APPLICATION OF THE PPM MODEL IN ASSESSING THE IMPACT OF ECONOMIC FACTORS ON THE SELECTION OF AN AGRO-TOURISM DESTINATION AFTER COVID-19

Tamara Gajić¹, Dragan Vukolić², Filip Đoković³, Marija Jakovljević⁴, Jovan Bugarčić⁵, Ivana Jošanov Vrgović⁶, Slobodan Glišić⁷

*Corresponding author E-mail: <u>vukolicd@yahoo.com</u>

ABSTRACT ARTICLE INFO The tourism industry is one of the industries most affected **Original** Article by the Covid-19 pandemic. Understanding the motivation Received: 22 May 2023 for travel is essential for the tourism development of the destination and long-term business. This study used the push-Accepted: 10 August 2023 pull-mooring model (PPM model) to explain the factors that influence the decision of tourists to visit agritourism doi:10.59267/ekoPolj2303755G destinations in Serbia after the Covid-19 pandemic, UDC 338.48-53:63]:[616with an emphasis on the economic factors of travel. The 036.21:578.834 results obtained by multiple regression analysis indicate a significant effect of economic, as well as other factors within Kevwords: the model, on the decision of tourists. The significance of the research is reflected in the creation of a realistic Agrotourism, PPM model, picture of the influence of factors on tourists' decisions, and economic factors, Serbia therefore on the creation of future management steps in the management of an agro-tourism destination. JEL: R23, Z32

5 Jovan Bugarčić, MSc, Faculty of Hotel Management and Tourism University of Kragujevac, Vojvođanska 5a, 36210, Vrnjačka Banja, Serbia. E-mail: bugarcicjovan@gmail.com, ORCID ID (https://orcid.org/0000-0002-6104-2939)

- 6 Ivana Jošanov Vrgović, PhD, College of Organizational Studies EDUKA, 11000 Belgrade, Serbia, Phone: + 381 64 648 32 03. E-mail: josanov.vrgovic@gmail.com, ORCID ID (https:// orcid.org/0000-0003-3010-3206)
- 7 Slobodan Glišić, PhD, Academy of Professional Studies South Serbia, Partizanska 7, 16 000Leksovac. E-mail: glisictfl@gmail.com, ORCID ID (https://orcid.org/0000-0002-0772-0831)

http://ea.bg.ac.rs

¹ Tamara Gajić, PhD, Geographical Institute "Jovan Cvijić" SASA, Belgrade 11000, Serbia. South Ural State University, Institute of Sports, Tourism and Service, Chelyabinsk, Russia. Faculty of Hotel Management and Tourism University of Kragujevac, Vojvođanska 5a, 36210 Vrnjačka Banja, Serbia. E-mail: tamara.gajic.1977@gmail.com, ORCID ID (https://orcid.org/0000-0003-3016-8368)

² Dragan Vukolić, MSc, Faculty of Hotel Management and Tourism University of Kragujevac, Vojvođanska 5a, 36210, Vrnjačka Banja, Serbia. University of Business Studies, Faculty of Tourism and Hotel Management, Banja Luka, Bosnia and Herzegovina. E-mail: vukolicd@ yahoo.com, ORCID ID (https://orcid.org/0000-0002-6364-9849)

³ Filip Đoković, PhD, College of Organizationl Studies - EDUKA, 11000 Belgrade, Serbia, Phone: + 381 64 648 32 03. E-mail: fdokovic@vos.edu.rs, ORCID ID (https://orcid.org/0000-0002-2342-9358)

⁴ Marija Jakovljević, PhD, Belgrade Academy of Business and Art Vocational Studies, department of business and IT studies, department of Legal and Sociological Sciences, Kraljice Marije 73, 11000 Beograd. E-mail: marija.jakovljevic@bpa.edu.rs

Introduction

Due to the Covid-19 virus pandemic, the tourism industry has lost more than 4 trillion dollars (UNWTO, 2023). The number of tourists on the world level decreased by about 70% in 2021 (Gajić et al., 2023). In countries that are developing, the situation is even more drastic, so it is estimated that the number of tourists moving to other destinations has decreased by 80% (UNWTO, 2023). In order for the tourism industry to recover as soon as possible after the end of the pandemic, it is necessary to investigate in detail the motivation of tourists for travel, during and after the pandemic. In addition, research on factors that influence travel motivation, travel mode preferences directly contributes to the development of strategies for the tourism industry and other stakeholders (Arbulú et al., 2021). Every time international media reports on a destination, tourists often change their travel plans, postpone or cancel their pre-scheduled travel plans (Zheng et al., 2020). If the pandemic continues longer, it negatively affects tourism, reduces significant revenues and causes liquidity problems (Gössling et al., 2020). Small and medium-sized tourism enterprises, tourism workers and destinations have shown their vulnerability during crisis situations such as the Covid - 19 pandemic (Basnyat & Sharma, 2021). Unhindered movement of tourists is necessary even in crises such as this pandemic in order to maintain the destinations. Due to the coronavirus alone, as of May 18, 2020, 100% of destinations worldwide still have some travel restrictions in place, and 75% have closed their borders entirely (UNWTO, 2023). As of July 5, 2021, the restrictions report mentions that one-third of travel destinations are partially closed (Twining Ward and McComb, 2020).

In this study, a research PPM model was used to determine the influence of factors on the decision of tourists to visit agritourism destinations in Serbia after the pandemic. The significance of the research is reflected in the addition of existing literature that deals with the development of agritourism in Serbia, before and after the pandemic. Also, the importance of the study is reflected in the application of the obtained results as a starting information base for the development of strategic measures for the future management of agritourism destinations in Serbia.

Literature review

The influence of various factors on the choice of destination with a focus on economic factors

When tourists choose a destination, they are influenced by the destination's images and attributes as well as infrastructure (Baloglu and McCleary, 1999; Ewing and Haider, 1999; Huybers, 2003). When choosing a tourist destination, tourists choose the most optimal destinations taking into account many factors (Hamilton and Lau, 2006). Tourists have the need to choose the least risky destination as their tourist destination (George and Booyens, 2014; Gajić et al., 2022). A tourist destination can become an undesirable destination if the tourist perceives a certain risk and therefore chooses another destination (Crompton, 1992).

For many people, tourism is a way to satisfy their psychological needs such as travel, pursuit of leisure activities, exploration of novelties and opportunities, self-expression and confidence, creativity, competition, need for relaxation and belonging. Intrinsic motivations refer to ensuring one's abilities on various emotional fronts (Gajić et al., 2023). Intrinsic motivation drives tourists to choose tourism for intangible rewards such as entertainment, safety and other emotional needs. Other essential factors of motivation are: attitudes of tourists, tourist's perception, values or beliefs, tourist's personality. In tourism, there are external motives that can influence tourists and pull them towards a certain motivation and subsequent decision: extrinsic motivation, place of origin, family, age, culture, market (Gajić et al., 2023a). Economic factors are one of the main factors that most affect travel. In most studies, a clear link between increased travel and increased income can be seen. The price is a significant, perhaps the deciding factor for choosing a certain destination. Serbia belongs to destinations that are considered cheaper compared to others in Europe and the region (Zheng et al., 2020). A clear example of this in recent years is the increase in international travel by Chinese, which correlates with the growing middle class in China over the past 20 years as a result of the liberalization of the economy (Ha & Jang, 2013).

However, foreign tourists also seek vacations in rural areas, especially those that are poorly explored and have different natural beauties than those already seen in Europe and the world (Bugarčić et al., 2023). Agritourism, which is considered a subcategory of rural tourism, is practiced in rural areas with agritourism activities. It is mostly attended by middle-income families, far from their place of residence, and the aim of the movement is the accumulation of information and experiences, which will satisfy the needs of visitors to these rural locations (Vukolić et al., 2023). Consumers in agritourism feel good in the countryside, more precisely in an agritourism household, because they have the opportunity to experience local products, healthy food, authentic culture, the joy of spending free time in nature in a less polluted environment and the like (Popescu & Andrei, 2011; Пасько et al., 2019; Stanciu et al., 2019; Stoica et al., 2022; Vukolić et al., 2023). The classification of consumer types in agrotourism is based on demographic, social, behavioral and other criteria.

Explanation of the PPM model in the existing literature

The PPM model originates from migration theories, which explain the factors that cause people to move from one area to another, and is currently used in various fields such as tourism (Hou et al., 2011; Hsieh et al., 2012; Xu et al., 2014). The best explanation of the PPM model can be seen from Heberle's research where the factors of migration are highlighted as push and pull where the push was the factor that led or "forced" people to go to another place in a negative sense while the pull was the factor which led people to go elsewhere in a positive sense (Bansal et al., 2005).

More specifically, research points out (Lee, 1966) that there are intermediate factors that are not positive or negative, and in addition to these factors, personal preferences can also act as obstructive factors against movement. After that, a factor called mooring http://aa.hg.ag.rs.

was added (Moon, 1995), and the existing push-pull model was extended to the push-pull-mooring model (hereinafter PPM).

The PPM model comprehensively explains and provides a useful and appropriate perspective for identifying changes in consumer behavior and intentions (Hou et al., 2011). The PPM model is derived from the push-pull paradigm and it is recognized as a theory that helps to understand changes in consumer behavior (Xu et al., 2014; Hou and Shiau, 2020). In tourism, very few studies have been conducted on this topic, in Serbia there are almost none.

In the field of hotel industry, in order to investigate the intentions of hotel users to change their goal, Sun (2014) composed factors with hotel characteristics and perceived risks and then composed mooring factors with individual characteristics to conduct the study. In hospitality studies (Ha and Jang, 2013; Jung and Yoon, 2012; Park and Jang, 2014), perceived quality, satisfaction, satiety and loyalty were used as push - pull factors, while personality, variety seeking and participation in purchase decision used as mooring factors. Although PPM is derived from the push-pull concept, which is often used to explain travel motives, most applications of the PPM model in the field of tourism have been conducted with a focus on the behavior of specific consumers. Since post-Covid-19 tourists require replacement or changes in various tourism-related behaviors, such as continuing travel or changing destinations, the application of the PPM model is considered valid to achieve the purpose of this study. The PPM model is a tool for understanding changes in consumer behavior or changes in behavioral intentions and enables complex studies of consumer behavior that include not only motive factors but also obstructive factors. Therefore, in this study, it is estimated that the PPM model can be applied as an internal factor that promotes the continuation and intention of trips that have been stopped due to Covid - 19.

In tourism, push can be seen as a characteristic of an emotional part that occurs within the traveler, such as an individual's urge to escape from the repetitive daily life (Baloglu and Uysal, 1996; Klenosky, 2002; Kim et al., 2003; Yoon and Uysal, 2005). Push factors include emotional characteristics that arise from the psychological causes of travelers, such as the desire to vacation, and they are the internal motives of individuals, including behavioral elements that lead potential tourists to travel for reasons such as vacation, escape from daily routine, health care and similar (Chon, 1989; MacCannell, 2013). Despite the fact that safety has been an important motivator for travel (Pyo et al., 1989), and that concerns about safety and hygiene have increased due to prolonged Covid-19, there are reasons for the increase in the desire of potential tourists to travel. It can be expected that these changes in the environment have affected the pressure factors that cause tourism consumer travel behavior after Covid - 19, so they should be significantly different from those before Covid - 19. That is, it can be said that there are limitations in considering the changed tourist motives of consumers by applying the existing measurement units as they are, as well as that there is a need to introduce new measurement units. Therefore, in this study, internal motives for the promotion of travel participation are defined as push factors.

Pull factors are motivators related to the characteristics or attractive attributes of a tourist destination, and include factors that influence the choice of destination (Bansal et al., 2005; Kim et al., 2003). Motivators in this sense are those motivators that attract travelers to a tourist destination, such as the natural environment, historical events, facilities, infrastructure and others (Baloglu and Uysal, 1996; Klenosky, 2002; Yoon and Uysal, 2005). Tourists' expectations and perceptions of tourist destinations, benefits that can be realized at tourist destinations and images of tourist destinations are also seen as pull factors (Prayag et al., 2020). Meanwhile, studies on the role of social media in the decision-making process by applying pull factors explain that social media change the decision-making process (Neuhofer et al., 2012; Kibby, 2020) and that they especially influence the production of related information, marketing, management, and decision-making processes more so in the case of experiential products such as tourism (Leung et al., 2013).

Tourism marketing activities, which have slowed down for some time due to Covid-19, continue, and the repeated exposure of travel information via social networks increases the interest of potential tourists in travel (Vukolić et al., 2022; Gajić et al., 2022). Furthermore, the preference for small group individual tours has increased over large package tours, and consumer views on travel behavior decisions are changing, such as the desire to minimize contact at travel destinations. However, most of the items traditionally used as pull factors (e.g., availability, attractiveness, price, etc.) are items that are adapted from a physical point of view and have measurement limitations to be used as appropriate pull factors in situations where the choice between continuation and withdrawal from traveling abroad should be done before planning a trip abroad with a specific fixed destination because of the emergence of Covid-19. Due to the limitation of push and pull factors to comprehensively explain the intentions of consumers who change their intentions and behavior, mooring factors emphasize or can even influence the decision-making itself (Zhang et al., 2014; Venkatesh and Brown, 2001). That is, in situations where external risk factors such as Covid-19 have appeared, in addition to social influences, personal dispositions such as the tendency to avoid uncertainty, mooring factors can influence decision-making.

Kim et al. (2003) analyzed correlations between push and pull factors, with the aim of examining the relationship in settings involving more common domestic travel decisions. They found significant correlations between various push and pull factors and that age, occupation, gender, and income influence these correlations. Although understanding the relationship between push and pull motivation is important, there are not many studies that address this topic except Kim et al. (2003).

Covid - 19 has increased the concern of tourist consumers about safety and hygiene. The level of recognition of safety and hygiene problems may vary according to personal moods and social situations, and may act as a factor that interferes with travel behavior. Even if an individual's desire to travel is strong, the burden of social norms and views can act as an obstructive factor in determining travel behavior (Cheng and Huang, 2013; Seo et al., 2018; So et al., 2021), and infectious diseases such as Covid – 19 are

becoming factors that disrupt travel behaviour. Decisions in the case of persons with a strong disposition to avoid risks (Kim and Kim, 2010). As such, there are various obstructive factors in the process through which a potential tourist determines his tourist behavior, so it can be predicted that the sensitivity of that person will be very high, especially at a time when the world is exposed to travel risks due to Covid - 19.

Therefore, it can be said that uncovering decision-making factors in the process through which potential tourists' travel motives lead to travel behavior and the extent to which these factors influence actual travel behavior is very important for future research on consumer behavior in tourism.

This study will add mooring factors that are not verified in the existing push and pull model in order to attempt a complex study of consumer behavior in tourism. The Republic of Serbia, undoubtedly, has an excellent basis for the development of tourism (Pantić, 2016; Pantić and Milojević, 2019).

Based on the review of available literature, initial hypotheses were set:

H1: Pull factors have a significant effect on tourists' decision to visit agritourism destinations in Serbia after the pandemic.

H2: Push factors have a significant effect on tourists' decision to visit agritourism destinations in Serbia after the pandemic

H3: Mooring factors have a significant effect on tourists' decision to visit agritourism destinations in Serbia after the pandemic.

H4: Economic factors have the strongest influence on tourists' decision to visit agritourism destinations in Serbia after the pandemic.

Methodology

In order to achieve the stated goal of the research, the authors used the PPM (push-pullmooring) model by the authors Jeong-Joon Kim, Byeong-Cheol Lee and Hyo-Jeong Byun (2022), whose factors are given in Model 1. The authors added another question with the possibility of answering yes or no, and the question was, would you visit an agro-tourism destination? A total of 67.3% answered yes and 32.7% no. To analyze the obtained results SPSS version 23.00 software was used. Exploratory factor analysis determined the percentage of saturation for each factor, as well as the separation of all items into 15 factors (50 indicators) whose characteristic values exceed the acceptable value of 1. The number of factors was confirmed by a parallel model. The procedure of maximum variance rotation from the measurement process eliminated all options that had values below 0.3, while the results showed that the requirements of load and internal consistency as reliability requirements were met. Kaiser-Meyer-Olkin and Bartlett's test of sphericity. Also, a Cronbach reliability analysis was determined for each item, in order to establish the degree of reliability for each of the dimensions. Finally, a regression analysis was performed to determine the influence of the dimensions of the PPM model on the decision of tourists to visit rural destinations in Serbia.



Source: Authors

Participants and procedure

The research was conducted in the period from January 2023 to March 2023, on a total sample of 380 tourists who visited a total of 45 rural households in Vojvodina (145 questionnaires), Central Serbia (112 questionnaires) and Western Serbia (123 questionnaires). The research is of a volunteer character and was done with the help of students of the Faculty of Hotel Management and Tourism in Vrnjačka Banja. It was explained to the tourists in advance that the research is anonymous and that it will be used exclusively for the needs of scientific work. The authors set the age of 18 as the lower limit of the respondents. Table 1 shows data on the sociodemographic characteristics of the respondents.

Condor	Male 42.5%
Gender	Female 57.5%
	High school 36 %
Education	Faculty 60 %
	MSc, PhD 4 %
	18-30 - 18 %
Age	31-55 - 58 %
	>56 - 24 %
	Low (≤300*) 1.8 %
Earning	Average (300-600*) 66.9 %
	High (>600*) 31.3 %

Table 1. Sociodemographic characteristics of the respondents

	I have traveled abroad several times 45.3%	
Frequency of traveling	I travel abroad once a year 26.9 %	
	I travel abroad several times a year 27.8%	
	Austria 9.5%	
	Bosnia and Herzegovina 42,5 %	
Country of residence	Slovenia 12.3%	
Country of residence	Montenegro 5.7 %	
	Hungary 3.4%	
	Russia 26.6%	

Source: Authors

Results and discussion

The results of factor analysis, with promax rotation, indicated the existence of five factors within the push dimension. The first factor gathers indicators of the need for travel (23.8% of variance explained), the second factor has a total of five indicators with a percentage of explained variance of 12.4%. The third factor within the push dimension gathers indicators of the search for something new (9.37% of variance explained), the fourth factor with indicators that describe the respondents' mood explains a total of 7.56% of the variance, and finally the fifth factor with a total of three questions explains the largest percentage of the variance out of 6.84%. The reliability analysis confirmed that all measures used in the study are reliable, as Cronbach's alpha (α) for each construct is greater than 0.7 (Kaiser, 1974). The Kaiser–Meyer–Olkin (KMO) overall measure of sampling adequacy were above 0.60 (Kaiser, 1974) indicating that the data were appropriate for the principal component model. The Bartlett's test (Bartlett, 1954) of sphericity was significant (p = 0.000)

Factors	Indicators	Factor loadings	Variance explained	α
Need to travel	After Covid-19, I wanted to travel to agritourism destinations	0.818		
	After Covid-19, my desire to travel to agritourism destinations grew.	0.719		
	I'm sorry I can't travel to agritourism destinations after Covid-19.	0.795	23.871	0.712
	I would like to have new experiences through trips to agritourism destinations.	0.650		
	I often remember previous trips to agritourism destinations (before Covid – 19)	0.613		
	I feel depressed because of Covid-19	0.700		
Covid 19 - stress and escape	I am not motivated for anything after Covid-19	0.607		
	I lack vitality in my life because of Covid-19.	0.702	12 490	0.822
	My stress has increased due to Covid-19.	0.899	12.409	0.825
	I'm sorry I can't have free activities due to Covid-19.	0.754		

Table 2. Analysis of push factors

Factors	Indicators	Factor loadings	Variance explained	α	
	When I return from a trip, I organize information about the places I visited.	0.731			
	I am looking for new knowledge through travel.	0.738			
Search for new	I satisfy my curiosity about tourist destinations through travel.	0.825	9.376	0.789	
knowledge	I often see photos of my travels before Covid – 19.	0.822			
	I often talk to my acquaintances about my travel experiences before Covid-19.	0.636			
	I love new experiences through travel.	0.619			
	Even if I travel to agro-tourism destinations, I will not easily catch the virus.	0.889			
Mood	I am not very afraid of contracting the corona virus.	0.759	7.563	0.803	
	The level of quarantine in agritourism destinations is reliable.	0.840			
	If I follow the rules well, I won't get infected.	0.728			
Economic factors	Travel costs have been reduced since Covid-19.	0.725			
	My budget for tourism activities after Covid - 19 is ready.	0.839	6.846	0.877	
	Overall consumer spending has generally decreased since Covid-19.	0.737			
KMO = 0.823 Bartlett's test: 3071.640; df = 57; <i>p</i> = 0.00					

Table 3 shows the reliability results for each factor indicator belonging to the pull dimension from the PPM model. It is observed that the reliability values for all indicators are within acceptable limits. The experience factor gathers a total of 4 indicators and explains 24.7% of the variance. The second factor gathers questions related to efforts to improve hygiene and explains 13.25% of the questionnaire. The third factor explains 9.29% of the variance and contains a total of four indicators. The fifth factor Event and promotions explains the largest percentage of variance (8.36%).

Factors	Indicators	Factor loadings	Variance explained	α
Experience	I would like to experience local culture (festival, event, etc.) in agritourism destinations.	0.721		
	I would like to do shopping in agritourism destinations, to buy local specialties, etc.	0.702	24 719	0.842
	I would like to eat food in agritourism destinations	0.648	24./18	
	I would like to do unique (recreational) activities for experience in agritourism destinations	0.636		

Factors	Indicators	Factor loadings	Variance explained	α	
Safety	Agritourism destinations have a good quarantine policy	0.667			
	Agritourism destinations have well-established tourism safety guidelines	0.650	13.258	0.717	
	Agritourism destinations invest enough effort in quarantine activities	0.820			
	I am fascinated when I see online/offline promotions (for agritourism travel destinations)	0.676			
Media	Online/offline promotions (for agritourism travel destinations) catch my attention	0.668	0.000	0.750	
exposure	When I see agritourism travel destinations shown on TV, I follow the content with great attention	0.653	9.299	0.752	
	When I watch videos from agritourism destinations, I want to go there	0.693			
	Advance purchase discounts for some trips to agritourism destinations are attractive.	0.691			
Events and promotions	Flexible product policies related to travel products in agritourism destinations are attractive.	0.696	8.362	0.864	
	My interest grows when I see various promotions related to travel to agritourism destinations (discounts on transportation, tourist products, etc.)	0.673			
	KMO = 0,812 Bartlett's test: 3920,543; df = 57; p = 0,00				

Table 4 shows the results of factor loadings, variance explained and Cronbach's reliability analysis. It can be seen that a total of 4 factors and 19 indicators were selected within the mooring dimension of the PPM model. The first factor Risk perception brings together 4 indicators with high reliability and explains a total of 30.38% of the variance. The second factor called Economic factors explains a total of 17.06% of the variance with its 4 indicators. The risk aversion disposition factor explains 11.38% of the variance, while the fourth factor called Uncertainty explains 8.53% of the variance.

Table 4. Analysis of	mooring factors
----------------------	-----------------

Factors	Indicators	Factor loadings	Variance explained	α
Risk perception	I know that personal hygiene is important in the prevention of infectious diseases.	0.844		0.769
	I know that my infection is dangerous for others.	0.838	30,380	
	The risks of viral infection are clear to me.	0.845	201200	
	I often check information about infectious diseases.	0.804		

Economic	The infrastructure to agritourism destinations may be damaged if I travel to those destinations	0.805		0.772	
	Prices in agortourism destinations can increase if the number of tourists in them increases	0.804	17 (07		
factors	The tourist offer of agro-tourism destinations will be better if there are more tourists	0.808	17.007	0.773	
	If I travel to agritourism destinations, I can help the development of local residents	0.805			
	I prefer travel destinations that have been verified by others.	0.817			
	I prefer to plan my trip in advance so that it goes perfectly.	0.823			
Risk	I prefer travel destinations with strict hygiene.	0.817		0.872	
aversion disposition	I prefer travel destinations where safety (physical, bodily) is ensured.	0.828	11.380		
	Even if I want to go, I don't go to restricted travel areas.	0.826			
	Even if I want to go, I don't go to high travel warning areas.	0.812			
	If I travel to agritourism destinations, the locals will not like me.	0.819			
Uncertainty	If I travel to agritourism destinations, I will be exposed to the risk of infectious disease.	0.833			
	Now it would be too expensive to travel to agritourism destinations.	0.832	8.538	0.818	
	If I travel to agritourism destinations now, I won't be able to enjoy it enough.	0.844			
	New strains of Covid-19 (eg Omicron) can spread.	0.838			
KMO = 0,804 Bartlett's test: 3207.087; df = 70; p = 0,00					

Multiple regression analysis determined the influence of PPM model factors on the decision of tourists to visit agritourism destinations in Serbia after the COVID-19 pandemic. Table 5 shows the results of the analysis.

Madal	Unstandardized Coefficients		Standardized Coefficients	+	Sia
Iviodei	В	Std. Error	Beta		Sig.
Economic factors	0.891	0.179	0.118	2.189	0.03
Push	0.091	0.028	0.191	3.214	0.00
Pull	0.135	0.036	0.241	3.743	0.00
Mooring	0.124	0.037	0.207	3.327	0.00
R ² = 34.5%		H1 🗸 ; H2 🗸	✓ ; H3 ✓; H4 X		

*criterion variable: tourist decision to visit agro destinations

The results of the multiple regression analysis indicated a statistically significant effect of all factors on the decision of tourists to visit agritourism destinations in Serbia after the pandemic (F=12.045, p=0.00). The push factor is low and positively related to the tourist's decision (β =0.191, p=0.01, t=3.214). Then, the Pull factor also shows a low, but statistically significant effect on tourists' decision to visit agro destinations in Serbia after the pandemic (β =0.241, p=0.00, t=3.743). The mooring factor within the PPM model also shows a positive significant effect on the decision of tourists (β =0.207, p=0.01, t=3.327). All hypotheses are confirmed, except for hypothesis H4, because the strength of all factors is approximately the same.

Conclusion with limitations and future implications

The COVID-19 pandemic has brought great changes in the tourist movement itself, and the influence on tourists to change their decisions. Rural areas reached their peak in the number of overnight stays. Serbia recorded a record number of visits by domestic and foreign tourists during the pandemic. However, even after the declaration of the end of the pandemic, the trend of increasing tourist visits to rural and agricultural destinations continues in Serbia. Many factors have an influence on making travel decisions, among which economic factors have always been key to important directions of tourist movements. After the pandemic, the situation changed a little. Now, to a large extent, safety and healthy living dictate movement trends.

The authors conducted a survey in agro-tourism households in Vojvodina, Central and Western Serbia, on a total sample of 380 respondents, who stayed in those households. The aim was to determine the influence of the PPM model factors on the decision of tourists to visit agritourism destinations, after the pandemic. The PPM model by Jeong-Joon Kim, Byeong-Cheol Lee and Hyo-Jeong Byun (2022) was used. There are various factors that influence the choice of a tourist destination. The goal of the research was to determine the extent to which each of the factors has an impact, with an emphasis on economic factors. It is important to clarify the definition of the motive of the trip, especially in relation to the purpose of the trip. Motive is not the same as purpose. Motives are the basic psychological reasons why we travel and are often not considered openly, unlike the purpose of travel. They reflect the needs of the individual and are often difficult to describe in words. The results obtained by multiple regression analysis indicated a significant effect of all factors of the PPM model on the decision of tourists. The impacts are positive, but quite low. The initial hypotheses that speak about the given impact have been confirmed. It turns out that economic factors have an equal influence on the decisions of tourists to visit agro destinations and households after the pandemic. Among the three determinants assumed by the PPM model in behavioral changes, the push factor is a factor that forces users to switch to a new service due to the negative elements of the existing service, while the pull factor is a factor that attracts users based on the attractiveness of the new service. Finally, the mooring factor plays a role in the push and pull effects given the situational and social circumstances related to the individual's motives (Socoliuc et al., 2018).

The obtained results can serve to expand the existing literature on the topic of the influence of environmental risks on the behavior of tourist consumers. This would strengthen information in many segments of the tourism industry in the domain of theoretical studies. By observing such results, it is possible to predict the reactions of tourists in advance and propose an offer based on their demand. The findings can be used as methodological support and practical recommendations for tourism and other industries when developing business strategies, taking into account the influence of economic and other research factors on the tourist's decision to choose a destination. These impacts can have longlasting effects on communities and economies and can be challenging for tourism and the economy to recover from the pandemic.

Conflict of interests

The authors declare no conflict of interest.

References

- 1. Arbulú, I., Razumova, M., Rey-Maquieira, J., & Sastre, F. (2021). Measuring risks and vulnerability of tourism to the COVID-19 crisis in the context of extreme uncertainty: The case of the Balearic Islands. *Tourism Management Perspectives*, *39*, 100857. https://doi.org/10.1016/j.tmp.2021.100857
- Baloglu, S., & McCleary, K. W. (1999). A model of destination image formation. Annals of tourism research, 26(4), 868-897. https://doi.org/10.1016/S0160-7383(99)00030-4
- 3. Baloglu, S., & Uysal, M. (1996). Market segments of push and pull motivations: A canonical correlation approach. *International journal of contemporary Hospitality Management*, 8(3), 32-38. https://doi.org/10.1108/09596119610115989
- 4. Bansal, H. S., Taylor, S. F., & St. James, Y. (2005). "Migrating" to new service providers: Toward a unifying framework of consumers' switching behaviors. *Journal of the Academy of Marketing Science*, 33(1), 96-115. https://doi.org/10.1177/0092070304267928
- 5. Bartlett, M. S. (1954). A note on the multiplying factors for various χ2 approximations. Journal of the Royal Statistical Society, Series B (Methodological), 16, 296-298.
- Basnyat, S., & Sharma, S. (2021). Effects of COVID-19 crisis on small and mediumsized hotel operators: insights from Nepal. *Anatolia*, 32(1), 106-120. https://doi.org/1 0.1080/13032917.2021.1879184
- Bugarčić, J., Cvijanović, D., Vukolić, D., Zrnić, M., Đoković, F., & Gajić, T. (2023). Gastronomy as an effective tool for rural prosperity – evidence from rural settlements in Republic of Serbia. *Economics of Agriculture*, 70(1), 169-183. doi:10.59267/eko-Polj2301169B
- Cheng, H. H., & Huang, S. W. (2013). Exploring antecedents and consequence of online group-buying intention: An extended perspective on theory of planned behavior. *International Journal of Information Management*, 33(1),185-198. https://doi. org/10.1016/j.ijinfomgt.2012.09.003

- 9. Chon, K. S. (1989). Understanding recreational traveler's motivation, attitude and satisfaction. *The tourist review*, 44(1), 3-7. https://doi.org/10.1108/eb058009
- 10. Crompton, J. (1992). Structure of vacation destination choice sets. Annals of tourism research, 19(3), 420-434. https://doi.org/10.1016/0160-7383(92)90128-C
- 11. Ewing, G., & Haider, W. (1999). Estimating what affects tourist destination choice. *Consumer behavior in travel and tourism*, 35-58.
- Gajić, T., Đoković, F., Blešić, I., Petrović, M. D., Radovanović, M. M., Vukolić, D., ... & Mićović, A. (2023). Pandemic boosts prospects for recovery of rural tourism in Serbia. *Land*, 12(3), 624. https://doi.org/10.3390/land12030624
- Gajić, T., Vukolić, D., Petrović, M. D., Blešić, I., Zrnić, M., Cvijanović, D., ... & Anđelković, Ž. (2022). Risks in the Role of Co-Creating the Future of Tourism in "Stigmatized" Destinations. *Sustainability*, 14(23), 15530. https://doi.org/10.3390/ su142315530
- George, R., & Booyens, I. (2014, December). Township tourism demand: Tourists' perceptions of safety and security. *In Urban Forum* (Vol. 25, pp. 449-467). Springer Netherlands. https://doi.org/10.1007/s12132-014-9228-2
- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. Journal of sustainable tourism, 29(1), 1-20. https://doi.org/10.1080/09669582.2020.1758708
- Ha, J., & Jang, S. S. (2013). Variety seeking in restaurant choice and its drivers. *International Journal of Hospitality Management*, 32, 155-168. https:// doi.org/10.1016/j.ijhm.2012.05.007
- 17. Hamilton, J. M., & Lau, M. A. (2006). The role of climate information in tourist destination choice decision making. *In Tourism and global environmental change* (pp. 243-264). Routledge.
- Heberle, R. Social Mobility. pp. 215–225. Available online: https://www.jstor.org/ stable/2766092 (accessed on 21 May 2023).
- 19. Hou, A. C., & Shiau, W. L. (2020). Understanding Facebook to Instagram migration: a push-pull migration model perspective. *Information Technology & People*, 33(1), 272-295. https://doi.org/10.1108/ITP-06-2017-0198
- 20. Hou, A. C., Chern, C. C., Chen, H. G., & Chen, Y. C. (2011). 'Migrating to a new virtual world': Exploring MMORPG switching through human migration theory. *Computers in Human Behavior*, 27(5), 1892-1903. https://doi.org/10.1016/j. chb.2011.04.013
- Hsieh, J. K., Hsieh, Y. C., Chiu, H. C., & Feng, Y. C. (2012). Post-adoption switching behavior for online service substitutes: A perspective of the push-pullmooring framework. *Computers in Human Behavior*, 28(5), 1912-1920. https:// doi.org/10.1016/j.chb.2012.05.010
- 22. Huybers, T. (2003). Modelling short-break holiday destination choices. *Tourism Economics*, 9(4), 389-405. https://doi.org/10.5367/00000003322662989

- Jung, H. S., & Yoon, H. H. (2012). Why do satisfied customers switch? Focus on the restaurant patron variety-seeking orientation and purchase decision involvement. *International Journal of Hospitality Management*, 31(3), 875-884. https://doi.org/10.1016/j.ijhm.2011.10.006
- 24. Kaiser, H. F. (1974). An index of factorial simplicity. Psychometrika, 39 (1), 31-36.
- 25. Kibby, M. (2020). Instafamous: Social media influencers and Australian beaches. *Writing the Australian Beach: Local Site, Global Idea*, 57-70. https://doi.org/10.1007/978-3-030-35264-6_4
- Kim, J. H., & Kim, C. (2010). E-service quality perceptions: a cross-cultural comparison of American and Korean consumers. *Journal of Research in interactive Marketing*. https://doi.org/10.1108/17505931011070604
- Kim, S. S., Lee, C. K., & Klenosky, D. B. (2003). The influence of push and pull factors at Korean national parks. *Tourism management*, 24(2), 169-180. https:// doi.org/10.1108/17505931011070604
- 28. Klenosky, D. B. (2002). The "pull" of tourism destinations: A meansend investigation. *Journal of travel research*, 40(4), 396-403. https://doi. org/10.1177/004728750204000405
- 29. Lee, E. S. (1966). A theory of migration. Demography, 3, 47-57.
- Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2013). Social media in tourism and hospitality: A literature review. *Journal of travel & tourism marketing*, 30(1-2), 3-22. https://doi.org/10.1080/10548408.2013.750919
- 31. MacCannell, D. (2013). *The tourist: A new theory of the leisure class*. Univ of California Press.
- 32. Moon, B. (1995). Paradigms in migration research: exploring'moorings' as a schema. *Progress in human geography*, 19(4), 504-524. https://doi.org/10.1177/030913259501900404
- Neuhofer, B., Buhalis, D., & Ladkin, A. (2012). Conceptualising technology enhanced destination experiences. *Journal of Destination Marketing & Management*, 1(1-2), 36-46. https://doi.org/10.1016/j.jdmm.2012.08.001
- Pantić, N. (2016, June). Impact of tourism on macroeconomic stability and economic development of the Republic of Serbia. In Tourism International Scientific Conference Vrnjačka Banja-TISC (Vol. 1, No. 2, pp. 153-168).
- Pantić, N., & Milojević, I. (2019). Investments and employment in tourism in the Republic of Serbia. Hotel and Tourism Management, 7(1), 95-104. doi:10.5937/ menhottur1901095P
- Park, J. Y., & Jang, S. S. (2014). Why do customers switch? More satiated or less satisfied. *International Journal of Hospitality Management*, 37, 159-170. https:// doi.org/10.1016/j.ijhm.2013.11.007

- Popescu, G., & Andrei, J. (2011). From industrial holdings to subsistence farms in Romanian agriculture. Analyzing the subsistence components of CAP. *Agricultural Economics*, 57(11), 555-564.
- Prayag, G., Gannon, M. J., Muskat, B., & Taheri, B. (2020). A serious leisure perspective of culinary tourism co-creation: The influence of prior knowledge, physical environment and service quality. *International Journal of Contemporary Hospitality Management*, 32(7), 2453-2472. https://doi.org/10.1108/ IJCHM-10-2019-0897
- 39. Pyo, S., Mihalik, B. J., & Uysal, M. (1989). Attraction attributes and motivations: A canonical correlation analysis. *Annals of Tourism Research*, *16*(2), 277-282.
- Seo, S., Kim, K., & Jang, J. (2018). Uncertainty avoidance as a moderator for influences on foreign resident dining out behaviors. *International Journal of Contemporary Hospitality Management*, 30(2), 900-918. https://doi.org/10.1108/ IJCHM-03-2016-0152
- 41. So, K. K. F., Kim, H., & Oh, H. (2021). What makes Airbnb experiences enjoyable? The effects of environmental stimuli on perceived enjoyment and repurchase intention. *Journal of Travel Research*, 60(5), 1018-1038. https://doi.org/10.1177/0047287520921241
- 42. Socoliuc, M., Grosu, V., Hlaciuc, E., & Stanciu, S. (2018). Analysis of social responsibility and reporting methods of Romanian companies in the countries of the European Union. *Sustainability*, 10(12), 4662.
- Stoica, M., Antohi, V. M., Alexe, P., Ivan, A. S., Stanciu, S., Stoica, D., ... & Stuparu-Cretu, M. (2022). New strategies for the total/partial replacement of conventional sodium nitrite in meat products: A review. *Food and Bioprocess Technology*, 1-25.
- 44. Sun, J. (2014). How risky are services? An empirical investigation on the antecedents and consequences of perceived risk for hotel service. *International Journal of Hospitality Management*, *37*, 171-179. https://doi.org/10.1016/j. ijhm.2013.11.008
- 45. Stanciu, S., Virlanuta, F. O., Dinu, V., Zungan, D., & Antohi, V. M. (2019). The perception of the social economy by agricultural producers in the north-east development region of Romania. Transformations in Business & Economics, 18.
- 46. Twining Ward, L., & McComb, J. F. (2020). COVID-19 and Tourism in South Asia. http://hdl.handle.net/10986/34050
- 47. UNWTO. Global Economy Could Lose Over \$4 Trillion Due To COVID-19 Impact on Tourism. Available online: https://www.unwto.org/news/global-economy-couldlose-over-4-trillion-due-to-covid-19-impact-on-tourism (accessed on 15 May 2023).
- 48. UNWTO. Global Economy Could Lose Over \$4 Trillion Due To COVID-19 Impact on Tourism. Available online: https://www.unwto.org/news/global-economycould-lose-over-4-trillion-due-to-covid-19-impact-on-tourism (accessed on 17 May 2023).

- 49. Venkatesh, V., & Brown, S. A. (2001). A longitudinal investigation of personal computers in homes: Adoption determinants and emerging challenges. *MIS quarterly*, 71-102.
- 50. Vukolić, D., Gajić, T., & Penić, M. (2022). The effect of social networks on the development of gastronomy-the way forward to the development of gastronomy tourism in Serbia. *Journal of Tourism Futures*, (ahead-of-print).
- Vukolić, D., Gajić, T., Petrović, M. D., Bugarčić, J., Spasojević, A., Veljović, S., ... & Petrović, T. (2023). Development of the Concept of Sustainable Agro-Tourism Destinations—Exploring the Motivations of Serbian Gastro-Tourists. *Sustainability*, 15(3), 2839. https://doi.org/10.3390/su15032839
- 52. Xu, Y. C., Yang, Y., Cheng, Z., & Lim, J. (2014). Retaining and attracting users in social networking services: An empirical investigation of cyber migration. *The Journal of Strategic Information Systems*, 23(3), 239-253. https://doi.org/10.1016/j. jsis.2014.03.002
- Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism management*, 26(1), 45-56. https://doi.org/10.1016/j.tourman.2003.08.016
- Zhang, H., Lu, Y., Gupta, S., Zhao, L., Chen, A., & Huang, H. (2014). Understanding the antecedents of customer loyalty in the Chinese mobile service industry: a push– pull–mooring framework. *International Journal of Mobile Communications*, 12(6), 551-577. https://doi.org/10.1504/IJMC.2014.064901
- Zheng, Y., Goh, E., & Wen, J. (2020). The effects of misleading media reports about COVID-19 on Chinese tourists' mental health: a perspective article. *Anatolia*, 31(2), 337-340. https://doi.org/10.1080/13032917.2020.1747208
- 56. Пасько, О. В., Чистяков, Д. И., & Крамарова, Т. Ю. (2019). Образование в сфере туризма как средство решения этнополитических проблем. *Инновационное образование и экономика*, (23), 19-23.