-level people on LinkedIn, their suggestions are less and more likely to enter...”*

*“... and this is also very useful. The e-mails constantly come from these applications. I constantly search for HR and I receive e-mails when there is a human resources announcement. This is actually useful for job seekers. „*

*“... You are already notified of similar postings you are looking for...”*

*“... Actually, for example, I registered for it this year; I started to use that media actively. Actually, I think it’s good. When we add the necessary people, since I just opened, there are about 350 people I know there, about 300 of them are on HR. I also added HR friends of my friends, I added experts etc. They share as much as they can. You know, they share job applications, for example, they will get mechanical engineers, they should send an e-mail to HR or customer service or something. I remember that I only sent over fifty or sixty e-mails there directly to people and I also get a return. You know, I think LinkedIn is active...”*

*“... Important for communicating with employees...”*

*“... Exactly. I think it is something that is done to reach a higher-level people and communicate with them in some way...”*

*“... That’s what I did from LinkedIn. Knowing all my managers and the backgrounds of all my managers, I was very comfortable when I got to work. After all, I knew who and where to go. ... LinkedIn has a lot of things about it, so you see all the managers where they work...”*

“... There are posts, for example, where they share their views or something. You can also notice what kind of opinion he has, which is actually a nice thing. ,, appears with his views from interviews...”

## 6. FUTURE RESEARCH DIRECTIONS

The study has limitations such as the limited number of interviewees. In future studies, it seems possible to reach other dimensions by interviews with more people. In summary, more academic studies need focusing on the use of social network sites in the recruitment process. Thus, it will enable both parties, career seekers and businesses, to reveal the accompanying opportunities and threats more clearly.

## 7. CONCLUSION

In this research, to what extent and how social network sites affect job seekers' behavior consisting of the job search process was investigated along with the access status of businesses to the target audience in terms of quality and quantity, cost and time factors, the depth of the information obtained about candidates. In addition, the criteria for job seekers to reach businesses and by businesses to job seekers, the premises and results of the use of social networking sites in the recruitment process are examined together in the tourism sector.

It is possible to summarize the results to be obtained from the research findings as follows. When the findings are analyzed:

- In the recruitment process, social network sites are effective tools used for specific purposes for both recruiters and job seekers.
- Using social networking sites is beneficial in terms of saving time and money. At the same time, it has been observed that it provides support in terms of reaching candidates and strengthening communication for both parties.
- In terms of businesses, when it is poorly managed, it can damage the business and its image. In terms of job seekers, no obvious disadvantages were found. On the other hand, it has many advantages such as accessing job offers and recruiters. In addition, there was no evidence of unethical use; therefore, the third assumption was partially supported. The research also found that LinkedIn is the most used social networking site, where job seekers obtain distinctive information about businesses. The presence in LinkedIn is distinctive for those organizations (Carpentier et al., 2019: 32). In addition, some additional findings have been found which are not included in the literature, such as the importance of correct use for businesses, and the necessity of the participation of all personnel for effective management have been reached. In this context, it is possible to say that the study brings new dimensions to the subject matter.

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# EFFECTS OF LEADERS-FOLLOWERS EXCHANGE (LMX) ON ORGANIZATIONAL COMMITMENT AND TURNOVER INTENT IN HOSPITALITY AND PUBLIC SERVICES

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**Abstract:** *Based on the specifics of the selected service sectors - hospitality and public, it is clear that the role of leaders significantly varies. Antecedents for achieving organizational and individual goals include a quality relationship between leaders and followers (supervisors and subordinates), making it possible for an organization to be functional and successful and employees satisfied at work. Although the concept of leadership is as old as human civilization, numerous multi-annual researches and thousands of studies have not yielded with a clear idea of what the leadership is and how best the organizational and individual goals could be achieved. This paper focuses on the effects of the quality of leaders - followers exchange to organizational commitment and turnover intent (intention to leave).*

**Keywords:** *LMX, Organizational commitment, Turnover intent, Hospitality sector, Public sector.*

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## 1. INTRODUCTION

Leadership is an extremely complex issue and therefore viewed from different aspects of social life, power, politics, trust, groups or organizations. As concluded by Northouse (2001) leadership can be categorized into two groups. The first group focuses on the characteristics and behaviour of leaders and followers, while the other group focuses on the interaction and relationship between leaders and followers. The definitions of leaders and the theories of leadership have changed over time, depending on variable that is taken for analysis. Among them there is a certain degree of cohesion and researchers are trying to form a theory in which all the positive aspects will be maximized and possibly negative aspects will be minimized (Graen & Uhl-Bien, 1995).

Depending on the type of sectors in which the research is conducted a number of specificities may arise due to various approaches applied by leaders towards their employees. Many researchers conclude that the quality of LMX relations depends on many factors. However, the specificity of the service sector is not highlighted sufficiently in those researches.

The hospitality sector consists of production and sales in hotels and restaurants on the one side, and travel agencies and tour operators on the other side, but also of public activities such as providing the necessary conditions and infrastructure for a variety of leisure activities (municipal services, museums, cultural or historically valuable buildings, theme parks, etc.). Due to many factors (working conditions, promotion, communication skills, relations between users and services - treatment of the service part of the job, good manners, etc.) tourism is character-

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ized by frequent changes in staff members. Human resources in the hospitality sector are most important, and their specificity is reflected in the fact that they have a long-term effect on the organization's business operations, they have the development capacity and are associated with all business functions.

The government or public administration, or only the administration, is the term that implies regular activities carried out by the state or province or local government (municipality). The public sector is a very complex system that involves the participation and coordination of numerous entities in achieving common goals - the functioning public sector.

## 2. LITERATURE REVIEW

### 2.1. LMX

In the early 1970s, the trends in the study of the process of leadership were revised and it was suggested that the impact of a two-way process between leaders and followers should be recognized as the implication of trade relations (Hollander & Julian, 1969). In contrast to the earlier theories, the new study was presented that was called the theory of leaders and followers exchange. The significance of LMX theory as one of the most influential theories of leadership is suggested by a number of studies that have been carried out over the past four decades (see more in Day & Miscenko, 2015). From vertical dyadic relationship (Dansereau, Graen & Haga 1975; Graen & Cashman 1975; Graen 1976) and the theory of social exchange (Wayne & Green, 1993) to the relational leadership (Uhl-Bein, 2006), the analysis of quality of leaders-members exchange has passed several phases from the standpoint of individual and organizational correlates.

LMX theory research began with the analysis of the role of the exchange, where the focus was on a variety of two-member interactions (dyadic) between the leader and follower in which the leader did not develop the same connection (relation) with each of the employees. In earlier literature, the research of antecedent's pre-establishment model of leader-member exchange was at the level of individual characteristics (personality, similar characters, etc.). The initial phase of LMX development was also confined to variable individual characteristics (Dienesch & Liden, 1986). Graen and his associates (1995) base the development of LMX on the characteristics of employment, because the nature of work has a certain influence on the development of exchange between the leaders and followers, which results in different outcomes. For example, a high level of LMX improves the sense of mutual obligations, reciprocity (Liden et al., 1997) and emotional attachment between the leader and follower, and such connections are social. Labour relations are based on social exchange (Erdogan, Liden, 2002) characterized by loyalty, commitment, support and confidence (Cropanzano & Mitchell, 2005), as opposed to economic exchange, characterized by employment contracts (Blau, 1964).

Studies that relied on social exchange argued the nature of the relationship between the quality of LMX and its outcome (Erdogan, Bauer, 2015). Numerous LMX studies focus on the outcomes (Graen & Uhl-Bien, 1995; Liden, Sparrow & Wayne, 1997; Schriesheim, Castro & Cogliser, 1999), that is, the positive organizational and individual outcomes result in a high-quality exchange between leaders and followers. Positive results include higher personal performance and operational performance, but also ascendants for *commitment to the organization*, job satisfaction, organizational behaviour, as well as a weaker desire to *leave the organization* (Gerstner & Day, 1997; Schriesheim et al, 1999; Wayne et al., 1997). LMX theory describes the relationship



of employees and their supervisors in a continuum from low to high exchange, and it is therefore measured as a continuous variable, because numerous studies have shown that it is more likely established either high or low exchange relationship with followers (Yukl, 2006). A high-quality exchange requires both parties to accept their mutual interests and have the agreement to carry out common goals. In contrast, low-quality exchange characterized by a follower has a limited level of communication with their leader and a limited scope of responsibility.

## 2.2. Organizational commitment and turnover intent

Organizational commitment is extremely useful because it has a major impact on the successful performance of an organization. It is a measure of the strength of identification of the employee with purposes and values of the organization (Mowday et al., 1982; Meyer & Allen, 1997), which is defined as a psychological condition for the relationship of an employee with the organization that influences the decision of the employee to stay in a specific organization (Meyer & Allen, 1993). The importance of this construct is reflected in the ability to predict, based on the level of its value, the concrete results such as the results of employees and their behaviour, which has practical significance for the organization.

The three-component construct is composed of emotional (affective), normative and continuous commitment. Affective commitment is defined as the emotional attachment, identification and involvement the individual employees feel towards the association, the trust in the organizational values, readiness to help the organization to achieve its objectives and to develop high quality and rational relationship with the management (Porter et al, 1974; Meyer & Allen 1991). Normative commitment is based on Weiner's (1982) study of internalization of norms of loyalty to organizations and it is more theoretical than empirical but depended on social circumstances and external pressures (family, environment), as well as on the sense of obligation to their workplace (loyalty). It is defined by a strong emphasis on social obligations and the tendency of individuals (Yang, 2008). Continuous commitment is the willingness to stay in the organization because of the lack of other available alternatives, i.e. employees do not stay in the organization because they want to, but because they have to (Meyer & Allen, 1991, 1997). Some scholars (Stinglhamber et al, 2002; Bentein et al, 2005) divide continuous commitment into two sub-dimensions - the experience of great sacrifice associated with leaving the organization and the lack of alternative employment opportunities.

In most studies commitment as a determination is treated as a statistical variable (Bentein et al, 2005). Wayne and his associates (2002, 2009) make a positive correlation between LMX and commitment in the sense that high-quality relationships promote employee's commitment to the organization and building good relations with followers in order to increase loyalty to the leaders. Affective commitment is considered as the strongest and most powerful form of organizational commitment (Jax, 2002), while all three constructs correlate negatively with turnover intent (Cooper-Hakim & Viswesvaran, 2005; Golden and Veiga, 2008).

Changing staff members has serious consequences on the efficiency of the organization. The time necessary to find the right employees and the time it takes for new employees to reach the maximum level of operational performance can sometimes be an obstacle in achieving organizational goals. The intention to leave an organization is a psychological process which an individual goes through when considering alternative employment opportunities due to dissatisfaction with the current organization (Martin, 2011). This is a process that precedes realization – quitting a job. Most research studies focus on the very intention of changing jobs because it is easier for

employees to express their intention to leave the organization than to really quit (Kim et al., 2010), regardless of the type of organization. A key challenge to organizations is to retain skilled workers (Griffeth et al., 2000). The individual predictors and organizational predictors (organizational commitment, job satisfaction, etc.) show a significant relationship with turnover intent.

The correlation between turnover intent and the level of LMX relationships gave inconsistent outcomes. Collins (2010) suggests that the nature of the relationship between leaders and followers and intention to leave „remains ambiguous”. Some studies noted a linear relationship between LMX and employee turnover intent (Morrow et al., 2005). Also, empirical findings showing a significant negative correlation between the quality of leaders and followers exchange and intentions to leave were recorded by Sparrow (1994), Wayne and his associates (1997), Erdogan and Liden (2002) and Sparr and Sonntag (2008), while others did not find any correlation (Vecchio et al., 1986). In summary, an employee who has a weak relationship with his/her superior(s), is more likely to indicate the intention to leave, than those employed with a high quality of exchange (Gerstner & Day, 1997; Schyns et al., 2007).

- H<sub>1</sub>:** There is a significant correlation between the level of LMX and organizational commitment in the hospitality and public sectors.
- H<sub>2</sub>:** Construct LMX is negatively correlated with the turnover intent in the hospitality and public sectors.
- H<sub>3</sub>:** Dimensions of organizational commitment as predictors of the level of LMX in hospitality and public sectors.
- H<sub>4</sub>:** Predictor's turnover intent negatively affects the level of LMX in hospitality and public sectors.

### **3. METHODOLOGY**

#### **3.1. Instruments**

Leader-member exchange questionnaire (LMX-7) - measuring the quality of the employee relationship with the superior according to Graen and Uhl-Bien (1995) is most commonly used to study theoretical questions, and it is filled by both the leaders and followers. The quality of leaders and followers exchange was measured by the LMX-7 questionnaire with the standard five-point Likert's scale (strongly disagree - strongly agree). Respondents were offered seven statements (items). The questionnaire is homogeneous and has a single dimension. Scores obtained by LMX-7 have the following meaning: very high from 30-35, high from 25-29, medium from 20-24, low from 15-19, and very low from 7-14. Results in the upper range point to a stronger, better exchange of leaders and followers, and results in lower ranges indicate the exchange of lower quality. Cronbach alpha for this questionnaire is very high (at  $\alpha = .94$ ).

Organizational commitment (OC) questionnaire – measuring the dimensions of organizational commitment according to Porter and his associates (1974) - affective (emotional), normative and continuous commitment - consists of five items (15 in total) which were measured on Likert's scale (1-strongly disagree to 5-strongly agree). It contains seven reverse-coded items. Emotional commitment has the highest alpha reliability coefficient ( $\alpha = .82$ ).

Turnover Intent (TI) - the measurement of intention to leave the organization by Mobley, Horner and Hollingsworth (1978). The turnover intent was measured with three questions on a five-

point Likert's scale (1-very bad to 5-excellent). The minimum score is 3 and the maximum is 15. Higher scores indicate a high intention of leaving the current job. Cronbach alpha for questionnaire is high ( $\alpha = .88$ ).

We also used control variables such as gender, age, years of service with the current employer, total years of service and level of education.

### 3.2. Procedure

The paper examined the quality correlates of the relationship between the employees and their superiors, as well as the regression model in the hospitality and public sector according to the LMX model. We also examined the relationship between the leaders and followers and determined its connection with the dedication to work and willingness to leave the job. Testing the organizational factors that have a predictive effect used organizational commitment and turnover intent. The results of performance test of those relationships are shown separately for hospitality and public sector, bearing in mind that organization in the hospitality sector is characterized by a high level of entrepreneurial orientation and a high level of competition on the market. The sample size included 200 respondents from hospitality (travel agencies, hotels, restaurants, coffee bars and wineries) and public sector (city and municipal administration, tourism organizations, public utilities, health centres, hospitals, elementary schools and colleges) in Serbia. The resulting data were analyzed using the SPSS 22.0 statistical package. Cronbach alpha was calculated for all instruments in order to confirm the reliability of the questionnaire.

### 3.3. Sample

Women accounted for 64%, i.e. they made the majority of subjects in the sample. The largest number of respondents (94) were aged from 30 to 44, while 27.5% of respondents were older than 45. A total of 8 respondents (4%) did not comment on their age (four from each sector). The questionnaires were offered to persons with six levels of education: elementary school, high school, college, university, Master (MSc) and Ph.D. The most common level is university education with 111 or 55.5% of the respondents. Only one respondent has an elementary school and has been employed in the hospitality sector (coffee shop). Also, most employees with secondary education are in restaurants and coffee shops, while in hotels (reception) most employees are with the university education. The average length of service with the current employer for the hospitality sector is 5.3 years, and in the public sector, it makes 10.4 years. One employee in the hospitality sector and four employees in the public sector have more than 30 years of service in the current organization.

## 4. RESEARCH RESULTS

Descriptive statistics and correlation of variables are shown in Table 1 for both sectors. Employees in both sectors have characterized the efficiency of their working relations with superiors as good, and stated that the superior recognize their potential and is ready to help them get „pulled out of the pulley”. Distribution results in the hospitality sector in this dimension are negatively skewed, and employees have higher scores for specific answers regarding the level of LMX. On the other hand, public sector employees have a normal distribution, i.e. have relatively uniform answers regarding the level of LMX. Employees in the hospitality sector show greater emotional attachment to the organization in which they work, as opposed to the public sector employees

who are not fully emotionally attached to the organization. Based on the results of continuous commitment it can be concluded that there are no significant differences between the sectors surveyed. Such responses could be explained with general conditions on the labour market and the economic crisis in which Serbia is. Other reasons may be that employees are unsure or undecided whether they want to stay in the current organization. It may be also assumed that employees do not feel comfortable discovering their true perception, especially when it comes to public sector employees. Considering that continuous commitment is based on benefits, people stay in their organization since they need to. The results for the normative commitment indicate that respondents in the public sector are not willing to commit to staying with the organization because of obligation or loyalty; this can be connected with an announcement of rationalization in the public sector made quite a long time ago.

Employees in both sectors have expressed different views on three findings of turnover intent, which indicates the range value of 4.00. One of the assumptions is that it is the result of the influence of external factors (economic instability, insufficient number of available alternatives and others). Although the hospitality sector is characterized by frequent job changes and highly extensive changes are being prepared in the public sector, the deviations in the perception of employees show minor differences. According to the results, the t-test (Table 2) showed that data obtained for hospitality were higher than for the public sector, and the size effect was medium for LMX and emotional commitment, and for the normative commitment it was small, according to the following:

- LMX hospitality (M = 3.40, SD = 1.00) higher than public (M = 2.89, SD = 1.02),  $t(198) = 3.54, \rho < .05, d = .06$ ;
- AC hospitality (M = 3.68, SD = .89) higher than public (M = 3.22, SD = .90),  $t(198) = 3.63, \rho < .05, d = .06$ ;
- NC hospitality (M = 3.16, SD = .54) higher than public (M = 2.84, SD = .55),  $t(198) = 4.21, \rho < .05, d = .01$ ;

**Table 1.** Mean, SD, correlation

Variables	M	SD	LMX
<b>Hospitality</b>			
Age	33.67	9.69	
Gender	.58	.50	
LMX	3.40	1.01	1
AC	3.68	.89	.49**
NC	3.16	.54	
CC	3.20	.67	
TI	2.36	1.08	-.60**
<b>Public</b>			
Age	42.63	9.25	
Gender	.70	.46	
LMX	2.89	1.02	1
AC	3.22	.90	.63**
NC	2.84	.55	
CC	3.28	.74	
TI	2.41	1.18	-.44**

\* Correlation is significant at the 0.05 level; \*\*Correlation is significant at the 0.01 level; LMX-Leader member exchange; AC-affective commitment; CC-continuous commitment; NC-normative commitment; TI-turnover intent; M-mean; SD-standard deviation, N=100 for each sector.

**Source:** Authors' calculations

The test showed that there were no sectoral differences when it comes to turnover intent. Determining the size effect between the groups was calculated using t-test (Rosnowo et al., 1996), and was interpreted according to the guidelines suggested by Cohen (Cohen, 1988).

**Table 2.** T-test

Variables	F	ρ	t	df	ρ
LMX	.29	.59	3.54	198	.00
AC	.04	.84	3.63	198	.00
NC	.27	.61	4.21	198	.00
CC	.36	.55	-.76	198	.45
TI	.90	.35	-.31	198	.76

F-statistics; ρ-value (Sig.)>.05; t-value of t-test; df-degrees of freedom; ρ-value (Sig)< .05.

**Source:** Authors' calculations

Multiple regression model shown in Table 3 where LMX is the criterion variable, and predictor of organizational commitment and intention to leave the current organization.

**Table 3.** Multiple regressions model

Variables		R <sup>2</sup>	F	ρ	β	t	ρ
AC	Hospitality	.24	30.16	.00	.49	5.49	.00
	Public	.39	63.04		.63	7.94	
NC	Hospitality	.00	.02	.88			
	Public	.02	1.69	.20			
CC	Hospitality	.02	1.54	.22			
	Public	.00	.08	.78			
TI	Hospitality	.36	54.96	.00	-.60	-7.41	.00
	Public	.19	23.51		-.44	-4.85	

Dependent variable is LMX; significant at the 0.05 level ; R<sup>2</sup> - coefficient determination; ρ-value < .05; β-beta standard regression coefficient.

**Source:** Authors' calculations

## 5. DISCUSSION

A significant correlation coefficient in both sectors was recorded in an emotional commitment to the level of exchange between leaders and followers. In hospitality sector Pearson's correlation coefficient was moderate -  $r(100) = .49$ ,  $\rho < .01$ , while in the public sector it was high -  $r(100) = .63$ ,  $\rho < .01$ . The first reason is that superiors know that the employees who enjoy their confidence respond favourably or respond positively to the requests, which increases the total commitment to the organization (Cogliser et. al, 2009). Another reason is that employees who have a high commitment to their work, have a good relationship with their superiors (Graen, Scandura, 1987). Fisher's  $z^4$  transformation of emotional commitment and level of LMX between hospitality and the public sector has shown that there is no statistically significant difference ( $z = -1.43$ ). *Hypothesis one was partially supported.*

<sup>4</sup> The comparison of the difference between the correlation coefficients for hospitality and public sector is calculated using the Fisher's Z transformation test, namely by calculating the Z value for assessment of significant differences between the two correlation coefficients  $r(a)$  and  $r(b)$  in two independent samples. If  $r(a)$  is larger than  $r(b)$ , the resulting value of  $z$  has a positive sign, otherwise it will be negative. If the value in absolute values is greater than 1.96 the differences between correlation coefficients are statistically significant.



The main objective of this paper was to determine correlates of quality at the organizational level in leader-follower exchange and compare the obtained results in the studied service sectors. The affective commitment to the organization shows a correlation with the level of leaders - members exchange in both sectors. Working in travel agencies, hotels, restaurants or cafes indicates that employees are willing to assist the organizations in achieving their objectives, and thus to develop good relations with superiors. In the public sector, employees showed a significantly higher relation between emotional commitment and level of LMX. Consequences arising from such integration can enable employee advancement, different benefits and preferential status in the organization in relation to others.

The connection between the level of leaders - members exchange and turnover intent was highly negative in the hospitality sector -  $r(100) = -.60, \rho < .01$ , while in the public sector it was moderately negative -  $r(100) = -.44, \rho < .01$ . When employees have a low quality of LMX exchange, turnover intent is stronger than that of employees with higher leaders and followers exchange (Gerstner & Day, 1997). On the other hand, in some studies, the researchers reported that the ratio may be „circular” between the levels of LMX and turnover intent (Morrow et al., 2005; Collins, 2007). Both extremes of low and high quality of exchanges between leaders and employees tend to increase the intention of changing jobs. In the first case, a sense of „negligence” in the organization, and the second, a sense of great importance in the organization. However, according to Collins (2007), employees with a very low quality of exchanges are less likely to change jobs or quit because of the lack of alternatives for a new job. Fisher’s transformation with turnover intent and the level of LMX between the hospitality and public sector showed no statistically significant difference ( $z = 1.53$ ). *Hypothesis two was fully supported.*

The cause for intention to leave can be the work environment, management, salary system, dissatisfaction, and personal or organizational problems. If employees feel they have the opportunity to leave the current organization and find another job that will probably stimulate the turnover intent. In many cases, the researchers (Mobley, 1977; Mitchell, 1981; Kim et al., 2010) examined the actual turnovers. For this sample, the respondents from the hospitality sector have shown to have a significant negative correlation between turnover intent and the level of exchanges with their leader. Similar ratios are in the public sector. In the hospitality sector, the advancement inability, length of the working week and working hours are predictors of intention to leave the organization. On the other hand, public sector employees have the pressure of rationalization that was announced a few years ago and among older responders, this is increased by the absence of available alternatives, which is likely to cause the results to be higher for individual statements in the questionnaire.

Based on the results for the hospitality sector, there is a correlation between criterion and predictor variables (organizational commitment). The dimension of emotional commitment shows statistically significant coefficient of the beta with LMX ( $R^2 = .24, F(1,98) = 30.16, \rho < .05$ ), i.e. medium intensity and positive sign. This indicates that hospitality sector employees have a favourable treatment which leads to affective commitment to the organization. However, a very small number of employees in some organizations have no other alternatives for employment in other organizations with similar working conditions. In three-dimensional model of organizational commitment in the public sector only emotional commitment has a statistically significant contribution to the prediction of LMX ( $R^2 = .39, F(1,98) = 63.04, \rho < .05$ ), i.e. high intensity and positive sign. This shows that despite numerous advantages (length of annual leave, paid leave, various fees, etc.) public sector is still under the constant pressure of changes that should

follow in the form of important public sector reforms. This is indicated by 39% of the criterion variability, and that is one of the indicators that the superiors will decide on redundancies. *Hypothesis three was partially supported in both sectors.*

The analysis shows that emotional attachment is a predictor of the quality level of exchanges between leaders and followers in the hospitality sector. The majority of the hospitality organization has a relatively small number of employees and strong relationships that are established among employees, including the relationship with the superiors. Therefore, the affective commitment to the organization in this sector is largely based on a good relationship with co-workers, including the superiors. Thus, the growth of affective commitment is accompanied by the growth of quality of the relationships with superiors. In the public sector, affective commitment is also a predictor of the LMX level. Numerous factors affect this result of the regression analysis. Primarily, the advantage of the public sector as compared to other organizations with respect of usual salary, the length of annual leave, sick leave or paid leave, reimbursement of transport costs to and from work and other things. Some of those benefits are the responsibility of leaders (for example, training, education, business trips, etc.).

Also, the results indicate that the turnover intent (high intensity and negative sign) affects the level of LMX quality in the hospitality sector ( $R^2 = .36$ ,  $F(1,98) = 54.96$ ,  $\rho < .05$ ), but it is not caused by a poor relationship with superiors in all cases. This paper points to the problems of leaving a job in the hospitality sector. The intention to leave affects negatively (smaller intensity) the level of LMX quality in the public sector ( $R^2 = .19$ ,  $F(1,98) = 23.51$ ,  $\rho < .05$ ) and employees are more influenced by the announced layoffs, but the real desire of change and the percentage of variability criterion variable is low (19%). *Hypothesis four is fully supported.*

In this sample size taken for the hospitality sector, the turnover intent variable significantly contributes to the prediction of negative results of the leaders and employees exchange. This can be attributed to the fact that the relationship that employees have with their superiors in the hospitality sector has a certain quality, but also that there is a higher degree of tolerance for the overall market situation. In the same sample, the public sector also showed that the intention to leave contributes significantly negatively to the quality level of LMX, as confirmed by studies in the US and Europe (Erdogan, 2002; Shirley, 2003; Sparr & Sonnentag, 2008; and others). In the case of the public sector, the situation is somewhat different. Years of work in the „safe area” of public administration or public companies have been brought into imbalance by the announced numerous dismissals and reorganization of the public sector.

## 6. FUTURE RESEARCH DIRECTIONS

The leader is the one who stands in front of his/her followers. The contribution of this research is the development of LMX theory in the hospitality and public sector from the point of quality of the leader-follower exchange correlations. We selected the correlations we assumed to have a significant predictive value for the LMX relation quality, as well as those that will result in a high or low LMX value. Also, the presented results can be used to avoid all the negative consequences of organizational performance.

Organizational commitment and turnover intent are important factors in service sectors. The number of samples and constructs (such as job satisfaction, organization justice, personal traits, etc.) should be increased, in order to examine the relations more closely in future research.

## 7. CONCLUSION

The hospitality sector belongs to the private sector where the managers or owners organize the work in accordance with their capabilities and knowledge. In addition to many external factors (economic power of service users, free time, length of vacation, lifestyle), the development of the team of followers also affects the achievement of organizational goals. Although the large-scale organizations such as hotels, restaurants and tour operators are the leaders in this sector, in organizations with fewer employees, the leader plays an important role. On the other hand, the public sector has its own functioning characteristics and its most important feature is to serve the citizens. We are witnessing many complaints that citizens have regarding the functioning of the public sector, from providing administration services (taxes, personal documents, etc.) to the functioning of public and public utility organizations. In order to increase accountability and raise the quality of services provided to citizens, it is necessary to reorganize and depoliticize the public sector in Serbia.

Employees should be able to respond effectively to the requirements and deliver quality services. This largely depends on the ability and capacity of the leader to support and influence his/her employees in achieving the organization's objectives. The quality of the relationship between leaders and followers produces a range of consequences such as a positive correlation with the organization while minimizing the intention among the employees to change or leave the organization. Resources (people and money) in the service sector and business conditions are essential for the survival of the organization in today's market. The indicator of the quality of the relationship with the superiors is the emotional attachment of employees to the organization, which indicates that employees in both sectors are willing to help the organization. In the case of the public sector, employees appear to be very restrained although they have significant advantages compared to other organizations.

As a consequence of the lower quality of the relationship with a leader, some respondents pointed out that they are thinking about changing the job. The intention to leave is negatively correlated with LMX in both sectors. Employees in the hospitality sector strive for better working conditions (salary, promotion, working hours), whereas employees in the public sector are in an uncertain position because the reorganization plan has not been adopted yet. According to the type of organizations it has been shown in both service sectors that employees have significantly different relationships with their superiors, because different rules of conduct are in place and because systems of functioning of the organization are different.

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# AN INDEX FOR MEASURING HORIZONTAL DIFFERENTIATION IN HOSPITALITY

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**Abstract:** *Amid a continuous and evolving offer of new services, the hospitality industry is immersed in a highly competitive changing environment, being differentiation an essential strategy to survive and gain a competitive advantage. As a consequence, a differentiation strategy is continuously being defined and adapted. Beyond the vertical differentiation, focused on objective quality signals, horizontal differentiation offers more chance and alternatives to hoteliers for using own resources and capabilities to gain a competitive advantage. In particular, product analysis and competition evaluation are a must-be to offer a value proposition co-created with the customer. Considering the great range of services, and the need to compute all properly and understandably, this work aims to design and index that can integrate all services of a hotel and allow comparison to evaluate the level of differentiation.*

**Keywords:** *Hospitality, Hotels, Horizontal differentiation, Differentiation index.*

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## 1. INTRODUCTION

Nowadays, the activity of tourism companies is immersed in continuous change because the environment moves at high speed, where tourism managers have to redesign their roadmap and define new strategies to follow, in order to lead and motivate all members of the hotel in front of the change, and to be able to ensure the correct performance and not exit from the market where they usually operate.

Hotels have to innovate continuously and not get stuck in the way they work and reach their target audience. This innovation must begin with the strategic ability to anticipate changes and achieve new opportunities in the tourism sector, generating an effort to achieve a different result. Hotels must design their value proposition by co-creating with their target and thus create the best process, image and product or services most successful.

Hotels have to take advantage of the information generated by their clients to create the best strategy to follow and thus be able to achieve the best results.

Among the strategies that a hotel can adopt are differentiation strategies, and in the tourism context these strategies have been approached through the distinction of vertical and horizontal differentiation, the first of which has been most analyzed by hotel research. Fundamentally, previous studies have addressed the analysis of vertical research strategies through the official hotel category, since this is a quality signal widely used by consumers. However, the hotel industry is traditionally considered as a sector with information asymmetries and although the official hotel classification is

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considered an indicator of standard quality, its validity as a signal of absolute quality for the consumer has been questioned, requiring mechanisms of additional information (Abrate et al., 2011; Akerlof, 1970); various reasons question its validity, such as the fact of the coexistence of different classification systems due to the various local and national regulations (Martin-Fuentes, 2018; UNTWO 2015), the superposition of adjacent categories (Nuñez-Serrano et al., 2014), the lack of correspondence between quality and hotel categories (López-Fernández & Serrano-Bedia, 2004).

For these reasons, hoteliers can use other types of strategies based on horizontal differentiation, for which it is essential to have an indicator that allows hotel managers to analyze the services offered by the competition. However, the analysis of these strategies has been addressed to a lesser extent by previous studies. This may be due to the existence of a wide variety of services offered within the hotel sector (Dube & Renaghan, 2000) that makes it difficult to measure the degree of differentiation of a hotel with respect to the competition. Fundamentally, chain membership or individual availability of services have been used as indicators of the degree of differentiation, which do not take into account the offer of services from the competition. Few studies have considered alternative measurements that do take into account the competition (Urtasun & Gutiérrez, 2017). Additionally, the development of an indicator of horizontal differentiation improves the consumer's purchasing decision-making process compared to the available offer and allows a better comparison by the consumer of the hotel price based on the services offered.

In this chapter we focus on the horizontal differentiation strategy as a competitive decision involved in providing better value to customers. In a highly competitive environment, most differentiated companies will be able to enjoy greater market power, allowing them to set higher prices (Carlton & Perloff, 2005) due to their higher value based on designing a unique value proposition. Considering hoteliers can offer a wide and diverse range of services, and extant literature offer a limited operationalization for this strategy (Silva 2015; Urtasun & Gutierrez 2017), present work develops a horizontal differentiation index for application in each service establishment of the hospitality industry. This index can be adapted to different context and organization, making comparisons with nearby establishments and find out differences and profiles.

One key innovation of this index is that is based on the geolocation of hotels for a more efficient and precise analysis of the competition based on the commercial area where the establishment is located. This proposal is intended to provide several contributions:

Firstly, our proposal can add the main approaches when horizontal differentiation is measuring, thus taking into account all the fundamental elements when establishing a horizontal differentiation strategy and being able to evaluate it globally with respect to the competition, surpassing thus the limitations of conventional methods to measure horizontal differentiation.

Secondly, from a business perspective, the problem of information overload has increased exponentially (Edmunds & Morris 2000, Leeflang et al. 2014), as companies obtain different types of data (such as those related to social media, location, web traffic and clickstream) at different points in the value chain (Brown et al., 2014), being a demand to seek solutions that make it possible to take advantage of the abundance of information available to the company and generate unique knowledge for the organizational competitiveness of companies (Brown et al., 2014, Day, 2011). In this sense, our proposal aims to facilitate access to good market coverage and focus on the most successful strategy to reach potential customers (Rondán-Cataluña & Rosa-Díaz, 2014) by aggregating the information available on the hotel offer of the competition.

From the consumer's point of view, the overload of information, due to the wide hotel offer available today (Dube & Renaghan, 2000), can generate a feeling of overwhelm (Bawden & Robinson, 2009, Savolainen, 2007, Savolainen, 2015) and can generate a greater time in making decisions, lower quality of decision and lower confidence in the decision (Chervany & Dickson, 1974). Additionally, if the information load exceeds a threshold, consumer confidence and purchase intention are negatively affected (Furner & Zinko, 2017). In this sense, an easily interpreted horizontal differentiation indicator can, from the consumer's perspective, facilitate the purchasing decision-making process in relation to the available offer, and allow a better comparison by the consumer of the hotel price based on the services offered.

Finally, obtaining an aggregate index of horizontal differentiation with respect to the competition is of interest from the strategic perspective of the company, since, like differentiation strategies, conformity strategies also have theoretical support that supports the idea that similarity with respect to competing companies may be associated with benefits (Boulding, 1966; Eaton & Lipsey, 1975) and that it has empirical support within the hotel sector (Lee & Jang, 2015). Furthermore, from a strategic management point of view, it has been suggested that the optimal strategy of a company should consider a mix of differentiation and conformity (Deephouse, 1999; Irmen & Thisse, 1998), this assumption having been verified empirically in the hotel industry (Kim et al., 2020); but, due to the high number of attributes within the hotel context, a few is known about what degree of differentiation should be adopted within a mixed strategy. Thus, within the hotel strategy, having an index that measures the degree of horizontal differentiation with respect to the competition will make it possible to evaluate in a more efficient way what is the optimal degree of differentiation that a hotel should adopt to increase its performance.

## **2. VERTICAL VS. HORIZONTAL DIFFERENTIATION STRATEGIES IN THE HOSPITALITY INDUSTRY**

### **2.1. Theoretical underpinnings for building a horizontal differentiation index in hospitality**

Three main theoretical views about the concept of strategy can be identified in the literature, that is, Porter's Competitive Advantage (Porter, 1985), the Resource-Based View (RBV) (Barney, 1991), an approach based on the heterogeneity of resources necessary to achieve a competitive advantage based on the theory of resources and capabilities (Barney, 1991; Peteraf, 1993), that consists of estimating the difference or similarity between the strategy or resources of a company and those of its industry (Deephouse, 1999). According to Porter (1985), a generic differentiation strategy consists of finding a unique attribute that is valuable to the customer and could provide an external competitive advantage. However, from an economic perspective, with the aim of structuring industries, two models of product differentiation have emerged based on what the product captures, i.e. its quality versus its quantities (Makadok & Ross, 2013). We distinguish between vertical and horizontal differences (Beath & Katsoulacos, 1991). Vertical differences are understood to mean that all products are offered at similar prices and the consumer will choose the product with the best performance. On the other hand, if the products are offered at different prices, the higher quality product will be the one with the highest price (Waterson, 1989).

Horizontal differentiation is based on the heterogeneity of consumer preferences regarding the desirable characteristics of a product or service, which means that each consumer acquires the product or service that best suits their specific preferences, being different from the preferenc-



es of another consumer when the price of the product is the same (Cremer & Thisse, 1991). Through horizontal differentiation, a company seeks a specific market share through a greater adaptation than the competition to the specific preferences of a part of the consumers. It aims to measure the extent to which the products offered are more attractive to certain consumers (Silva, 2015) and evaluate the best strategy based on nearby competing establishments (Urtasun & Gutiérrez, 2017).

In the hospitality context, vertical differentiation has been analyzed through the hotel category as an indicator of quality signal (Pawlicz & Napiella, 2017; Silva, 2015) or through similar indicators (Lee, 2015), where they implicitly adopted the assumptions of the Signaling Theory (Spence, 1973), serving the tourist to opt for one hotel or another. In addition, the hotel category is one of the most analyzed factors in hedonic price models, generating a positive effect on it (Becerra et al., 2013; Bull, 1994; Israel, 2002; Zhang et al., 2011) being the essential explanatory variable of room price (Bull, 1994; Israeli, 2002), and even the factor with the greatest impact on price (Espinete et al., 2002; Zhang et al., 2011). Additionally, the star category of a hotel is positively related to other factors of hotel quality, such as physical standards of the hotel or affiliation to quality assurance programs (Abrate et al., 2011). Finally, comment on how the hotel category is used by potential clients based on their needs and preferences so that they can choose the hotel that best suits them (Masiero et al., 2015). Extant hospitality research supports the reducing effect of vertical differentiation on pricing competition (Becerra et al., 2013; Israeli, 2002; Lee, 2015). However, it is an asymmetric effect depending on the quality of the establishment (Lee & Jang, 2013).

Differentiation strategies have found support from various theoretical currents (Barney, 1991; Chamberlin, 1933; Carlton & Perloff, 2005; Porter, 1991) that postulate that a more differentiated company can increase its performance.

However, the category has limitations to differentiate the hotels in terms of quality and explain the price. Thus, Abrate et al. (2011) conclude that “The lodging accommodation classification needs updating given the relevance of quality assurance programs to explain pricing. New criteria should evaluate intangible aspects related to service quality and managerial efforts to reduce the environmental impact associated with their operations” (p. 920). In addition, there may be heterogeneity caused by different local and national regulations (Martin-Fuentes, 2018; UNTWO, 2015), with great difficulty in characterizing the offer of the hotel establishments due to the great diversity of services and differences in economic development between countries. Thus, similar hotel categories between countries may correspond to different services. There is also an overlap in quality between adjacent categories (Nuñez-Serrano et al., 2014), and no correspondence between classification by quality/classification by categories (López-Fernández & Serrano-Bedia, 2004). Extant differentiation literature has passed over this informational limitation. For these reasons, hoteliers can employ other types of strategies based on horizontal differentiation.

## **2.2. Measurement of horizontal differentiation in the hospitality literature**

The research focused on the hospitality industry, shown as limitations at the methodological level for the measurement of differentiation, basically approached from the three standpoints: geographic location with respect to points of interest (Ivanov & Piddubna, 2016; Latinopoulos, 2018; Lee & Jang 2013; Soler et al., 2019); the link to the chain (Becerra et al., 2013) and the offer of services and amenities (Espinete et al., 2003; Yang et al., 2016).

Concerning the first approach, geographic differentiation is mainly linked to especially important location decisions, and long-term decisions given the high relocation costs of the hotel industry (Baun & Haverman, 1997), being insufficient to adequately characterize the entire hotel differentiation strategy.

On the other hand, chain affiliation is the most widely considered approach, despite its limitations as an indicator of horizontal differentiation, since there are variations in service quality (Antony et al., 2004); the customer may perceive differences in the service received between hotels of the same chain (Sun et al., 2017) and the reduction of asymmetry of information regarding the consumer due to the proliferation of electronic Word of Mouth and Online rankings in the hotel sector (Masiero & Nicolau, 2016) has caused its deterioration as a sign of differentiation (Hollenbeck, 2018), being partially replaced, so that there are divergences in its impact on the room price.

Thus, there are previous studies (Balaguer & Pernias, 2013; Becerra et al., 2013; Ivanov & Piddubna, 2016) that conclude that belonging to a chain allows increasing the room rate; other studies concluded that its effect is not significant (Baldassin et al., 2017; Hung et al., 2010; Israel, 2002; Pawlicz & Napierala, 2017) and finally Soler et al. (2019) found that such linkage had a negative effect.

Another methodological alternative to analyze the effect of horizontal differentiation on price is to forecast the individual effect of each infrastructure or service offered by the hotel. This alternative also has limitations, one of them being the wide variety of attributes considered by consumers in choosing a hotel (Dube & Renaghan, 2000) and through which a hotel can differentiate itself. This high number of available services can generate inconveniences since the most common form of incorporation in hedonic models has been through the incorporation of dummy variables associated with the corresponding services, which at a methodological level, can generate multicollinearity with the hotel category (Pawlicz & Napierala, 2017). In addition, like chain membership, there is a diversity of results on the same service depending on the destination analyzed (Baldassin et al., 2017; Latinopoulos, 2018; Lee & Jang, 2011; Yang et al., 2016).

Finally, the main limitation of the three previous approaches is that they do not measure the level of differentiation with respect to the competition, so they do not take into account the value that the consumer receives compared to the value offered by rival products, so that the aggregate measurement of the differentiation in services of a hotel with respect to the competition through a service indicator has been considered to a lesser extent by previous studies (Silva, 2015; Sánchez-Pérez et al., 2020; Urtasun & Gutiérrez, 2017); the indicators proposed in the approach of Urtasun & Gutiérrez (2017) are complex and the interpretation of their value can be not very intuitive when evaluating the degree of differentiation of a company for hotel managers and the consumer, while the indicator proposed by Silva (2015) may increase its value as it incorporates a greater number of services, which can generate confusion when evaluating the degree of differentiation of a hotel. In this way, in this chapter, we will adopt an aggregate measurement approach through an indicator of easy interpretation of its value for both the consumer and the company that allows us to know the differentiation in services, with respect to the hotels of the competition, and to truly know the uniqueness of each hotel.

### 3. OPERATIONALIZATION OF AN HORIZONTAL DIFFERENTIATION INDEX IN THE HOTEL INDUSTRY

Once all relevant theoretical concepts have been identified, the development of the differentiation index was developed through three different stages: data collection, data geolocation and index calculation.

**Data collection stage.** We use as an empirical setting the Spanish hotel industry, due to its size and width (Deloitte, 2018). First, a dynamic online system was developed that allowed data to be obtained from hospitality websites. This monitoring system allows you to constantly update the service offer of each establishment. The data sources used were mainly the websites of establishments with information on their activity, as well as websites of tourist intermediaries. To achieve the autonomous monitoring system, we will use tools such as R software through packages such as RCrawler (Khalil & Fakir, 2017), as well as other similar tools for tracking and data extraction on the Internet. As a result of this first phase, information was obtained on the services offered by each hotel (Table 1), various attributes of each establishment (category, age, size), room prices, and location data (GPS coordinates).

**Geolocation stage.** Based on the GPS coordinates of each establishment obtained in the previous stage, each establishment was geolocated using routines programmed in R based on the „geosphere” and „ggmap” packages. To determine the competing establishments of each hotel, the commercial areas defined by a wholesale travel agency were considered as areas of geographic competence (Balaguer & Pernías, 2013). Given that hotels with the same category, located in the same commercial area, are considered vertically homogeneous, in addition to obtaining the number of hotels in each commercial area, we calculate the total number of hotels with the same category for each commercial area and for all hotel categories.

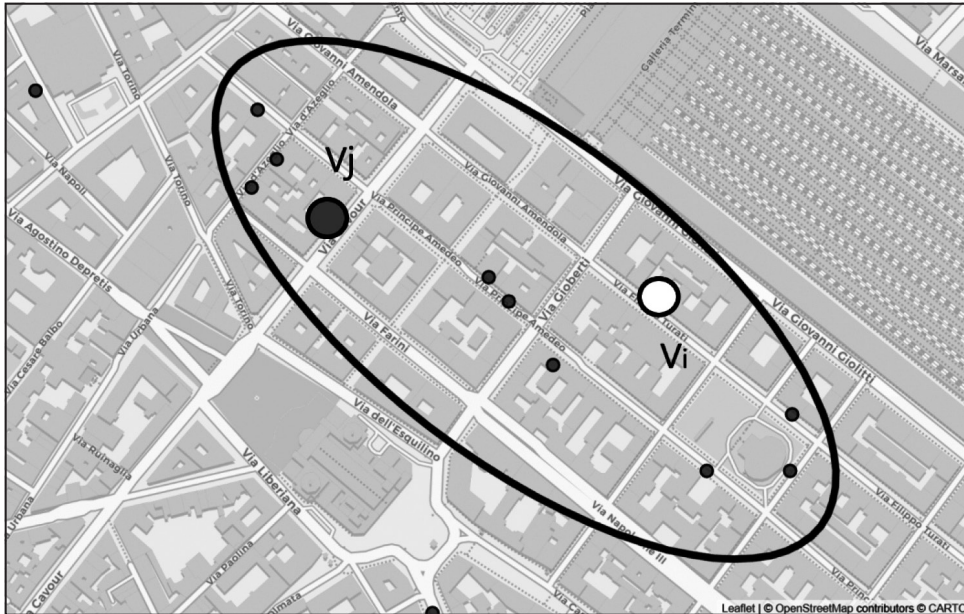
**Calculation of the horizontal differentiation index.** For each hotel establishment  $i$ , the horizontal distance in services with respect to the competition in its commercial area was measured. For this, each hotel establishment  $i$  was characterized through a vector of services  $V_i$  formed with 99 dummy variables (see Table 1) that each represent whether the corresponding service is available at hotel  $i$ . These dummy variables have been weighted so that those relevant services in the Italian context, like services related to the Italian historical and cultural context (Cucculelli & Goffi, 2016; Manrai et al., 2017; Presutti et al., 2015), have been weighted by 2, and other services related to sun and beach tourism have been weighted by 1/2. For the rest of the services we have used the unit as weighting (Table 1). Given another hotel in the same shopping area  $A_i$  represented by the vector  $V_j$ , to measure the distance between their respective service vectors (Figure 1) we consider a distance used in the product differentiation research (Chisholm et al., 2010) given by:

$$Dif_{ij} = \left( \cos^{-1} \frac{V_i \cdot V_j}{\|V_i\| \cdot \|V_j\|} \right) / \left( \frac{\pi}{2} \right)$$

**Table 1.** Summary of hospitality services offered and weights

<b>Sport</b>	<b>Meals</b>
Aerobics (1)	Accommodation Breakfast buffet lunch (1)
Animation activities (1)	Average board no drink (1)
Aquatic gymnastics (1/2)	Bed and breakfast (1)
Archery (1)	Breakfast (1)
Badminton (1)	Breakfast buffet (1)
Basketball (1)	Brunch (1)
Mountain biking (1)	Buffet dinner (1)
Billiard - American or Russian (1)	Buffet lunch (1)
Bowling (1)	Continental breakfast (1)
Children's animation (1)	Diet food (1)
Darts (1)	Dinner (1)
Diving (1/2)	Dinner a la carte (1)
Golf (1)	Dinner from menu to choose (1)
Gymnastics (1)	Dinner type buffet (1)
Handball (1)	Drink included (1)
Hiking (1)	Half board (1)
Horse riding (1)	Lunch (1)
Jet sky (1/2)	Lunch a la carte (1)
Mini golf (1)	Lunch from menu to choose (1)
Paddle (1)	Menu a la carte (1)
Petanque (1)	Menu lunch (1)
Ping pong (1)	
Sailing (1/2)	
Squash (1)	
Surf (1/2)	
Tennis (1)	
Table tennis (1)	
Volleyball (1)	
Water ski (1/2)	
Windsurf (1/2)	
<b>Credit card</b>	<b>Entertainment</b>
American express (1)	Business (1)
Diner (1)	Cultural (2)
Diner club (1)	Design (2)
Electronic cash (1)	Ecological (1)
Electronic cash card (1)	Holiday complex (1)
Japan credit bureau (1)	Ideas for family (1)
Maestro (1)	Meeting (1)
MasterCard (1)	Romantic (2)
Visa (1)	Sky (2)
Visa card (1)	Spa (1)
Visa electron (1)	Thematic (2)
	Casino (2)
<b>Other services</b>	
Non-smoking rooms (1)	Flexible entry and exit (1)
Adapted for people with reduced mobility (1)	Quality toiletries (1)
Parking (1)	Free luggage storage (1)
Free WIFI (1)	Pets (1)
24-hours reception (1)	Common and co-working spaces (1)
High speed Internet (1)	Cooking classes, art, yoga (1)
Abundant plugs (1)	Cots (1)
Ironing board (1)	Laundry service (1)

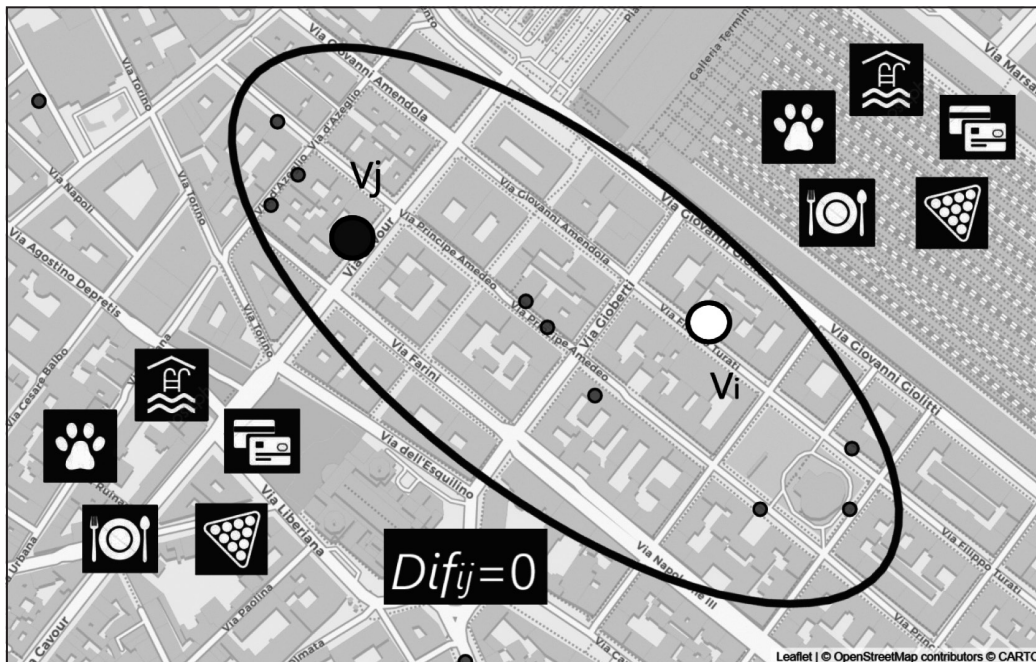




**Figure 1.** Comparison of the services offered for two hotels:  $V_i$  and  $V_j$ .

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

The distance value ranges from 0 to 1. If the distance value is zero, the two hotels offer the same services and are not differentiated (Figure 2).

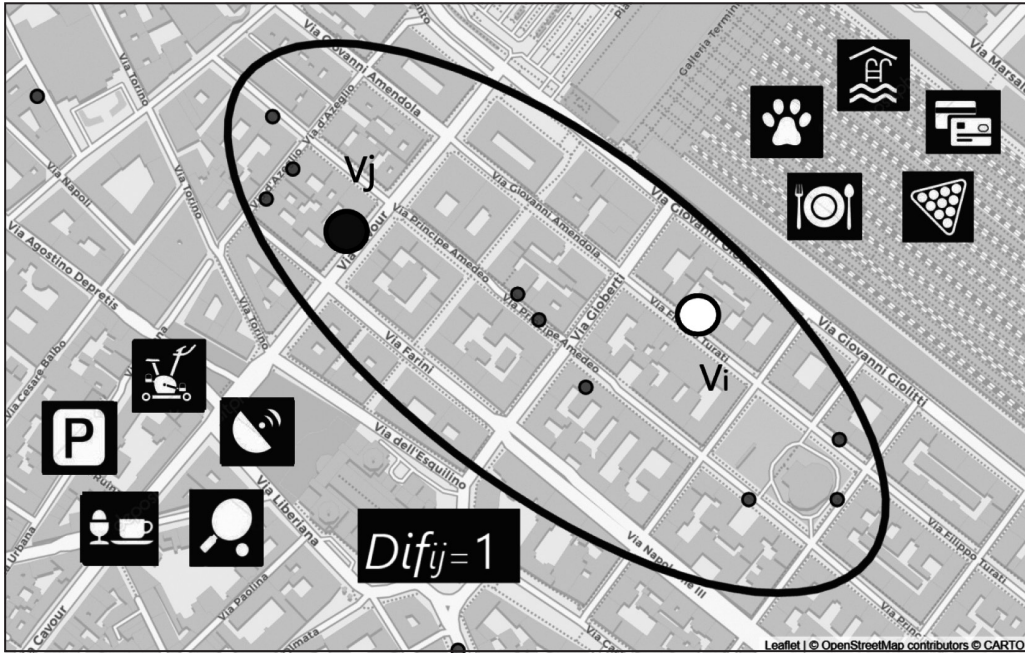


**Figure 2.** Case of hotels offering similar services but not differentiated

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

If the value of the distance is 1, the two hotels do not have overlap between the services offered by each one and they are totally differentiated (Figure 3).





**Figure 3.** Case of hotels offering different services / differentiated  
 Source: Own elaboration through the use of OpenStreetMap® and Contributors

This operation is being repeated with the rest of the hotels in the commercial area (Figure 4).



**Figure 4.** Case of whole set of hotels in the same area  
 Source: Own elaboration through the use of OpenStreetMap® and Contributors

Finally, the value of the horizontal differentiation index ( $H_{Dif}$ ) for the hotel considered is the minimum distance obtained with respect to the competitors in its area (Figure 5), thus capturing the unique value that the hotel contributes within its commercial area:

$$(H_{Dif})_i = \min_{j \in A_j} (Dif_{ij})$$



- ***H\_Dif***. As horizontal differentiation degree of hotels, we consider our proposal. It ranges from 0 to 1 to represent minimum horizontal differentiation and maximum horizontal differentiation respect to competitors.

Additionally, we consider the following control variables:

- ***Size***. Following Lee (2015) and Silva (2015), we controlled hotel size by the number of rooms because hotel size may affect hotel pricing.
- ***Age***. We controlled hotel age by the number of years of hotel operations to account for possible differences between new hotels and old hotels (Silva, 2015)
- ***Competitor***. Hotel's competition for each hotel is represented by the logarithm of the number of lodging establishments in the commercial area of the hotel (Becerra et al., 2013).
- ***Distance***. This variable account for the average distance of each hotel in kilometers, with respect to other hotels in its area (Becerra et al., 2013).

Specifically, we propose the following model to analyze the impact of vertical and horizontal differentiation on hotel price:

$$LNPrice_i = \beta_0 + \beta_1 \cdot Size + \beta_2 \cdot Age + \beta_3 \cdot Competitors + \beta_4 \cdot Distance + \beta_5 \cdot Category + \beta_6 \cdot H_{Dif} + \varepsilon_i$$

The proposed model was estimated with the sample of Italian hotel with OLS. Firstly, we analyzed the heteroscedasticity of the residuals using the Breusch-Pagan test whose results confirms the absence of heteroscedasticity in the residuals (p-value=0.133). Next, we analyzed the presence of multicollinearity with the variance inflation factor (VIF). For all explanatory variables, VIF values are below 2 (Table 2) and it confirms the absence of multicollinearity in the model. Finally, Table 2 shows the results obtained in the estimation of the proposed model with OLS.

**Table 2.** Model estimation with OLS

Variable	Coefficient	p-value	VIF
Intercept	2.589(9.556e-1)	0.007***	
Size	9.913e-4(3.985e-4)	0.013**	1.327
Age	-3.204e-5(4.724e-4)	0.946	1.036
Competitors	0.071(0.018)	1.280e-4***	1.914
Distance	-0.074(0.012)	1.11e-10***	1.186
Category	0.453(0.039)	2e-16***	1.291
H_Dif	0.208(0.097)	0.032**	1.774
F-statistic	41.27	2.2e-16***	
R <sup>2</sup>	0.477		

**Source:** Own elaboration

Results from Table 2 show that both vertical and horizontal differentiation have a significant positive impact on hotel price. Thus, the strategy based on horizontal differentiation in Italy has a positive impact and conformity strategies penalize hotel prices. Additionally, Table 2 provides the R<sup>2</sup> value. The value obtained indicates that the hotel price in Italy may be affected by other factors such as the valuation of the clients or the location of the hotel measured as the distance to the city center or distance to attractions.



#### 4. FUTURE RESEARCH DIRECTIONS

The information found on the Internet about the services and characteristics offered by the hotels could reach all domestic devices through the installation of a free application, and thus the consumer could be informed about the services offered by the hotels that might interest them the most at the moment of hiring, make a comparison quickly and make the most effective hiring. The range of services could be expanded through co-creation with stakeholders related to the hospitality sector and specifically with potential tourists, and thus be able to detect new potential services to offer. Another future research would be to analyze the hotel offer and the decision-making of hoteliers.

#### 5. CONCLUSION

The hospitality industry is characterized by a wide and varied offering, being difficult to make comparisons and evaluation. Considering this, this work offers an index whose statistical properties have been assessed, and practical application has been illustrated.

The design of this horizontal differentiation index lets hoteliers make faster and better decisions about services that will fit best in the profile of the tourist who visits them. In addition, it can be useful to carry out a market research of focal competition, and, thus it is able to detect what the competition is offering, how it is differentiating, what is adding value with respect to the focal establishment.

Finally, this indicator, flexible, easy to understand and use, will save time and minimize risks and thus it allows the consumer to feel safe and satisfied with the hotel contracted.

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# ONLINE PLATFORMS AS MODERN TOOLS IN TOURISM IN EXTRAORDINARY TIMES: CASE FOR FURTHER DIGITALIZATION IN WESTERN BALKANS

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**Abstract** *Extraordinary times require an extraordinary response, especially when economic growth is at stake. Tourism contributes to economic growth in Western Balkans and has been robust in recent years. That was supported by new business models which make it possible for households to participate in the digital economy, including online platforms for travel accommodation. Internet connectivity and digital skills are crucial in that respect. This paper looks at the convergence of the Western Balkan candidate countries to the European Union (EU) in terms of connectivity and the digital skills needed. Analysis of data derived from questionnaires and other sources at the Eurostat show that candidate countries participate in the collaborative economy less and are below EU average in terms of digitalization. Investments supported by EU commitment to the region could improve internet connectivity and digital skills in the Western Balkans. That would benefit their economies which is especially relevant now considering the Covid-19 outbreak in the first quarter of 2020 and its disruption to achieving many goals. The argument for further digitalization is even more important.*

**Keywords:** *Digitalization, Tourism, Economics, Digital single market, Western Balkans, Management tools.*

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## 1. INTRODUCTION

Tourism represents over 10% of gross domestic product (GDP) and supports about 330 million jobs globally (World Travel and Tourism Council (WTTC), 2020). Tourism of today is considerably more influenced by the internet and information technology than ever before. With the development of digital technology and the internet, tourists and other travellers can now find various information, accommodation and other services online. They can compare and review options from different accommodation providers and their search can be completed in seconds and without costs.

Following European Commission's (EC) initiative for an all-inclusive digital society (2007), the EU's Digital Single Market aims to ensure access to the internet throughout the EU to encourage participation in the digital economy and society. Regarding tourism, the aim is to boost digitalization and to enhance investment in the tourism sector through the better use of available EU financing opportunities. The principles of the EU's digital single market are important for countries that are in the process of accession to the EU as well. Digitalization and listing spare dwellings on digital platforms for short-term stays can be an important source of revenue, not only in the EU but also in the Western Balkans. Further digitalization in this region is thus important. The importance is two-fold, not just as a matter of improving local economies, but also as a step towards convergence to the EU regarding its digital single market<sup>2</sup>.

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<sup>2</sup> For more details on the Digital Single Market see <https://eufordigital.eu/discover-eu/eu-digital-single-market/>

This research had been guided by concepts associated with digital technology and its impact on economic activity. There is a strong correlation between tourist arrivals and employment and GDP. Research has confirmed that tourism has a positive impact on economic growth (Faber and Gaubert, 2019). The analysis incorporates a general view that the digital economy can help generate growth (European Central Bank, 2018) and that online-platforms can bring additional tourist revenue (International Monetary Fund (IMF), 2018). The study looks at the level of internet access at home, meaning that the internet is accessed at home by any device (e.g. desktop computer, laptop, telephone, tablet, mobile or smartphone, etc). The assumption is that in order to be able to participate in online platforms for short-term accommodation successfully, households need internet access at home. Listing a dwelling on an online platform implies a series of activities such as information about the accommodation, pricing, updating and upgrading privacy and other policies of the accommodation, providing information and assistance to travelers in terms of directions, maps, and similar. Internet access at home, by any device, is thus considered necessary in this research.

## 2. LITERATURE REVIEW

Research has confirmed that tourism has a positive impact on economic growth (Faber and Gaubert, 2019). Tourism has been increasingly influenced by new technologies and digitalization. Newer research has found that the potential benefits of digitalization are high (Charalabidis et al, 2015; Parviainen et al, 2017). One of the benefits is that by digitizing information-intensive processes costs can be cut by up to 90% (Marcovitch and Willmott, 2014). On the other hand, digitalization has a proven impact on reducing unemployment (Parviainen et al, 2017) which is of high importance to the Western Balkans. Digitalization is typically understood as the adoption or increase in the use of digital or computer technology by an organization, industry, country, etc. IMF's definition of digitalization is that it "encompasses a wide range of new applications of information technology in business models and products that are transforming the economy and social interactions." (IMF, 2018, p.1).

Academics have established that digitalization is transforming the world not only in terms of socializing, traveling and sharing information but also in terms of working and new business models (Bouwman et al, 2017), such as "collaborative" or "sharing" economy. "Sharing economy" has no single definition (Goeroeg, 2018). However, in regard to accommodation rentals, common to all definitions is that it is a peer-to-peer system, where companies use online platforms to connect people who have a spare dwelling with people who are searching for accommodation. IMF found that "platforms such as Airbnb have enabled the rapid growth of short-term rentals in some economies, particularly those with a tourism industry, suitable housing stock, and a favorable legal environment" (IMF, 2018, p.25).

Online "sharing economy" platforms typically lead to reduced costs for travellers compared to hotels (Bivens, 2018) and on the other hand, generate revenue for owners of properties (Mao et al, 2018). In contrast to hotels, online platforms enable travellers to rent a wider range of accommodation-types, from rooms to bungalows, villas, etc. It is no wonder then that online platforms such as Booking.com, Airbnb, HomeAway and others have been embraced by households because those platforms mean new opportunities for revenue (Clancy, 2018). Digitalization has been included in policy strategies in many countries, not just because it has a positive impact on economic growth and GDP per capita (Sabbagh et al, 2013; ECB, 2019) but because it improves the digital literacy of the population as well. To be able to actively participate in the society and



digital economy, access to technologies and services must be affordable, as well as the ability and skills to use them.

Regarding the Western Balkans, it seems the governments have still not recognized the potential of digitalization in tourism and the adaptation of new technologies and applications as a tool to transform domestic tourism (Dugalić and Lazarević, 2018).

### 3. METHODOLOGY

This research looks at digitalization from the viewpoint of internet connectivity and digital skills to use the internet. Internet, the system of interconnected computer networks, is in this paper analyzed from the perspective of internet access, meaning that the term *access to the internet* includes all types of internet connectivity (dial-up, fixed broadband, mobile broadband, etc.). Wired technologies most commonly used to access the internet are divided between broadband and dial-up access over a normal or an ISDN telephone line. Broadband lines are defined as “having a capacity higher than ISDN, meaning equal to or higher than 144 kbit/s.” (Eurostat, 2019, p.13).

In terms of connectivity, the analysis looks at the level of internet access at home, meaning that the internet is accessed at home by any device (e.g. desktop computer, laptop, telephone, tablet, mobile or smartphone, etc). The assumption is that in order to be able to participate in online platforms for short-term accommodation, households need internet access at home. Listing a dwelling on an online platform implies a series of activities such as updating information about the accommodation, pricing, updating and upgrading privacy and other policies of the accommodation, providing information and assistance to travelers in terms of directions, maps, and similar. An accommodation provider has to have internet access to be able to undertake all communication with guests and to successfully conduct all segments of the booking and payment processes. All that typically means more than just an occasional ten-minute work engagement on a mobile smartphone or other portable devices. Internet access at home, by any device, is thus considered necessary in this research. In terms of households, Eurostat’s ICT questionnaires included all types of households (single person, single person with dependent children, two adults, two adults with dependent children).

Data for research have been derived from Eurostat’s statistical data warehouse and EC’s special surveys and reports<sup>3</sup>. Predominant sources of data have been Eurostat’s surveys on information communication technology (hereafter:ICT) usage in households and by individuals. Eurostat’s secondary statistics indicators on the ICT sector and ICT specialists were also used for analysis. Surveys that are taken periodically in policy areas where official statistics are not always available were also explored. Macroeconomic data for Western Balkans were taken mostly from the IMF and the Eurostat. Other reports and assessments from specialist organizations and EU bodies regarding digitalization have been also analyzed and reviewed.

Research methods are descriptive and quantitative. The descriptive part explains the meaning of various variables and the logic behind indicators which are based on the responses to questionnaires and surveys submitted to the Eurostat.<sup>4</sup> Quantitative methods are used to analyze

<sup>3</sup> All figures and tables in this analysis have been prepared by the author, based on data in Eurostat’s and IMF’s databases available as of September 2020.

<sup>4</sup> See relevant explanations in Eurostat (2019), Eurostat (2020a) and Eurostat (2020b).

data directly derived from the mentioned questionnaires and surveys. With quantitative methods using statistical analysis, digitalization is analyzed from the connectivity perspective while also looking at the digital skills and the use of collaborative economy in the Western Balkans in regard to short-stay tourist accommodation. Some comparisons have been done vis-à-vis the average of the EU as candidate countries have been also analyzed from the perspective of their convergence in digitalization towards the average of the EU. The Western Balkan candidate countries analyzed are Albania, North Macedonia, Serbia and Montenegro. Many data for Albania have not been available in Eurostat's database related to ICT, so Albania is included in this research only to the extent of the availability of data.

#### 4. ACCESS TO INTERNET AND DIGITAL SKILLS

The EU strategy has been based on improving access “for consumers and business, on creating the right conditions for digital networks and on maximizing the growth potential of the digital economy” (European Parliament, 2019, p.11). Part of the EU strategy was to roll-out ultrafast connectivity to homes in every EU region so that “rural areas can also have better mobile coverage and fast internet” (European Parliament, 2019, p.43). The principles of the EU's digital single market are important for countries that are in the process of accession to the EU as well because “fast and secure digital connectivity is an essential element of the reforms required for creating a market- and investment-friendly environment in the Western Balkans.” (European Commission, 2019, p.1) Under the initiative of the EC, the EU and the Western Balkans partners have started a process to boost connectivity in the region and improve access to the digital economy and society. That was part of the Strategy for the Western Balkans from February 2018. The strategy supported the deployment of broadband and a roadmap to lower roaming costs.

Internet connectivity in the Western Balkans candidate countries is below the EU27 average<sup>5</sup> (Figure 1) although there has been an improvement since 2015 when only 69% of households had access to the internet at home in North Macedonia and 64% in Serbia. In 2019 both countries recorded an increase in internet access at home as it reached 82% in North Macedonia and 80% in Serbia. In Montenegro, there were only 55% of households with access to the internet in 2012 but that percentage climbed to 72% in 2019. It must be emphasized that Eurostat data about internet connectivity are collected annually by national statistical authorities applying various methods but based on Eurostat's model questionnaire<sup>6</sup> on the use of ICT in households and by individuals. The 2019 Eurostat questionnaire had two questions in terms of connectivity and their answers were directly converted to the data presented below. The first module of the questionnaire was module A (Access to Information and Communication Technologies) and the first question, was

“A1. Do you or anyone in your household have access to the internet at home? (by any device)”.

The second question in module A of the ICT survey was

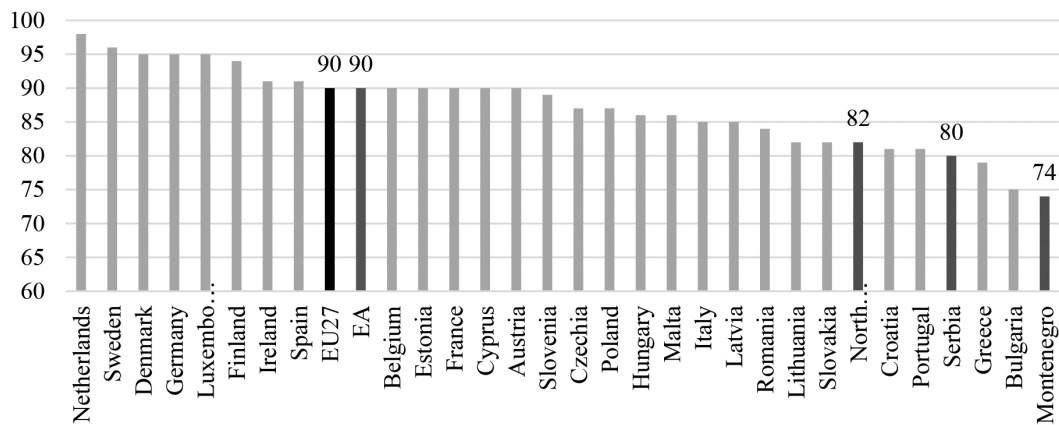
“A2. What types of internet connections are used at home? (*tick all that apply*)

<sup>5</sup> EU27 means EU from 2020 onwards

<sup>6</sup> The exact title of the survey is Community Survey of ICT Usage in Households and by Individuals. For detailed explanation see Eurostat meta data at: [https://ec.europa.eu/eurostat/cache/metadata/en/isoc\\_i\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/isoc_i_esms.htm)

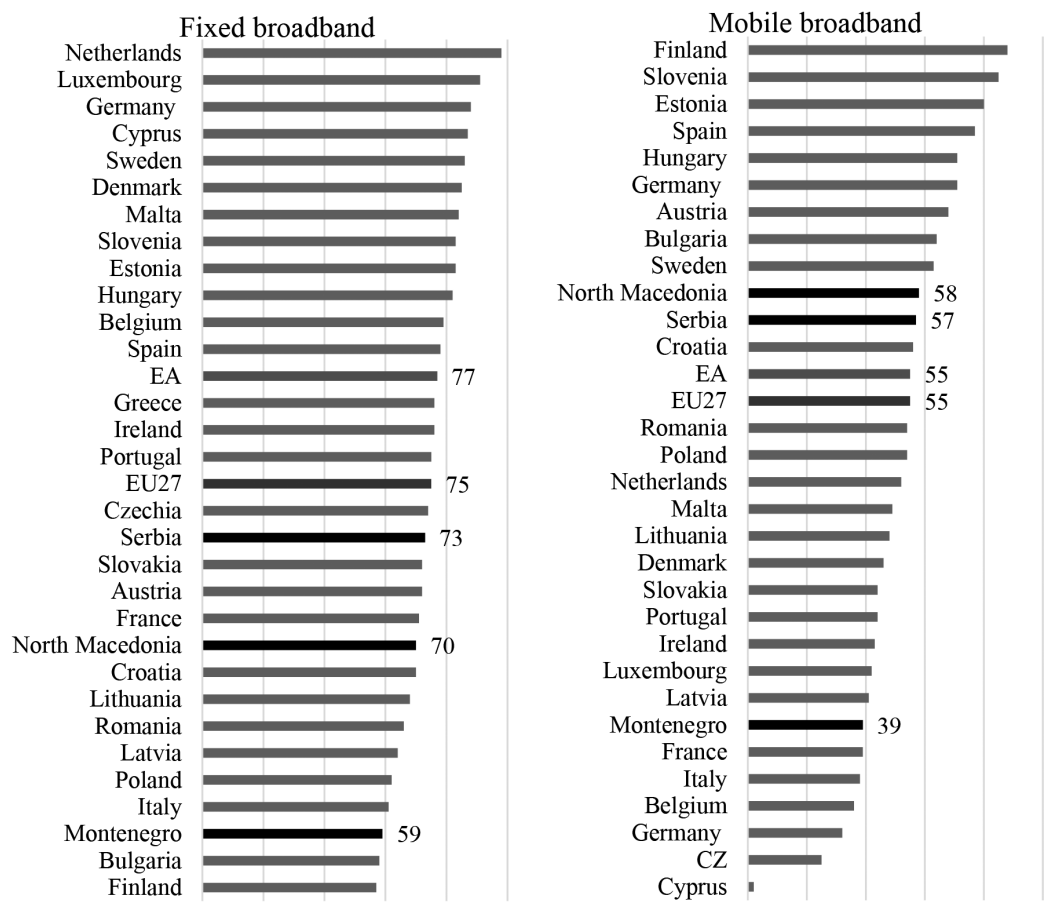
#### 4.1. Broadband connections

- a) Fixed broadband connections, e.g. DSL, ADSL, VDSL, cable, optical fibre, satellite, public Wi-Fi connections
- b) Mobile broadband connections (via the mobile phone network, at least 3G, e.g. UMTS, using (SIM) card or USB key, mobile phone or smart phone as a modem)”



**Figure 1.** Percentage of households that answered that they had internet access at home (by any device) in 2019

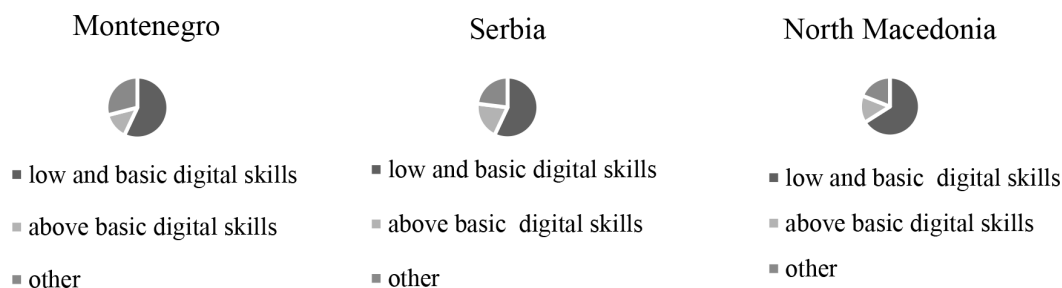
Source: Eurostat, 2020



**Figure 2.** Percentage of households with fixed and/or mobile broadband at home in 2019

Source: Eurostat, 2020

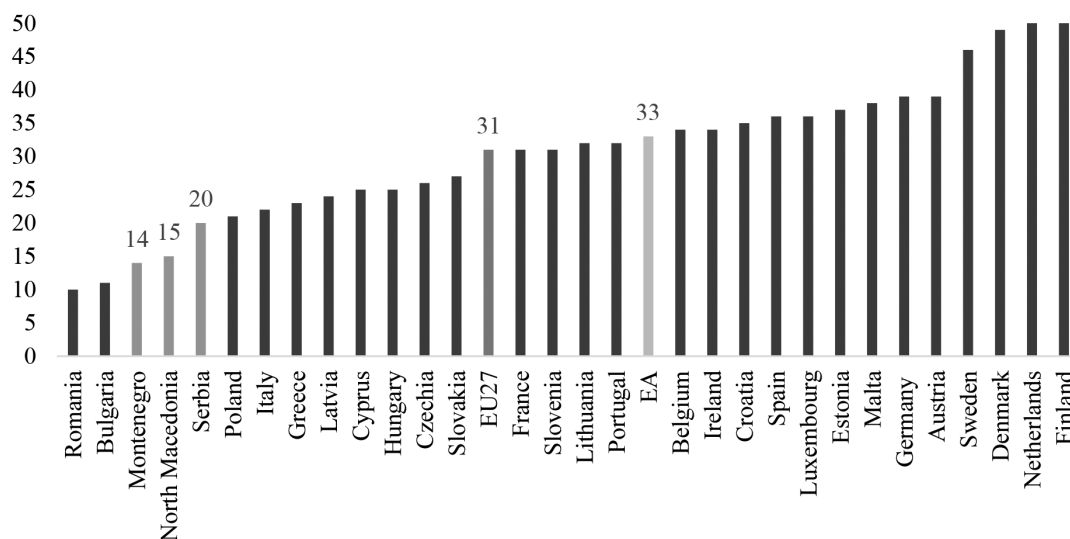
In terms of the type of internet connection (Figure 2), 73% of households in Serbia had fixed broadband and 57% had mobile broadband at home in 2019. In Montenegro, the percentage of households with fixed broadband was 59 % and with mobile broadband 39%, while in North Macedonia the percentage was 70% and 58 % in 2019, respectively. Candidate countries from the Western Balkans are below the EU average in terms of digital skills as the majority of households answered that they had low and basic digital skills (Figure 3).



**Figure 3.** Composition of digital skills in Western Balkan candidate countries, 2019<sup>7</sup>

Source: Eurostat, 2020

In order to be competitive in a new digital world, being connected to the internet is not enough, digital skills are needed as well. The percentage of households that answered to the Eurostat’s ICT questionnaire that they do not have the internet at home because of the lack of skills has been falling over the years, but candidate countries from the Western Balkans are still below the EU27 average in terms of individuals who have above basic digital skills (Figure 4).



**Figure 4.** Closing the gap: Western Balkans vs. EU.

Percentage of individuals who have above basic digital skills, 2019

Source: Eurostat, 2020

## 5. EU ASSISTANCE IN DIGITALIZATION IN WESTERN BALKANS

The EU can and should help the Western Balkans to close the gap vs EU countries regarding digitalization considering that access to fast and ultrafast broadband is a necessary condition for competitiveness (European Commission, 2020) and being competitive is one of the features needed in the accession process. General financial and technical assistance for candidate

<sup>7</sup> The newest available data for Montenegro is 2017. The same figure is a proxy for 2019.

countries (Albania, Serbia, Northern Macedonia and Montenegro) has been available under the Instrument for Pre-accession Assistance (IPA). IPA II<sup>8</sup> (2014-2020) has a strategic focus for each country for the 7 years. In country strategy papers priorities were set out for EU financial assistance to support candidate countries on their path to the EU. The strategies translate political priorities from the enlargement policy framework into areas where financial assistance is most useful to meet the accession criteria. IPA II targets sectors that can bring candidate countries closer to EU standards in terms of institution- and capacity- building, reforms focused on socio-economic and regional development; reforms focused on employment, social policies, education, promotion of gender equality, and human resources development; capacity building in agriculture and rural development, and regional and territorial cooperation. Under the IPA II financial assistance in terms of country allocation for 2014-2020, indicative funding allocation for Serbia was €1.539,1 billion, for Montenegro €279.1 million (not including the allocation for cross-border cooperation), for North Macedonia € 608.7 million and Albania €639.5 million.

However, it seems that there has been some new awareness about the importance of digitalization in recent years. On 6 February 2018 the Digital Agenda for Western Balkans was presented as one of the six flagship initiatives in the Communication on a Credible Enlargement Perspective for Enhanced EU engagement with the Western Balkans (EC, 2018)<sup>9</sup>. In April 2018, an EU commitment to launching the Digital Agenda was declared during the Western Balkans Digital Summit. The Digital Agenda included a roadmap for lowering roaming charges between the EU and Western Balkans partners. The Digital Agenda for Western Balkans is about the EC working with six Western Balkan partners (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Northern Macedonia and Serbia) in order to invest in broadband connectivity. The commitment is in line with the fact that good digital infrastructure is essential for the roll-out of broadband in the Western Balkans. To deploy broadband infrastructure in the region €30 million in EU grants has been pledged to be available<sup>10</sup> under the Western Balkan Investment Framework. As one of the first investment packages, it was a technical assistance package for Albania that had been approved first.

The Digital Agenda for the Western Balkans is expected to support the digitalization of industry in the Western Balkans to ensure that all sectors benefit from digital innovations. This includes not only supporting eGovernment, eProcurement and eHealth tools but also helping improve digital skills by providing opportunities for students and young people to acquire coding and other digital literacy skills. The idea also was that the Digital Agenda could help set up national research facilities and integrate them in the digital European Research Area. This is particularly important now as there are many uncertainties regarding travel due to the corona-virus outbreak. As a result, by integrating national research facilities digitally, world-class training for a new generation of researchers and engineers could be brought together, thereby promoting interdisciplinary collaboration.

In addition to all of the above, on 6 October 2020, the EC adopted an Economic and Investment Plan for the Western Balkans<sup>11</sup> to support the economic recovery and convergence to the EU. The plan is expected to mobilise up to €9 billion and support human capital, competitiveness and inclusive growth, sustainable connectivity and green and digital transition. Digital transition will be supported by the roll-out of broadband infrastructure.

<sup>8</sup> Details on the legal framework see [https://ec.europa.eu/neighbourhood-enlargement/instruments/overview\\_en](https://ec.europa.eu/neighbourhood-enlargement/instruments/overview_en)

<sup>9</sup> For more details see Communication on a Credible Enlargement Perspective for Enhanced EU engagement with the Western Balkans: [https://ec.europa.eu/commission/sites/beta-political/files/communication-credible-enlargement-perspective-western-balkans\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/communication-credible-enlargement-perspective-western-balkans_en.pdf)

<sup>10</sup> See Press Release [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_18\\_4242](https://ec.europa.eu/commission/presscorner/detail/en/IP_18_4242)

<sup>11</sup> For more details, see [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_1811](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1811)



## 6. IMPORTANCE OF TOURISM AND ONLINE PLATFORMS

Some candidate countries in the Western Balkans rely on tourism more than others. According to data from WTTC (2020) the importance of the tourism industry in Montenegro can be explained by the impact of international visitors which was €1,132 million in 2019 in visitor spend, about 47.7% of total exports. Tourism and travel are also important in Albania as it contributes about one fifth to the GDP. On the other hand, Serbia and North Macedonia are less reliant on tourism receipts compared to the other two candidate countries. In Serbia, international visitor impact in visitor spending was 7.0% of total exports while in North Macedonia international visitor spend was 4.9% of total exports in 2019 (WTTC).

**Table 1.** Arrivals at tourist establishments – total: hotels, holiday and other short-stay accommodation, camping grounds, recreational grounds and trailer parks

	2017	2018	2019
<b>Montenegro</b>	843.609	959.121	1,167.968
<b>North Macedonia</b>	624.853	702.833	755.438
<b>Serbia</b>	1,496.301	1,709.961	1,845.562

Source: Eurostat, 2020

**Table 2.** Arrivals at tourist establishments: holiday<sup>12</sup> and other short-stay accommodation

	2017	2018	2019
<b>Montenegro</b>	42.093	37.993	37.980
<b>North Macedonia</b>	22.019	24.157	25.514
<b>Serbia</b>	149.729	184.956	210.252

Source: Eurostat, 2020

With the change in how tourists plan their holidays, supported by information-communication technology in recent years, online platforms such as Airbnb, Booking.com and others have boomed locally, regionally and globally in the last decade. Online platforms for accommodation generate revenue for owners of properties (Mao et al, 2018, Clancy et al, 2018). These online platforms have been also welcomed in the Western Balkans as the number of establishments for holiday and other short-stay accommodation has risen sharply in the last few years.

Serbia had the most spectacular rise of establishment for holiday and other short-stay accommodation from 2014 to 2018, while Montenegro followed with 15.4% growth between 2016 and 2018 and North Macedonia recorded an increase of 5.6% between 2016 and 2019 (Eurostat, 2020). In line with the worldwide boom in tourism in the last few years, there has been an increase in arrival at all tourist establishments (Table 1), including at holiday and other short-stay accommodation (Table 2) in Western Balkan candidate countries.

Most of the short-term travel accommodation services are booked through websites such as online platforms Booking.com, Airbnb, HomeAway, VacationRentals and similar that provide

<sup>12</sup> Eurostat's definition of **holiday and other short stay accommodation** is "accommodation, typically on a daily or weekly basis, principally for short stays by visitors, in self-contained space consisting of complete furnished rooms or areas for living/dining and sleeping, with cooking facilities or fully equipped kitchens. This may take the form of apartments or flats in small free-standing multi-storey buildings or clusters of buildings, or single storey bungalows, chalets, cottages and cabins. Very minimal complementary services, if any, are provided." Holiday and other short stay accommodation excludes "provision of furnished short-stay accommodation with daily cleaning, bed-making, food and beverage services". It also excludes "provision of homes and furnished or unfurnished flats or apartments for more permanent use, typically on a monthly or annual basis" (Eurostat, 2020b)

dedicated websites, i.e. online platforms, where travellers can access tourist services directly from other individuals. However, tourists and other travelers may also use other websites or applications to arrange accommodation from another individual (Figure 5), such as social networks (e.g. Facebook) where individuals and companies can advertise their accommodation as well (Eurostat, 2020). In 2019 about 21 % of all individuals in the EU27 used any website or application to arrange accommodation and 17 % used dedicated websites and applications to arrange an application from another (private) individual during the preceding 12 months (Eurostat, 2020). A similar trend of the “collaborative” economy has been seen in the Western Balkans in recent years too. The percentage of individuals using any website or application to arrange accommodation from another private individual was 15 % in Serbia while in Montenegro and North Macedonia they were 14% and 13% in 2019, respectively. In Serbia 11% of individuals used only dedicated websites or applications to arrange accommodation from another individual. In Montenegro, 13% of individuals use dedicated websites to arrange accommodation and in North Macedonia, only 4% of individuals used dedicated websites or applications to arrange accommodation from another individual in 2019 (Eurostat, 2020).

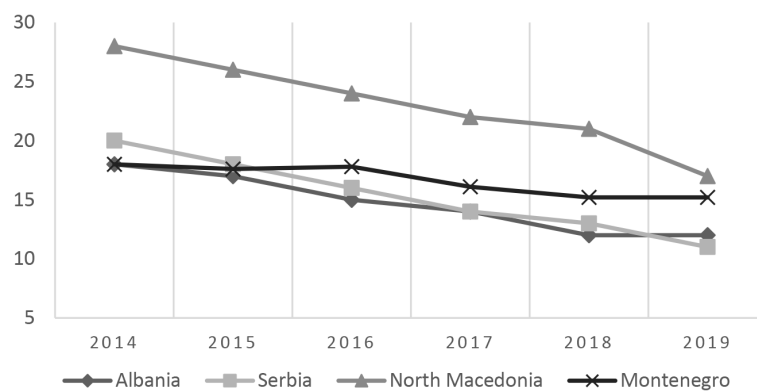
Data analysis shows that candidate countries of Western Balkan still have a lot to do to converge to the EU average not only in terms of connectivity and digital skills but also concerning the collaborative economy. In line with the above rests the economic case for further digitalization. Digitalization has been included in policy strategies in many countries, including the EU as a whole. Digital platforms can create new occupations and new jobs. The impact of digitalization in tourism is not just about participating in the digital economy for holiday and other short-term stay accommodation, digitalization can also help connected businesses and other businesses to expand. Also, digital technology has changed the terms of work with the rise to more short-term work instead of standard long-term contracts which are not so easy to come by in the Western Balkans. New business models – online platforms – have enabled clusters of tourist-related-businesses to form, and if listing a property on online platforms does not require significant investments, it can contribute to the households’ income assuming that the internet’s deployment and adoption of internet-enabled digital services and products can be delivered to households under reasonable cost provisions.

Low communication costs and search costs over the internet are, therefore, interesting for both, travelers and property owners. From a household’s perspective then, by listing a spare dwelling at platforms such as Airbnb and others, a household’s disposable income can increase and thereby in macro-economic terms, add to the GDP. That is in line with research that has established digitalization means a positive impact on economic growth per capita and GDP (Sabbagh et al, 2013). Another economic argument for further digitalization is related to taxation and the state budget. An increase in participation in online platforms, leading to more tourist arrivals to the country, also improves fiscal receipts by the state, leading to the alleviation of the burden on the public budget. Besides, digitalization may create new jobs and improve unemployment rates which are still rather high in the Western Balkans (Figure 6).

In line with the above, there is a strong argument for further digitalization and households’ participation in the digital economy in terms of financial resources available for digitalization. The EC’s digital strategy for the Western Balkans from 2018 is an incentive for countries in the region to prepare projects that would bring internet to remote and mountainous regions (for which tourist demand is rising) while also providing faster and ultra-fast internet access elsewhere in the Western Balkans.



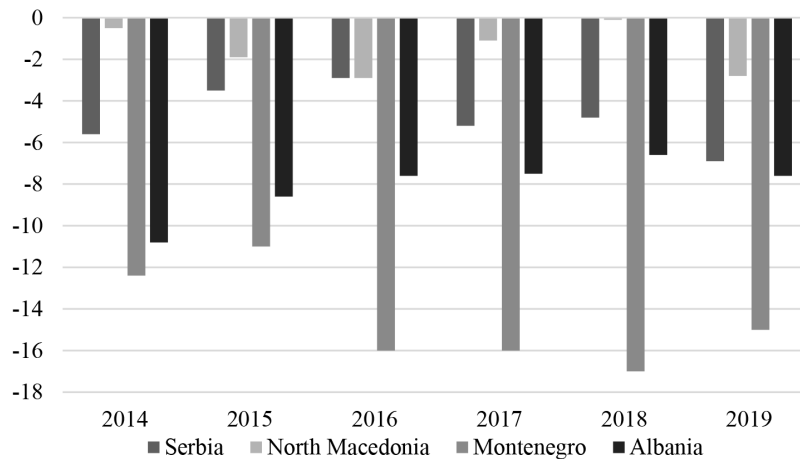
**Figure 5.** Collaborative economy in 2019: Western Balkan candidate countries vs EU  
 Source: Eurostat, 2020



**Figure 6.** Unemployment rate (%) in candidate countries of the Western Balkans  
 Source: Eurostat, IMF, 2020

External imbalances are another important challenge in all candidate countries from the Western Balkans. They all have relatively large current account deficits (Figure 7) due to much higher imports than exports of merchandise. Exports of services and secondary income cannot fully offset the deficits in merchandise trade.

The relation between tourism and unemployment is that tourism influences not only accommodation services for visitors but also the food and beverage industry and railway, road, water and air passenger transport. The impact of tourism is also felt in demand for entertainment, cultural and other activities. Attracting more tourists and other travelers to the country and being able to offer them competitive and sustainable tourist services does not only help domestic labour markets and increase employment but also contributes to the growth of services exports and reducing current account deficits.



**Figure 7.** Current account balance as % of GDP

Source: IMF, 2020

## 7. MANAGEMENT TOOLS AND COVID-19 ARGUMENT FOR DIGITALIZATION

Traditional management tools have evolved in the last few years to the extent that accommodation providers can, aided by technology and digitalization, provide personalised services based on travellers' preferences and needs. Digitalization enables accommodation providers at online platforms to have access to online platform management tools for online booking systems, online payment systems, online financial analytics and online customer relationship systems. For accommodation providers such as households, digital platforms make it possible not just to provide accommodation to tourists and other travellers with the online platforms' support system to manage all phases of tourist services, but to also expand beyond accommodation products to coordinate and facilitate visitor experiences in a destination. These management tools available to accommodation providers are online platforms that act as information brokers and intermediaries (e.g. TripAdvisor, Expedia). On the other hand, digitalization makes it possible for travellers to plan and manage their travels wholly online and while they are already on the way as they can use mobile applications, social media, chatbots, instant advice and the rise of the platform economy in that respect. Travellers can expect that the integration of different applications can make it possible to make changes to bookings on very short notice.

The tourism sector has been hit hard by the outbreak of Covid-19 but in comparison to hotels, accommodation offered by households and individuals has certain advantages. First, tourists and other travellers do not have to meet their hosts or other people because keys for the accommodation can be exchanged in a non-personal way (by leaving them in a designated place). Modern management tools enabled by digitalization do not mean only that check-in/out can be done without a personal contact but also that cashless payment is possible thereby complying with physical distancing requirements. Second, hotels are typically larger and with more guests compared to

private accommodation provided in detached houses, buildings or bungalows where guests can also prepare their food. Hence, the probability of interacting with other guests in elevators or common areas such as restaurants is very small in accommodations provided by households. Third, hotels usually offer breakfasts and other services (fitness, pools, hairdressers, etc.) that imply larger numbers of people. That is typically not the case in accommodation listed by households at online platforms for short-term tourist stay. Fourth, with the relaxation of travel restrictions, people have started travelling but are still careful. That might mean that travel is mostly local or regional. In the case of the Western Balkans, taking into the account purchasing power of the region, travellers probably wouldn't seek luxury and expensive accommodation. In that respect it has been established that private accommodation listed on online platforms has been, on average, cheaper than hotels (Bivens, 2019). Fifth, the EU's recent pledge for investment in digitalization and reductions in roaming charges for the Western Balkans is an additional argument for further digitalization in the region, especially in this time of uncertainty due to the outbreak of Covid-19.

In sum, in the current and post-corona-virus era, a private accommodation that can be booked online is in a good position to ensure social-distancing and other response measures requested by the authorities. However, accommodation providers need to have not only a connected property but a connected guest as well. That is possible through the use of various technologies. Accommodation providers need to have digital skills to use technology so as to address all tourists' and other travellers' needs and wants. That is especially so if the accommodation is in coastal, rural and mountainous areas that are not hot-tourist spots and have yet not developed to attract large crowds. In the aftermath of the corona virus outbreak, technology is a key enabler.

## **8. CONCLUSION**

Western Balkan candidate countries still have a long way on their convergence to the EU average in terms of digitalization and the use of collaborative economy in tourism. The region should increase internet connectivity and also invest in digital skills in order to be able to improve human capital generally, not just in tourism. This is important for both, businesses and households, considering various social and economic challenges in the region.

A reliable and fast internet connection is needed, because the new digital world is entering many aspects of society and economy, including tourism. People use the internet for various reasons and now in the Covid-19 era even more, from sending and receiving emails to making calls (including video calls) over the internet (Viber) and participating in social networks (Facebook, Twitter, Instagram) as well as using instant messaging (exchanging messages via Messenger, WhatsApp, Viber). All of the above has become even more important in times of social distancing requirements and the Covid-19 outbreak. However, in addition to the need of being connected to the internet in these challenging times, the ever-evolving digital technology has had significant effects on consumers' and travellers' behaviour in the last few years. Digitalization is a challenge for traditional business models because "sharing" or "collaborative" economy concept has been embraced by those who see that business model as an opportunity for households and local economies.

Analysis of data in this research shows that Western Balkan countries still have a lot to do to make their economies more competitive, and in terms of digitalization, additional effort should be put into improving internet connectivity and digital skills for the new era. In addition to having a significant economic appeal for candidate countries of Western Balkans, digitalization and investing in digitalization imply further convergence towards the digital single market of the EU.







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# MOBILE APPS AS A TOOL FOR DESTINATION MANAGEMENT – CASE STUDY OF BELGRADE

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**Abstract:** *Mobile applications, as a very dynamic segment of modern ICT (Information and Communication Technology), are in widespread use in tourism. Tourist destinations are increasingly using mobile applications to manage the development of a destination product, that is, the applications themselves are seen as an important part of the destination product and the overall tourists' experience. This paper focuses on mobile applications and their use in destination management and the achievement of overall tourist satisfaction. Special attention is paid to the use of mobile applications in the management of tourism development in Belgrade as well as the impact of mobile applications on tourists' experience of Belgrade as a tourist destination.*

**Keywords:** *Information and communication technology, Tourists' satisfaction, Smart destination.*

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## 1. INTRODUCTION

Today, more than ever, the modern tourism market is constantly adapting to the new information and communication technologies (ICTs) that have led to a series of changes in the tourism market, which are manifested both on the tourist supply side and the tourist demand side (Štetić & Šimičević, 2014). ICTs have become a source of competitive advantage for the tourism industry and tourist destinations (Buhalis, 1998; Zelenka, 2009) and an indispensable tool in developing a destination product, in creating a tourism offer for individual tourism companies, and in communicating with consumers. Thus, *the ignorance of ICTs and avoidance of their implementation in all aspects of business creates negative impacts and increased the competitive advantage of competition* (Čavlek et al., 2010). It could be said that the biggest changes and benefits are for both, tourist demand and tourism economy, in the field of ICTs, which gives new opportunities and tools to the tourism managers, but also the consumers themselves (Štetić & Šimičević, 2014). Neuhofer also assigns a new role to information and communication technology as a mediator in going through a new experience and/or as the basis of a new experience around which it is created (Štetić et al., 2017).

The dominance of ICTs in the tourism business is in line with trends in the tourism market. These trends are reflected in consumer's behaviour changes, i.e. tourists, which directly affect the business of different companies and entrepreneurs (Van Wee et al., 2013), including companies and organizations in tourism. The main trends in tourism companies and organizations influenced by modern ICT are (Gu et al., 2016; Ammirato et al., 2014):

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1. **Big data analysis** with lower overall costs in time and money,
2. **Interactive contact with consumers** and increase in the share of direct sales,
3. **Overall reduction of costs**, shortening of timeframes for the provision of services and operations increased quality of work and efficiency.

Also, the development of megacities as tourism destinations, but also as significant outbound centers as well as the increasing demand for „smart tourism” products (Gu et al., 2016) can be highlighted as important trends. An increasing population of megacities wants to spend their free time within different, better quality surroundings than those in which they live and work, in order to have psycho-physical regeneration and rest. Due to an increasing amount of available information, in their search for such surroundings, they rely on modern information and communication solutions to find services that suit them as efficiently as possible. On the other hand, tourism destinations and businesses use the same information and communication solutions to reach the end consumers as directly and as quickly as possible (Milićević et al., 2020) and to provide them with the information they need quickly and efficiently (Štetić et al., 2019; Trišić et al., 2020). Also, modern technology has enabled the creation of smart tourism products that leads to the establishment of „smart destinations” that will be fully available to modern tourists (Buhalis & Law, 2008; Neuhofer et al., 2012; Buhalis & Amaranggana, 2015, Yalçinkaya et al., 2018).

*Smart tourism includes smart tourism experiences that enable tourists to communicate and interact more closely with residents, local businesses, local government, and tourist attractions in cities* (Yalçinkaya et al., 2018). Besides, through mutual communication smart tourism should ensure the creation of added value for all stakeholders such as Destination Management Organizations (DMOs), travel agents, tour operators, local communities, tourists (Trišić, 2019), local, regional and national authorities, cultural organizations, heritage sites (Trišić, 2019), transportation organizations and other businesses, institutions, and intermediaries (Koo et al., 2019).

Basically, „smart tourism” can be observed as the last stage in the development of tourism and tourism destinations (Gretzel et al., 2015; Trišić et al., 2018), and it is based on the application of „top” ICTs and technological systems (Gretzel et al., 2015; Khan et al., 2017). The terms „smart tourism” and „smart destinations” are derived from „smart cities” based on the Internet of Things (IoT), cloud computing, mobile communication, and artificial technology systems (Put-van den Beemt & Smith, 2016). „Smart city” is not a mono-component but it is a system consisting of „smart elements” as (Khan et al., 2017; Sziva, 2017):

- „smart economy”
- „smart people”
- „smart management”
- „smart mobility”
- „smart environment”
- „smart housing”

Essentially, the use of modern ICTs should ensure the sustainable development of cities integrating all elements of the system into a functional whole. It can be done by maximizing the linkage of human resources to high-tech solutions that will reduce the consumption of material, environmental and social resources, maximizing effects on the population and economy at the same time.

In order to create a „smart destination”, DMOs need to apply modern ICTs to fulfill their function of creating a destination product, together with its presentation, lobbying for it within the

economy and with tourists as well as launching it at target markets. To fully implement ICTs in the DMO business we apply Destination Management Systems (DMSs) (Buhalis & Wagner, 2013) that consist of a network of hardware, software, and software solutions or applications and communication channels, databases, or multiple databases that are available to users through database management systems. Such a DMS fulfills the needs of all participants in a destination, connects and provides information, and stimulates internal and external communication, and supports strategic management decisions. (Martins, et al., 2013). However, it should be noted that the accelerated development of new technologies is not only a chance but also a challenge, and often a problem in managing destinations. Gretzel (2015) identified several fields in which the development of modern ICTs can present a challenge in the effective management of tourism destinations by DMOs. Those are:

1. **DMOs websites have ceased to be a dominant source of destination information**, and as the alternative sources of information, there are blogs, vlogs, web magazines and newspapers, apps and social media,
2. **Most DMOs do not have internal human resources that can keep up with all the changes in modern ICTs**, so they are forced to engage external entities to avoid technological backwardness, the irrelevance of communication channels, and poor attendance of online presentations, which can lead to significant costs,
3. **With the development of social media** and free posting and sharing the content by users, DMOs have lost control over the online marketing contents,
4. **Mobile device development** requires DMOs to adapt their websites to the requirements of modern „smart devices”
5. **DMOs are forced to develop mobile applications** as a ubiquitous communication channel and a tool for managing users’ movement within a destination,
6. **The emergence of portable technology, mini-portable cameras, and drones** have set the task to DMOs to connect users with attractions in a destination.

What is particularly interesting and important for „smart tourism” and the development of „smart destinations” is the use of „smart devices” by tourists, the tourism industry, and DMOs in their daily activities and businesses. *Interaction among stakeholders is basic in the smart destination setting and it is articulated through a technological infrastructure composed of smart technologies and solutions. In the smart destination, the DMO takes a pro-active role together with businesses and applies the public-owned smart solutions for engaging tourists at a superior level* (Femenia-Serra & Neuhofer, 2018). One of the segments of applying ICTs and smart devices to achieve smart tourism experiences is to implement mobile applications by tourists before, during, and after the trip and by the tourism industry and DMOs in communication with the market and creation of the tourism product.

## 2. LITERATURE REVIEW

The development of technology in the 21<sup>st</sup> century has enabled us to be constantly connected with other users, service providers, organizations, and businesses. This development has eventually meant the creation of mobile or portable devices (laptops, tablets, and mobile phones) that people can use anywhere around via wireless Internet connection wherever there is an Internet signal. The combination of smart portable devices and advanced software solutions results in „smart” phones and other „smart” devices that have the functionality and speed of standard PCs. In this way, it is possible to perform a series of more or less complex operations according to the user’s needs. Smartphones and other smart devices are recording an unstoppable upward



growth trend in the mobile market and today over 50% of all mobile users in the world own smart devices (Kim et al., 2017). This is particularly evident in the markets of the USA and Europe (Tjostheim & Holmqvist, 2010) where this percentage is even higher.

In order to better understand the importance of mobile applications for modern tourism, it is necessary to define mobile applications and how they work. In this sense:

Jieun sees mobile applications as a software solution that provides information and supports users in their daily or business activities by technical characteristics of the mobile devices on which they are used. On the other hand, Alin has simplified this definition even more and says that mobile applications are a set of coded instructions designed to solve certain problems. (Filofteia, 2016)

Dickinson et al., (2012) say that *mobile applications are specifically designed software for mobile devices that improves the delivery of mobile services.*

Based on the above-mentioned definitions, it can be concluded that mobile applications are specially developed software solutions that should make users' search for information easier, as well as their order, booking, or payment for certain products and/or services: they facilitate communication with other users or organizations, find entertainment, etc. Thus, mobile applications serve to address the daily needs of users in all areas of their lives and save time and money in the process of solving these problems. All applications could be classified into 7 basic groups (Schieder, 2013; Kiilunen, 2013):

1. **navigation applications** use GPS, augmented reality, and other location services to show users their location and route to the desired point (most commonly used as navigation applications for travel, but also to navigate within destinations);
2. **social networking applications** allow users to share content and to communicate with other users; in addition to social networking applications, it is possible to instantly share content between these and other tourist applications by linking them through software solutions, and such solutions can also be introduced into destination applications;
3. **mobile marketing applications** provide information on discounts, rewards, competitions, etc.;
4. **travel safety applications** provide information on various safety aspects during travel, from medical warnings to natural disasters and safety of certain parts of the destination from crime, etc.;
5. **transaction applications** include a whole set of applications for purchasing, bookings, banking and other financial services, auctions, etc.;
6. **information applications** offer a wide range of services from translation and currency calculations to destination information, itinerary creation, event calendars, etc.;
7. **entertainment applications** such as various games, TV, music, photo editing, and their sharing, eBooks, or applications for downloading and displaying books, etc.

Mobile applications are developed by individuals or organizations and they can be targeted at specialized users or the wider public. Important is that they are simple, understandable, and easy to use. The most popular services for mobile application downloading are the Google Play Store and the Apple App Store, with several million different downloadable applications.

The development of the mobile application market leads to the development of applications for tourism needs, i.e., the applications which are intended for tourists in all three stages of travel,

before, during, and after the trip itself. The increasing use of mobile applications is also matched with the widespread use of mobile devices by tourists. A survey conducted by DCS+ Travel Technologies found that a large proportion of common and business travellers use mobile devices at all stages of the tourism cycle, as can be seen in Table 1.

**Table 1.** The percentage of mobile device usage by tourists during the stages of the tourist cycle (%)

	Common tourists		Business travellers	
	Desktop/tablet	Mobile phone	Desktop/tablet	Mobile phone
<b>Total at any stage</b>	94	67	97	78
<b>Imagination / Inspiration</b>	73	31	74	39
<b>Research</b>	88	27	86	36
<b>Booking / Purchase</b>	81	14	84	28
<b>Travel / Experience</b>	57	50	67	54
<b>Sharing / After the trip</b>	63	37	67	42

**Source:** <http://www.dcsplus.net/hubfs/PDF/Resources/How-mobile-apps-are-changing-travel-habits.pdf?t=1531405451357>

The disadvantage of the research presented in Table 1 is that tablets, which by their nature are mobile devices, are placed in the same category as desktop devices. If they were to be classified as mobile phones, certainly, the percentage of mobile devices used at all stages of the tourism cycle would be much higher. However, it can be concluded that the percentage of mobile usage increases significantly during the travel and sharing stage, i.e. in the last stage of the cycle, when tourism applications are significantly used to share content and comments on certain services.

### 3. STATE-OF-THE-PLAY AND NEW TRENDS IN USING MOBILE APPS IN TOURISM

Mobile applications for tourism purposes can be categorized into a smaller or larger number of groups or categories, some authors list even 12 categories of tourism applications. (Dickinson et al., 2012). Smirnov et al., (2014) grouped all applications into applications that collect information relevant to tourists through Internet sources, i.e. those that require an Internet connection in order to show tourists relevant information locally and temporally and applications that have their databases and do not require an Internet connection to show information relevant to tourists. Regardless of the number of categories, it should be emphasized that today tourism applications make extensive use of modern technology achievements. They incorporate the capabilities of mobile devices to use GPS, proximity sensors, gyroscopes, and other technical solutions (Dickinson et al., 2012; Kim & Kim, 2017) allowing applications to make the most of technical components of the devices. Thus, they make it easier for tourists to obtain the information they want. Therefore, the focus of tourism mobile applications are tourists and/or groups of tourists (Da Silva & Rocha, 2012). We can say that there is a large number of tourist applications dealing with all aspects of the organization and realization of tourist travel and with all aspects of one tourist destination, from the provision of basic services to online reservations and payment services in the destination. Their role, number, and types will only grow over time.

Still, mobile application implementations through digital travel guides, digital maps, and ratings of tourism services remain the most common. In this regard, integrated GPS devices are widely used to a great extent by all „smart” phones and tablets and timely marked information is available on the Internet (Tjostheim & Holmqvist, 2010). Thus, users are provided with spatially

and temporally relevant information based on where they stay and the time at which the desired information is requested. Mobile or digital guides are a commonly used type of application by tourists and these applications provide situationally dependent multimedia services for visitors while recommending attractions that are close to the visitor or related to the activities he prefers. This type of application is the best indicator of incorporating GPS and time information. (Smirnov et al., 2014; Kourouthanassis et al., 2014) By providing location-based services, digital travel guides can provide time – and location-relevant information to tourists based on their location. Thus, through digital maps or other means of presenting information, they inform tourists about sales networks, traffic, accommodation facilities, restaurants, etc., which is the best way to inform tourists about activities in the destination.

It may be easiest to illustrate the importance and impact of mobile applications in tourism through the applications for tourism service rating. These applications can be used at the moment of consuming a service or after travelling. For tourists, this is not a new option as they were already able to rate their trip through the services introduced by TripAdvisor in the early 21<sup>st</sup> century. What is new is that this option is now widely implemented within tourism applications and thanks to the use of „smart“ mobile devices, tourists can rate the quality of services and facilities instantly, on the go. They can also share it with a wider community that uses the same application, thus creating an e-WOM (electronic word-of-mouth) that has an instant effect on the behaviour of other users. Furthermore, this affects their use or non-use of certain tourist services (Kim & Kim, 2017).

Also, increasing implementation of AR (Augmented Reality) within tourism applications can be expected in the coming period (Nabeen et al., 2016). AR enables full integration of the simulated environment with the real one implementing 2D and 3D objects into applications. (Ajanki et al., 2011; Kounavis et al., 2012; Kečkeš & Tomičić, 2017) One example of AR implementation in tourism applications is „Here WeGo“ where 3D objects of the most important and most interesting tourist locations are inserted into the drivers' navigation maps of a particular destination. The aim is to make it easier for tourists to reach it and to draw attention to potentially attractive sights in the city. Importantly, AR content within applications can be presented in a variety of formats, from the text, through photos and drawings to video. The greatest use of AR today is within digital tourist guides, digital maps (of a city, transport, etc.), archeological sites and areas where historical events significant for a particular destination took place, etc. In any case, modern tourists respond positively to the use of AR, and smartphones have finally enabled tourists to use AR massively through integration with mobile applications (Kečkeš & Tomičić, 2017).

Nowadays, mobile applications play an important role in destination management as a part of a broader corpus of modern ICTs. *DMOs are challenged to plan and implement technological solutions, which benefit both the own destination from a public perspective and the tourists visiting it* (Femenia-Serra & Neuhofer, 2018). DMOs are using mobile apps in order to provide tourists with information, but also to direct tourists' movements in the destination as well as to promote certain parts of the destination product. DMOs can create general-purpose mobile applications for the general public with the most important destination information, such as accommodation facilities, attractions, restaurants and bars, cycling and other trails, parking locations, retail network, destination history, digital destination maps, etc. They can also launch applications targeted at particular segments where they act as guides through cultural events, informing tourists on festivals, shopping, adrenaline sports, and destination opportunities in this regard, etc. Currently, there are several general-purpose destination applications on the

market that provide information on all aspects of the destination. Their weakness is that these pieces of information are mostly summarized and tourists interested in specific aspects of a destination, for example in its cultural offer, can find out only some of the most general information or a list of cultural institutions in these applications. Fortunately, the software solutions available today make it possible to connect these applications to cultural institutions' sites, digital maps, and virtual guides through museums, minimizing this weakness and making it almost invisible to users.

In the process of creating destination applications, DMOs should focus on tourists' needs and provide answers to four basic tourists' questions during their stay in the destination. These questions are: what, how, when, and where, which means that the application should help tourists decide what to see, how to get to a particular attraction or location, to get real-time information to coordinate activities better, and to get to know the area where they move. (Tjostheim & Holmqvist, 2010). In order for users of destination applications to become loyal and continuously use them, the DMO should design applications in such a manner that they become an alternative source of cognitive satisfaction instead of the mere content that a particular application contains (Yus, 2014).

When it comes to mobile apps, it should be noted that DMOs need to be aware that they are not the only ones that create destination apps. Today, practically all participants on the tourist offer side have their applications. This can be both, the advantage and disadvantage of a tourist destination. The advantage is that more applications are available related to the tourist destination, which increases the visibility of the destination in the tourist market. The disadvantage is that a DMO does not control how tourist offer will present the destination, what information it will provide, and whether it will be in line with destination marketing efforts. Therefore, close cooperation with all destination providers is required in order to send a unique message to the market through various applications. It is also important to avoid tourists being misled and misinterpreting the marketing efforts of a particular DMO. Applications created by business entities in the destination can be classified into (Schieder, 2013):

1. **Applications of transport companies** such as car rental agencies, airlines, railway; through these applications, tourists can get informed about the services which these companies offer, make booking and payment, as well as get information about the destinations where they operate or have their terminals;
2. **Applications of e-tour operators** through which they can book trips or individual travel elements and pay for them, but also they can get informed about the destination, its accommodation facilities, attractiveness, etc.; through these applications, one can also interact with other users through users' comments and ratings; the most famous applications of this type are Expedia, Travelocity, etc.;
3. **Amusement park applications** enhance tourists' experience in the destination itself allowing them to view amusement park activities, book and buy tickets, plan activities within it, and virtual queueing through mobile devices in order to shorten waiting time for some attractions in the park;
4. **Accommodation applications** of hotels and hotel chains, but also applications that connect owners of private facilities, villas, smaller family-run hotels like Airbnb with tourists; by launching their applications, hotels, and hotel chains are affecting greater market visibility, thus increasing the number of direct promotions and revenues and making their brand recognizable; these applications also provide basic information about the destination in which their accommodation is located, such as the closest attractions, city transport lines, etc.

Mobile applications as software solutions aimed at specific issues and situations have experienced a real boom in tourism. On their smart mobile devices, tourists have at least one mobile app designed to help them feel comfortable in a tourist destination or get to know it better. It can be said that creating mobile applications in order to manage destinations and tourist experiences is a must, not a choice of DMOs. Modern tourists communicate with other users and their surroundings through applications in their daily lives, and so they require the same during their travels.

#### **4. RESEARCH AND METHODOLOGY**

The research is aimed at identifying destination mobile applications that the Tourism Organization of Belgrade (TOB), a DMO engaged in developing Belgrade as a tourism destination, promotes on its official website with the links through which these applications can be downloaded to smart devices.

In addition to identifying the mobile apps that TOB recommends to tourists as a useful tool for feeling comfortable in Belgrade, they will also have access to the description of apps, their functions, built-in options, the number of app downloads on Google Play Store as the most used and the largest mobile app store, as well as user ratings at these stores.

In the second part of the research, the obtained results will be compared to the competing destinations near Belgrade, i.e. Zagreb and Budapest as the direct competitors of Belgrade. Thus, it will be seen whether Belgrade as a tourism destination uses the capabilities of mobile applications as a management tool to develop the destination in the right way and following market demands.

#### **5. CHARACTERISTICS OF THE DESTINATION MOBILE APPS AVAILABLE TO TOURISTS IN BELGRADE**

When the use of tourism mobile applications as a management tool has been explored by TOB, the primary source of information was TOB's official web site, where two tourist applications were recommended to visitors, the „Belgrade Info Guide” and „Belgrade Talking” (<http://www.tob.rs/useful-informations/mobile-app/belgrade-info-guide>).

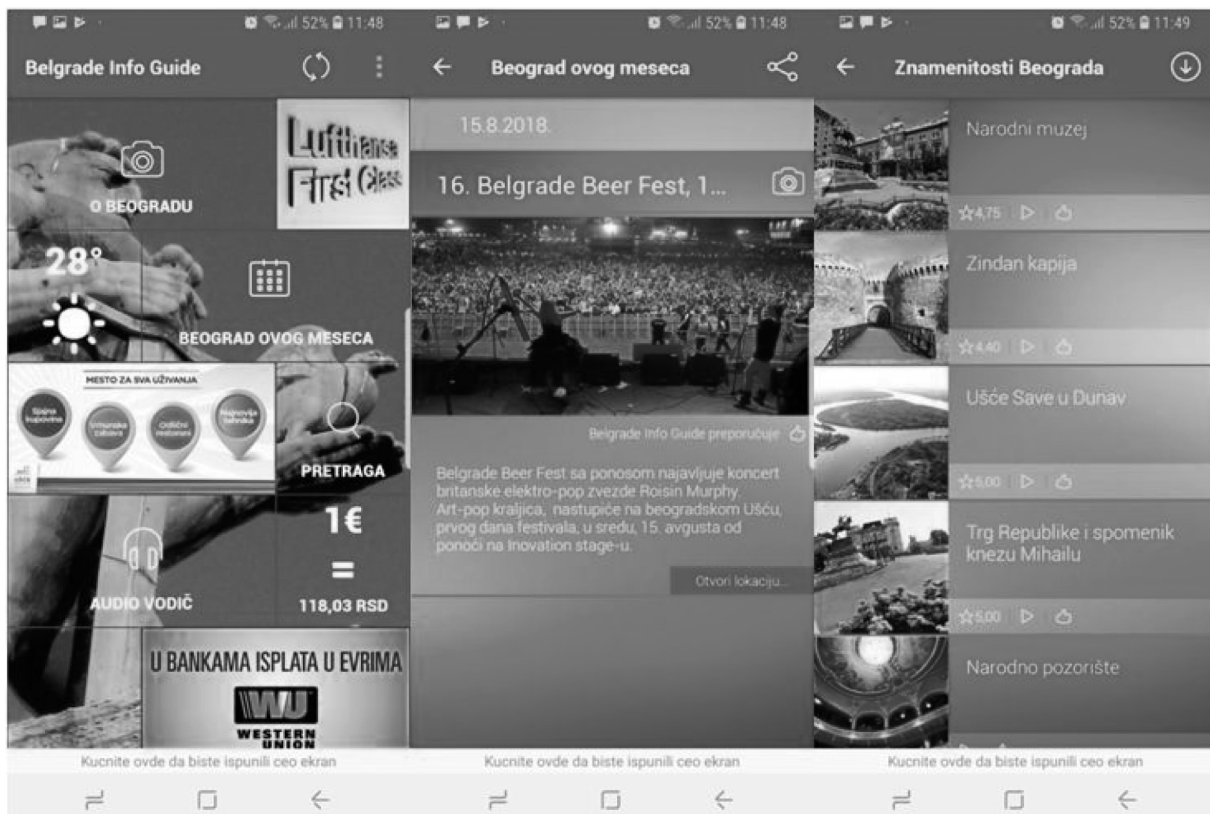
„Belgrade Info Guide” was designed in collaboration with TOB and it has been downloaded to smart devices over 10,000 times with an average user rating of 4.0. It is a digital tourist guide through Belgrade and it consists of several sections or services. It is a multilingual application that can be used in Serbian, English, Russian and Greek and it was last updated in November 2019. The layout of the application is shown in Figure 1. The application contains an offline digital map with over 1500 drawn facilities, from major tourist attractions to accommodation facilities of various types, restaurants, cafes, shopping malls, cinemas, museums, and other facilities of interest to visitors, which should facilitate making decisions on the time spent in Belgrade according to users' personal preferences and wishes, etc. All of these objects can also be accessed through the „Where to ... ” category. The good side of offline digital maps is that users can use them without having to connect to the Internet.

Besides, the application also includes:

- **Information on Belgrade** through different periods of history, up to these days;
- **Calendar of events** in Belgrade, covering events of a different character, sporting events, cultural events, etc.;



- **42 most important sights of Belgrade** which, in addition to the textual part, contain multilingual audio explanations and photographs; users can rate or comment on each of the sights, but they can also mark whether they have visited it or not;
- **The app also has an „auto mode” function** that allows the app to notify users when they are near an attraction and to tell them the most important details about that attraction;
- **There is also the section called ”My Belgrade“** which contains all the locations that the user has saved and which he can later share, comment and rate.



**Figure 1.** „Belgrade Info Guide” user interface

**Source:** Screenshots of „Belgrade Info Guide” app

Given that this application is among the leading tourist applications according to the number of downloads, it could be concluded that it is interesting and useful for tourists. More about the application, its features, and ratings can be seen in Table 2.

Another application presented on TOB’s official website is „Belgrade Talking”. Unfortunately, „Belgrade Talking” is no longer available on the Google Play Store and cannot be downloaded on smart devices. This mobile application allowed tourists to find out historical and interesting facts about some of Belgrade’s most important locations, buildings, and facilities. The application also contained AR aimed at viewing the environment via mobile phone to obtain information about the facilities located in the user’s environment and it offered two functions, „locations” and „walks”. „Locations” were individual places or attractions that the user was able to choose and then to read or hear facts and curiosities about them in audio format. „Walks” were a set of itineraries withdrawn objects on a digital map. Since it can no longer be downloaded, the information about it should be removed from TOB’s official website so that users are not misled.

**Table 2.** „Belgrade Info Guide” app characteristics, features, and users’ ratings

Type of the app	Number of downloads on Google Play Store	Main features of the app	Average rate/number of users' ratings
<ul style="list-style-type: none"> <li>Digital tourist guide</li> </ul>	<ul style="list-style-type: none"> <li>10.000 + times</li> </ul>	<ul style="list-style-type: none"> <li>Available in 4 languages</li> <li>Offline map with over 1.500 marked locations,</li> <li>"Where to ...?" categories with over 1.000 locations</li> <li>Information about Belgrade, its history, present, and future</li> <li>Events calendar</li> <li>42 Belgrade landmarks with the multi-language audio guide</li> <li>Audio guide with auto mode function enables the app to notify you that you are close to some attraction</li> <li>"My Belgrade" with favourite locations</li> </ul>	<ul style="list-style-type: none"> <li>4,0/157</li> </ul>

**Source:** <https://play.google.com/store/apps/details?id=rs.bginfofox.belgrade.android&hl=en>

## 6. DESTINATION MOBILE APPS IN COMPARISON: BELGRADE VS ZAGREB VS BUDAPEST

An analysis of Zagreb and Budapest’s implementation of mobile applications in managing the development of the two destinations was also carried out in order to get a clearer picture of the position of Belgrade because they represent direct competitors to our town. The sources of information are the official web presentations of DMO Zagreb and Budapest.

An analysis of the official website of the Zagreb Tourist Board, which is Zagreb DMO, revealed that two mobile applications intended for visitors to Zagreb were singled out. The first application is „Zagreb Be There” and the second is „VoiceGuide Zagreb”. „Zagreb Be There” is the Zagreb Tourist Board’s destination mobile application and it allows users to get to know Zagreb and some of its less-visited parts, locations, and monuments by choosing routes, locations, and events. Also, visitors can make their lists of favourite sites in the „wishlist” section. „VoiceGuide Zagreb” app is currently unavailable and cannot be downloaded to smart devices. Otherwise, this application is intended as an audio guide through Zagreb which automatically releases audio information about the attraction when we arrive near it. Besides these two applications, 14 other applications were presented on the official website of Zagreb DMO, which should provide tourists with information about restaurants, purchase of public transportation tickets, taxi services, and ordering rides, etc. These applications are not under the direct control of Zagreb DMO but may be useful to visitors to this destination (<https://www.infozagreb.hr/explore-zagreb/apps>).

As regards Budapest, on the official website presentation of the Budapest Festival and Tourism Centre as Budapest DMO there is information on two applications. The first app is the BUM app designed by the Budapest Chamber of Commerce and Industry (BCCI) (<https://bevasarloutca.hu/en/about-us>). BCCI has made this application in order to revitalize once-famous Budapest shopping streets where economic activity is to be revived. Unfortunately, this application has not been long refreshed and according to information from the Budapest Festival and Tourism Centre website, currently, it does not operate (<https://www.budapestinfo.hu/search-results>). Another featured application is „Park”, designed to help people find a parking place in Budapest.

For this research, the applications „Belgrade Info Guide”, „Zagreb Be There” and „BUM”, as official destination applications of Belgrade, Zagreb, and Budapest, were compared on different bases and Table 3 presents the results.

**Table 3.** Comparison of official destination mobile apps of Belgrade, Zagreb, and Budapest

Features and characteristics of selected apps	„Belgrade Info Guide” app	„Zagreb Be There” app	„BUM” app
<b>Type of the app</b>	• Digital tourist guide	• Digital tourist guide	• Digital tourist guide
<b>Number of downloads on Google Play Store</b>	• 10.000 + times	• 10.000 + times	• 1.000 + times
<b>Main features of the app</b>	<ul style="list-style-type: none"> <li>• Available in 4 languages</li> <li>• Offline map with over 1.500 marked locations,</li> <li>• "Where to ...?" categories with over 1.000 locations</li> <li>• Information about Belgrade, its history, present, and future</li> <li>• Events calendar</li> <li>• 42 Belgrade landmarks with the multi-language audio guide</li> <li>• Auto mode function enables the app to notify you that you are close to some attraction</li> <li>• "My Belgrade" with favourite locations</li> </ul>	<ul style="list-style-type: none"> <li>• Available in English language</li> <li>• Offline map with locations sorted by categories</li> <li>• 10 available routes with short descriptions of each location inside the route</li> <li>• Gamification of the app with prizes inside each route</li> <li>• Events calendar</li> <li>• "Wishlist" with favourite locations</li> <li>• Connected to social media (Twitter and Facebook)</li> </ul>	<ul style="list-style-type: none"> <li>• Available in Hungarian language</li> <li>• Offline map with locations sorted by shopping streets and types of businesses</li> <li>• Short description of streets and businesses</li> <li>• Possibility of users rating of each location/business</li> </ul>
<b>Last app update</b>	• November 2019	• October 2019	• October 2017
<b>Average rate/number of users' ratings</b>	• 4,0/157	• 3,6/167	• 2,3/7

**Source:** <https://play.google.com/store/apps/details?id=rs.bginfofox.belgrade.android&hl=en>, <https://play.google.com/store/apps/details?id=co.infinum.zagrebbethere>, <https://play.google.com/store/apps/details?id=hu.bum&hl=en>

All three destinations have one official application, with Zagreb leading by the number of applications for tourists on the Zagreb Tourist Board website. Compared data show that all three applications are from the category of digital tourist guide and that the applications „Belgrade Info Guide” and „Zagreb Be There” have a similar number of downloads with approximately similar users' rating, with a slightly better rating of „Belgrade Info Guide” application. The functions of these two applications are similar and they enable visitors to use offline digital maps, which is important for tourists because they do not have the opportunity to constantly access the Internet. Also, these two applications are regularly updated. „Zagreb Be There” is also gamified because it offers tourists some rewards if they visit most locations within each route. On the other hand, the „BUM” application is not updated regularly, it cannot be downloaded to smart devices at the moment and has a limited number of functions. All this contributed to the dissatisfaction of users who rated this app with only 2.3 out of a possible 5, proclaiming this to be the worst of the three apps in the observed destinations.

## 7. FUTURE RESEARCH DIRECTIONS

Prior research on the use of mobile applications conducted by DMOs to develop a destination tourism product and to manage tourists within a destination is important because it shows us how ready destinations are to use modern marketing tools in their day-to-day business. Mobile applications require serious access, regular monitoring of changes in the field, and updating information in the application following the changes. An example of a „BUM” application and poor users’ experience due to non-updating data and limited application functions have resulted in extremely low app ratings and low downloads on smart devices.

In the future, it will be interesting to monitor the direction in which mobile applications will develop and whether DMOs will make greater use of the opportunity to integrate modern hardware and software solutions so that they create more comprehensive mobile applications intended for tourists in destinations. It is expected that the functions, interfaces, use of AR, and currently non-existent solutions, which will bring the development of modern ICTs over time, will improve and provide tourists with a completely new experience of tourist destinations. It will also be interesting to monitor the use of mobile applications in the tourist destinations involved in this research, namely in Belgrade, Zagreb, and Budapest.

## 8. CONCLUSION

With the environment digitalization including tourist destinations, and with the appearance of IoT and tourists’ switch to mobile smart devices, there have also been tremendous changes in the management of tourist destinations. Mobile applications are now regarded as an indispensable part of the overall tourism offer of a destination and should be viewed in this light. It can be said that tourist mobile applications have their positive and negative sides when it comes to the tourist experience. Positive sides manifest tourists’ ability to plan their stay in a destination implementing pre-offered tour itineraries and sharing their impressions, ratings, photos, etc., with other users, approaching the most interesting locations and attractions through text, video, and audio content. By facilitating tourists to feel comfortable within a destination, the use of AR enables tourists to obtain timely and location-relevant information, which positively affects their experience of the destination. Discovering once „hidden” parts of the destination, tourists will have a new experience that affects overall satisfaction with the destination. The disadvantages of tourist applications are a small number of languages in which they can be used; destinations generally have no control over the content and information provided by applications; they cannot directly affect the accuracy of applications; the number of locations covered by mobile applications is limited; applications need to be constantly updated to avoid their obsolescence; although most applications have offline modes, their full value for tourists is only visible in the online function when it is possible to download information from different databases and to net an application with social networks through the function of sharing content and activities.

Belgrade as a tourist destination has relatively early become aware of the need for developing tourist applications in order to manage the destination and to improve overall tourist experiences during their stay. It is difficult to say to what extent these destination applications affect tourist experiences because the small number of users’ reviews with just a few comments is not enough to get a more comprehensive picture. As there is no possibility to contact the users who have downloaded the application, direct analysis of their impact on the destination perception



cannot be done. This can only be done indirectly through an analysis of rating and the number of downloads. However, comparing Belgrade to Zagreb and Budapest as direct competitors, it can be said that Belgrade, namely TOB, follows current trends in the use of mobile applications as a tool for destination product development. Yet, in many parameters, such as the number and variety of functions, the number of downloads, users' ratings, and updates, TOB is ahead of its observed competitors, especially of Budapest.

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# THE USE OF GEOLOCATION FOR COMPETITION ANALYSIS OF DESTINATIONS: APPLICATION TO THE HOTEL SUPPLY IN BARCELONA

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**Abstract:** *Geolocalization and the use of geographic information systems (GIS) have become fundamental tools in many disciplines because they can link databases and view the geographic information provided by these databases. Within the hotel context, geolocation and GIS can be used as tools that from a management perspective facilitate the evaluation of the competitive level existing in a tourist destination and from a consumer point of view facilitate their choice. This chapter tries to show the usefulness of geolocation through its application in the evaluation of the hotel supply in Barcelona (Spain).*

**Keywords:** *Tourist destination, Geolocation, Geographic Information Systems, Competition, Location.*

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## 1. INTRODUCTION

Nowadays, technological advances are increasing the generation of geolocated information with new sources of information such as a smartphone or social networks, that provide new opportunities (Kitchin, 2013). In this context, the use of geolocation and Geographic Information Systems (GIS) are relevant tools to explore intensely the abundant information currently available in the “Big Data” era both from the perspective of researcher, professional or individual daily routine of people (Sui & Goodchild, 2011). GIS can be conceived as an effective tool to link databases and geographic information, which allows an improvement in the analysis and visualization of features of data by location maps. The visualization of data through maps when we have multi-source databases in a complex process is one of the reasons for the success of the GIS (Roig-Tierno et al., 2013). Thus, the use of GIS allows users to spatially analyze phenomena of interest for researchers in many areas, and it has been used usually in science areas such as soil science, (Zhu et al., 2001), climatology (Bradley, 2002), or hidrology (Frankenberger, 1999) but less common in social science (Teixeira, 2018).

Recently, advances in the development of GIS have allowed companies and organizations to use it increasingly (Roig-Tierno et al., 2013) and its extension to fields where researchers have little prior knowledge of GIS (Teixeira, 2018). From a management perspective, the use of GIS help managers in the complex decision process, like location decision of firms. In addition, due to the increasing use of the Internet, GIS analysis is increasingly sophisticated, since we have tools that integrate GIS with the Internet, making GIS analysis very convenient for decision-making (Yang et al., 2014). Thus, the use of GIS makes possible a better understanding of geographical information and it is one of the reasons for its success (Ozimec et al., 2010).

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From a theoretical perspective, the incorporation of GIS in social science research areas has promoted that spatial variables have an increasingly relevant role as descriptive and explanatory variables (Roig-Tierno et al., 2013).

The use of GIS in marketing research has also promoted the development of new fields such as geomarketing, which seek to satisfy consumer needs and increase the profitability of companies through the use of GIS (Baviera-Puig et al., 2016; Hess et al., 2004) or the geocompetition by mapping and locating a company's competitors (Roig-Tierno et al., 2013). Thus, GIS has become a relevant tool to achieve a competitive advantage and achieve greater efficiency in marketing campaigns (Guarda et al., 2019).

One of the fields that generates more geolocated information and that can benefit the most from the use of GIS is tourism (García-Palomares et al., 2015). Thus, in tourism research, GIS has been employed in tourism development analysis (Jin et al., 2019), identification of tourist hot spots (García-Palomares et al., 2015), or assessment of tourism destination (González-Ramiro et al., 2016) and it can be a powerful tool to manage and promote tourism destinations (Mango et al., 2020). In the tourism context, the hospitality sector also has explored the use of Geomarketing and GIS (Dušek et al., 2019; Feng & Morrison, 2002) and the hospitality research has applied geolocation and GIS to analyse room price (Kim et al., 2020; Latinopoulos, 2018; Soler & Gemar, 2018; Zhang et al., 2001b); hotel agglomeration and competition (Lee, 2015; Lee & Jang, 2015; Urtasun & Gutiérrez, 2017) or hotel location (Fang et al., 2019; Fang et al., 2020; Yang et al., 2015).

The purpose of this chapter is to illustrate the use of geolocation and GIS descriptively in the hotel sector and more specifically, the use of geolocation for an analysis of the existing competition in the hotel offer in the city of Barcelona.

## **2. GEOLOCATION AND GIS IN HOSPITALITY**

In recent years, Yan et al., (2014) claimed for the incorporation of the use of geographic information system to analyze in a more complete and sophisticated way hotel industry. Hospitality scholars have increasingly attempted to incorporate the use of geolocation and GIS to address this issue and how the lodging industry could be affected by their geographic location, but analysis with spatial data requires more sophisticated techniques which account for spatial heterogeneity and spatial dependence (Nicholls & Kim, 2019). Also, hospitality researchers have had to use techniques such as Geographically Weighted Regression (GWR) or Geographically Weighted Poisson Regression (GWPR) (Fotheringham et al., 2002) because the global models (conventional multivariate regressions) can hide the local relationship between the dependent and explanatory variables (Nicholls & Kim, 2019). These advanced regressions techniques can be managed by programming with software such as R or GWR 4 Software or by advanced statistical packages such as ArcGIS.

One stream of research has investigated hotel location with GIS (Fang et al., 2019; Fang et al., 2020; Yang et al., 2015). For new hotels, geolocation is a useful tool to support location decisions, a crucial decision (Yang et al., 2012) because it is almost impossible to relocate a hotel after it has opened (Fang et al., 2019). With the right location decision, a hotel can enjoy higher occupancy (Luo & Yang, 2016), it can attract more customers (Yang et al., 2012) because hotel location can significantly impact hotel choice (Chu & Choi, 2000) and it can raise profitability



(Luo & Yang, 2016). Recently, hospitality research has analyzed hotel location decisions through geolocation and GIS to apply modelization methods to account for spatial heterogeneity and spatial autocorrelation. Fang et al. (2019) and Fang et al. (2020) incorporated GIS in the analysis of hotel location choice and they concluded that the factors which impact hotel location change across regions. Additionally, Fang et al. (2019) concluded that global model estimation may not capture efficiently the hotel location choice.

On the other hand, through geolocation and GIS, hospitality research has evaluated price determinants (Kim et al., 2020; Latinopoulos, 2018; Soler & Gemar, 2018; Zhang et al., 2011b). For hotel room prices in Beijing, Zhang et al., (2011b) used GWR to obtain a hedonic price model, finding a significant spatial variation within all the independent variables. Similarly, Latinopoulos (2018) analyzed the effect of a sea view on hotel prices in Halkidiki, Greece, and found that its effect varies across areas. Both Soler & Gemar (2018) with a sample of hotels in Malaga (Spain) and Kim et al. (2020) with a sample of hotels in Chicago found that the relationships between room price and hotel attributes and location attributes are spatially varying.

Additionally, spatial with geolocation and GIS hospitality research has investigated price competition and differentiation strategy (Lee, 2015), and agglomerations effect on hotel performance (Lee & Jang, 2015; Urtasun & Gutiérrez, 2017).

The purpose of this chapter is to show in a managerial way how the use of geolocation and GIS allows analysing the competitive intensity of the hotel sector in a destination.

### **3. AGGLOMERATION AND COMPETITION IN THE HOTEL INDUSTRY**

On the one hand, from the Industrial Organization approach, the theoretical argumentation (Shaked & Sutton, 1982) establishes a price decrease when there is an increase in the degree of local competition with empirical evidence that supports this negative effect of competition on price within the hotel sector (Abrate et al., 2012; Balaguer & Pernias, 2013; Becerra et al., 2013), so that the greater the number of hotels the greater is the decrease in the average price of the room.

On the other hand, in contrast to the theory from the Industrial Organization approach, a positive relationship between the set of selected tourist activities available in an area and their economic result are proposed by the Central Place Theory (CPT) (King, 1984; Daniels, 2007) as hotels tend to be located next to each other to improve supply and efficiency and to be able to survive (Yang et al., 2012). Additionally, the Agglomeration Theory (McCann & Folta, 2008) postulates that benefits can be obtained from hotel agglomeration, such as exogenous factors (other companies that attract tourists), reduction of the cost of consumer search leading to increased demand (Baum & Haveman, 1997), or the creation of endogenous externalities. Based on these theories, a positive relationship between hotel benefits and agglomeration is postulated, which has been empirically supported within the hotel sector (Chung & Kalnins, 2001; Lee & Jang 2015; Silva, 2016).

However, the differentiation strategy can be affected by the hotel agglomeration. On the one hand, differentiation can reduce the risk of failure of hotels (Baum & Mezas, 1992) and allows to reduce the possible negative effects associated with greater competition. Thus, lodging literature has promoted differentiated hotel agglomerations. On the other hand, hotels with great-

er differentiation may be the most affected by agglomeration externalities (Chung & Kalnins, 2001) since hotels less differentiation can capture most of the benefits of agglomeration, and depending on market demand, there is the possibility of benefits in undifferentiated agglomerations (Lee & Jang, 2015), so differentiation may not be an adequate strategy. In addition, the Strategic Equilibrium Theory (Deephouse, 1999) propounds the dilemma between conformity or differentiation from competitors and postulates that the degree of differentiation of hotels is established based on competition (Kim et al., 2020).

#### 4. APPLICATION OF GEOLOCATION IN THE SPATIAL COMPETITION ANALYSIS: BARCELONA HOTELS

Next, we are going to use geolocation to analyze the competitive intensity of a database that includes a sample of hotels in the city of Barcelona (one of the most important tourist cities in Europe) in 2017 when it was ranked the sixth place in the *Top 15 European Cities – Total Bed-nights 2017* with 18,791,180 overnight stays (European Cities Marketing, 2018).

The sample of hotels was obtained with the combination of web analysis techniques together with an information system from an international tourism intermediary (Paulizt & Napierala, 2017). Regarding the web analysis techniques, an online monitoring system was developed to crawl data directly from web pages of lodging establishments. This monitoring system was based on tools for tracking and data extraction from the Internet. Specifically, for this study the R software (Team R Core, 2020) was used through the “Rcrawler” package (Khalil, 2018; Khalil & Fakir, 2017) for the development of the monitoring system. As a result, a sample with 217 hotels located in Barcelona was obtained and we can obtain the following information for each hotel in the sample:

- **Hotel name.**
- **Hotel Age.** number of years in operation for each hotel.
- **Number of rooms.** size of each hotel measure as total number of rooms.
- **Category.** Star rating of the hotel measured from one to five stars and officially assigned by the autonomous Government of Catalonia.
- **Room Price.** For each hotel, we obtained the yearly average room rate in euros for a standard double room during the year 2017. For a deeper analysis of competitor prices, we consider the standard double room because is the usual price employed in the hospitality research ( Sánchez-Perez et al., 2019) and the average room rate because room price may suffer variations caused by distribution channel, season, or the occurrence of commercial events. However, the average is more reliable since it is free of these price variations (Lee, 2015).
- **Available services.** For each hotel, we collect information about availability of several services, including hotel-style, food services, payment methods and sports activities (Yang et al., 2016; Latinopoulos, 2018; Soler et al., 2019). With this information, we consider a  $V_i$  vector based on dummy variables related to each of the services considered.
- **GPS coordinates.** To geolocate the hotels in the sample, we crawl the GPS coordinates for all of them. Thus, we collect the **Longitude** and **Latitude** for each hotel.

Secondly, from the information provide by an international tourism wholesaler, we add the following information for each hotel in the sample:

**Table 1.** Sample descriptive statistics for hotels in Barcelona

	Mean	St. dev.	Min	1 <sup>st</sup> Quart	Median	3 <sup>rd</sup> Quart	Max
Age	2002.728	11.032	1865	2001	2004	2007	2016
Number of rooms	102.507	87.787	5	52	79	113	500
Consumer average score	7.061	2.157	0	7	7.8	8.1	9.4
Room price	93.603	107.604	34.34	55.61	71.92	96.40	1224.16
Horizontal differentiation	0.224	0.285	0	0	0	0.5	1
Barcelona areas	%	Barcelona areas	%				
Airport Zone	0.461	La Rabassada	0.461				
Barrio Gotico	7.373	Las Ramblas	9.677				
Camp Nou	1.843	Parallel	2.304				
Ciudadella/Villa Olímpica	2.765	Paseo de Gracia	7.373				
Ciutat Vella/ El Raval	1.382	Paseo Marítimo/Playa	1.843				
Diagonal Mar	2.765	Plaza Catalunya	7.373				
Eixample	25.806	Poblenou	1.843				
El Born	3.687	Puerto de Barcelona	0.461				
El Guinardo	0.461	Sagrada Familia	2.304				
Gracia	1.843	Sants-Montjuic	6.912				
La Diagonal	5.991	Sarria-Sant Gervasi	4.147				
La Maquinista	0.461	Vall D'Hebron	0.461				
Category	%						
1 star	0.922						
2 stars	10.599						
3 stars	32.719						
4 stars	47.465						
5 stars	8.295						

**Source:** Own elaboration

- **Area.** This is the commercial zone for each hotel. We consider the 24 commercial areas traditionally defined in Barcelona by the intermediaries as geographical competition areas because is a common practice for a better analysis of the hotel competition (Balaguer & Pernias, 2013) and hotel location choice (Yang et al., 2012).
- **Consumers Average Score.** The yearly average valuation made by the customers of each hotel in 2017. This rating made by the customers and published on the web portal is a numerical valuation ranging from zero (the worst evaluation) to ten (the best evaluation). Similar approaches were considered in the hospitality research to measure reputation information about hotels (Yang et al., 2016; Zhang et al., 2011a).

Finally, from the information of available services for each hotel included in the vector  $V_i$  and from the information of commercial zones, we consider an index of horizontal differentiation:

- **Hotel Differentiation.** To measure the degree of services differentiation for each hotel  $i$  respect to the hotel located in the same commercial zone  $Z_i$ , we consider the following index (Chisholm et al., 2010; Sánchez-Pérez et al., 2020):

$$(\text{Hotel Differentiation}) = \min_{j \in Z_i} \left( \cos^{-1} \frac{V_i \cdot V_j}{\|V_i\| \cdot \|V_j\|} \right) / \left( \frac{\pi}{2} \right) \quad (1)$$

It takes values between 0 (the minimum differentiation) and 1 (the maximum differentiation).

Table 1 shows the sample descriptive statistics obtained with all hotels in the sample. Now, for a better understanding of the extensive information contained in the database, we will make use of geolocation and mapping. With the GPS coordinates obtained in the previous stage and

with the R package „sf” (Pebesma, 2018) a geographic database can be obtained with all the variables previously described. For the visualization of the information through maps, the R “mapview” package was used (Appelhans et al., 2019). The package “mapview” employs OpenStreetMap® to map the geographic information. Thus, we can visually analyze the hotel supply of the establishments included in the sample of hotels located in the city of Barcelona. First, we show the computer code to load the packages in R and access our sample of hotels:

```
>library(sf) #To load the package sf
>library(mapview) #To load the package mapview
#To load the database with the sample of hotels in Barcelona#
>Barcelona<-read.table(„Hotel _ Barcelona.csv”,header=T,sep==”|”,dec=’,’)

```

The object `Barcelona` is a `data.frame` object in R which includes two variables `Longitude` and `Latitude` with the GPS coordinates of each hotel. Next, with the function `st_as_sf` from “sf” package, we obtain a geolocated data frame:

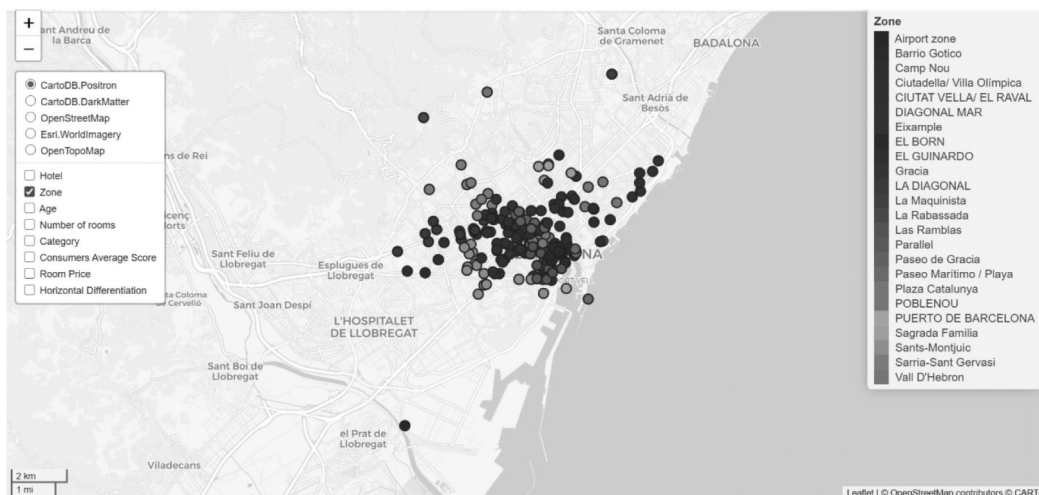
```
>Barcelona.sf<-st_as_sf(
Barcelona,coords=c(„Longitude”,„Latitude”),crs=4326)
#Argument coords=the colums of the database with the GPS
coordinates
#Argument crs=coordinate reference system

```

Through geolocation, we can visualize all the characteristics included in the database by mapping the sample of hotels. Figure 1 shows an interactive map with the distribution of hotels in the sample by commercial areas defined in Barcelona. The map, which contains all the variables in the database, is obtained with the function `mapview` from “mapview” package:

```
>mapview(Barcelona, burst=TRUE, homebutton=FALSE,alpha.region=1)

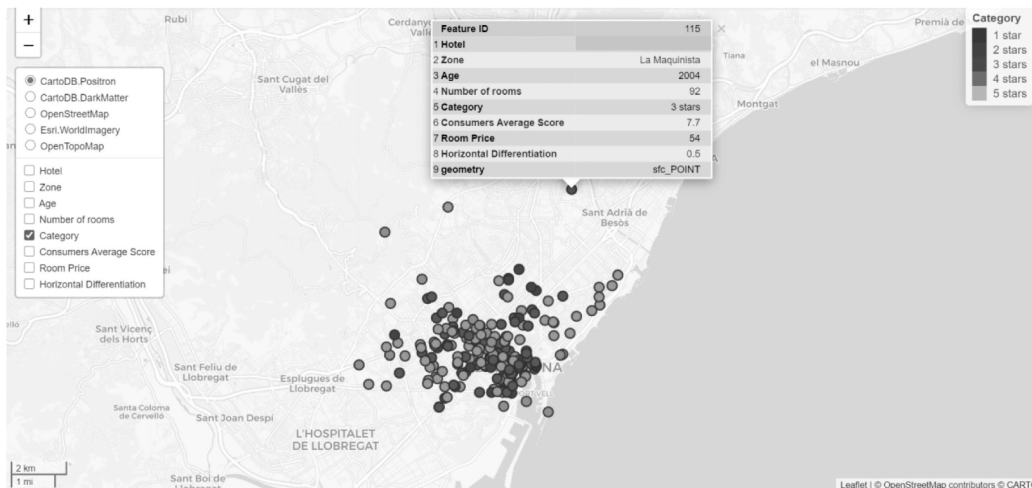
```



**Figure 1.** Hotel sample geolocation by commercial zone

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

With the left menu, we can mapping all variables includes in the database. Figure 2 map the hotels included in the sample by hotel category. Each hotel point in the map can show the features included in the dataset. This is very useful to hotel managers because they can better visualize the characteristics of hotels around their hotels and they can better take over the degree of competition intensity in the room price, online reputation, or service differentiation.



**Figure 2.** Hotel sample geolocation by hotel category

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

**Table 2.** Sample descriptive statistics for hotels in Las Ramblas

	Mean	St. dev.	Min	1 <sup>st</sup> Quart	Median	3 <sup>rd</sup> Quart	Max
Age	1997	30.930	1865	2002	2005	2007	2013
Number of rooms	98.71	67.209	14	45	83	131	255
Consumer average score	6.833	2.464	0	6.2	7.7	8.2	9
Room price	83.5	41.942	47.62	57.94	68.95	86.18	224.07
Horizontal Differentiation	0.178	0.269	0	0	0	0.392	0.732
Category	%						
1 star	0						
2 stars	14.286						
3 stars	42.857						
4 stars	33.333						
5 stars	9.524						

**Source:** Own elaboration

To illustrate how geolocation can help hotel managers to carry out competitive analysis, we consider a hotel manager whose hotel is located in the commercial area ‘Las Ramblas’. The descriptive statistics for all hotels in this commercial zone are showed in Table 2. With R, we can obtain a data.frame with only the hotels located in the area ‘Las Ramblas’:

```
>Las _ Ramblas<-Barcelona[Zone%in%c(,Las Ramblas'),]
```

Additionally, Figure 3 shows the spatial distribution by hotel category and hotel differentiation in services in this zone:

```
>mapview(Las _ Ramblas,zcol='Category',alpha.region=1) #Figure 3a
>mapview(Las _ Ramblas,zcol='Hotel Differentiation',alpha.
region=1)#Figure 3b
```

The hotel supply in ‘Las Ramblas’ shows a preeminence of hotels between 3 and 4 stars and where there are few 2 and 5 stars hotels. Regarding hotel differentiation in services, most of the hotels located in this area offer similar services and are little differentiated horizontally.





**Figure 3.** Spatial distribution by category and hotel differentiation in area ‘Las Ramblas’.

Source: Own elaboration through the use of OpenStreetMap® and Contributors

Similarly, Figure 4 shows the spatial distribution for room price and consumer average score in ‘Las Ramblas’:

```
>mapview(Las _ Ramblas,zcol='Room Price',alpha.region=1)#Figure 4a
>mapview(Las _ Ramblas,zcol='Consumers Average Score',alpha.
region=1)#Figure 4b
```

Most hotels in this area have a room price between 50 and 80 euros, with just few hotels exceeding 100 euros, and only a hotel whose room price exceeds 200 euros. Concerning consumer score, this commercial area has a high online reputation, since the hotels located in it are highly valued by consumers except for a few hotels whose valuation is much lower than the rest of the hotels in the area and their managers must analyze the reasons why they are less valued than their direct competition.

In summary, ‘Las Ramblas’ area stands out for its offer of hotels between 3 and 4 stars where a few hotels have mainly differentiated their offer of services. It is an area well valued by previous consumers and the average room price is mostly between 50 and 80 euros per night.



**Figure 4.** Spatial distribution by room price and consumer score in ‘Las Ramblas’

Source: Own elaboration through the use of OpenStreetMap® and Contributors

**Table 3.** Sample descriptive statistics for hotels in ‘Barrio Gótico’ and ‘Paseo de Gracia’

Barrio Gótico							
	Mean	St. dev.	Min	1 <sup>st</sup> Quart	Median	3 <sup>rd</sup> Quart	Max
Age	2001	8.065	1981	1995	2003	2006	2013
Number of rooms	70.12	52.321	9	37.75	60.50	78.50	197
Consumer average score	6.269	1.927	0	5.925	6.450	7.575	8
Room price	136.84	229.508	43.36	54.26	62.93	97.64	983.12
Horizontal Differentiation	0.147	0.267	0	0	0	0.125	0.732
Paseo de Gracia							
	Mean	St. dev.	Min	1 <sup>st</sup> Quart	Median	3 <sup>rd</sup> Quart	Max
Age	2005		1997	2003	2007	2008	2010
Number of rooms	103.9		28	65	91	127.8	235
Consumer average score	6.85		0	7.25	7.9	8.125	8.7
Room price	132.96		73.58	103.16	114.62	143.29	277.49
Horizontal Differentiation	0.327		0	0	0.399	0.529	0.654
Barrio Gótico				Paseo de Gracia			
Category	%		Category	%			
1 star	0		1 star	0			
2 stars	6.25		2 stars	0			
3 stars	50		3 stars	6.25			
4 stars	37.5		4 stars	68.75			
5 stars	6.25		5 stars	25			

**Source:** Own elaboration

To illustrate how geolocation can help hotel firms in location decisions, we suppose that a company wants to open a new hotel in Barcelona and has considered for its location the area called ‘Barrio Gótico’ and the area called ‘Paseo de Gracia’. The data.frame in R with two areas is obtained as follows:

```
>Loc_Decisions<-Barcelona[Zone%in%c(,Barrio Gotico', 'Paseo de Gracia'),]
```

Table 3 describes the main measures for both commercial areas of the characteristics included in the analysis. Similar to the previous examples, R can show the spatial distribution for two areas (Figure 5).



**Figure 5.** Spatial distribution for ‘Paseo de Gracia’ and ‘Barrio Gótico’ areas

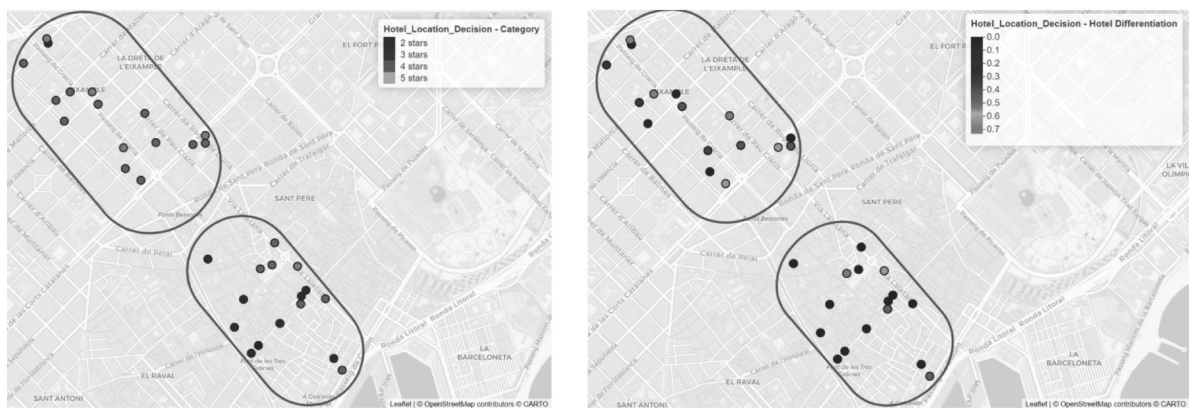
**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

Through geolocation and mapping, we can analyze the characteristics of both areas and based on the results make a more accurate decision. Both areas have a similar number of hotel establishments and if we analyze the supply by the number of rooms available (Figure 6), we can show the number of rooms available in each of the establishments in both areas. We can see that, even though there is the same number of establishments, the bed supply available in each of them is generally greater in ‘Paseo de Gracia’ area than in ‘Barrio Gótico’ area. Similarly, hotels in the first zone are newer than hotels in the second zone.



**Figure 6.** Spatial distribution by size and age in ‘Paseo de Gracia’ and ‘Barrio Gótico’ areas

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors



**Figure 7.** Spatial distribution by category and hotel differentiation in ‘Paseo de Gracia’ and ‘Barrio Gótico’ areas.

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

Figure 7 depicts the spatial distribution of hotel category and hotel differentiation in services in both zones. Most hotels in ‘Paseo de Gracia’ are hotels with 4 and 5 stars whereas hotels in ‘Barrio Gótico’ show a preeminence for a hotel with 3 and 4 stars, and just a few hotels of 2 and 5 stars. Thus, in the case of ‘Paseo de Gracia’ area, there is a hotel supply more vertical differentiated (Becerra et al., 2013; Makadok & Ross, 2013; Silva, 2015) than ‘Barrio Gótico’ area. Regarding hotel differentiation in services, hotels located in Barrio Gótico offer similar services with some exceptions, whereas in ‘Paseo de Gracia’, services offered are wider and with more different services.





**Figure 8.** Spatial distribution by room price and hotel differentiation in ‘Paseo de Gracia’ and ‘Barrio Gótico’ areas.

**Source:** Own elaboration through the use of OpenStreetMap® and Contributors

Concerning room price, as a key competitive variable (Figure 8), ‘Paseo de Gracia’ area shows a greater number of establishments with prices between 100 and 150 euros per night, with two hotels with an average price between 150 and 200 euros and a single hotel with a price above 200 euros. Most hotels in ‘Barrio Gótico’ show a price between 50 and 100 euros and some of them with prices lower than 50 euros. Only one hotel sets prices above 200 euros and as an exception a hotel sets prices above 500 euros. Regarding the users’ review, most of the hotels in ‘Paseo de Gracia’ area show a high reputation, close to 8 points (out 10) and some hotels show average scores around 6. Two hotels show very low evaluations. On the other hand, in the ‘Barrio Gótico’ area, hotels are usually valued at around 6 points, while there are some establishments whose valuation is close to 8 and only one hotel has a low score.

After this analysis, we can conclude that ‘Paseo de Gracia’ area has a supply of newer hotels and a higher number of available beds than the supply of ‘Barrio Gótico’. The ‘Paseo de Gracia’ area has also hotels that are more vertically and horizontally differentiated than hotels in ‘Barrio Gótico’. However, the online reputation among consumers in both areas is very similar and is only slightly higher in ‘Paseo de Gracia’. Finally, the room price in ‘Paseo de Gracia’ is usually between 100 and 150 euros while in ‘Barrio Gótico’ the price is usually between 50 and 100 euros. With the information, the company can make a better decision about the location of a new hotel in Barcelona, and provides more accurate details about the hotel.

## 5. FUTURE RESEARCH DIRECTIONS

From a methodological point of view, the use of geolocation and GIS could promote the use of modelization techniques that can account for spatial heterogeneity and spatial autocorrelation. These modelization techniques can bring an alternative analysis of competition in the lodging industry more accurate than traditional techniques (Nicholls, 2019).

The geographic information found on the Internet can be crawled with a dynamic monitoring system dynamic that allows to constantly update the information of each establishment and consequently allows to monitor the degree of competition in a destination.

## 6. CONCLUSION

This chapter tries to illustrate the use of geolocation within the hotel context and specifically how through the use of geolocation and GIS the degree of hotel competitive intensity in a tourist destination can be evaluated. The incorporation of geolocation in the analysis of hotel competition provides more complete and accurate information on each of the areas or zones within the same tourist destination and allows a better evaluation of the competitiveness between these areas, in line with the interest in evaluating the competitiveness that exists within the current tourism context (World Economic Forum, 2019). Finally, the incorporation of geolocation is also relevant for improving the consumer's hotel choice process.

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# FUZZY LOGIC AND ARTIFICIAL INTELLIGENCE TOOLS IN THE CONTEXT OF TOURISM ANALYSIS

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**Abstract:** *Qualitative and quantitative approaches to multicriteria evaluation and managerial decision-making often ignore the specifics of the role of the human factor. This article summarizes management methods that reflect not only numerical inputs but also data of a qualitative nature while considering their applicability in the tourism sector. Some of them can be assorted within the classes of Artificial intelligence. The focus is on the fuzzy approach at the theoretical and application level. The fuzzy approach is used to evaluate the degree of country travel and tourism competitiveness of selected European and Asian countries based on subjective rankings from the viewpoint of travelling persons. The results indicate that among countries under review, China is ranked as a highly competitive country in travel & tourism. Conditional competitive countries in terms of travel & tourism are the Czech Republic, Pakistan, Russia, and Turkey.*

**Keywords:** *Decision making, Artificial neural networks, Six sigma, Forecasting, Fuzzy approach.*

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## 1. INTRODUCTION

Standard mathematical approaches to multicriteria evaluation and managerial decision-making largely based on it more or less ignore the specifics of the human factor role in evaluation and decision-making activities in terms of individual knowledge, skills, and experience of decision-makers. These standard approaches make managers not deviate from the framework of a deep-rooted tradition of scientific thinking, which identifies understanding a phenomenon with the ability to quantitatively analyse it as if it was a mechanistic system subjected to algebraic, differential or integral equations. In this context, see e.g. the study by Jovanović (1999), who deals with investment decision-making in conditions of uncertainty and risk using standard methods like Break-even Analysis, Sensitivity Analysis, Theory of Games, and Decision Making Theory, or Schwartz & Zozaya-Gorostiza (2002), who perform investment evaluation in disruptive technologies in a conventional way. Many decision tools and techniques have been developed to assist managers in making decisions in conditions of uncertainty while reflecting human vague thinking (Coldrick et al., 2005).

Decision tools are important instruments for setting business strategies. It is the quality of the individual corporate processes, which is key for maintaining stability and competitiveness. From the historical point of view, the first tool of quality management is Statistical quality control (SQC). However, much more commonly used methods, which could be referred to as classical ones, are Total quality management, Six Sigma, and a new concept of Six Sigma – Lean Six Sigma (LSS). These methods are widely used in industries, and an important question to

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be asked is to what extent these methods are applicable in the tertiary sector, e.g. in tourism. With the development of computer technologies in the last decades, new management methods have appeared, which are based on cybernetic principles. Some of them can be assorted within the classes of Artificial intelligence (AI) that emerged as a computer science discipline in the 1950s. Many powerful tools have been developed that are useful for automatically solving systems that would otherwise require human intelligence. These tools include knowledge systems, fuzzy logic (Omrane et al., 2016), inductive learning, neural networks, genetic algorithms, case reasoning, ambient intelligence, analytical hierarchy and network process (Sevinc et al., 2018). These techniques can be used independently or in a combination; they can handle both the numerical inputs and linguistic variable. A critical point is to choose a structured approach that will help decision-makers formulate their judgments and attitudes.

In the task of expert analysis or expert management of vaguely defined systems, the vague concepts are usually presented by means of linguistic variables and their linguistic values (i.e., terms). The word “linguistic” is used here in the meaning “communicated in natural language”. Desirable relationships between combinations of terms of input linguistic variables and terms of an output linguistic variable are given by a set of rules. The fuzzy set theory and the fuzzy approach based on it serves this purpose very well.

The fuzzy approach provides space for application of the human factor (individual knowledge, skills, and experience of an expert). It is based on the assumption that key elements of human thinking are not numbers, but intuitive concepts, the contents of which can be modelled by fuzzy sets, i.e. sets with blurred edges in which the transition from the membership to “non-membership” is gradual and vague rather than sudden and sharp (Zadeh, 1999). The ubiquity of fuzziness in the processes of human thinking suggests that most of the logic behind it is the logic with continuous fuzzy truths, fuzzy connections, and fuzzy derivation rules. The ability to manipulate intuitive concepts and subsequent summarization in the sense of summarizing data is one of the most important advantages of the human mind, which is also its fundamental characteristic (Zadeh, 1973).

The fuzzy method is used to evaluate the level of country travel & tourism competitiveness based on the subjective rankings of Travel & Tourism Policy and Enabling Conditions, Natural and Cultural Resources, and Safety and Security published by Calderwood & Soshkin (2019) among selected European and Asian countries from the perception of travelling persons.

The objective of the paper is to evaluate the degree of country travel & tourism competitiveness across European and Asian countries based on the subjective rankings from the viewpoint of travelling persons using fuzzy approach.

## **2. LITERATURE REVIEW**

The following part briefly describes the basic methods and approaches to assess managerial tasks in situations of risk and uncertainty.

### **2.1. Method of Statistical quality control as an initial tool of quality management**

The first analytical management tools were simple statistical methods – the so-called Statistical quality control (SQC). The modification of probability theory for the application in business enabled the introduction of the SQC system, the system that gave rise to a complex control system,

and which enabled the regulation of costs and risks, improvement of manufacturing knowledge, and specification of the definition of quality. As such, it led to the creation of a specialized position, “Quality engineer” (Miranti, 2005). It may seem that currently, the SQC is less commonly used due to the existence of more sophisticated and modern measurement tools. According to Grigg & Walls (2007), SQC has its relevant application (in the present as well as in the future) in the whole industry, provided that the management has basic statistical thinking. Boyapati & Kantam (2012) agree with this statement, using also the analysis of graph of extreme values, which sorts the data into subsets, determines their extreme values, and further processes them using the probability theory.

## **2.2. Total Quality Management**

Another classic management tool is Total quality management (TQM). Ghassan et al. (2019) seek a correlation between introducing the control mechanism TQM and the performance of companies operating in the service sector. If TQM is focused on customers and innovations, it has the potential to improve the performance of the company. Zhang et al. (2020) note that the quantitative use of TQM in the service sector is not very frequent; however, there have been recently more and more papers dealing with this issue. Especially managers of companies operating in the service sector should pay attention to new possibilities of the application of TQM. Well-implemented TQM should influence the so-called Critical Success Factors (CSF). For example, in the hospitality sector, the first rank of soft aspects includes internal and external cooperation, which is followed by focus on customer and effective management (Jusoh et al., 2018). Benavidez-Valesco et al. (2014) connect TQM and Corporate Social Responsibility (CSR) on the example of hotel services. The synthesis of TQM and CSR is a relevant philosophy of hotel management that generates a competitive advantage. The implementation results in the increased accommodation capacity and higher performance of a hotel as a business. The growing productivity of a hotel is given by the satisfaction of its employees (Tari et al., 2017).

## **2.3. Contribution of Motorola – Six Sigma philosophy**

The aforementioned tools of quality management are mainly of historical significance, although their application, as stated above, is still suitable. The most popular tools to improve the management processes currently include Six Sigma ( $6\sigma$ ). Its popularity has grown in recent decades (Sony et al., 2020; Ninerola et al., 2019). For successful implementation of this method in a company, it is necessary to accept its individual tools and the entire methodology in the organization. Also, it should be stated that the issue of the individual acceptance of Six Sigma is addressed in a relatively low number of research papers (Mueller & Cross, 2020). Based on statistical evidence, it may be stated that the implementation of Six Sigma in a company increases the innovation activities (incremental innovation) and the overall financial performance of the company (Oprime et al., 2019). Six Sigma can be used to optimize skill-based processes, such as software development in IT industries (John & Kadadevaramath, 2020). According to Cudney et al. (2020), Six Sigma can even be used to improve teaching methods at universities; however, this is conditioned by carrying out more complex studies. There is a relatively low number of papers dealing with the implementation of Six Sigma in the sector of public services. It is particularly the level of public transport that has a significant impact on the quality of the economic and social life in towns. A high level of urban public transport indicates the status of a modern town. The application of the Six Sigma method has the potential to contribute to the quality of public services (Kuvvetli & Firuzan, 2019). Chakraborty & Tan (2012) provide the

basis for the successful application of Six Sigma in the services sector. The sample of tested entities includes also a hotel; however, the study is limited by a lower number of elements in the statistical dataset and locality (Singapore). Despite this, it can be argued that Six Sigma has the potential to influence contextual factors (e.g. type of services). In 2001, the company Starwood Hotels and Resorts was thinking about accepting the Six Sigma philosophy within the planned improvement of the quality of its services. The expected outcome was increased performance of hotels (Pearlman & Chacko, 2012).

#### **2.4. Modification of Six Sigma – Lean Six Sigma**

At the beginning of the new millennium, Lean Six Sigma (LSS) evolved from Six Sigma. The basic principle of LSS is interconnecting the lean thinking principles, i.e. the elimination of waste, and the Six Sigma method. It can be said that in practice, LSS is widely introduced to improve the processes of health care; it helps to improve the operation and quality, reduce costs, and medical errors. The condition of the successful implementation of LSS in health care is knowing the level of entity preparedness for the transformation before the very beginning of the change (Vaishnavi & Suresh, 2020). Gupta et al. (2020) bring an interesting view of the issue of leaving university early. With the help of university teachers and LSS experts, they try to find a solution to eliminate this negative phenomenon. There can also be mentioned the sector of public services, specifically the police as a security component of the state. It often has to face a limited budget. Adoption of LSS may lead to streamlining of the processes and better staff morale in reducing costs (Antony et al., 2019). Fletcher (2018) mentions the rich fund of LSS contributions aimed at the private sector. He tries to apply LSS in the public sector of services in the context of municipalities. There are also positive factors influencing the effective use of tax revenues, organizational structure, cost reduction. The adoption of LSS can thus theoretically have the potential to suppress the bureaucratic apparatus. Finally, a contribution from the service sector within the private sector. Gutierrez-Gutierrez et al. (2016) state that the combination of lean thinking and Six Sigma leads to continuous improvement of company performance. LSS as a synthesis of these methods brings significant advantages to companies operating in logistics services.

#### **2.5. Artificial Neural Networks**

Currently used management tools include artificial neural networks (ANN). They are based on biological learning patterns. Their advantage is the ability to work with large data volumes with very accurate prediction results (Vrbka & Rowland, 2019; Vochozka et al., 2019). In practice, the results of NN are applicable in all areas of life; it is even possible to predict potential development of share prices (Vochozka & Horák, 2019; Vochozka et al., 2020). As Kolkova (2020) adds, due to globalization and digitization, accurate prediction results of future variables are necessary to maintain competitiveness. The disadvantage of their application, especially of convolutional neural networks, are considerable hardware demands on the level of computational systems and longer data processing time (Jan & Verma, 2020). It can thus be stated that NN can be used without any limitation for the companies operating in the service sector. Chung & Jung (2020) predict that their proposed dynamic cluster model based on NN and in general, technologies obtaining knowledge from unstructured information will be the basic tools to support the development and management of health care. In the financial sector, specifically on the example of European open economy, the application of NN and logistic regression enables predicting bankruptcy as early as ten years before it really occurs (Altman et al., 2020). According to Horak et al. (2020), predicting bankruptcy is always a topical issue. For its predicting, they test the

NN tools and Support Vector Machine. NN can also help to identify the preferences of bank clients (Ilie et al., 2017). A suitable tool to determine the creditworthiness of loan applicants is FLANN (Functional Link Artificial Neural Network). FLANN is able to help mortgage lenders to decide whether to approve or reject the application. Chang et al. (2020) compare 113 685 reviews from the web TripAdvisor. Using the convolutional model of NN and its deep learning, they monitor the complementarity of various types of data. This outperforms simple data comparison. The resulting visualization of data can help hotel managers to determine business strategies based on analysing feedback provided by hotel service users. A similar methodology (using user reviews available on the web TripAdvisor) is used by Khorsand et al. (2020). Kim (2018) points to the importance of predicting future financial problems. It can be stated that predicting financial distress has a significant impact on deciding about loans and the profitability of hospitality companies and hotels. He thus proposes a cost-oriented set SVM-NN-DT as an effective method of early warning of financial distress of hotels and hospitality companies.

## 2.6. Fuzzy Approach in Management in Tourism

Tourism is an important part of the national economy. Based on a region of a country, tourism represents a significant source of income. An increase in tourism leads to the expansion of the supply of hotel services (Larrinaga & Vallejo, 2021). This statement can be applied globally as well; especially in the second half of the 20<sup>th</sup> century, tourism experienced a boom. Its influence is very significant in tourist destinations, which is reflected in the growth of the national GDP (Saridogan, 2020). The attempts to measure benefits of tourism qualitatively and quantitatively using classical methods do not make much sense as individual indicators (the input data) contain many inaccuracies caused by the “inner” uncertainty; therefore, the findings obtained contain uncertainty hidden in individual input indicators (Shaikh et al., 2017). This requires the application of tools that are more suitable for solving problems related to uncertainty.

The fuzzy approach has proved to be a suitable tool to measure tourism in terms of sustainable development as shown by Ziyadin et al. (2019). Here, a new approach to selecting strategic installations in the functioning of the tourism industry was applied, within which the economic-mathematical fuzzy model of management of sustainable development of tourism industry was created.

A novel approach to forecasting the success of a newly launched service in tourism by using a hybrid intelligence system called the Adaptive Neuro Fuzzy Inference System was described by Atsalakis et al. (2018). The advantage of the method lies in utilizing the combination of both the learning ability of a neural network and the reasoning ability of fuzzy logic in order to provide an improved predictive ability compared to the application of a single method. The inputs for the model were obtained from the questionnaire data that contained the variables of the new service development in tourism. The prediction accuracy of the method was evaluated by calculating performance measures. The results showed that this procedure captured uncertainty in the relationships between the input and output data to forecast the success of launching a new tourism service. Compared to other methodologies, the proposed approach proved to be the most successful.

Tourism is an energy-intensive economic sector, which is expected to play a role in reducing CO<sub>2</sub> emissions. However, low-carbon tourism in most destinations is neglected. As Zhang (2017) points out, this can be seen e.g. in the Chinese Chengguan District of Lhasa, which has ambitions to become a world tourism centre. The author created a study based on fuzzy Delphi-ANP approach to suggest which low-carbon tourism strategy should be adopted in Chengguan District

in forthcoming years. The priorities of low-carbon tourism strategies in Chengguan District were identified (economic development, environmental construction and social support). The study particularly stresses the importance of the indicators for tourism carbon intensity, low-carbon transportation, education regarding a low-carbon environment, carbon sink density, and wastewater treatment in order to call for the immediate implementation and development of low-carbon tourism.

Tian et al. (2020) developed an integrated decision-making method for the assessment of environmental impact of tourism attractions in China by using an improved method of analytic hierarchy process and the extended picture fuzzy preference method for enrichment evaluations, the so-called PROMETHEE II method. The picture fuzzy method numbers were used to describe decision-makers' preference that capture uncertain and vague information in the decision-making process. Based on the results of the improved analytic hierarchy process method and the picture fuzzy method the assessment of candidate tourism attractions was performed.

The research study by Correia et al. (2019) investigated whether certain conditions can encourage tourists to buy luxury products. The results were obtained from the fuzzy-set qualitative comparative analysis; they showed that a combination of four conditions can motivate tourists to buy products of luxury brands (fashion leadership, prestige sensitivity, emotional attachment, and social value). Based on the fuzzy-set procedure, the study demonstrated that tourists who score highly in all four conditions form nearly a perfect subcategory of luxury buyers.

## 2.7. Brief Insight into Fuzzy Set Theory

The fuzzy approach has its foundations in various versions of fuzzy logic, which were created by adapting the binary numerical characteristics of propositional operators to the interval  $\langle 0,1 \rangle$ . If  $|A| \in \{0,1\}$ , respectively  $|B| \in \{0,1\}$ , is the truth value of the statement A, respectively B, we can express the classical truth tables for negation, conjunction, disjunction and implication by numerical characteristics of these operators (Běhounek & Cintula, 2006):

$$\begin{aligned} |\neg A| &= 1 - |A|, \\ |A \wedge B| &= \min\{|A|, |B|\}, \\ |A \vee B| &= \max\{|A|, |B|\}, \\ |A \rightarrow B| &= 1 \text{ for } |A| \leq |B|, |A \rightarrow B| = 1 - (|A| - |B|), \text{ otherwise.} \end{aligned}$$

By moving from the set  $\{0,1\}$  to the interval  $\langle 0,1 \rangle$  we obtain the semantic form of Lukasiewicz's fuzzy propositional calculus, originally formulated by Lukasiewicz and Tarski (Peregrin & Svoboda, 2016), applied in the theory of fuzzy sets. The basic rule of fuzzy logic in the selection of the considered alternatives is that the highest truth-value statements are preferred.

## 2.8. Formal Description of Fuzzy Approach to Solving Managerial Problems

A detailed formal description of individual steps of the fuzzy approach within the process of linguistic decision analysis in the context of multi-criteria decision-making is presented in Herrera & Herrera-Viedma (2000). The basic procedure involves the following basic phases (see also Fig. 1):



**Phase One:** The fuzzification of the numerical vector  $x = (x_1, \dots, x_n)$  entering the relation in which the vector  $x$  selects inferential rules relevant to its multi-criteria evaluation. These are the rules  $((A_{1i}, \dots, A_{nj}), B_k) \in P$ , in which terms' formalizations  $A_{1i}, \dots, A_{nj}$  of the left side are all nonzero numbers  $\mu_{A_{1i}}(x_1), \dots, \mu_{A_{nj}}(x_n)$ .

**Phase Two:** Moving from the symbolic notation  $((A_{1i}, \dots, A_{nj}), B_k)$  of the selected inference rule to its logic notation dependent on  $x$  in the form of  $(\min\{\mu_{A_{1i}}(x_1), \dots, \mu_{A_{nj}}(x_n)\}, \mu_{B_k}) = (\mu_{A^*}(x), \mu_{B_k})$ , we obtain a number  $\mu_{A^*}(x)$  indicating not only the degree of truthfulness that the situation characterized by the vector  $x$  actually occurred, and therefore, the degree of eligibility of the rule selection  $((A_{1i}, \dots, A_{nj}), B_k)$  to its solution, but also the degree of significance of the term  $B_k$  in the multi-criteria evaluation of the vector  $x$ .  $\mu_{B_k}: Y \rightarrow \langle 0,1 \rangle$  is the standard membership function of the elements  $y \in Y$  to the fuzzy set  $B_k$ . On the other hand,  $\mu_{B_k}^*: Y \rightarrow \langle 0,1 \rangle$  in the form of  $\mu_{B_k}^*(y) = \min\{\mu_{A^*}(x), \mu_{B_k}(y)\}$  limits from above the function  $\mu_{B_k}$  by means of the number  $\mu_{A^*}(x)$ .

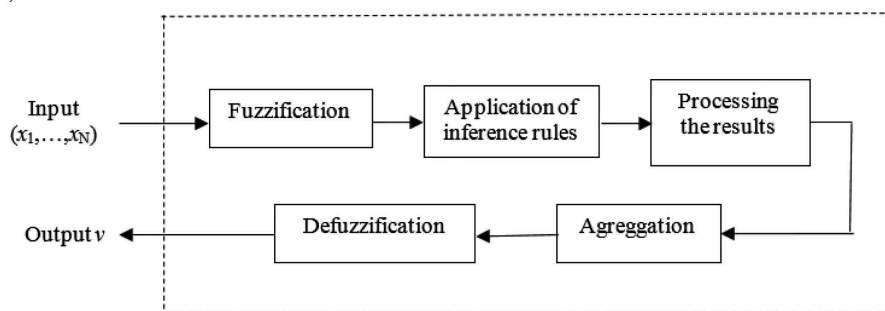
**Phase Three:** The components of the relation  $K$  will then be the elements of the set  $Px = \{B_k: \exists y: (\min\{\mu_{A^*}(x), \mu_{B_k}(y)\} > 0), ((A_{1i}, \dots, A_{nj}), B_k) \in P, y \in Y\}$ . These are the partial intermediate results by which aggregation (logical sum) we obtain the formalized term  $B_{agg} = \{(y, \mu_{agg}(y)): y \in Y\}$  on  $Y$ , for which it holds that (1)

$$\mu_{agg}(y) = \max \left\{ \min \{ \mu_{A^*}(x), \mu_{B_k}(y) \} : ((A_{1i}, \dots, A_{nj}), B_k) \in P, y \in Y \right\} \quad (1)$$

**Phase Four:** The final phase of the fuzzy approach is defuzzification, whose last step provides the output value  $y_x$  of the multicriteria model of an alternative evaluation  $(a_1, \dots, a_c) \in A$  as the mean value of the elements  $y \in B_{agg}$  weighted by the values  $\mu_{agg}(y)$  of their significance – see (2). Therefore:

$$y_x = \int y \cdot \mu_{agg}(y) dy / \int \mu_{agg}(y) dy \quad (2)$$

where  $\int$  is the symbol of a definite integral over the universe  $Y$  – more in detail in Dubois & Prade (1996).



**Figure 1.** Schematic representation of the problem solving process using fuzzy approach

#### 4. FUZZY APPROACH METHOD IN THE APPLICATION

The fuzzy procedure of a country travel and tourism competitiveness evaluation is applied from the viewpoint of travelling persons. The fuzzy approach takes into account the uncertainty of the input data contained in the indexes of ratings (Manns, 2013) and the uncertainty and complexity of vague sociological and psychological factors (Munda et al., 1995) as well as expert knowledge and experience.

#### 4.1. Problem Setting and Data

Based on the values of Travel & Tourism Policy and Enabling Conditions (P), Natural and Cultural Resources (R) and Safety and Security (S) published by Calderwood & Soshkin, (2019), as we can see in Table 1, the selected European and Asian countries can be divided into three categories (countries with high travel & tourism competitiveness, countries with conditional travel & tourism competitiveness, and countries with low travel & tourism competitiveness) based on the perception of travelling persons obtained from Executive Opinion Survey as well as quantitative data obtained from other sources. The survey data was derived from the responses in the World Economic Forum's Executive Opinion Survey and their values range from 1 (the worst) to 7 (the best).

**Table 1.** Values of indexes of Travel & Tourism Policy and Enabling Conditions, Natural and Cultural Resources and Safety and Security of selected countries in 2019

Country/Index	Travel & Tourism Policy and Enabling Conditions (P) Score / Percentage rate	Natural and Cultural Resources (R) Score / Percentage rate	Safety and Security (S) Score / Percentage rate
Czech Republic	4.7 / 67 %	2.5 / 36 %	6.1 / 87 %
China	4.3 / 61 %	6.1 / 87 %	5.6 / 80 %
Bosnia and Herzegovina	4.1 / 59 %	1.7 / 24 %	5.4 / 77 %
Russia	4.4 / 60 %	3.8 / 54 %	5.1 / 73 %
Turkey	4.5 / 64 %	3.3 / 47 %	3.4 / 49 %

Note: Rating data are at the evaluation scale 1 - 7, where 1 represents the worst and 7 the best score; for the purpose of further processing, the absolute values are converted to a percentage scale at the interval  $\langle 0, 100 \rangle$  %.

Source: Calderwood & Soshkin, 2019; own processing.

A direct relationship between the values of the indicators that are considered determinants of the level of travel and tourism competitiveness of a country has not been identified. However, vague practices exist for estimating the level of travel and tourism competitiveness from the values of these determinants. Moreover, an immediate relationship between the level of travel and tourism competitiveness and popularity of the country is also known. This enables us to solve the given task in two steps: The first step is the fuzzy estimation of travel and tourism competitiveness level; the second step utilizes the estimation results to allocate the country into a relevant category according to the destination popularity.

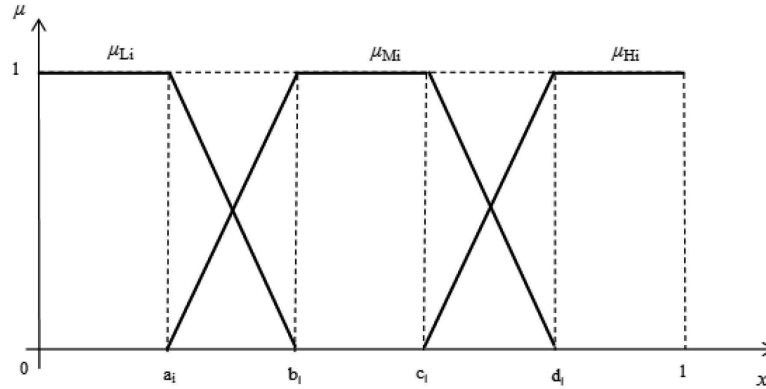
#### 4.2. Results

The task consists of the separation of elements in a selected sample of countries into classes (travel and tourism competitiveness level) identified by a trio of classifiers (rating indices – P, R, S), which is a standard task of discriminant analysis; however, both the functions of the classifiers and the classes are defined vaguely, which makes it non-standard. Therefore, the task is solved using the established fuzzy approach described in Fig. 1, which captures the individual steps within the fuzzy process. This is preceded by a phase of a fuzzy model formulation, which is specified as follows:

Three input linguistic variables  $A_i, i \in \{P, R, S\}$  with value domains  $U_{A_i} = \langle 0, 100 \rangle$  %, the identified basis values of which are the numbers presented in separate columns of Table 1. The task is to estimate the individual basic values of output linguistic variable B (travel and tourism competitiveness level) at the value domain  $U_B = \langle 0, 100 \rangle$  %. For linguistic terms  $A_{ik}$  of the variable  $A_i$ , and  $B_j$  of the variable B and for their formalized terms (fuzzy sets)  $\underline{A}_{ik}$ , and  $\underline{B}_j$  it

holds true that  $j = k, k \in \{L, M, H\}$ . For practical reasons,  $A_i, A_{ik}$ , and  $\underline{A}_{ik}$  will be replaced by  $i, k_i$ , and  $\underline{k}_i$ ,  $B$  and  $\underline{B}_j$  by  $O$  and  $\underline{k}_O$ .

The files of fuzzy sets  $\underline{k}_i = \{(x, \mu_{ki}(x)): x \in U_i\}, k \in \{L, M, H\}, I \in \{P, R, S\}$  or the file  $\underline{k}_O = \{(p, \mu_{kO}(p)): p \in U_O\}$  can be an acceptable choice, in which the designation L means a low value of linguistic variable, M a mean value and H a high value, defined by trapezoidal functions of affiliation  $\mu_{ki}(x)$ , respectively  $\mu_{kO}(p)$  drawn in Fig. 2, Fig. 3, and Fig. 4.



**Figure 2.** Courses of membership functions to terms of linguistic variable  $i$ , for  $i \in \{P, R, S\}$

The following applies:

- (Li)  $\mu_{Li}(x) = 1$  for  $0 \leq x \leq a_i$ ,  
 $\mu_{Li}(x) = (b_i - x)/(b_i - a_i)$  for  $a_i \leq x \leq b_i$ ,  
 $\mu_{Li}(x) = 0$  for  $x \geq b_i$
- (Mi)  $\mu_{Mi}(x) = (x - a_i)/(b_i - a_i)$  for  $a_i \leq x \leq b_i$ ,  
 $\mu_{Mi}(x) = 1$  for  $b_i \leq x \leq c_i$ ,  
 $\mu_{Mi}(x) = (d_i - x)/(d_i - c_i)$  for  $c_i \leq x \leq d_i$ ,  
 $\mu_{Mi}(x) = 0$  otherwise
- (Hi)  $\mu_{Hi}(x) = 0$  for  $0 \leq x \leq c_i$ ,  
 $\mu_{Hi}(x) = (x - c_i)/(d_i - c_i)$  for  $c_i \leq x \leq d_i$ ,  
 $\mu_{Hi}(x) = 1$  for  $x \geq d_i$

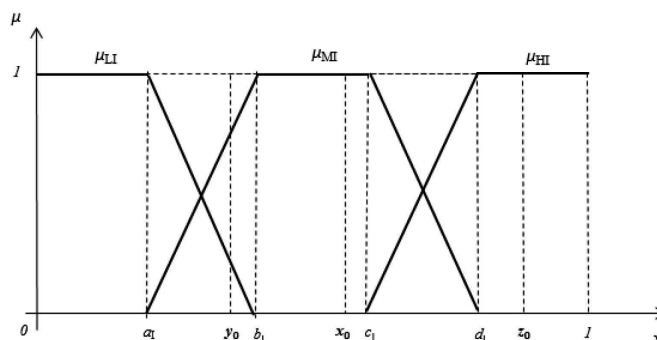
Various distributions of parameters  $a_i, b_i, c_i, d_i$  for various  $i$  on the horizontal axis in Fig. 2 represent various distributions of basic values of these variables. Table 1 shows, for example, that when  $i = P$ , none of the basic values out of these five is under the limit of  $d_i$ , whereas when  $i = S$ , three values are under this limit. For this reason,  $a_P < a_S$  should apply. Especially for  $O$ , where the distribution is not known and where there is no reason for assuming asymmetry,  $a_O = 20, b_O = 40, c_O = 60, d_O = 80$  (see Fig. 4). By a suitable choice of these four parameters in the affiliation of functions to terms of input linguistic variables, it is possible to consider the structure of the measured or otherwise established data in the fuzzy model (this is a task for an expert). To describe the procedure of the task, all linguistic variables are assumed to have the same distribution and uniformity as the four mentioned parameters (as in the case of variable  $O$ ). This distribution will vary according to the experts who decide on its parameters.

Another step is a compilation of a set of inference rules of type  $((k_1P, k_2R, k_3S), kO)$  for assigning three output terms to total 27 various triplets  $\alpha_3$  of input terms, where  $k_1, k_2, k_3, k \in \{L, M, H\}$ . The basic strategy is the choice of  $kO$  with the  $k$ , which prevails in the triplet  $(k_1P, k_2R, k_3S)$ . If none of them prevails,  $MO$  is chosen. This selection strategy assigns  $MO$  to thirteen triplets of input terms in total;  $LO$ , respectively  $HO$ , is assigned in seven of the remaining cases – see Table 2 presenting the rules compiled based on this strategy, which is determined by the experts and decision makers.

**Table 2.** Set of twenty-seven inference rules (in the form  $k_1k_2k_3 \rightarrow k$ )

LLL→L	LLH→L	LMH→M	MMM→M	MLL→L	MHM→M	HHH→H	HLH→H	HHM→H
LLM→L	LHL→L	LMM→M	MLM→M	MLH→M	MHH→H	HLL→L	HMM→M	HLM→M
LML→L	LHM→M	LHH→H	MML→M	MMH→M	MHL→M	HHL→H	HMH→H	HML→M

The specific procedure related to the fuzzy model solution shown in Fig. 1 will be explained on the example of construction of the  $p_0$  parameter for the Czech Republic. As stated above, for the purpose of the demonstrative calculations, the differences in the distribution of values of individual indices will be ignored (for each of them the parameters of affiliation functions to terms are given as  $a = 20\%$ ,  $b = 40\%$ ,  $c = 60\%$ ,  $d = 80\%$ ). A triplet of input basis values  $(x_0, y_0, z_0), x_0 \in U_P, y_0 \in U_R, z_0 \in U_S$  is the triplet  $(67, 36, 87)$  – see Table 1. Their inclusion into the respective terms is seen in Fig. 3.



**Figure 3.** Graphical representation of the term assignment to the input basic values for the Czech Republic

From the calculations, it follows that (the formulas for calculation are specified below Fig. 2):

- $67 \in S_{MP}$  with the truth  $|67 \in S_{MP}| = \mu_{MP}(67) = (80 - 67) / 20 = 0.65$
- $67 \in S_{HP}$  with the truth  $|67 \in S_{HP}| = \mu_{HP}(67) = (67 - 60) / 20 = 0.35$
- $36 \in S_{LR}$  with the truth  $|36 \in S_{LR}| = \mu_{LR}(36) = (40 - 36) / 20 = 0.2$
- $36 \in S_{MR}$  with the truth  $|36 \in S_{MR}| = \mu_{MR}(36) = (36 - 20) / 20 = 0.8$
- $87 \in S_{HS}$  with the truth  $|87 \in S_{HS}| = \mu_{HS}(87) = 1$ .

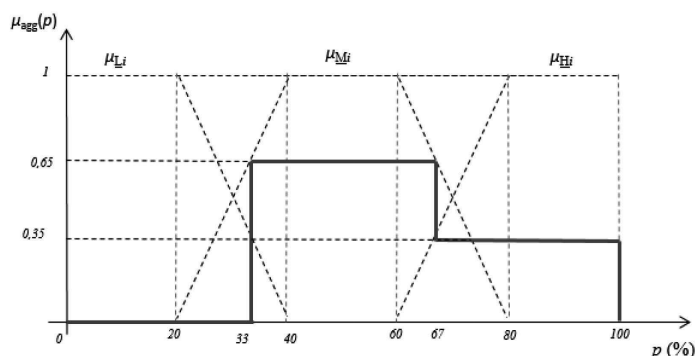
We have finished the fuzzification process in which the assigned input values  $(67, 36, 87)$  enabled selection of four triplets  $\alpha_3$  in the symbolic notation  $\alpha_{MMH} = (\underline{MP}, \underline{MR}, \underline{HS}), \alpha_{MLH} = (\underline{MP}, \underline{LR}, \underline{HS}), \alpha_{HMH} = (\underline{HP}, \underline{MR}, \underline{HS})$  and  $\alpha_{HLH} = (\underline{HP}, \underline{LR}, \underline{HS})$ ; in the logic notation  $\alpha_{MMH}^* = (67 \in S_{MP}) \wedge (36 \in S_{MR}) \wedge (87 \in S_{HS}), |\alpha_{MMH}^*| = \min\{0.65, 0.8, 1\} = 0.65$ ;  $\alpha_{MLH}^* = (67 \in S_{MP}) \wedge (36 \in S_{LR}) \wedge (87 \in S_{HS}), |\alpha_{MLH}^*| = \min\{0.65, 0.2, 1\} = 0.2$ ;  $\alpha_{HMH}^* = (67 \in S_{HP}) \wedge (36 \in S_{MR}) \wedge (87 \in S_{HS}), |\alpha_{HMH}^*| = \min\{0.35, 0.8, 1\} = 0.35$ ;  $\alpha_{HLH}^* = (67 \in S_{HP}) \wedge (36 \in S_{LR}) \wedge (87 \in S_{HS}), |\alpha_{HLH}^*| = \min\{0.35, 0.2, 1\} = 0.2$ .

By the application of inference rules on the symbolic notation of triplets, the outputs  $MO$  and  $HO$  were traced by the rules  $(MP, MR, HS), MO), ((MP, LR, HS), MO), ((HP, MR, HS), HO)$  and  $((HP, LR, HS), HO)$ .

Then

$$AGG = (\alpha_{MMH}^*, p \in S_{MO}) \vee (\alpha_{MLH}^*, p \in S_{MO}) \vee (\alpha_{HMH}^*, p \in S_{HO}) \vee (\alpha_{HLH}^*, p \in S_{HO}) \text{ and } \mu_{agg} = |AGG| = \max\{\min\{|\alpha_{MMH}^*|, \mu_{MO}(p)\}, \min\{|\alpha_{MLH}^*|, \mu_{MO}(p)\}, \min\{|\alpha_{HMH}^*|, \mu_{HO}(p)\}, \min\{|\alpha_{HLH}^*|, \mu_{HO}(p)\}\} = \max\{\min\{0.65, \mu_{MO}(p)\}, \min\{0.35, \mu_{HO}(p)\}, \mu_{HO}(p)\}.$$

Then  $\mu_{AGG}(y) = 0.65$  for  $33 \leq y < 67$ ,  $\mu_{AGG}(y) = 0.35$  for  $67 \leq y < 100$  (see the bold line in Fig. 4).



**Figure 4.** Graph of function  $\mu_{agg}$

By a numerical approximation of the values of integrals in the formula for the calculation of the horizontal coordinate of the position of the centre of gravity (the relation (2)), the value of  $p_0$  in (%) is assessed as

$$p_0 = (0.65 \cdot (40 + 50 + 60) + 0.35 \cdot (70 + 80 + 90 + 100)) / (3 \cdot 0.65 + 4 \cdot 0.35) = 65 \%$$

The resulting values of  $p_0$  for all examined countries are summarized in Table 3.

**Table 3.** Values of travel and tourism competitiveness index  $p_0$  (in %)

Country	Index $p_0$ in % / Fuzzy score
Czech Republic	65 / 4.6
China	75 / 5.3
Pakistan	50 / 3.5
Russia	60 / 4.2
Turkey	55 / 3.9

### 4.3. Discussion

As stated above, there is an indirectly proportional dependence of the popularity of the country from the view of travelling persons (PC) on the travel and tourism competitiveness level (TC). When TC grows, PC increases and vice versa. From this point of view, Fig. 2 and 3 can be interpreted in such a way that in the interval (0, a) all experts consider TC to be low and hence PC is



considered to be low as well. At the interval of (a, b), their views differ. The number of experts who consider TC to be low decreases in favour of those who consider TC to be medium, which increases if TC moves closer to the point b. The same can be said about PC. In terms of the interval (b, c), all experts agree that TC and PC are medium. In the course of (c, d), the experts gradually deviate from the view that TC and PC achieve medium values and agree that TC and PC are high at the interval of (d, 1).

The boundaries between the classes of country popularity with respect to the opinion of most experts are as follows: the intersections of the curves  $\mu$  of the formalized terms of the linguistic variable TC have coordinates  $p_1$  [30, 0.5] and  $p_2$  [70, 0.5], see e.g. Fig. 3. Because of their similarity to the potential curves  $\mu$  of the terms of the variable PC, they can be mutually approximated.

The boundaries distinguishing the countries with high travel & tourism competitiveness (highly popular destinations), conditional travel & tourism competitiveness (conditionally popular destinations), and low travel & tourism competitiveness (low popular destinations) lie at the points  $p_1 = 30$  percent and  $p_2 = 70$  percent. The results summarised in Tab. 3 indicate that China is ranked as a country with high travel & tourism competitiveness and a very popular tourist destination. The countries with conditional travel & tourism competitiveness include the Czech Republic, Pakistan, Russia, and Turkey, which are considered to be medium popular with travelling persons.

For the purposes of the demonstrative task, necessary calculations are, without loss of generality, minimized by the assumption of identical courses of membership functions of formalized terms of input linguistic variables. Regardless of this simplification, the solved specific task is a useful illustration of the presented method in terms of tourism indices estimation.

## 5. FUTURE RESEARCH DIRECTIONS

Further research should be focused on the application of fuzzy approach in the broader area of tourism management. In terms of artificial intelligence and artificial neural networks, further research should be aimed at increasing awareness of these tools and their use in the service sector, which includes tourism.

## 6. CONCLUSION

The objective of the paper was to evaluate the level of travel & tourism competitiveness of selected European and Asian countries based on the subjective ranking of travelling persons and fuzzy approach.

The theoretical part indicates that SQC used for management is one of the oldest tools; despite this, it is also currently suitable for the application in all types of companies, including those operating in the service sector. It should be added that the knowledge of statistical methods is important for management. In summary, SQC can be seen as a pioneering method that introduced a modern methodology in quality assessment in the world of management. A more recent version – TQM – is used more frequently in management compared to its predecessor; the fund of the contributions to its application in the service sector is not very rich. However, there is a large number of studies territorially focused on hotel industry in the countries of southern Europe, especially Spain.

Currently, one of the most widely used tools to measure quality is Six Sigma, which was created by the management of the multinational corporation Motorola. For company management, before the implementation of the Six Sigma method, it is very important to accept its tools; however, the individual acceptance of Six Sigma in companies has been little addressed in the studies. The application of Six Sigma can be a turning point for companies within their life cycle. Six Sigma has the potential to increase innovations, improve financial performance and skills of employees. In the service sector, Six Sigma can be applied to improve the quality of teaching within the tertiary education, etc. In tourism, there can be mentioned e.g. the introduction of Six Sigma in the company Starwood Hotels and Resorts. In 2001, LSS appeared as a modification of Six Sigma. LSS has a similar application and methodology as the basic Six Sigma; the difference is in the concept of LSS, which is a synthesis with lean thinking. LSS improves processes in state administration, logistics, education, etc.

Modern management tools are based on computer technology. They include also ANN, whose main advantage is their ability to work with large volume of data and relatively accurate predictions of various phenomena for the future. The main disadvantage is required hardware and longer data processing time. In the service sector, ANN can be used for predicting bankruptcy, determining the creditworthiness of entities applying for mortgage loans, optimization of processes in health care, tourism, etc. From the portal TripAdvisor, user reviews are collected, which are integrated in the ANN system. The prediction results should lead to better business performance. In the case of ANN, it should be taken into account that for most companies, it is a theoretical tool. Their wide application in tourism is expected rather in the future, although a number of companies operating in this sector have already been using artificial neural networks. The authors believe that the development and application of artificial intelligence in tourism will contribute to improving the situation concerning the problems arising with the current coronavirus pandemic.

The paper focused on the fuzzy approach method in more detail at the theoretical and application level. The fuzzy approach provides space for the application of the human factor. It is widely used for the evaluation of problems and issues concerning travel and tourism sector. It is based on the assumption that the key elements of human thinking are not numbers but intuitive concepts, the contents of which can be modelled by fuzzy sets. Herein, the fuzzy approach was used to assess the travel & tourism competitiveness level, the solution of which was obtained by a “detour” over vaguely defined procedures. The results indicate that within the countries under review, China is ranked as a country with high travel & tourism competitiveness and a very popular tourist destination. The countries with conditional travel & tourism competitiveness include the Czech Republic, Pakistan, Russia, and Turkey, which are considered to be medium popular with travelling persons.

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# EFFECTIVE ACADEMIC ENGLISH COURSES IN TOURISM: AN INTERDISCIPLINARY APPROACH AS A TOOL FOR SUCCESS

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**Abstract:** *The purpose of this chapter is to present an interdisciplinary approach to developing effective academic English courses in tourism. The authors propose to use the synergy of English for Specific Purposes (ESP) theory, Systemic-Structural Activity Theory (SSAT) and selected marketing techniques. Based on an analysis of the specialised literature, it is stated that the engagement of learners is a key factor for effective language learning. The possibilities for using adapted marketing techniques to increase engagement by increasing involvement are discussed in the chapter. The authors propose approaches for defining the target vocabulary and for increasing the motivation for learning based on the theory of ESP and SSAT.*

**Keywords:** *English for Specific Purposes (ESP), Student engagement, Systemic-Structural Activity Theory (SSAT), Consumer engagement.*

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## 1. INTRODUCTION

In the modern times of globalisation and internationalisation, the sector of tourism needs highly qualified employees more than ever in order to be competitive and provide effective management and operation. Communication within a business and with customers and partners worldwide is more intensive and challenging in terms of the Internet and social media. Workers of foreign origin, multinational companies, international contacts with a variety of nationalities and cultures - language education and the knowledge of two or three foreign languages are a must for all stakeholders involved in the sector. This requires the acquisition of new knowledge and skills related to the specific features of each new media which not only involves vocabulary, grammar, genre, register, etc., but certain interdisciplinary knowledge and skills related to business in areas such as advertising, marketing, customer care. It is, therefore, essential for educational institutions to offer adequate and modern courses in foreign languages for specific purposes that provide the required knowledge and skills and take into consideration the characteristics of the modern generations, generation Z and the millennials. When designing courses, it should also be borne in mind that the Internet and social media have changed everyday communication and have a specific discourse that must be acquired for effective business relations in addition to general business correspondence and communication. At the same time, it is possible to take advantage of the new means of communication to facilitate learning and enhance student performance. Thus, by achieving higher student engagement we can optimise course effectiveness and, hence, prepare more highly qualified specialists ready to add value to any business in the sector of tourism.

Having considered this issue from the perspective of academic experts in English and economics, we have come to the idea that it is possible to apply an interdisciplinary approach involving

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novelties in language teaching and the introduction of marketing techniques employed to increase consumer involvement in order to improve course parameters and, hence, course effectiveness. Concerning the need to determine the most appropriate topics and lexis to be taught, we have to define precisely the areas students will study. For this purpose, we suggest using the Systemic-Structural Activity Theory (SSAT) and the marketing theory of involvement.

## **2. ENGLISH FOR SPECIFIC PURPOSES**

English for tourism is part of English for specific purposes, ESP. The reasons for the emergence of ESP are related to the socio-political development of mankind especially in the post-war world after 1945. These reasons include the needs of the society, the revolution in the area of linguistics and the shift in the learning focus to the learner. With the increasing internationalisation of human activities and later on with globalisation, the modern world needed more as well as specific courses in English that could meet the expectations and requirements of all sectors of the economy. This is how courses for accounting, agriculture, aviation, hospitality industry, oil industry, financing, banking, etc. were designed and offered. The revolution in linguistics which started in the second half of the last century led to a greater interest in learner's needs, motivation, personal characteristics and ways of learning. More attention was paid to communication and communicative competence with all its components. Scientists focused more on authentic communication environment, learning and teaching strategies, materials design and the differences between written and spoken English and between formal and informal register.

According to the definition of English for specific purposes suggested by Strevens (1988), it has absolute and variable characteristics. The absolute ones include meeting the specific needs of the learner; specific content related to professions and areas; a focus on the specific language needed for operation in a particular field in terms of grammatical structures, vocabulary, discourse, etc.; and it is always considered and taught in comparison with General English (GE) or English for general purposes. Because of their nature, the variable characteristics may include the limitation of ESP to a certain skill such as writing, for example, and involves the use of a predefined teaching methodology (Strevens, 1988, p. 7).

Ten years later, in 1998, Dudley-Evans and St. John offered a revision of this definition with three absolute and five variable characteristics. The absolute characteristics include the satisfaction of the specific needs of the learner, the employment of the methodology and activities of the subject ESP serves and the focus on the specific language appropriate for these specific activities. The variable characteristics include the possibility for ESP: to be related to given subjects; in specific learning situations, to resort to the methodology which is different from that of General English; generally oriented to adult learners from higher education institutions or particular fields; to be studied by intermediate or advanced learners; and taught to beginners if assumed that they have basic knowledge of the language system (Dudley-Evans and St John, 1998, pp. 4-5).

Defining ESP involves its types as well. In 1983, Carter suggested a classification of three main types of ESP, which was accepted by scholars. The first type is English as a restricted language, meaning that this type is restricted in its use within a certain profession like that of air traffic controllers. It is very specialised and its repertoire is restricted to specific situations. The second and most common one is English for academic and occupational purposes. As its name implies, it involves the studying of English for professional goals and comprises a multitude of areas such as English for medicine, English for law, English for engineering, etc. The third type

is English with specific topics and involves the studying of particular topics related to a given situation (Carter, 1983).

The differences between ESP and GE (General English) mean that ESP courses differ as well as they aim at developing and mastering specific competences. Carter distinguished three key features of ESP courses: authentic materials, specific purpose and self-direction (Carter, 1983, p.134). Authentic materials are of paramount importance as they provide the specific context, lexis, grammar, discourse and facilitate the acquisition and improvement of specific learner competences and contribute to effective teaching and learning. Specific purpose provides the focus of the course because it can aim at developing all or some skills. For instance, a course can be aimed at effective presentations or at business writing. Self-direction means that the language learner is also a proficient user who has achieved a level of communicative competence that ensures the independence to decide how, what, when or where to learn in order to satisfy their language needs.

Another distinction related to ESP is its syllabus seen by Cummins (1979) as a dichotomy between the basic interpersonal communicative skills (BICS) and the cognitive academic language proficiency (CALP). BICS are related to informal communication with colleagues, relatives and friends, whereas CALP refers to the sophisticated usage of the language in an academic context. Researchers like Gatehouse (2001) think that using this dichotomy and in order to be competitive and successful in their career path, learners have to acquire three basic skills: the specific jargon of the particular profession; the acquisition of a set of more general academic skills; and the ability to use the language to communicate effectively and regardless of the occupational area and its context. Thus it is possible to conclude that an effective course in ESP needs a syllabus including these topics and activities and ensuring the optimised acquisition of specific language knowledge and skills.

Course effectiveness is related to the composition of a learner group. Learners can differ in age, language level, professional experience and background, individual needs, motivation and learning style. This means that with a heterogeneous group it is more challenging to work and achieve results compared to homogeneous groups and an ESP expert needs to allocate more time to prepare materials and to offer activities and tasks that can contribute to the effective learning process of the particular group.

An important facet of ESP that should be considered is materials selection since each ESP course has its own specific features such as learner characteristics, professional area, group composition, focus, etc. Therefore, no textbook can be sufficient alone for the achievement of course objectives, and materials are usually tailor-made. There is a correlation between their quality and appropriateness on one hand, and the ESP professional's expertise, experience and motivation, on the other.

A vital aspect of ESP is the language expert or ESP practitioner (Dudley-Evans and St John, 1998). Dudley-Evans and St John use the term to highlight the five roles of the ESP specialist which include: a teacher, a curriculum designer, a consultant, a researcher and an assessor. Each of them can be typical of a course stage with two or more involved at a time depending on the particular learning situation and context. It is, therefore, of key significance for an ESP practitioner to have specific knowledge related to the subject matter and professional context as well as strong motivation and considerable resourcefulness and creativity.



Being part of English for specific purposes, English for tourism has all characteristic features of ESP and to provide an effective course in it, we need to give all these aspects careful consideration along with the requirements of academic institutions and a particular university.

### **3. ACADEMIC COURSES IN ENGLISH FOR TOURISM: SPECIFICS**

With the development of aviation and the increased welfare of a large part of the world's population, the need for courses in English for tourism became pressing. A variety of courses has been offered from English for the hospitality industry to English for hoteliers and restaurateurs. Academic courses in English for specific purposes for students of tourism involve the development and improvement of communicative competence along with the acquisition of subject matter. They are aimed at preparing competitive professionals who can operate as managers, entrepreneurs, employees in travel agencies or for tour operators, event managers, etc. in the sector of tourism. Their course is designed to cover the key topics of the subject matter such as types of tourism, reservations, organising events, catering, types of accommodation, types of transportation, etc. with variation according to the particular sub-sector. At the same time, it is also intended to develop and improve specific student communicative competence in terms of knowledge and skills related to effective business communication such as writing proposals, requests, dealing with complaints, organising events and travels, preparing leaflets and brochures. Communicative competence and knowledge of subject matter can be achieved using the traditional courses in foreign languages for specific purposes. Focusing on English as the lingua franca of today's world, this implies the use of a textbook in tourism. Generally, textbooks cover the most common topics and activities in a classical way, i.e. a way associated with more strictly defined roles and formal classes. Learners can be involved in role plays, simulations and case studies or assigned the writing of reports, proposals or business letters as single tasks involving one or two skills (e.g. listening and speaking or reading and writing). Additional materials can be used as well as course packs in order to meet the particular needs of the stakeholders in a country or region, including students. The quality, variety and appropriateness of these materials depend on the ESP expert's background, experience, motivation and personal qualities such as resourcefulness and creativity. However, the tasks are usually focused on one or two skills and are not interactive in terms of involving more activities, the use of the Internet and social media nor a different student composition such as individual, pair, small-group or all-group participation within an assignment of one big task or several tasks. Another weakness of this classical way of education is the fact that students do not change their roles- they are not allowed to be teachers in terms of consulting, assessing, encouraging or designing materials. Generally, they are not given the possibility to choose the topics to study or the issues to discuss. Hence, motivation and learner engagement are not employed to the extent that would bring satisfaction and optimal ESP acquisition. Furthermore, the new generations' flair for digital interaction is hardly taken account of and used.

Having considered all these aspects, the authors have come up with the idea of using an interdisciplinary approach in order to ensure greater course effectiveness. By introducing novel, interactive tasks and using marketing techniques we enhance student engagement. Learners are seen as consumers buying a particular educational product and choosing a particular educational service. Increased student engagement leads to greater overall motivation and hence to improved performance and course effectiveness.

#### 4. STUDENT ENGAGEMENT

The success of any activity is determined by the motivation of the agent. It is a set of motives involving needs, ideals, personal goals, aspirations, interests. If there is no or low motivation, the activity will either not be conducted at all or its quality will be doubtful. Applied to learning, this means that learning will be unsuccessful, performance unsatisfactory and no proficiency will be achieved unless there is the motivation for learning. That is why De Bot, Lowie and Vespoor conclude that highly motivated learners have higher chances to learn better (De Bot, Lowie, & Vespoor, 2005). Motivation is influenced by two types of factors: extrinsic, related to the performance of activities followed by a kind of praise or reward, and intrinsic, related to the satisfaction of personal needs with the activities themselves seen as a reward. Extrinsic factors or extrinsic motivation are associated with a higher position at work, a better salary, i.e. with the expectation of a promotion or a benefit. With intrinsic motivation, the individual's desire for personal improvement and satisfaction and therefore for contribution to the welfare of a society or organisation leads to enhanced performance. Intrinsic motivation is considered engagement. In terms of learning, Bender suggests the following definition of engagement: "engagement may be defined as cognitive investment in, active participation with, and emotional commitment to learning particular content" (Bender, 2017, p.2). Martin and Torres define engagement as "meaningful student involvement throughout the learning environment" (Martin and Torres, 2016, p.1). Thus they see it as a relationship between the student and the learning environment which includes the learning community, the teachers, the curriculum, the teaching methodology, the peers (Martin and Torres, 2016, p.1). Therefore, this construct comprises of three types of engagement: cognitive- related to students' investment in learning, behavioural- related to student participation in learning related activities; and emotional- related to the reactions to teachers, educational institution, peers. Fredricks et al. conclude that "student engagement is increasingly viewed as one of the keys to addressing problems such as low achievement, boredom and alienation, and high dropout rates" (Fredricks et al., 2004, p.59). Engaged students are motivated students who are more likely to perform better and achieve better results. Engagement, however, can vary in time and duration. Thus, if we manage to ensure increased student engagement over a longer period, ideally throughout the whole course, we will achieve greater course effectiveness and better student performance.

When examining student engagement, we find it essential to take into account that the characteristic features of modern generations for different generations have different needs and interests and should, therefore, be approached accordingly in order to achieve success in teaching them. The learning context differs as well. As mentioned above, contemporary world is driven by information and communication technologies. The new generations, generation Z and the Millennials, which are also called digital natives, have a natural flair for this kind of technology. They show greater engagement if their education involves it and is more interactive and dynamic. This suggests that course effectiveness and teaching approaches should be adapted to these new challenges. In foreign language education for specific purposes this means that novel techniques should be introduced and different authentic materials should be used in order to provide more interactive tasks and involve students as co-creators of learning content. Windham (2005) suggests that to achieve increased student engagement new courses must include interaction, exploration, relevancy, multimedia and instruction. Following these trends in learning and taking into consideration the fact that apart from being learners, students can be seen as consumers of an educational product; we have come to the idea of applying the abovementioned interdisciplinary approach combining conventional English language teaching approaches with

marketing techniques. Thus, higher engagement can be achieved based on samples, promotions and first-hand experience, and greater involvement in the learning process allowing learners to consult, partner and cooperate with the teacher towards the achievement of language and subject matter acquisition and, ultimately, towards their more effective preparation for effective functioning at a professional level after graduation.

## **5. SYSTEMIC-STRUCTURAL ACTIVITY THEORY AND ENGLISH FOR TOURISM**

As mentioned, modern tourism is a complex activity and its study requires the application of an interdisciplinary approach. In itself, the interdisciplinary approach is an interesting phenomenon and deserves special attention. The desire to study socio-economic phenomena in all their complexity and diversity contributed to the emergence of different research approaches to the mid-1970s. Interdisciplinary approaches enrich the classical disciplinary ones by focusing not on the acquisition of classical disciplinary knowledge, but on the synthesis of new knowledge about the studied objects by searching for similar subject areas in them. This allows the use of the methodology of one discipline to solve the problems of another discipline. At the same time, the language of these disciplines is mutually enriched, as well as their disciplinary methodology is improved. Therefore, the successful application of the multidisciplinary approach requires the joint work of professionals from different fields who study a common subject. From a practical point of view, it is not an easy task to form a team of professionals from different fields to solve specific practical problems. The task becomes even more complicated when a team of scientific researchers has to be formed for the needs of the practice. In this case, the correct scientific approach is to apply a multidisciplinary research scheme that combines the views of scientists from different theoretical fields. For this reason, we propose to use the Systemic-Structural Activity Theory (SSAT) to determine the learning tasks in studying English for tourism.

In its essence, the Systemic-Structural Activity Theory (SSAT) is a synthesis of contemporary work activity studies. These studies are interdisciplinary and are most often carried out within the framework of ergonomics, management, psychology and economics. Although SSAT is a psychological theory, it was developed in a way that provides for work activity studies from the perspective of various scientific disciplines. SSAT emerged as a development of the ideas of the General Activity Theory (GAT) and the Applied Activity Theory (AAT). Since the theoretical constructs of the GAT are at a high level of theoretical abstraction, it is not appropriate for the study of human work activities. New avenues for applied research should be sought. This is how AAT and later SSAT emerged. Currently, SSAT is a separate and independent approach to work activity analysis and differs significantly from all other approaches. According to SSAT, activity is systematic and goal-driven. Goals are achieved consciously by a mechanism of self-regulation. A process unfolds in which cognition, behaviour, and motivation are integrated and organised. Being familiar with this process details, scholars can study the motivation for task performance in a work activity as well as the impact of environmental factors on this motivation. The purpose of the considered process is to precisely define the work tasks and to motivate the people who will perform them. Therefore, SSAT can be used to identify areas of study and to increase student motivation.

SSAT emerged as a natural and logical development of the General Activity Theory (GAT) ideas. In its essence, AT is an umbrella term for a broad variety of psychological, social-psychological, socio-cultural and other theories and studies. They all originate from the Activity Theory

that was formulated in the Soviet Union. Its founders are Lev Vygotsky, Alexei Leontiev and Sergei Rubinstein (Yasnitsky, 2018). The main idea of this theory is that human activity is a systematic and socially determined phenomenon.

The Western psychological thought discovers AT after a group of Scandinavian scientists turned their attention to it (Engeström, 1987). Scandinavian scholars' research allowed to amalgamate the major ideas of AT with the achievements of Western psychological science.

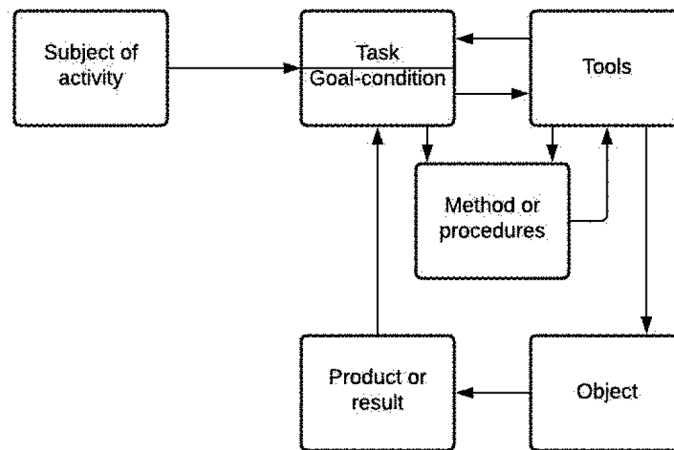
These are the prerequisites for the emergence of the Applied Activity Theory (AAT). It applies research methods of cognitive psychology within the theoretical framework of the General Activity Theory. An overview of the achievements of this theory was first systemized in the Theoretical Issues in Ergonomics Science (TIES) (Bedny, 2004).

The founders of SSAT are Gregory Z. Bedny, Inna Bedny, and Waldemar Karwowski. Being a further development of the ideas and concepts of the GAT and the AAT, SSAT focuses on the concept of activity. SSAT is intended for practical application which affects the interpretation of the concept. The theory founders state: "We understand activity as a self-regulated system that integrates cognitive, behavioural, and emotional-motivational components, and is directed toward achieving a conscious goal of activity" (Bedny, Bedny, and Karwowski, 2019, p. 5). SSAT is a common theoretical framework for management studies and work psychology. The theory terminology is well-developed and includes basic concepts that are suitable for practical application. The main theoretical scheme allows the use of both qualitative and quantitative scientific methods of research. Activity has a purposeful nature and systematically covers the external behaviour as well as the internal mental and emotional-motivational processes (Bedny, Karwowski, 2011). An important part of the theory is the view that activity is a self-regulating system in which knowledge, behaviour and motivation correlate with one another. Another significant point is the approach to the concept of task. Each task is considered an activity determined by the characteristics of a particular situation and is aimed at achieving the task goal under the given conditions. From the SSAT perspective, task analysis involves the precise description of the activity structure during task performance. This structure is systematic and its description is given based on qualitative and quantitative methods. The task itself consists of logically organised cognitive and behavioural actions that are directed to achieve the goal of the task (Bedny, Meister, 1997). Thus, the whole hierarchical scheme of work activity can be seen as an activity aimed at the performance of a task through the conduction of cognitive and behavioural actions, and operations. In turn, a goal of a task organises the task elements into a holistic system. The realisation of the goal by the subject is a proviso for human work activity.

In terms of SSAT, human work activity is systematically organised. All the components of the motivational process that imparts energy to this activity are precisely distinguished. Both physical and mental actions are subject to observation and analysis. This allows the use of a wide variety of research methods - experimental, observation, psycho-physiological tests and more. The distinction between tasks, actions and activities, as well as between their outcomes, allows us to analyse the behaviour of all participants in the motivational process. This is also a good prerequisite for transdisciplinary research. For example, tasks and their structure can be analysed with management science tools. Actions and their outcomes can be explored with psychological instruments. Interactions between participants in the process can be studied with the help of sociology, interactions with the environment with the help of ergonomics, etc. In general, SSAT is one of the most relevant theories for interdisciplinary research, and it is one of its strengths.

Activity theory is a powerful tool for theoretical research at a high level of abstraction, but it is not suitable for specific research with a practical focus. In contrast, SSAT has precisely designed units of analysis and capabilities for predicting the performance of human work systems.

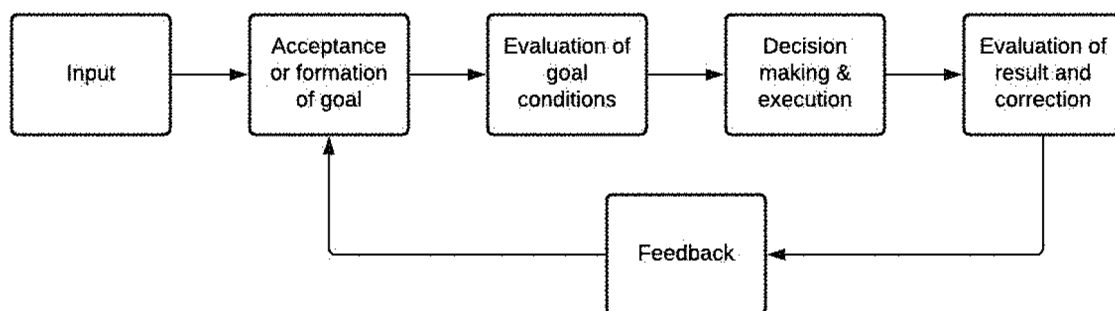
Figure 1 shows the structure of the activity according to SSAT.



**Figure 1.** The structure of the activity  
 Source: (Bedny & Karwowski, 2007, p.22)

According to Bedny & Harris (2005), “Activity is a goal directed system, where cognition, behaviour and motivation are integrated and organised by a mechanism of self-regulation toward achieving a conscious goal” (Bedny & Harris, 2005, p.130). One of the most popular presentations of activity theory today was developed by Engeström (Engeström, 1999). He proposes a scheme in the form of a triad, the main elements of which are the subject, the object and the outcome of the activity.

Unlike the scheme proposed by Engeström, the SSAT distinguishes between the concepts of goal and result. The goal is a cognitive mental representation of the desired future state of the object, while the result is the actual consequences of the activity. The result of activity may or may not match the goal. This implies that actions are constantly corrected. If the actual result of an activity does not coincide with the goal of the subject, then he or she must develop a new strategy to achieve the goal or completely reconsider their actions. This process of continuous adjustment of actions means that the feedback is permanently presented in the phenomena under consideration. The main steps of the process are shown in Figure 2.



**Figure 2.** Goal and result according to SSAT  
 Source: (Bedny & Harris, 2005, p.132)



Another important concept for the theory is the motive. It is adopted by activity theory. A motive is present when the subject makes a semantic connection between his needs and the object of influence. Therefore, motivation is a complex phenomenon that contains both internal cognitive characteristics of the subject and situational variables. As the goals guide the activity, the motives give it the energy to arise. The motive may be characterized by varying intensity and the activity induced by it may be more or less desired by the subject. This will affect the efforts that the person is willing to make to achieve the goal. The classic view of the relationship between motive and a goal is that motive is an energy vector that gives the activity a goal-directed character (Leont'ev, 1981).

Figure 3 represents the structure of the activity from the point of view of practical research.



**Figure 3.** Research components of the activity

Source: (Bedny & Harris, 2005, p.134)

The SSAT makes a clear distinction between objects of study and units of analysis. The reason is that opportunities are being sought to increase the practical applicability of research. In such an approach, the activity and the individual tasks that make it up are considered as an object of study. In turn, this object must be described with the help of various analytical units suitable for the purposes of the specific study.

As mentioned, the first two components of the scheme (activity and task) are considered as the object of study, and the rest - as specific units of analysis for a particular study. The main subject of the research is the defined human work activity. It consists of a set of certain tasks and manifests itself in the process of their implementation. The main analytical unit for the activity is the action. It can then be broken down into operations. Functional blocks can be considered as complete structures (macro blocks) or decomposed into smaller components (micro blocks) depending on the objectives of the study. Thus, it is possible to make a morphological analysis of the activity in depth.

In our particular case, we can use SSAT in two directions. The first is related to the definition of important work moments in the field of tourism business. For example, activities such as welcoming hotel guests, accommodation, dealing with complaints and requirements, etc. can be analysed. This will allow researchers to determine the topics from which to extract the necessary professional vocabulary. The second direction is related to the possibility to increase the motivation for learning of students. By its very nature, learning activity is a kind of work activity. This allows the teacher to decompose the learning activity into its morphological elements using SSAT. Then, using certain characteristics of the learners, to design the learning process in such a way as to increase their motivation and stimulate them to make more efforts to achieve the learning goals.

## 6. MARKETING AND LEARNING ENGAGEMENT

The idea of using marketing tools to increase the engagement of foreign language students may seem strange but only at first glance. We must take into account that modern marketing is not just business theory and practice but above all a philosophy and a way of thinking. Authors like Kotler believe that the idea of people and organisations achieving their goals through fair exchange with others is one of the achievements of the 20th century. In essence, seen as a phi-

losophy, marketing is a means by which people (as individuals or organisations) achieve their goals through voluntary mutually beneficial exchanges with others (Kotler, 2000).

In the field of marketing, the concept of consumer engagement is relatively new. The first publications dedicated to this problem appeared after the beginning of the new century. Before that, from the middle of the last century until its end, the term consumer involvement was used. The reasons for this must be sought in two directions. The first one is related to the development of marketing theory and practice, and the second - to the development of modern information and communication technologies.

The researcher who introduced the concept of consumer involvement in marketing was Herbert Krugman (Krugman, 1965). Initially, he studied the impact of involvement on persuasive communications in marketing and the mass media. He pointed out that the phenomenon was too complex and its practical use required in-depth research. Later, Krugman proposed the first adequate instruments for measuring involvement (Krugman, 1967). With the increase of research in the field, the concept of felt involvement is confirmed. It is defined as a specific psychological experience of the motivated consumer (Celsi & Olson, 1988). Further research found that felt involvement can manifest itself in two dimensions - as enduring or situational, as well as cognitive or affective (Richins, Bloch, & McQuarrie, 1992).

It is gradually becoming clear that the most important dimension of involvement is its sustainability over time. From this point of view, involvement is enduring and situational. It is important to note that these two characteristics are not alternative. They can exist together and separately to some extent. The relationship between them needs to be discussed more closely below. At this stage, we will note that in the cases of enduring involvement the observed individual demonstrates a strong interest in an object (product, brand) or activity over a long period. Such behaviour occurs when there is a strong connection between the object and the significant needs of the individual. This phenomenon is relatively rare. Situational involvement is much more common. In these cases, the characteristics of involvement are determined by the specific parameters of the observed situation. For instance, many people do not have a specific attitude towards household appliances, but experience a very high level of involvement when an appliance breaks down and needs to be replaced with a new one. Exploring the relationship between enduring and situational involvement is not an easy task. This relationship is particularly important because the overall level of involvement depends on the levels of enduring and situational involvement experienced by the subject. This means that enduring and situational involvement must be examined separately, as well as the mechanisms by which these two dimensions interact. Enduring involvement is a consequence of the unique value orientations and stable attitudes of the individual. Because psychology has a wide range of tools for exploring values, attitudes, and preferences, enduring involvement can be relatively accurately explored and measured. In terms of situational involvement, however, things are quite different. In practice, it cannot be separated from long-term involvement and explored on its own. The observed individual always experiences some level of enduring involvement (high or low depending on his individual attitudes and values) and at the same time some level of situational involvement (depending on the parameters of the specific situation). In other words, we can observe and explore enduring involvement relatively independently. In certain cases, we can observe and explore enduring and situational involvement together. But, it is not possible to observe and study only situational involvement, because enduring involvement is constantly manifested over time. This means that in order to get an idea of situational involvement, we need to shift the focus of research from people to the situations in which they act. Observing certain situations makes it pos-

sible to describe the behavioural response of large groups of people. If these behavioural responses are systematized, it is possible to identify sustainable trends and causal relationships between the characteristics of situations and the behaviour of individuals (Houston & Rothschild, 1978).

Research into the way in which enduring and situational involvement interact to build the resulting level of involvement yields very interesting results. It turns out that the use of complex models of interaction does not contribute much to increasing the explanatory and predictive value of research. Simple additive models prove to be sufficiently precise and effective (Richins, Bloch, & McQuarrie, 1992). The most interesting finding from the research on the interaction between enduring and situational involvement is that the input levels of initial enduring involvement do not significantly affect the perceived situational involvement. In other words, high initial levels of enduring involvement before the individual is in a particular situation do not make situational involvement more intense. Accordingly, in the opposite case, at low initial levels of enduring involvement, when in a certain situation, the evoked situational involvement is not suppressed. The conclusion is that the result of the joint action of enduring and situational involvement depends mainly on the perceived level of situational involvement. The complex response of the subject is always proportional to the level of situational involvement but has a different intensity depending on the initial levels of enduring involvement. This finding is very important both for the development of marketing theory nowadays and for the purposes of increasing the motivation of students in learning a foreign language. Both marketers and educators need to focus on finding ways to increase situational involvement.

The widespread use of information and communication technologies in the relations between business organisations and their customers nowadays drastically changes modern marketing. The ability of marketers to implement multi-channel strategies increases the client's strength in his relationships with business organisations, while intensifying competition between these organisations. Nowadays, customers can make serious purchases with just one click of a computer mouse while having fun or doing some other work. The theoretical concepts of classical marketing, including those related to consumer involvement, are no longer sufficient to gain significant competitive advantages. This is the reason why marketers have shifted from the concept of involvement to the concept of engagement. It is obvious that there is a connection between these concepts. In essence, in modern marketing the complex behavioural response that results from enduring involvement and behavioural attitudes in a particular situation that is caused by situational involvement is called engagement. However, this connection needs to be clarified more precisely.

There is a difference between involvement and engagement. In the case of involvement, the emphasis is on the internal psychological characteristics, and the case of engagement on the predisposition to action (Vivek, Beatty & Morgan, 2012). This difference is not sharp. Both involvement and engagement are concepts borrowed from psychology. As a theoretical construct, involvement is focused on internal characteristics per se, and engagement on internal characteristics that elicit a particular behavioural response. For this reason, we state that complex involvement which includes the subject's behavioural responses to a particular situation can to some degree be seen as engagement. Naturally, the meaning of this statement is not to confuse the concepts, but to outline the historical continuity and the connection between them.

Although relatively new, the concept of consumer engagement is already used in marketing and this gives positive results. In order to show a certain level of engagement, the subjects surveyed must first reach a certain level of involvement. In order to monitor this process, it is necessary

to use adequate tools to measure involvement and engagement. There are tools for measuring involvement that have been developed by traditional marketing and have proven their adequacy over a long period (Bloch, 1981). Tools for research and measurement of consumer engagement are being developed by modern marketing (Vivek, Beatty, Dalela, & Morgan, 2014). Research shows that engagement tends to be viewed and measured as an attitude. This presupposes to analyse and measure adequately three main components: cognitive, affective and behavioural (volitional). Modern psychology has precise tools for measuring attitudes and they have to be adapted to the needs of marketing and language learning. In this regard, language teachers can use the experience already gained in the field of marketing. Due to the interest of business in developing new approaches that can be used to gain a competitive advantage, there is already extensive experience from research and this experience is constantly enriched. In modern conditions, marketing and sales are becoming increasingly associated with the use of information and communication technologies. This allows marketers to monitor the behavioural reactions of their customers in real time. In addition, modern technologies allow collecting data for a given group of users simultaneously from different sources - social networks, voluntary activities, political and social events, shopping behaviour, preferred financial services, etc.

As mentioned, in order to increase the overall final involvement, it is necessary to focus on situational involvement. For this purpose, a separate group of marketing communications has been developed - sales promotion. In essence, sales promotion is any action of the organisation designed to increase sales, provide an additional incentive to buy or encourage the use or testing of a product or service. Sales promotion comes in many forms, but they all focus on convincing the target audience to become a customer. A wide variety of sales promotion tools have been developed for marketing purposes. In the new high-tech conditions, this set of tools is constantly enriched.

Although difficult to influence, enduring involvement is also important. Its level can be increased through persuasive communications that improve consumer awareness of the product. The idea is to build beliefs that a product can play a more significant role in the life of the consumer. The level of enduring involvement can be increased through persuasive communications that improve consumer awareness of the product. For this purpose, informative advertising and communications in the field of public relations are used. Although this task is more difficult, marketers do not stop their efforts in this direction.

In conclusion, language teachers can use marketing tools to increase the involvement and engagement of their students. To this end, marketing tools must be adapted to the requirements of training. Each marketing tool has its analogue. For example, informative advertising corresponds to traditional lectures, sales promotion corresponds to the provision of additional incentives and diversification of the learning environment and learning tasks to increase the interest of students, etc. Following the logic of marketing models, educators have to select the most appropriate tools to influence learners. Their efforts need to focus on both enduring and situational involvement, with a focus on the latter.

## **7. AN INTERDISCIPLINARY APPROACH TO ENGLISH FOR TOURISM**

Along with textbooks, course packs and conventional materials, we introduced several novelties based on the new learner characteristics and contexts and provoking greater curiosity. Curiosity is expected to lead to greater interest and engagement similarly to the involvement in the process of purchasing. Along with this, although academic courses have a strict syllabus to follow,

we use SSAT to determine which topics and related vocabulary to pay greater attention to in the learning process in order to optimise course effectiveness concerning the particular student groups. Using textbooks, course packs and conventional learning materials, involving the traditional activities of reading, listening, speaking and writing may not provoke the expected engagement of modern students. However, introducing tasks challenging creativity, team work and peer comparison, and including social media can be beneficial to student performance.

In this regard, our first suggestion is related to the introduction of more interactive tasks created by the ESP practitioner and involving the work with the immense electronic databases and the use of social media. An example of such tasks is tasks related to the analysis of specific problems and trends in tourism. Students are required to do their own research and find reliable information on the consequences of the pandemic for the sector of tourism in general, for a particular country or tourist service. Then they have to process and analyse the information gathered by focusing on the most important implications or trends, make recommendations and, finally, prepare a presentation for their colleagues. After the presentation, they are expected to share with the group their personal view on the issue. The other students, in turn, are required to provide feedback on their colleague's performance by analysing the strengths and weaknesses of the task accomplishment. A task like this involves student resourcefulness and critical thinking and fosters the acquisition of subject matter together with specialised knowledge and skills related to the professional communication in the area such as presentations, summarising, analysis of trends and graphs, processing of specialised information; consulting and collaborating with peers similarly to team work at work, assessing peer performance. The specific listening, writing, reading and speaking skills are developed and improved in a more competitive and stimulating environment leading to higher engagement and enhanced performance. Another beneficial effect is the skill to find reliable sources of data and to process information which is crucial for the success of an expert in economics and especially in tourism where there are a lot of trends, options and opportunities to be anticipated, predicted, analysed and taken advantage in terms of survival and competitiveness. In terms of marketing, we increase consumer involvement and attract attention by using a combination of informative media advertising and offering small gifts at the point of purchase. In learning, the traditional lectures play the role of informative advertising and since students perceive the Internet as a place primarily for entertainment, the tasks including it and the social media are, in turn, perceived as gifts. This technique contributes to the diversification of "boring" lectures and the facilitated understanding of learning material. Thus product knowledge is increased and, correspondingly, enduring involvement. In addition, gifts stimulate a positive attitude which is how situational involvement is enhanced. As a result, there is higher consumer engagement.

Interactive projects are our second suggestion. Project-based learning (PBL) has become popular and widely used over the last years for the advantages it brings to a course in terms of student motivation, self-direction and autonomy. However, the novelties we introduced with our project add value by increasing cognitive and behavioural engagement. They are new and innovative in terms of project structure, objectives and content and intended to offer a balanced acquisition and mastering of the skills for fluent business communication in situations simulating the professional context of tourism. Towards the end of their course in English for tourism, our students are assigned three projects - two individual ones and one group project. The first individual one is about a destination in Bulgaria because it is the mother country of the majority of our students. Learners are required to conduct research by gathering reliable information about the place of interest in terms of geography, landmarks, means of transportation, types of accommodation and tourism, what to do and visit. The second one is focused on a foreign country. Students are



expected to prepare a brief about a country once again by doing their own research, collecting and processing reliable information about the key features of the destination, including geography, climate, health requirements and warnings, landmarks and sights, places of interest, currency, economic and social specifics relevant to foreign visitors, accommodation, etc. In addition, each student has to make a presentation to familiarise their group with the results from their research as well as to try to convince them as if they were real customers why the destination is worth visiting. In turn, the students from the group are supposed to provide feedback about the strengths and weaknesses of their colleague's presentation similarly to what a lecturer does when reviewing the second project brief and the first project paper. Thus students can acquire and improve the specific linguistic knowledge and skills - the specific communicative competence, in terms of terminology, grammatical structures, register, context, discourse, etc. Furthermore, by participating in such projects which simulate the real-life routine of an employee in tourism, they can gain practical experience from different perspectives and be prepared for successful realisation in the sector of tourism. They can enhance the soft skills for synthesising, analysing and summarising as well. Similar to promotions and samples in marketing, intended to increase consumer interest and involvement, our projects provide a personal experience aimed at revealing the advantages of a product that customers may not have been aware of.

The group project is focused on communication with customers and customer satisfaction. Students have to prepare questionnaires related to the service offered by an agent in tourism such as a hotel, a restaurant, a travel agency, a tour operator, a carrier and do a customer survey. Having collected these data, they need to analyse them and write a report about their findings. And, finally, they are expected to prepare a presentation about the survey with an introductory information about the business surveyed. Through this interactive project involving several activities and including all linguistic skills for specific purposes we achieve the following goals: increased student communicative competence in writing formal documents, in doing scientific work in English and for the purposes of tourism, enhanced skills for effective presentations, both written and oral, in tourism. Student inventiveness is encouraged and revealed in the preparation and design of the questionnaires and presentations, the selection of pictures, the choice of a business and the preparation of this business's brief. After the presentations, there is always a discussion about student performance and impressions allowing for another perspective - that of the analyst, consultant and peer reviewer. This way peer competition encouraged soft skills developed such as team work or performance assessment which helps students become better prepared for work in a competitive environment like the sector of tourism.

The last suggestion is related to visits. The visits students are offered in our courses are of two kinds with English as the language of communication. The first kind of visits are those of distinguished professionals in the sector of tourism who give a lecture and then discuss with the students a burning issue or an essential aspect of their work and familiarise the audience with the institution they represent - its structure, culture, achievements and strategies for success. They also talk about the opportunities their organisation provides for internships, work and business events. These academic visits can also include university alumni or 3- and 4-year students who have already started their careers or have already succeeded by winning a prize, starting their own business in the sector or offering a novel tourist product or service. This way, by sharing their own experience with younger students, they inspire and provide peer feedback. Through these visits students view their future career from a different angle and can find additional motives for development and learning engagement. The second kind of visits are the practical visits to businesses in tourism. Thus, students can gain practical experience, see how the company

functions from the inside and get personal insights into business activity. For instance, last year our students visited a family hotel, a big hotel in the capital and a guest house. Then, they had visits to an amusement park and a catering company. By familiarising with the way these businesses are organised and operate and by meeting the managerial staff, students were provided a first-hand experience which they found much more involving than their lectures and seminars. Therefore, combining classical academic education with more unconventional forms of learning, we provoked greater interest and managed to convince learners why some disciplines or topics that they usually find difficult or useless are in fact an integral part of their courses and a must for a future expert in tourism. Needless to say, motivation was enhanced, ESP acquisition improved significantly and overall learning results, including knowledge of subject matter and professional skills, were much higher compared to the traditional academic approach. The high-ranking professionals involved in learning play the role for students that celebrities from advertisements play to consumers – endorse a product and convince users in its quality, thus leading to a higher level of engagement.

## 8. CONCLUSION

Applying an interdisciplinary approach involving psychology, marketing and methodology of foreign language teaching, we managed to optimise an academic course in English for tourism by making a parallel between learners and consumers. Students are seen as the consumers opting for the educational product a higher institution offers, and their engagement is encouraged and increased similarly to consumer involvement in marketing by using marketing techniques in accordance with the novel interactive tasks, projects or visits that we introduced. Thus, through the combination of modern teaching and marketing and based on psychology, we manage to use adequate tools that ultimately lead to increased student engagement and hence to more effective ESP acquisition in the sector of tourism. Student performance is facilitated and improved significantly owing to the more balanced and motivating way of teaching the specific linguistic content in a more relaxed environment along with the provision of a more learner-centred education in subject matter of tourism.

This approach was piloted with students last year and the feedback received was very positive and encouraging. In order to examine its effectiveness empirically, we are in a process of collecting quantitative and qualitative data. The processing of the data gathered will provide a basis for a more elaborate analysis and optimisation of the proposed approach. Since the suggested interdisciplinary approach was developed for the sector of tourism but is intrinsically related to education, it could successfully be applied to other disciplines and we believe that the synergy it ensures can add value to the quality of the overall educational product, namely a bachelor or master programme and hence to the welfare of the business and society.

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