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DETERMINING THE TRAVEL RISK PERCEPTION AND TRAVEL BEHAVIOR OF SERBIAN RESIDENTS DURING THE POST-PANDEMIC PERIOD

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Abstract

The tourism industry is very sensitive to the influence of various crisis situations which can have smaller or greater negative impact on its development. Many tourist destinations closed their borders due to the development of a global pandemic of COVID-19, which resulted in a dramatic reduction of tourist turnover as well as the temporary stop of normal functioning of the tourism industry. Moreover, the current health crisis influenced significantly the changes in decision-making process of tourists when choosing a holiday destination and the way of organizing their journey. The purpose of this paper is to examine the relations among travel risk perception, tourist behavior during travel and the frequency of travel among Serbian residents when the individual characteristics of the respondents are controlled. Results of the empirical research indicate that tourist's behavior during travel is positively connected with the travel risk perception. Furthermore, age and education affect the travel risk perception.

Key Words: *travel risk perception, Republic of Serbia, COVID-19, attitudes of residents, post-pandemic period*
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Introduction

The tourism industry is one of the few sectors in the world that records the fastest and strongest development (Alkier et al., 2020) and is considered a significant stimulator of the development of the national economy by influencing the increase of employment, growth of domestic demand, balance of payments as well as the uniform redistribution of wealth (Selimi et al., 2017; Đorđević et al., 2021). Tourism is important from the aspect of positive effects, which it achieves on the economy of the country in which it is developing, but at the same time it is a generator of various negative effects on the local community and the environment (Podovac et al., 2019). However, tourism is also exposed to various factors from the external environment and is a very vulnerable economic activity due to various crises (Paraskevas & Altinay, 2013; Ritchie et al., 2014; Štetić, 2016). The impact of the crisis on tourism has increased dramatically due to the emergence of terrorism, epidemics, and natural disasters (Laws & Prideaux, 2005) while some authors point out that this influence has intensified especially since the terrorist attack on September 11, 2001 (Yang & Nair, 2014a; Karl, 2018). Crisis situations negatively affect the overall tourism development by reducing tourist turnover, tourism revenues, occupancy of accommodation facilities, etc. On the other hand, tourists are also reacting to the crisis due to the increased risk for personal safety, security and health (Blake & Sinclair, 2003; Page et al., 2012).

The COVID-19 virus, which was discovered in Wuhan (China) at the end of 2019, caused the entry of the whole world into a crisis, whose negative impact on the economy and lives of people is of enormous proportions. Due to the pronounced danger to human health, the World Health Organization (WHO) has declared a global health crisis ih March 2020 (Wachyuni & Kusumaningrum, 2020). According to the WHO (2021), the number of infected reached 112,902,746 cases worldwide (as of 27 February 2021), while the number of deaths was 2,508,679. These data indicate that the COVID-19 virus poses a great danger, which endangers not only human health but also the functioning of the economic and social system, developing new circumstances to which the whole world had to adapt. In addition to the fact that the appearance of this virus caused the health crisis, there was an economic and social crisis due to the pronounced impact on people's lives and the economy (Asare & Barfi, 2021). Due to the continuous growth of the number of people infected with the COVID-19 virus, many countries have introduced a travel ban as one of the measures aimed at reducing the number of those infected. According to the UNWTO

(2020a), by April 2020, almost all destinations had introduced certain restrictive measures when it came to travel. The largest number of tourist destinations (97 of them) have completely or partially closed their borders to tourists, while 65 destinations have partially postponed international flights. A significantly smaller number of destinations applied a differentiated approach in defining entry ban measures (39 destinations) and the remaining 16 destinations introduced measures such as quarantine or self-isolation for 14 days. The introduction of the travel ban has caused a collapse in the development of the tourism industry, which will take a long time to recover. The number of international tourist arrivals decreased by 74%, while a loss of US$ 1.3 trillion was achieved when it comes to revenues from international tourism in the first year of pandemic. The COVID-19 virus pandemic has destabilized the role that tourism plays in the development of the world economy, with an estimated loss of US$ 2 trillion in global GDP in that year, jeopardizing as many as 100-120 million direct jobs (UNWTO, 2020b).

In this paper, the subject of research are the attitudes of the inhabitants of the Republic of Serbia (further in the text Serbia) about their intentions when it comes to tourist trips in the period after the end of the pandemic. Virus COVID-19 was detected for the first time in Serbia at the beginning of March 2020, with the total number of positive cases of 456,450, while the number of deaths was 4,429 by the end of February 2021. The spread of the pandemic in Serbia has greatly influenced the application of restrictive measures when it comes to the movement of people, which had a very negative effect on the tourism development as one of the activities with the greatest contribution to the national economy (Ministry of health of the Republic of Serbia, 2021). According to the data from the Statistical Office of the Republic of Serbia (2020), in 2020 there were 1,820,021 tourists in Serbia, respectively 50.7% in relation to the previous year. When it comes to foreign tourists, the consequence of the introduction of the ban on movement has led to a reduction of 75,8% in the number of foreign tourists during 2020 in the total tourist turnover compared to the previous year, while in the same period there was a decrease of 25,5% in the number of domestic tourists. During the first year of the COVID-19 virus pandemic, the survival of a large number of tourist companies was questionable.

Literature review

As a term that is the subject of analysis of various scientific disciplines (Berg-Beckhoff et al., 2017; Aven, 2018), risk represents a situation or event whose outcome is uncertain (Aven & Renn, 2009) or the probability that a particular event will occur along with its consequences (Solomon & Schopler, 1982, cited in Grima et al., 2021). People face different risks every day, which can have different consequences. However, some risks may upset people or cause people concern, while other risks may be intentionally or unknowingly ignored by people and society (Fragouli & Theodoulou, 2015). People perceive risk and behave in two basic ways: in the form of feelings, which imply instinctive reactions of individuals to crises and in the form of risk analysis (Slovic & Peters, 2006).

Risks in tourism are a controversial research topic with many disputes and paradoxes (Yang & Nair, 2014b) due to the pronounced fragmentation and inequality, which is caused by the interpretation of risk as a set of uncertain outcomes that individuals, companies, and destinations should avoid (Williams & Baláž, 2015). Despite the pronounced impact of risk on tourism since 2001 (Schmude & Weber, 2020), several studies, which deal with risk analysis in tourism, were published during the 1990s (i.e., Cossens & Gin, 1995; Poirier, 1997; Sönmez & Graefe, 1998). Tourist trips are associated with various risks, the outcome of which can negatively affect tourists. The authors are focused on researching several types of risks in tourism: natural disasters (Lehto et al., 2008; Rosselló et al., 2020), terrorism (Pizam & Fleischer, 2002; Araña & León, 2008; Liu & Pratt, 2017), health risks (Henderson, 2004; Sánchez-Pérez et al., 2021; Chua et al.,2021), political instability of the country and wars (Muzindutsi & Manaliyo, 2016; Ghalia et al., 2019; Lee et al., 2021) and criminal activities (Pizam, 1999; Biagi & Detotto, 2014). Dealing in their study with the systematization of previous theoretical knowledge on risk perception in tourism, Cui et al., (2016) stated that the risk can have five to seven dimensions, whereby the following types of risks can be added: psychological risk, financial risk, performance risk, social risk, time risk, risk of loss of opportunities and equipment risk. These risks can lead tourists to physical injury and can have a strong impact on travel decisions and tourist flows (Karl & Schmude, 2017). Risks can be caused by nature or human factors. Risks posed by nature include natural disasters such as earthquakes, eruptions, and tsunamis; health risks and water and food quality, while human risks include political instability, crime, terrorism and wars (Micić et al., 2019). Despite the existence of different types of risks

in tourism, researchers pay more attention to the analysis of perceived risk in relation to the actual risk (Bauer, 1967, cited in Seabra et al., 2013; Martin-Azami & Ramos-Real, 2019). This type of risk is the focus of numerous studies (Lepp & Gibson, 2003; Sjöberg et al., 2004; Slovic & Peters, 2006) where the travel risk perception is very often the subject of research not only in the field of tourism but also in psychology, sociology, culture, economics, etc. (Cui et al., 2016). In addition to the multidisciplinary nature of the research, an aggravating circumstance in the analysis of travel risk perception relates to the subjective character of risk assessment and its impact on tourist safety (Garg, 2013; Grima et al., 2021). Perceived risk is related to the way tourists perceive uncertainty and potentially negative outcomes, which are a consequence of traveling and consuming the tourist offer (Matiza, 2020) as a result, this risk affects the travel behavior and desire of tourists to revisit a specific destination (Floyd et al., 2004; Hasan et al., 2017).

The world's population is facing increasing health crises. Gossling et al. (2020) point out that only during the 20th century, there were three health crises caused by the Spanish, Asian and Hong Kong flu, and the beginning of the 21st century was marked by pandemics of SARS, bird flu, MERS and Ebola. The authors point out that the growing number of pandemics is a consequence of global changes, e.g., the growth of the number and mobility of the world's population, urbanization, increased food consumption, the development of the global transport network (Gossling et al., 2020). Health crises have negative effects on tourism development (Luković & Stojković, 2021) and the behavior of tourist demand, where the intensity of the impact depends on the size of the crisis, the cause, and the possibility of recovery (Otoo & Kim, 2018). Also, tourism can contribute to the spread of diseases and viruses due to the pronounced mobility of tourist demand (Godovykh et al., 2021). Although, pandemics are common and have a negative impact on the way tourists perceive destination (Perić et al., 2021), The current pandemic of the COVID-19 virus has introduced significant changes in the paradigm of researching tourist behavior and ways of making travel decisions (Kock et al., 2020).

The COVID-19 virus pandemic has caused a global crisis with the most pronounced negative consequences for the world economy and society in the last few decades (He & Harris, 2020; Susilawati et al., 2020). The introduction of restrictive measures when it comes to the movement of people has largely had a negative impact on the development of the service sector, to which tourism belongs. Although the travel ban has reduced the

number of newly infected people, it has also drastically reduced the number of tourist trips globally. On the other hand, the pandemic has influenced the publication of a number of studies on the impact of the pandemic on the development of international tourism and its recovery strategy in the post-pandemic period (Farzanegan et al., 2020; Gössling et al., 2020; Alkier, 2021; Alkier et al., 2021a; Alkier et al., 2021b; Alkier et al., 2021c; Božović et al., 2021). Bearing in mind that tourism for travelers is actually a hedonistic experience, which affects emotions, behavior, attitudes and satisfaction (Sigala, 2020), a significant number of research also deals with the analysis of changes in the travel behavior when it comes to tourist travel during and after the end of the pandemic (Neuburger & Egger, 2020; Bae & Chang, 2020; Wachyuni & Kusumaningrum, 2020; Perić et al., 2021).

The results of several empirical studies have shown that in the short term after the COVID-19 virus pandemic, tourists will start traveling again according to established habits, which they had even before the outbreak of the health crisis. Wachyuni & Kusumaningrum (2020) have, based on the research conducted in Jakarta at the very beginning of the proclamation of the pandemic, concluded that tourists will re-opt for tourist travel no later than six months after the end of the crisis. The authors also presented conclusions on the behavior of tourists during the trip after the end of the pandemic, according to which tourists will visit domestic destinations with shorter stays and will stay mostly in naturally preserved environments compared to other types of destinations. A similar conclusion was reached by Ivanova et al. (2020) examining the future intentions of the inhabitants of Bulgaria when it comes to tourist travel. The results of their research showed that most of the respondents are ready to re-join the tourist flows within two months after traveling in the country with certain changes in behavior during the trip. In addition, the respondents stated that for the first time after the pandemic, they will travel to one of the domestic destinations under their own direction with their family, and that the choice of destination will be greatly influenced by factors such as hygiene, disinfection, and health system reliability. Tourists are more cautious than ever when it comes to traveling at home and abroad taking care of their health. Exploring the impact of travel risk perceptions on the future intentions of Serbian tourists during the pandemic, Perić et al. (2021) have determined that tourist trips will take place mainly within the borders of the Republic of Serbia and tourists will be increasingly important aspect of health safety, hygienic conditions in accommodation facilities, adequate health care and insurance. By examining the impact of risk perception on the future behavior of tourists, Bae i Chang (2020) stressed the importance

of untact tourism as a form of tourism that provides health-protective behavior.

Within this chapter the authors presented the most significant theoretical and empirical findings which indicate that the risk perception and its influence on undertaking travels in the post-COVID period has gained significantly in importance in tourism research. Bearing this in mind, following the authors will present the results of the empirical research conducted in Serbia.

Research methodology

The purpose of this study is to examine travel risk perception, travel behavior during travel and the travel frequency among Serbian residents when the individual characteristics of the respondents are controlled. In order to achieve the set goal of the empirical research, the authors collected primary data using a structured questionnaire, which contained two groups of questions, first being about the personal characteristics of the respondents (gender, age and education) as well as the question about the frequency of travel. Questions, which involved respondents expressing the degree of agreement with the claims about the travel risk perception (7 claims) and the travel behavior during the trip (10 claims) are in the second group. Respondents rated the degree of agreement with the statements ranging from the lowest 1-I completely disagree to the highest score 5-I completely agree. The questionnaire is based on the research conducted by Neuburger and Egger (2020) with the aim of examining the perceptions of the Austrian, German and Swiss inhabitants about the COVID-19 virus, the risk of travel and their behavior during future travel, ie in the post-pandemic period.

The research was conducted in the period from February 4th to 17th, 2021, by sending a questionnaire in electronic form to potential respondents via e-mail. The questionnaire was distributed to 750 e-mail addresses, with 304 respondents filling out the questionnaire in an adequate way, which means that the percentage of total respondents is 40.5%. SPSS was used for data processing with appropriate methods (descriptive statistical analysis, Cronbach's Alpha coefficient, and linear regression). Descriptive statistical analysis was applied in order to present the socio-demographic profile of the respondents, while the reliability of the measurement scale has been verified by calculation of the Cronbach's Alpha coefficient. Linear regression was applied in order to analyze the impact of respondents' socio-

demographic characteristics on their perception of travel as well as on their behavior during travel after the end of the COVID-19 virus pandemic.

Results and discussion

The research sample included 304 respondents, of which 215 (70.7%) were female and 89 (29.3%) were male. Regarding the age structure, the largest number of respondents aged 21 to 30 participated in the research, respectively 119 of them (39.1%), after which follow the age groups 16-20 (35,2%), 31-40 (12,5%), 41-50 (7,9%), 51-60 (3,3%) and 61-70 (2%). According to the level of education, the most represented respondents in the sample are graduates (34.5%), followed by the respondents who have a secondary school (32.9%), PhD (15.8%), M.Sc. (13.8%), and college (3%). When asked about the frequency of travel, 61.2% of respondents said they travel 1-2 times a year, 22.7% of the total number of respondents travel 3 to 5 times a year, and 16.1% travel more than 5 times a year.

Table 1: *Reliability of measuring scales and mean values*

	M	SD	α
Travel risk perception	3.02	0.98	0.84
Tourism contributes to the spread of COVID-19.	2.33	1.29	
The spread of the virus greatly affects tourism.	4.30	1.14	
Staying in hotels is risky due to a large number of people from different countries who can be carriers of the virus.	3.12	1.38	
I am afraid that tourists who are near me are infected with the corona virus.	2.53	1.34	
A travel ban would have the effect of reducing the spread of the virus.	2.19	1.38	
Bussiness trips, which are organized by the companies during the pandemic is irresponsible.	3.20	1.54	
Visiting destinations with a large number of infected people is irresponsible	3.44	1.52	
Travel behavior during travel	2.56	1.11	0.92
My behavior during the trip will surely change due to the corona virus.	3.34	1.47	
Whether I will travel to another country depends on the way the media report on the situation in that country.	2.82	1.45	

I plan to cancel trips to countries with a large number of infected people.	2.88	1.54	
I plan to cancel trips to countries with where no cases of infection have been reported.	2.30	1.43	
At the moment, I'd rather not travel by plane/boat.	2.47	1.56	
At the moment I'd rather not travel by train.	2.48	1.56	
At the moment I'd rather not travel in the country.	1.89	1.30	
At the moment, I'd rather avoid big events.	2.92	1.59	
I'd rather avoid tourist attractions in my hometown.	2.08	1.39	
I'd rather avoid any contact with tourists in my place of residence.	2.38	1.46	

Source: *Author's research*

The results of the descriptive analysis on the travel risk perception and tourist behavior during travel are shown in Table 1. By calculating the Cronbach's coefficient, it was determined that the reliability of the measuring scale is adequate ($\alpha > 0.7$). When it comes to the travel risk perception, the highest degree of agreement of the respondents is for the claim The spread of the virus greatly affects tourism ($M = 4.30$). In the case of tourist behavior during the trip, the highest average score is 3.34 for the statement My travel behavior will certainly change due to the corona virus (Table 1).

Multiple linear regression was applied in order to determine the influence of travel behavior during travel and travel frequency on the travel risk perception. Predictor variables in the model are the travel behavior during the trip and the travel frequency, while the criterion variable is the travel risk perception. The travel risk perception and the travel behavior during the trip were calculated as an average score. Travel frequency is a dichotomous variable coded as follows: 0-once to twice a year and 1-three and more times a year. Preliminary analysis was conducted to check whether the assumptions for the use of this test were violated: normality, linearity, multicollinearity and homoskedasticity. It was determined that there was no major violation of the preconditions for use of multiple linear regression. Two predictor variables explain 55.4% of the variance of the criterion variable - Travel risk perceptions, $F(2, 301) = 186.77$; $p = 0.00$. The perception of travel risk is significantly influenced by the travel

behavior during the trip (β = 0.74; p = 0.00). Tourists' behavior during travel is positively related to the travel risk perception. If travel behavior increases by one standard deviation (1.11) the travel risk perception increases by 0.74 standard deviations (Table 2).

Table 2: *Influence of travel behavior during travel and travel frequency on travel risk perception*

	Non-standardized coefficient		Standardized coefficient		
	B	SE	β	t	p
Behavior during travel	0.655	0.034	0.741	19.156	0.000
How often you travel	-0.052	0.078	-0.026	-0.671	0.502

Source: *Author's research*

Hierarchical multiple linear regression was applied to check the influence of travel behavior during travel and the frequency of travel on the travel risk perception, when personal characteristics are controlled. Predictor variables in the model are the travel behavior during the trip and the travel frequency, while the criterion variable is the travel risk perception. The travel risk perception and the travel behavior during the trip were calculated as an average score. Travel frequency is a dichotomous variable coded as follows: 0-once to twice a year and 1-three or more times a year. The control variables in the model are gender, education and age of the respondents. All three control variables are dichotomous variables coded as dummy variables (gender: 0-female and 1-male; education: 0-secondary and higher/higher secondary and 1-doctoral, master and basic academic studies and age-from 16 to 30 and 1-from 31 to 70 years). Preliminary analysis was conducted to check whether the assumptions for the use of this test were violated: normality, linearity, multicollinearity and homoskedasticity. No major violation of the preconditions for the use of application of the mentioned analysis was determined.

Personal characteristics (gender, age, and education) explain 0.3% of the variance of the criterion variable – Travel risk perception. When predictor variables (travel behavior and travel frequency) are included in the model, the model as a whole (predictor and control variables) explains 56.8% of the variance of the criterion variable - Travel risk perception, F (5, 298) = 78.50; p = 0.00. Predictor variables explain an additional 56.6 variants of the criterion variable - Travel risk perception, R2change = 0.566, F change

(2, 298) = 195.37; p = 0.00. The travel risk perception is significantly influenced by the travel behavior during the trip (β = 0.76; p = 0.00). Tourists' behavior during travel is positively related to the travel risk perception. If travel behavior increases by one standard deviation (1.11) the of travel risk perception increases by 0.76 standard deviations. Of the control variables, the travel risk perception is significantly influenced by age (β = -0.11; p = 0.01) and education (β = 0.08; p = 0.04). In the final model, age was negatively associated with travel risk perception, and in the model only with control variables it was positively associated. Older respondents (aged 31 to 70) perceive the travel risk to be 0.11 standard deviations lower than young (aged 16 to 30). In the final model, education is positively associated with travel risk perception, as in the model only with control variables. More educated respondents (doctoral, undergraduate, and master studies) perceive travel risk by 0.08 standard deviations higher than respondents with high school and college (Table 3).

Table 3: *Influence of travel behavior during travel and travel frequency on travel risk perception when personal characteristics are controlled*

	Non-standardized coefficient		Standardized coefficient		
	B	SE	β	T	p
Gender	0.076	0.083	0.035	.908	0.365
Age	**-0.256**	**0.092**	**-0.114**	**-2.780**	**0.006**
Education	**0.166**	**0.081**	**0.081**	**2.053**	**0.041**
Behavior during travel	**0.671**	**0.034**	**0.760**	**19.552**	**0.000**
How often you travel	-0.033	0.079	-0.016	-.413	0.680

Source: *Author's research*

Concluding remarks

The pandemic of COVID-19 has greatly changed the behavioral patterns of tourists during travel, but also their future travel intentions. Tourists are more than ever aware that travel during a pandemic can negatively affect their health, so they are very careful when choosing a destination, activities during the trip and length of stay in the destination. In this paper, the authors have presented the research results of attitudes of residents of the Republic Serbia about going on journeys in the period after the pandemic of virus COVID-19. The results clearly indicate that Serbian residents are

aware of the impact of pandemic of COVID-19 on the travel as well on their future travel behavior. The results of multiple linear regression showed that tourists' behavior during travel is positively related to the perception of travel risk. The results of hierarchical multiple linear regression showed that the travel risk perception is significantly influenced by age and education. The scientific significance of the presented research results is reflected in a more completely analysis of travel risk perception as well as the behavior of tourists during travel after the end of the pandemic. Practical contribution refers to the use of research results by the bearer of tourism development to define an adequate strategy for communication with tourists. In the context of the global health crisis, it is very important to raise awareness among tourists about the safety of the destination for their stay, but also about the fact that hygiene in the destination is at a high level and that travel does not endanger the health of tourists. The fact that research was limited to the Serbian residents is primary limitation of this paper. Therefore, the recommendation for future research would be to include residents of other countries in the analysis. Another limitation of the research relates to the general examination of the attitudes of Serbian residents without focusing on a particular type of destination or travel. In this sense, future research should be more specific. Recommendations for future research are to examine the impact of tourists' personal characteristics on and travel intentions in other tourist destinations during and after a pandemic.

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