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HOTEL AND TOURISM MANAGEMENT

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UNIVERSITY OF KRAGUJEVAC

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FACULTY OF HOTEL MANAGEMENT AND TOURISM IN VRNJAČKA BANJA

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Editorial

Менаџмент у хотелијерству и туризму – Hotel and Tourism Management is an open access peer-reviewed journal which discusses major trends and developments in a variety of topics related to the hospitality and tourism industry. The Journal publishes both theoretical and applied research papers, giving full support to collaborative research efforts taken jointly by academia and industry. According to its editorial policy goal, *Менаџмент у хотелијерству и туризму – Hotel and Tourism Management* has constantly been striving to increase its quality by promoting the popularisation of science and providing significant scientific and professional contribution to the development of hospitality and tourism industry, both in Serbia and on the global scale. The Journal is published by the Faculty of Hotel Management and Tourism in Vrnjačka Banja, University of Kragujevac. Since launching the Journal in 2013, twenty-three issues have been published so far.

Менаџмент у хотелијерству и туризму – Hotel and Tourism Management includes the following sections: Original Scientific Paper, Review Article, Short or Preliminary Announcement and Scientific Critique. The Journal does not consider PhD theses as prior publication and welcomes excerpts from the author's dissertations. It is published semiannually. The Journal offers an open access of its contents, which makes research results more visible to a wider international academic community. All articles are published in English and undergo a double-blind peer-review process.

The main aspects taken into consideration in paper evaluation are the originality of the study, contribution to the theory and practice and the use of grammar and style (either American or British English are accepted). The expected turn-around period is one to two months following the date of receipt. The crucial requirements for the submission of a manuscript are that the manuscript has not been published before, nor is it under consideration for publication elsewhere. The manuscript will be initially checked to ensure that it meets the scope of the Journal and its formal requirements. Submitted content will be checked for plagiarism. The provided names and email addresses will be used exclusively for the purposes stated by the Journal and will not be made available for any other purpose or to any other party.

The Journal has a reputable international editorial board comprising experts from the United States, the United Kingdom, Australia, the Russian Federation, Sweden, Spain, Italy, the United Arab Emirates, India, Poland, Finland, Argentina, Greece, Slovenia, Bulgaria, Serbia, Croatia, Montenegro.

I am glad to announce that *Менаџмент у хотелијерству и туризму – Hotel and Tourism Management* is indexed in ERIHPLUS (European Reference Index for the Humanities and the Social Sciences), CABELLS Scholarly Analytics, CEEOL (Central and Eastern European Online Library), DOAJ (Directory of Open Access Journals), ProQuest, EBSCO (EBSCO Information Services), Ulrich's Web (Ulrich's Periodicals Directory), CAB Abstract, SCIndeks (Serbian Citation Index), Scilit, CNKI (China National Knowledge Infrastructure), CyberLeninka, WorldCat and Google Scholar databases.

I would like to use this opportunity to express my deep gratitude to the authors, reviewers, and members of the Editorial Board for their devoted time and efforts that have contributed to the development of our Journal. At the end, I am pleased to invite you to look into the latest research in the fields of hospitality and tourism presented in the current issue.

Editor in Chief
prof. Drago Cvijanović

CONTENT

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The role of guest loyalty between satisfaction with service recovery and guest behavior in mountain hotels

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Abstract

Purpose – The purpose of the study is to investigate the role of guest loyalty in the relationship between satisfaction with service recovery (SSR) and consumer citizenship behavior (CCB), as well as dysfunctional customer behavior (DCB) of hotel guests. **Methodology** – The study was conducted on a sample of 1,324 guests from hotels operating in the Republic of Serbia, Croatia, and Slovenia in mountain tourism. The obtained data were analyzed using an SEM approach. **Findings** – Loyalty has a mediating role in the relationship between SSR and CCB. On the other hand, loyalty does not have a mediating role in the relationship between SSR and DCB of hotel guests during their stay. **Implications** – The study has theoretical and practical implications. The theoretical implication is that loyalty forms the foundation for guests’ cognitive and affective responses when they are satisfied with a service recovery; this means that loyalty is a driver of hotel guests’ CCB. In the opposite situation, loyalty does not act as a shock absorber that will mitigate the impact of dissatisfaction with service recovery on the manifestation of DCB. The practical implications are that hotels must prioritize effective service recovery strategies to enhance guest loyalty and encourage CCB while simultaneously reducing the risk of DCB.

Keywords: loyalty, satisfaction, service recovery, customer citizenship behavior, dysfunctional customer behaviour, hotel industry
JEL classification: L80

Uloga lojalnosti gostiju između zadovoljstva oporavkom usluge i ponašanja gostiju u planinskim hotelima

Sažetak

Svrha – Svrha studije je da se ispita uloga lojalnosti gostiju u odnosu između zadovoljstva oporavkom usluge i građanskog potrošačkog ponašanja, kao i disfunkcionalnog ponašanja gostiju hotela. **Metodologija** – Istraživanje je sprovedeno na uzorku od 1.324 gosta iz hotela koji posluju u planinskom turizmu u Republici Srbiji, Hrvatskoj i Sloveniji. Dobijeni podaci su analizirani primenom SEM pristupa. **Rezultati** – Lojalnost ima posredničku ulogu u odnosu između zadovoljstva oporavkom usluge i građanskog potrošačkog ponašanja. S druge strane, lojalnost nema posredničku ulogu u odnosu zadovoljstva oporavkom usluge i

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disfunkcionalnog ponašanja gostiju hotela tokom njihovog boravka. **Implikacije** – Studija ima teorijske i praktične implikacije. Teorijska implikacija je da lojalnost čini osnovu za kognitivne i afektivne odgovore gostiju kada su zadovoljni oporavkom usluge; to znači da je lojalnost pokretač građanskog potrošačkog ponašanja. U suprotnoj situaciji, lojalnost ne deluje kao amortizer koji će ublažiti uticaj nezadovoljstva povratkom usluge na ispoljavanje disfunkcionalnog ponašanja. Praktične implikacije su da hoteli moraju dati prioritet efikasnim strategijama oporavka usluga kako bi povećali lojalnost gostiju, podstakli građansko potrošačko ponašanje i istovremeno redukovali rizik od pojave disfunkcionalnog ponašanja.

Ključne reči: lojalnost, zadovoljstvo, oporavak usluge, građansko ponašanje potrošača, disfunkcionalno ponašanje potrošača, hotelijerstvo
JEL klasifikacija: L80

1. Introduction

The absence of a standardized hotel evaluation process affects how hotels around the world are evaluated based on the quality of the content and services they offer (Hung, 2017; Tsao, 2018). However, the intangible nature of the service means that service failures in the hotel industry are common and unavoidable occurrences (Hwang & Mattila, 2020; Koc, 2019), even for top-rated hotels, which can lead to negative guest experiences and erosion of hotel competitiveness (Bagherzadeh et al., 2020). Even the most successful companies in the world cannot guarantee completely failure-free service. A service failure refers to a situation where a service provider fails to deliver what is necessary to meet the consumer's expectations (Harrison-Walker, 2019; Shams et al., 2020a). The importance of providing failure-free service is illustrated by the results of Glasly's 2018 Customer Service Expectations Survey, which indicated that 26% of respondents would give up repeat purchases after the first negative experience with the service (Forbes, 2018). However, the fact that effective service recovery can turn frustrated consumers into satisfied customers underscores the importance of service recovery. In this context, Migacz et al. (2018) and Luo et al. (2019) emphasize that service recovery is a critical tool in service quality management, underscoring its significance in retaining loyal customers, as effective recovery can lead dissatisfied customers to regain their satisfaction. This is particularly significant given that the costs of attracting new customers are three to five times higher compared to serving the existing ones (Zeithaml, 2000).

Considering the above, it is not surprising that satisfaction with service recovery (SSR) is the subject of numerous studies in marketing and an indispensable topic in the hotel industry. However, there are a few studies that have gone a step further in examining the impact of SSR on consumer citizenship behavior (CCB) that is not related to repeat purchases and sharing positive experiences with others (Odoom et al., 2020; Zoghbi-Manrique-De-Lara et al., 2014). In other words, there are a few studies that focus on consumer citizenship behavior of hotel guests, which, by definition, represents voluntary and discretionary behavior that is not necessarily required for establishing quality relationships with the environment (Groth, 2005), but which leads to the improvement of relations and can have a significant impact on hotel operational outcomes.

The necessity to investigate this form of consumer behavior arises from the fact that guests' (dis)satisfaction with the hotel's attempts to correct service failures is an important driver of their behavior (Betts et al., 2011; Gelbrich & Roschk, 2011). Positive and negative emotions that guests feel during the process of service recovery, in response to their criticisms and complaints, affect their satisfaction. In this context, the satisfaction they feel as a result of the actions taken by the hotels belongs to the domain of affective feeling, and as such affects their ethics, where ethics refers to reasoning about what is good and what is bad behavior. Depending on whether these emotions are positive or negative, they can lead to CCB (discretionary), or dysfunctional customer behavior (DCB).

The question that arises is: what is the role of loyalty in this relationship? Loyalty is expected to act as a shock absorber that reduces negative emotions that lead to DCB (Turillo et al., 2002), because loyalty should influence dissatisfied guests to find cognitive reasons to justify the hotel's failure to recover service. The result would be the absence of their intention to manifest dysfunctional behavior. This means that it should have a negative mediating role between SSR and DCB of hotel guests. Following the same logic, loyalty is expected to play a positive mediating role between SSR and the CCB of the hotel.

Therefore, the purpose of this study is to examine the role of hotel guests' loyalty in the relationship between SSR and guest behavior, as a form of behavior that significantly impacts business costs and revenues. Confirming or refuting either theoretical postulates or empirical findings carries a series of significant implications, both in terms of hotel management and the development of new theoretical perspectives.

2. Literature review

It has long been known that guests' satisfaction or dissatisfaction with the hotel's efforts to rectify service failures is a significant factor influencing their subsequent behavior. This is evidenced by numerous studies (Bagherzadeh et al., 2020; Guchait et al., 2019; Harrison-Walker, 2019; Hollebeek & Rather, 2019; Odoom, 2020; Rather & Sharma, 2019). On the one hand, Shams et al. (2020a) provide evidence that there is a positive correlation between SSR and loyalty, while Bagherzadeh et al. (2020) found that there is a positive correlation between SSR and word-of-mouth. Gelbrich and Roschk (2011) emphasize that SSR has a greater impact on word-of-mouth communication compared to overall satisfaction, but it has a lesser impact on repeat purchases compared to overall satisfaction. Jin et al. (2019) found that the level of SSR depends on the guest's involvement in this process. Similar findings were presented by Hazee et al. (2017). The authors point out that guest involvement in service recovery has a positive effect on their intentions to visit the hotel again. A common to these studies is the finding that subsequent behavior can be reflected in increased loyalty to the hotel. The latter is particularly important in the context of the fact that the impact of a dissatisfied customer is significantly greater than the positive impact of a satisfied customer (Kim et al., 2017), which is especially pronounced in the hotel industry. The absence of a standardized hotel rating process, on the one hand, and the growing importance of social networks and the increase in online bookings on the other means that the comments and criticisms of hotel guests have a strong influence on the choice of a hotel by potential guests.

Guchait et al. (2019) point out that effective service recovery can generate repeat visits with improved satisfaction levels. This finding is in accordance with the so-called service recovery paradox according to which effective recovery can turn angry, frustrated customers into loyal customers. The paradox is related to secondary satisfaction when customers compare their service recovery expectations with their perceptions of the actual service recovery performance. If there is positive confirmation, that is, if perceptions of service recovery performance are greater than expectations, a paradox may emerge. However, the findings of De Mantos et al. (2008) indicate that this paradox has a positive effect on consumer satisfaction, but not on loyalty. Study by Jackson (2019) indicate that the level of satisfaction consumers feel due to service recovery depends on their attribution. In other words, the likelihood of forgiving service failures and consequent behavioral intentions and loyalty depend on the sense of perceived control. Since hospitality services are designed to require the active participation of service recipients in value creation (Rather et al., 2021) hotel guests believe that their personal actions control the outcomes. This leads to guests feeling that their actions and behaviors influence the outcomes or results of their experience. In this way, the service recovery process is accelerated, and guests experience a higher level of satisfaction. The hotel's response to discretionary behaviors also impacts the level of guest satisfaction (Tung et al., 2017). When the hotel responds positively to the guests' discretionary behaviors, it increases their level of satisfaction (Qiu et al., 2018). Numerous authors have proposed different approaches to promote this process including expressions of empathy (Luo et al., 2019), expressions of genuine apology (Radu et al., 2019), compassion, kindness and other positive emotions, offering compensation (Hwang & Mattila, 2020) etc. Although each of these actions can have a different impact on satisfaction (overall satisfaction and satisfaction with service recovery) and loyalty of hotel guests, Yao et al. (2019) have determined that front-line employees play a crucial role in this process. Similar findings were presented by Hewagama et al. (2019). However, if the reactions are negative or indifferent, it may have a negative impact on satisfaction and loyalty. Essentially, the way the hotel staff handles and appreciates the guest's reactions can influence how satisfied those guests are and how likely they are to remain loyal to the hotel.

From a theoretical perspective depending on the degree of SSR, the reaction of hotel guests is either CCB or DCB. However, Zoghbi-Manrique-de-Lara et al. (2014) point out that SSR does not directly influence guest behavior but rather that loyalty mediates that relationship. The study by Zoghbi-Manrique-de-Lara et al. (2014) indicates that loyalty acts as a precondition only for CCB. Moreover, the factors that influence such behavior may be independent of those that influence guests to pass on their positive experiences after staying in the hotel to others. When hotel guests are satisfied with the service, loyalty has a positive mediating role. Otherwise, loyalty does not have a significant mediating role. The difference between what theory predicts and what actual research shows highlights the importance of further investigating this topic and understanding the conditions under which this mismatch occurs.

Although some efforts have been made to discover why hotel guests exhibit CCB when SSR, the precise mechanism by which this occurs has not yet been identified. The finding that DCB is manifested in cases of dissatisfaction with service recovery implies that hotel guests' reactions are actually consequences of affective emotions, which motivate certain behaviors. Hence, the representation of loyalty as the result of both cognitive and affective processes (Oliver, 1997) represents a good starting point in researching this issue. According to Oliver (1997), loyalty develops as a consequence of previous experience and knowledge that the guest has about the hotel. It is the result of a cognitive process. Hence, when a hotel responds positively to a service failure, guests will perceive it positively based on their knowledge. As a result, it is possible that they will become loyal. The affective component connects personal perception with cognitive and represents an emotional response to various attributes and external stimuli. With continued service recovery, guests will experience positive emotions, which will further result in an increase in favorability towards the hotel or service brand. This means that loyalty is also formed on the basis of an affective reaction. Therefore, based on the above discussion, the following hypothesis is suggested:

Hypothesis 1: Satisfaction with service recovery has a positive effect on hotel guest loyalty.

According to The Social Exchange Theory, people establish certain relationships in order to realize and protect their interests, but with a set of certain expectations about what each party contributes with and what they can expect from the other party. The theory predicts that people will respond to positive reactions with positive behavior. This kind of behavior represents results and cognitive reactions because a set of expectations is formed on the basis of the knowledge that people have about what they can get from the relationship, but also affective reactions (which represent the result of lived experience). Since loyalty is the result of a positive experience (experienced satisfaction), it mediates between satisfaction and reaction as a positive response to experienced satisfaction.

Hypothesis 2: Loyalty plays a positive mediating role in the relationship between satisfaction with service recovery and customer citizenship behavior among hotel guests

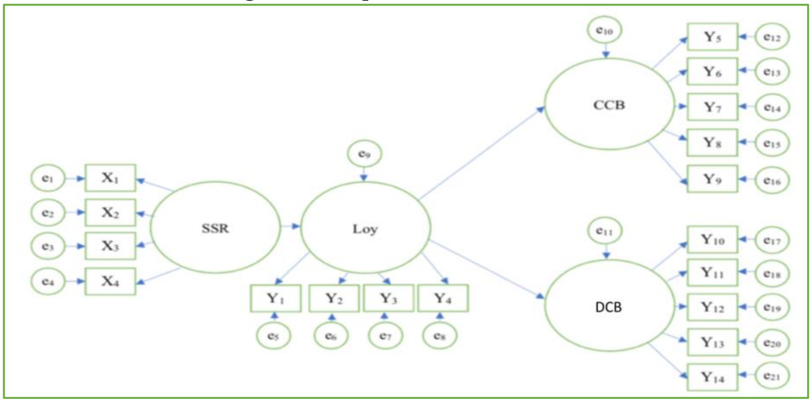
Additional justification for the hypothesis defined in this way can be found in The Social Identity Theory, according to which individuals undertake the activities that match their identity and support institutions that embody that identity. Consequently, depending on whether guests perceive the service recovery as valid or not, they will identify or feel alienated from the hotel. If the service recovery is evaluated as valid, it means that the service recovery was performed in accordance with their value system. Furthermore, it implies that they share common values, which is the basis for feeling a common identity. According to the theory, when people share the same identity, it results in a stronger sense of connection and belonging, which leads to stronger loyalty, solidarity and mutual support. Hence, high identification affects the guests' motivation and willingness to support the hotel in a way that will manifest positive customer behavior, whereby loyalty appears as a result of high identification (Rather et al., 2021). When people feel that they are a part of something, they are more likely to remain loyal to it. Furthermore, this suggests that guest loyalty has a mediating role in a positive CCB when satisfied with service recovery.

If a hotel does not implement adequate service recovery measures, guests will feel frustrated. When guests perceive that the hotel's efforts to resolve the issue are ineffective or inadequate, their frustration can intensify. This expectation is strongly supported by the Frustration-Aggression Theory. According to this theory, heightened frustration tends to lead to Dysfunctional Customer Behavior (DCB) – activities and actions that guests intentionally engage in, resulting in damage to the hotel's value (Kang & Gong, 2019). An additional explanation for this guest behavior can be found in Folger's (2001) theory. According to this theory, people behave the way they do because they believe it is the only correct way. In this context, if they judge that the hotel's activities to recover the service were inadequate, they will interpret it as poor service, which may lead to dysfunctional behavior. However, they can also interpret inadequate service recovery as the hotel's only possible response. In such cases, due to their emotional connection with the service and hotel brand, through loyalty, they may justify such actions and minimize their dissatisfaction, feeling a moral obligation to help the hotel, even at the expense of their personal benefit (Turillo et al., 2002). The affective, or emotional, component that stems from loyalty to the hotel will suppress their cognitive arguments in justifying the hotel's inadequate actions. The above suggests the following hypothesis:

Hypothesis 3: Loyalty plays a negative mediating role in the relationship between satisfaction with service recovery and the dysfunctional behavior of hotel guests during their hotel stay.

The conceptualization of the previously performed analysis of the theoretical foundations of SSR, loyalty, and CCB and DCB, as well as empirical studies, can be graphically represented by the following research model:

Figure 1: Proposed research model



Note: SSR – Satisfaction with service recovery, Loy – Guest loyalty, CCB – Customer citizenship behavior, DCB - Dysfunctional customer behavior
Source: Authors' research

3. Research methodology

The study was conducted on a sample of 1324 hotel guests, who stayed in one of the 94 hotels operating in the Republic of Serbia, the Republic of Croatia, and the Republic of Slovenia in the field of mountain tourism. The Republic of Slovenia is a well-known Alpine destination. The share of tourism in GDP was around 12%, before the outbreak of the Covid19 pandemic. The Republic of Croatia is also a well-known tourist destination whose share of tourism in the total GDP, before the outbreak of the Covid19 pandemic, was around 10.3%. The share of tourism in the Republic of Serbia is significantly lower and before the outbreak of the pandemic, it was around 1.3%. The Republic of Serbia is included in the study because over 70% of all tourism in the Republic of Serbia is mountain tourism.

The sampling method used for this research was stratified sampling. Participants were grouped into categories of tourists (leisure travelers, business travelers, and digital nomads) to ensure that each category was adequately represented in the sample. The differentiation between digital nomads and business travelers was based on the study conducted by Reichenberger (2018). Subsequently, within each category, participants were selected through random sampling. This approach enabled a balance between the different categories of tourists and their proportional representation in the research, according to their share in the total number of tourists. A more detailed structure of hotel guests who participated in the study is presented in Table 1.

Table 1: Structure of hotel guests – respondents

Country	**Serbia**	**Cro.**	**Slo.**	**Serbia**	**Cro.**	**Slo.**	**Serbia**	**Cro.**	**Slo.**
Hotel category	**3***			**4***			**5***		
Leisure travelers	72	46	125	27	33	28	17	21	26
Business travelers	33	28	28	76	113	62	47	52	35
Digital nomads	34	138	64	21	47	34	18	63	36
Men	117	135	125	43	66	75	68	74	85
Women	136	119	78	51	50	51	13	22	17
Average length of stay in the hotel	3.8	6.7	4.1	3.3	5.9	6.2	1.8	2.9	3.7

Source: Authors' research

The data was collected in 2022 using a structured questionnaire, which was developed based on relevant claims proposed in the literature. More specifically, the items in the questionnaire were defined by taking into account theoretical and empirical studies related to organizational behavior, CCB and DCB (Kang & Gong, 2019; Odoom et al., 2020; Shams et al., 2020a; Zoghbi-Manrique-de-Lara et al., 2014). The questionnaire can be found in Table 2.

Table 2: The questionnaire

Item	**Mark**	**Source**
I am satisfied with the behavior of the employees in solving the problem	X_1	Odoom et al., 2020
I am satisfied with the procedure and resources used to solve the problem	X_2	
I am satisfied with the compensation offered by the company (service restoration, refund, etc.)	X_3	
I am satisfied because the steps taken by the hotel to solve the problem were quick and efficient	X_4	
I will say positive things about this hotel to other people	Y_1	Shams et al., 2020a
I will recommend this hotel to my friends or relatives	Y_2	
I consider this hotel as my first choice for accommodation	Y_3	
I would not switch to another hotel the next time if the price of the stay increased by 10%	Y_4	
I take measures to protect the hotel from potential problems	Y_5	Zoghbi-Manrique-de- Lara et al., 2014
I am taking action to reduce hotel costs	Y_6	
I show concern for the efficient functioning of the hotel	Y_7	
I write a positive review about the hotel	Y_8	
I defend the hotel when others criticize it	Y_9	
I acknowledge that I took advantage of some hotel services	Y_{10}	Kang & Gong, 2019
I refused to follow the instructions of the hotel staff	Y_{11}	
I write a negative review about the hotel	Y_{12}	
I acknowledge that I use more resources than acceptable at this hotel	Y_{14}	
I tend to make the hotel dirtier than I should	Y_{14}	

Source: Authors' research

The first four items on the questionnaire pertain to guests' SSR, while the next four focus on guests' loyalty. The remaining items address CCB and DCB. Respondents rated the statements on the questionnaire using a five-point Likert scale, with scores ranging from (1) "I completely disagree" to (5) "I completely agree".

4. Results

4.1. Measurement model analysis

Data were analyzed using the statistical package JASP. Structural equation modeling (SEM) was employed to assess the validity of the measures and test the hypothesized relationships. A confirmatory factor analysis (CFA) was conducted to examine the measurement model, as CFA is a fundamental method for evaluating the internal structural validity of measurement instruments. In addition to χ^2, which is sensitive to sample size and model complexity (Alavi et al., 2020), various goodness-of-fit indices were used, as suggested by Chen (2007). Results for the overall model are presented in Table 3.

Table 3: Results for the overall model fit

Goodness Fit Index name	p-value
$\chi^2(29) = 1066.921$	0.0
Comparative Fit Index (CFI)	0.9
Tucker-Lewis Index (TLI)	0.9
Parsimony Normed Fit Index (PNFI)	0.6
Bollen's Incremental Fit Index (IFI)	0.9
Relative Noncentrality Index (RNI)	0.9
Standardized Root Mean Square Residual (SRMS)	0.04

Source: Authors' research

Except for χ^2, which is known to be sensitive to sample size, all other indices indicated satisfactory values for a good model, as suggested by the literature. The quality of the survey instruments was examined through reliability and validity analyses (Fornell & Larcker, 1981; Hollebeek & Rather, 2019). Convergent and discriminant validity of the constructs were assessed, and reliability was evaluated using composite reliability, which is a more robust measure than Cronbach's alpha, as it accounts for error variances and factor loadings (Hayes & Coutts, 2020; Trizano-Hermosilla & Alvarado, 2016). The results are presented in Table 4.

Table 4: The results of CFA

						95% Confidence Interval			**CR**	**AVE**
Factor	**Item**	**Estimate**	**Std. Error**	**z-value**	**p**	**Lower**	**Upper**	**Std. Estimate**		
SSR	X1	0.805	0.019	41.535	< .001	0.767	0.843	0.894	0.901	0.704
	X2	0.890	0.018	49.373	< .001	0.855	0.925	0.987		
	X3	0.528	0.025	20.712	< .001	0.478	0.577	0.532		
	X4	0.825	0.021	39.767	< .001	0.784	0.865	0.872		
Loy	Y2	0.797	0.045	17.532	< .001	0.708	0.886	0.908	0.931	0.870
	Y3	0.814	0.046	17.785	< .001	0.724	0.903	0.957		
CCB	Y5	0.779	0.021	37.638	< .001	0.738	0.819	0.916	0.935	0.878
	Y8	0.902	0.023	39.872	< .001	0.858	0.947	0.958		
DCB	Y12	0.589	0.069	8.572	< .001	0.454	0.724	0.69	0.833	0.720
	Y13	0.712	0.081	8.836	< .001	0.554	0.87	0.982		

Source: Authors' research

As can be seen from Table 4, all items with factor loadings greater than 0.5 were retained for further analysis (Zoghbi-Manrique-de-Lara et al., 2014). The AVE values also indicate good convergent validity of the measurement instrument, as each subscale has a value greater than 0.5 (Parrey et al., 2019). Additionally, the instrument demonstrates good reliability, with the composite reliability (CR) for each subscale exceeding the standard of 0.7 (Parrey et al., 2019). According to Eising et al. (2013), when subscales contain two items, the best indicator of reliability is the Spearman-Brown coefficient (SBC). Since the three subscales each contain two items, the Spearman-Brown coefficient was calculated. The SBC values are presented in Table 5, confirming the previous conclusions regarding reliability.

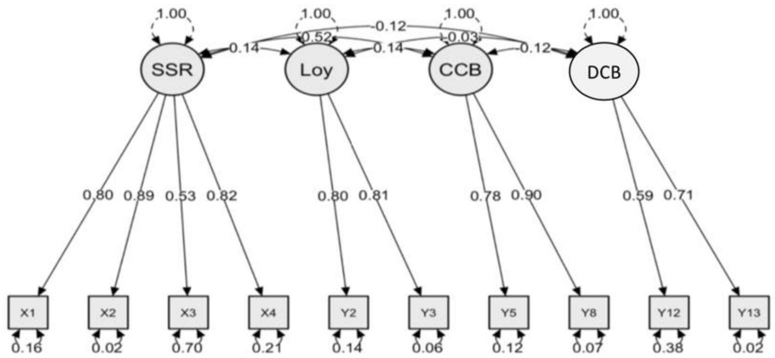
Table 5: Spearman-Brown reliability coefficient (SBR)

	Y_2 and Y_3	**Y_5 and Y_8**	**Y_{12} and Y_{13}**
Coefficient correlation	0.907	0.872	0.7
P value	< .001	< .001	< .001
SBR	0.951	0.931	0.820

Source: Authors' research

The graphic representation of the measuring part of the model is shown in Figure 2.

Figure 2: Graphic representation of CFA results



Source: Authors' research

The discriminant validity of the scales was tested based on the Fornell-Larcker (1981) criterion. The square root of the AVE for each construct was compared with the correlations between the constructs. The results supported the discriminant validity, as the correlations between each construct and the others were lower than the square root of their AVE (see Table 6).

Table 6: Results of the discriminant validity

	Type travers	**gender**	**Educ.**	**SSR**	**Loy**	**CCB**	**DCB**
Type travers	-						
Gender	0.234	-					
Educ.	0.154	0.578	-				
SSR	0.251	0.564	0.671	**0.839**			
Loy	0.182	0.573	0.445	0.141	**0.933**		
CCB	0.405	0.536	0.521	0.516	0.110	**0.937**	
DCB	0.268	0.418	0.476	-0.101	-0.017*	-0.114	**0.849**

Note: Educ. – Level of education of hotel guests – respondents; SSR – Satisfaction with service recovery; Loy – Guest loyalty; CCB – Customer citizenship behavior; DCB – Dysfunctional customer behavior. On the main diagonal is the square root of AVE of construct. All correlations are significant at $p < 0.05$, except *. * marked that the coefficient was not statistically significant.
Source: Authors' research

The results suggest that CCB exhibits significant intercorrelations in the expected directions, as shown in Table 6, while DCB was not correlated with loyalty. These findings provide a good starting point to support the mediating role of loyalty in the relationship between SSR and CCB, but not for DCB, as the correlation coefficient between loyalty and DCB is statistically insignificant.

4.2. Structural model analysis

Structural equation modeling (SEM) was employed to test the structural relationships between the variables. The results are presented in Table 7. The various goodness-of-fit indices indicate an acceptable fit for the model.

Table 7: The results of the proposed structural model

Factor	Factor	Label	Estimate	Std. Error	z-value	p	Std. (all)
Loy	SSR	alpha	0.141	0.030	4.733	< .001	0.142
CCB	SSR	direct	0.496	0.027	18.526	< .001	0.513
CCB	Loy	beta	0.063	0.025	2.529	0.011	0.065
DCB	SSR	delta	-0.087	0.028	-3.148	0.002	-0.119
DCB	Loy	omega	-0.008	0.021	-0.394	0.694	-0.011
indirect	alpha*beta	indirect	0.009	0.004	2.263	0.024	0.009
total	direct+indirect	total	0.505	0.027	18.926	< .001	0.522
proportion	direct/total	proportion	0.982	0.008	126.10	< .001	0.982
$indirect_1$	delta*omega	$indirect_1$	-0.001	0.003	-0.393	0.695	-0.002
$total_1$	delta+$indirect_1$	$total_1$	-0.088	0.028	-3.192	0.001	-0.121
$proportion_1$	delta/$total_1$	$proportion_1$	0.987	0.034	28.688	< .001	0.987
Goodness-of-fit indices: $\chi^2(29) = 1066.921$, CFI = 0.9, TLI = 0.9, PNFI = 0.6, IFI = 0.9, RNI = 0.9; SRMS = 0.04							

Source: Authors' research

The value of the coefficient (alpha) (0.141), which describes the relationship between SSR and guests' loyalty, indicates that there is a significant path between SSR and loyalty, supporting Hypothesis 1. This finding is consistent with numerous studies (Bagherzadeh et al., 2020; Harrison-Walker, 2019; Odoom, 2020; Zoghbi-Manrique-de-Lara et al., 2014). To test Hypotheses H2 and H3, the bootstrap method was employed. The coefficient describing the direct relationship between SSR and CCB indicates that there is a significant path between SSR and CCB. Additionally, this coefficient shows that the impact is less than the correlation coefficient between SSR and CCB, which equals the regression coefficient in the model where only SSR is the predictor variable (Repišti, 2017). This suggests that the second condition for the existence of a mediation effect is met (Repišti, 2017). Furthermore, since both the alpha coefficient and the beta coefficient - describing the relationship between loyalty and CCB—are statistically significant, this indicates a significant indirect effect, thereby confirming Hypothesis H2, which posits that loyalty has a positive mediating role in the relationship between SSR and CCB. Therefore, partial mediation is identified, as the direct effect coefficient is also statistically significant. An analysis of the relationships among direct, indirect, and total effects shows that the direct effect is dominant, which has several implications that will be discussed further.

The failure to meet the first condition for mediation - significant correlation between the variables of interest - implies that loyalty does not have a mediating role in the relationship between SSR and DCB. The results presented in Table 7 support this indication, as the omega coefficient, which describes the relationship between loyalty and DCB, is not statistically significant. Consequently, there is no indirect effect. This finding suggests that Hypothesis H3 is not confirmed, which has several implications, primarily highlighting the significance of SSR in preventing DCB. This conclusion is supported by the sign and statistical significance of the delta coefficient that describes the direct effect of SSR on DCB. One possible explanation for why loyalty does not influence the DCB of hotel guests is that, despite their emotional connection with the hotel, current dissatisfaction overrides the cognitive reasons that justify maintaining a long-term positive relationship between the hotel and the guest.

5. Discussion

The results obtained underscore the significance of SSR for guest loyalty and CCB. Specifically, the findings suggest that when guests are satisfied with service recovery, SSR foster their loyalty. Consequently, SSR as a transaction-specific satisfaction has a positive impact on loyalty. The extent of this influence in relation to other factors of loyalty, remains to be examined. Also, the influence of SSR on the type of loyalty remains to be investigated.

Furthermore, the obtained results indicate that SSR has a strong direct influence on the CCB of hotel guests and helps prevent the occurrence of DCB. According to the Social Exchange Theory (SET), this occurs because when guests feel that the hotel has invested in meeting their needs and rectifying the situation, they feel an obligation of reciprocity. As a result, guests are likely to exhibit CCB, thereby maintaining the dynamics of social exchange. In this mechanism, loyalty influences hotel guests, prompting them to find cognitive reasons to justify viewing the hotel as a victim and feeling obliged to support it in order to sustain the dynamics of social exchange. In other words, loyalty mediates the influence of SSR on CCB.

Loyalty does not act as a buffer in the relationship between SSR and DCB. This indicates that loyal guests do not feel a moral obligation to assist the hotel when service recovery is unsatisfactory. According to the dominant theoretical framework, the moral obligation to help arises from an emotional connection to the hotel. This connection complicates their ability to find cognitive reasons to reject the hotel as a victim, resulting in a decision not to exhibit dysfunctional behavior. To preserve the benefits of their relationship with the hotel, even amid dissatisfaction with the recovery process, guests should not exhibit DCB. Therefore, the emotions stemming from loyalty should ideally mitigate their current dissatisfaction. However, the acknowledgment that loyalty does not mediate this relationship implies that loyal guests, like disloyal ones, can harm the hotel with the same moral imperative and intensity, even when they are aware of their actions. For loyal guests, there is little to prevent them from finding valid reasons to reject the hotel as a victim. In fact, it may be easier for them to “deny the hotel as a victim” and exhibit DCB. This further suggests that current dissatisfaction generated by ineffective service recovery outweighs the cognitive reasons that justify maintaining a long-term positive relationship between the hotel and the guest. In other words, negative emotions stemming from dissatisfaction with service recovery can surpass the positive emotions arising from loyalty. The consequence is the manifestation of DCB, rather than behaviors that would justify the hotel as a victim. This suggests that the emotions triggered by ineffective service recovery have a stronger impact on immediate behavior compared to the loyalty that develops from long-term affective and cognitive responses in the guest-hotel relationship.

The above findings have two significant implications. First, any effective service recovery will lead to enhanced loyalty and the manifestation of CCB. Conversely, any failure to implement effective service recovery increases the risk of DCB and fails to promote further loyalty. Second, relying on loyalty as a buffer in this context is a risky strategy, as its mediating role in the relationship between SSR and DCB has not been confirmed. Therefore, it is crucial to cultivate an organizational climate and culture among employees that emphasizes the importance of adequately addressing service delivery failures. Such failures will only impact the hotel's performance in the short term if they are effectively managed and swiftly resolved. When handled properly, they should not affect guests' future repeat visits. Employees must understand that repeat visits will only occur if guests believe they have made genuine efforts to correct any failures.

The theoretical implications of the study position loyalty not merely as an outcome or result of SSR but as a driver of positive behavior among hotel guests. This perspective suggests that loyalty is fundamental to the cognitive and affective experiences of guests, influencing their behavior. However, adopting this view necessitates consideration of the factors that shape tourists' cognitive and affective perceptions. Unfortunately, this study does not account for such factors, even though multiple authors (such as Dhir & Chakraborty, 2023) indicate that social context significantly impacts the dynamics of social interactions and that cultural differences affect complaint expression. In some cultures, individuals may be more inclined to publicly express satisfaction or dissatisfaction, while in others, doing so may be less common. This suggests that national culture plays a crucial role in shaping tourists' attitudes. For instance, in many Asian cultures, hotel guests might be more reserved in voicing dissatisfaction to maintain harmonious relationships, potentially leading to lower service dissatisfaction ratings, even if guests feel unsatisfied. Additionally, cultural differences can influence how guests perceive and value various aspects of service. In certain cultures, attributes like staff friendliness and attention to detail may be prioritized, while others might emphasize service efficiency and functionality. Such differences can lead to varying satisfaction ratings under similar circumstances. Moreover, differing value systems and behavioral norms shape guests' expectations regarding service quality; some may prioritize personalization and customization, while others focus on economy and efficiency. Consequently, cultural background significantly impacts guest attitudes and expectations. Recognizing these differences is essential for designing complaint management strategies that accommodate diverse cultural expectations. Within this context, the question of whether and how guests' perceptions of hotel ratings influence the role of loyalty in this relationship is particularly intriguing.

6. Conclusion

Since failures in service delivery within the hotel industry are inevitable, creating loyal customers involves more than just ensuring stable cash flows and strengthening the current competitive position. It also entails shaping customer behavior, specifically increasing the likelihood that customers will engage in CCB. This approach not only achieves short-term benefits from the CCB of guests - impacting the hotel's ongoing performance (Makuljevic & Knezevic, 2023) - but also contributes to the preservation of the hotel's position and the strengthening of its competitiveness in the long term.

Unfortunately, there is an insignificant correlation between loyalty and DCB, indicating that relying on loyalty is a risky strategy in mitigating service delivery errors, and emphasizing the importance of an effective service recovery process. Only an efficient service recovery will affect the SSR of the hotel's guests and thus prevent the occurrence of DCB. This further implies that all activities designed to encourage satisfaction due to service recovery should have a prominent place in business strategies and hotel business improvement plans.

However, the fact that loyalty does not mediate the relationship between SSR and DCB suggests that hotel guests do not operate through the same mechanism, implying that actions and the same managerial tools for eliciting reactions to CCB do not have the same effect on discouraging hotel guests from exhibiting DCB. This further implies that they must create other measures in case dissatisfaction with the recovery of the service occurs.

Considering the various types of loyalty, future research should take this into account gaining a deeper understanding of the role of loyalty as a mediator between SSR and CCB. Understanding how each type of loyalty influences customer citizenship behavior is crucial, as it will facilitate better personalization of marketing efforts for each group of loyal guests.

Conflict of interest

The authors declare no conflict of interest.

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The mediating role of the glass-ceiling phenomenon in the relationship between career opportunities and employee engagement within the hospitality

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Abstract

Purpose – The main purpose of this paper is to examine and analyze the relationship between career opportunities and employee engagement, as well as the mediating effect of the glass-ceiling phenomenon within the hospitality. **Methodology** – Beside desk research, this paper employs the empirical research undertaken by use of a specially prepared online questionnaire. Research was conducted between October 2023 and April 2024 with participation of 567 women employed in the hospitality, while proposed relationships were tested by using the partial least squares method for structural equation modeling (PLS-SEM, SmartPLS software). **Findings** – The research results showed the existence of a positive relationship between broken glass-ceiling and employee engagement, that career opportunities are positively related to employee engagement and elimination of the glass-ceiling effect, and that the glass-ceiling effect mediates the relationship between career opportunities and employee engagement within the hospitality. **Implications** – This is one of the first studies which addresses the topics of glass-ceiling, career opportunities and employee engagement in the hospitality by using specific methodology (questionnaire and PLS-SEM). The research findings may be used as a basis for decision making process for retaining employees in the hospitality on the long run by eliminating glass-ceiling effects, improving career opportunities and employee engagement.

Keywords: hospitality, employee engagement, women's career, glass-ceiling phenomenon, career opportunities
JEL classification: L83, M12, M54

Posrednička uloga fenomena „staklenog plafona” u relaciji između karijernih mogućnosti i angažovanosti zaposlenih u ugostiteljstvu

Sažetak

Svrha – Svrha ovog rada je da istraži i ispita relacije između karijernih mogućnosti i angažovanosti zaposlenih, kao i posredničku ulogu fenomena „staklenog plafona” među zaposlenima u ugostiteljstvu. **Metodologija** – Pored kabinetskog, u ovom radu je sprovedeno

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i empirijsko istraživanje primenom posebno koncipiranog onlajn upitnika. U periodu od oktobra 2023. do aprila 2024. godine sprovedeno je istraživanje u kojem je učestvovalo 567 ispitanika ženskog pola zaposlenih u ugostiteljstvu. Relacije između varijabli su testirane pomoću modeliranja strukturnih jednačina metodom parcijalnih najmanjih kvadrata (PLS-SEM, SmartPLS softver). **Rezultati** – Rezultati istraživanja pokazuju postojanje pozitivne veze između eliminisanog fenomena „staklenog plafona" i angažovanosti zaposlenih, zatim između karijernih mogućnosti i angažovanosti zaposlenih i eliminacije „staklenog plafona", kao i da fenomen „staklenog plafona" ima posredničku ulogu u odnosu između karijernih mogućnosti i angažovanosti zaposlenih u ugostiteljstvu. **Implikacije** – Ovo je jedna od pionirskih studija koja se bavi istraživanjem fenomena „staklenog plafona", karijernih mogućnosti i istraživanjem angažovanosti zaposlenih u ugostiteljstvu koristeći specifičnu metodologiju (upitnik i PLS-SEM). Rezultati istraživanja mogu da posluže kao osnova za proces odlučivanja o tome kako zadržati zaposlene u ugostiteljstvu posmatrano na duži rok, pomoću eliminisanja „staklenog plafona", poboljšanja karijernih mogućnosti i unapređenja angažovanosti zaposlenih.

Ključne reči: ugostiteljstvo, angažovanost zaposlenih, karijere žena, fenomen „staklenog plafona", karijerne mogućnosti
JEL klasifikacija: L83, M12, M54

1. Introduction

The hospitality industry has established itself as a key engine of worldwide economic activity and a large source of global employment (Alexakis & Jiang, 2019). As a dominating labor-intensive industry, hospitality demands employees to have the adequate competence for delivering high-quality services (Papageorgiou et al., 2024). Conversely, the hospitality industry is characterized by low salaries, poor working conditions, extended hours, shift work, weekend and holiday obligations, job insecurity, high levels of direct communication, demanding clients, managerial pressure to achieve high results, and limited opportunities for remote work. These factors have collectively led to numerous adverse consequences for employees and their well-being (Avdiu & Nayyar, 2020; Baum et al., 2020; Kim & Lee, 2020; Lukić Nikolić & Garabinović, 2023). Furthermore, all these issues contributed to the common and negative fact that the hospitality business is becoming less appealing for newcomers in the labor market, while existing employees are reconsidering their career options (Huo, 2021). As a result, the hospitality industry faces the difficulty of long-term employees' retention. The solution to this unfavorable situation can be found in human resource management and its related approaches and practices. First and foremost, career advancement opportunities are extremely important to all employees in the modern workplace, particularly in the hospitality industry, because all employees aspire to achieve sustainable career development (Jiang et al., 2021). Furthermore, all employees desire to be engaged and give their best while obtaining reciprocity from their employers. In that context, gender equality, defined as equal opportunity for both men and women, was identified as a key aspect in creating a positive working environment and organizational climate. The inequality in gender advancement to higher positions in the hospitality industry can be easily observed, especially given that careers are usually continuous in the sense that an individual progresses from an entry-level position to a first-line manager, middle-level management, and top management (Ng & Pine, 2003). The glass-ceiling is a phenomenon that blocks women from ascending to higher-level executive positions. According to studies, the glass-ceiling effect reduces women's chances for advancement on higher positions in the organizational hierarchy. Despite the growing theoretical interest in gender equality and the glass-ceiling, there has been little empirical research on this problem (Babic & Hansez, 2021), especially in the hospitality industry. That was the primary reason for this paper: to examine and analyze the relationship between career opportunities and employee engagement, as well as the mediating role of the glass-ceiling phenomenon within the hospitality industry. The significance of this study arises from the fact that the hospitality industry has a considerable labor shortage and high employee turnover (Innerhofer et al., 2024; Kwok, 2022). To maintain stability and growth, hospitality businesses must retain talented and competent employees (Lazzari et al., 2022; Xuecheng et al., 2022). Consequently, leaders and managers of hospitality businesses are under pressure to provide equal career opportunities to all employees and to break down the glass-ceiling phenomenon in order to increase employee engagement.

The paper is organized as follows. The first part of the paper contains a literature review on the glass-ceiling effect, employee engagement, and career opportunities in the hospitality industry in order to propose research hypotheses. The second part of the paper focuses on research methodology and provides a brief summary of the empirical research undertaken, beginning with the questionnaire structure, data collection procedure, and statistical software and techniques used. The third part of the paper contains the research results with discussion of the research findings. Finally, the paper's key findings are given in conclusion, together with their implications for the academic community and practice, as well as the limitations of the conducted research and recommendations for further research on this topic.

2. Background

Glass-ceiling effect. The glass-ceiling was first used as a metaphor to illustrate women's limited promotion chances in the organizational hierarchy (Hymowitz & Schellhardt, 1986). This metaphor has become commonplace in business and management literature and practice nowadays (Martinez-Fierro & Lechuga Sancho, 2021). In general, the glass-ceiling metaphor can relate to members of specific population groups, such as racial/ethnic minorities, people with various sexual choices, and women (Stavrinoudis et al., 2021). In this paper it is used to refer to women. Glass-ceiling represents persistent barriers, discriminatory practices, and attitudes that prevent qualified women from advancing to higher management positions (Babic & Hansez, 2021; Powell & Butterfield, 2015), or a lower probability of women being promoted than men, or simply a lower proportion of women at the top management positions (Espinosa & Ferreira, 2022). The glass-ceiling represents discrimination against women in management, which rises as women advance in their professional positions inside the organization (Babic & Hansez, 2021; Cotter et al., 2001). The glass-ceiling effect can have a wide range of negative implications, both for individuals and organizations. Job dissatisfaction, disengagement, burnout, professional stress, and low productivity are some of the most serious repercussions of the glass-ceiling at the individual level. At the organizational level, there is diminished appeal as an employer, a poor employer brand, lower levels of overall results, and high fluctuation rate of employees (Taparia & Lenka, 2022). Eliminating the glass-ceiling effect is important for organizations because a lack of professional growth opportunities for women is connected with talent loss, high women turnover, work disengagement, lack of commitment and loyalty (Remington & Kitterlin-Lynch, 2017). Furthermore, eliminating the glass-ceiling led to equal career opportunities and enhanced employee engagement, which results in better organizational performance.

Employee engagement. Employee engagement is defined as a consistent, positive, affective-motivational state of employee fulfillment and high satisfaction (Maslach et al., 2001). Employee engagement requires vigour, determination, and absorption (Schaufeli et al. 2002). Vigor signifies a high degree of energy and mental resilience on the job, particularly in stressful conditions, as well as a desire to go above and beyond what is required of employees. Dedication is characterized by a sense of purpose, excitement, inspiration, pride, and challenge, whereas absorption indicates a thoroughly engaged and happily immersed individual in his task—focused concentration, outstanding control, and profound satisfaction (Schaufeli & Bakker, 2004). Employees that are engaged are full of positive energy and excitement; they are deeply immersed, devoted, and enthusiastic about their work tasks and activities (Kahn, 1990; Schaufeli, 2016). They care about the organization's future and are willing to go above and beyond job description to meet the objectives (Cook, 2008). As a result, organizations in the hospitality industry make significant efforts to engage their employees. According to research, employee engagement is critical for organizational success and results (Rozman & Strukelj, 2021), because employees who are willing to do more than what is required in job description exhibit high performance, service quality, and positive organizational behavior.

Career opportunities. Career, as a person's collection of professional experiences (Greenhaus et al., 2010), represents vertical growth process that results in professional advancement through improvements in many conditions such as job responsibilities, status, and payment (McDonald et al., 2005). Perceived career opportunities in an organization refer to employees' perceptions of the alignment of work assignments and employment prospects with their career ambitions (Kraimer et al., 2011). Career has traditionally been measured by promotions, salary, and other objective criteria, while in the contemporary business environment, career is considered as a self-directed and value-driven orientation defined by individual employees (Lehtonen et al., 2022). Career opportunities can be seen as growing professional skills, getting rewards, and achieving employees' career objectives (Weng & McElroy, 2012). Employees must be prepared to deal with changes in the nature and type of job, as well as working environment. Any type of training and development that corresponds to employees' affinities and preferences increases their engagement. Employees who upgrade and develop their knowledge and abilities are more engaged because they find satisfaction in performing new tasks (Swarnalatha & Prasanna, 2012). Similarly, the existence of personalized employee training and development programs leads to better engagement since employees know that the organization actually cares about them and their careers (Jain & Khurana, 2017).

Consequently, the proposed hypotheses in this research are:

Hypothesis 1: There is a positive relationship between broken glass-ceiling and employee engagement.

Hypothesis 2: Career opportunities are positively related to employee engagement.

Hypothesis 3: Career opportunities are positively related to elimination of glass-ceiling effect.

Hypothesis 4: Glass-ceiling effect mediates the relationship between career opportunities and employee engagement.

3. Materials and methods

The field research was conducted using a questionnaire technique for data collection. The first part of the questionnaire consisted of profile questions with the aim to establish respondents' basic characteristics, including gender, age, education, working experience, marital status, and parental status. The second part of the questionnaire encompassed statements from three measurement scales that had been used in previous research and confirmed to be reliable and valid. The first scale Career Opportunities (CO) was developed on the basis of statements developed by Kraimer et al. (2011) with the aim to examine whether organizations from hospitality industry provide opportunities for developing specialized functional skills, advancement to higher managerial levels, established programs and policies for career progress of employees, etc. The second scale, Employee Engagement (EE), included eight statements from the engagement scale utilized in the cross-national study (Schaufeli et al., 2006). The third scale, Glass-Ceiling Effect (GCE), was developed from three initially defined statements by Elacqua et al. (2009). In addition, this measurement scale includes three new statements more suitable to European culture, developed on the basis of the research of Babic and Hansez (2021) (e.g. I notice that men progress more quickly than women in this company; Women are not given the same treatment as men in managerial positions at this company; and Men are able to get jobs at higher hierarchical levels in this company than women, even with the same expertise and skills) with the aim to more thoroughly investigate manifestations of the glass-ceiling effect. Respondents answered to statements by selecting one of the responses on a seven-point Likert scale (1 – completely disagree, 7 – completely agree). Statements used in this research are presented in Table 2.

The questionnaire was administered online using Google Forms and sent to the e-mail addresses of hospitality objects managers such as hotel restaurants, exclusive restaurants, classic restaurants, restaurants serving Chinese and Mexican food, cafeterias, bars, beach bars, etc., with the kind request that they complete the questionnaire and forward it to other employees. With three follow-up e-mails, in the period October 2023 to April 2024, a total of 567 women employed in hospitality objects in four countries (Serbia, Bosnia and Herzegovina, Montenegro, and Croatia) participated in this research. In accordance with the ”ten times” rule (Barclay et al., 1995), which states that the minimum sample size should be ten times the number of independent variables in the most complex regression in the model, the sample size obtained in this research is more than sufficient (10*8=80 while 567 respondents participated in this research).

The data was processed and analyzed using Statistical Software for Social Sciences (SPSS) version 21.0 and SmartPLS software version 4.0. Proposed hypotheses were tested using the partial least squares method for structural equation modeling (PLS-SEM), which represents the key multivariate analysis tool used in business and organizational research (Ringle et al., 2020), and increasingly applied in various tourism studies (Seocanac, 2024).

4. Results and discussion

Table 1 shows the results related to the basic characteristics of the respondents who participated in the research. The largest number of respondents is between 25 and 34 years old (39.2%). This is followed by respondents who are between 35 and 44 years old (20.8%) and those who are between 45 to 54 years old (17.6%). A small number of respondents is above 55 years of age (13.2%), while only 9.2% of respondents are from 18 to 24. Almost 60% of respondents have finished secondary school, followed by those who have finished high school (22.8%) and faculty (14.6%). The research included 3.5% of respondents who had only completed primary school. In terms of the length of work experience, more than 70% of respondents work up to 5 years, with 33.7% of respondents working for less than 1 year, and 37.2% of respondents working from 1 to 5 years in hospitality. Furthermore, 17.6% of respondents have worked in the hospitality from 5 to 10 years, while 11.5% of respondents have worked there for more than 10 years. In terms of marital status, the majority of respondents are married or cohabiting (66.1%) and the majority of respondents (61%) have children.

Table 1: The basic characteristics of the respondents

Characteristics		**N**	**%**
Age	From 18 to 24	52	9.2
	From 25 to 34	222	39.2
	From 35 to 44	118	20.8
	From 45 to 54	100	17.6
	Above 55	75	13.2
Education	Primary school	20	3.5
	Secondary school	335	59.1
	High School	129	22.8
	Faculty	83	14.6
Working experience	Less than 1 year	191	33.7
	From 1 to 5 years	211	37.2
	From 5 to 10 years	100	17.6
	Above 10 years	65	11.5
Marital status	Married/cohabitating	375	66.1
	Unmarried/divorced	192	33.9
Parental status	Have children	346	61.0
	Do not have children	221	39.0

Source: Authors' research

Table 2 shows the mean (M) and standard deviation (SD) for each of the measurement scales and statements used in this research. All respondents (N=567) used a seven-point Likert scale (Min=1, Max=7) to answer all of the questions. The Career Opportunities (CO) scale has a mean value of 4.65. The mean values for each statement on this scale are similar, ranging from 4.60 to 4.68. Employee Engagement (EE) has a mean value of 5.66. The statement that employees are immersed in their work has the greatest mean value of 5.81, while the statement that when they wake up in the morning, they prefer to go to work has the lowest mean value, 5.47. The mean value for the entire scale Glass-Ceiling Effect (GCE) is 5.53. The statement that women at the company are not excluded from important senior management communications has the greatest mean value (5.64), while the lowest mean value is recorded for the statement that respondents did not notice that men can get jobs at higher hierarchical levels in the company than women even with the same expertise and skills (5.48).

Table 2: Mean (M) and Standard Deviation (SD) for scales and statements

Variable		**M**	**SD**
Career Opportunities (CO)	**Source**	**4.65**	**2.052**
My company provides opportunities for employees to develop their specialized functional skills (CO1)	Kraimer et al. (2011)	4.68	2.088
My company has programs and policies that help employees to reach higher managerial levels (CO2)		4.64	2.118
There are career opportunities within my company that are attractive to me (CO3)		4.68	2.114
My company offers many job opportunities that match my career goals (CO4)		4.60	2.141
Employee Engagement (EE)		**5.66**	**1.867**
At work, I feel full of energy (EE1)	Schaufeli et	5.57	1.884

When I get up in the morning, I feel like going to work (EE2)	al. (2006)	5.47	1.969
I find the work that I do full of meaning and purpose (EE3)		5.64	1.945
My job inspires me (EE4)		5.58	2.019
I am proud of the work I do (EE5)		5.70	1.961
Time flies when I am working (EE6)		5.74	1.915
I feel happy when I am working intensely (EE7)		5.75	1.895
I am immersed in my work (EE8)		5.81	1.863
Glass-Ceiling Effect (GCE)		**5.53**	**1.920**
I do not believe that women at our company generally progress to a certain level, then go no further (GCE1)	Elacqua et al. (2009)	5.51	2.097
I believe our company is serious about eliminating barriers that prevent women from reaching their potential (GCE2)		5.52	2.095
Women at our company are not excluded from important senior management communications (GCE3)		5.64	2.033
I did not notice that men progress more quickly than women in this company (GCE4)	Babic and Hansez (2021)	5.52	2.109
Women are given the same treatment as men in managerial positions at this company (GCE5)		5.53	2.104
I did not notice that men are able to get jobs at higher hierarchical levels in this company than women, even with the same expertise and skills (GCE6)		5.48	2.120

Source: Authors' research

Reflective indicator loadings for the structural model were calculated and presented in Table 3. All values of reflected indicator loadings are higher than the threshold value 0.708, indicating that the reliability criterion is met (Hair et al., 2021).

Table 3: Reflective indicator loadings

	EE	**GCE**	**CO**
EE1	0.951		
EE2	0.961		
EE3	0.971		
EE4	0.970		
EE5	0.975		
EE6	0.967		
EE7	0.971		
EE8	0.965		
GCE1		0.818	
GCE2		0.886	
GCE3		0.939	
GCE4		0.948	
GCE5		0.954	
GCE6		0.953	
CO1			0.964
CO2			0.969
CO3			0.980
CO4			0.967

Source: Authors' research

Table 4 shows the Cronbach's alpha, Composite Reliability (rho_a), Composite Reliability (rho_c) and Average Variance Extracted (AVE) values used to establish indicator and construct reliability and validity. Cronbach's alpha for the Employee Engagement (EE) scale is 0.990, rho_a is 0.990, rho_c is 0.991, while AVE is 0.934. Cronbach's alpha for the Glass-Ceiling Effects (GCE) scale is 0.962, with rho_a of 0.975, rho_c of 0.970, and AVE of 0.842. For the scale Career Opportunities (CO) Cronbach's alpha is 0.979, rho_a is 0.979, rho_c is 0.985, while AVE is 0.941. The obtained results for each of the scales indicate significant scale reliability as well as construct reliability and validity, since Cronbach's alpha and Composite Reliability (rho_a and rho_c) are greater than 0.7, and AVE is above the threshold value of 0.5 (Fornell & Larcker, 1981).

Table 4: Scale reliability and construct reliability and validity

Scale	**Cronbach's alpha**	**rho_a**	**rho_c**	**AVE**
Employee Engagement (EE)	0.990	0.990	0.991	0.934
Glass-Ceiling Effect (GCE)	0.962	0.975	0.970	0.842
Career Opportunities (CO)	0.979	0.979	0.985	0.941

Source: Authors' research

Table 5 shows the results of discriminant validity using the heterotrait-monotrait (HTMT) correlation ratio. The obtained results fall below the specified criterion of 0.85 (Henseler et al., 2015), indicating that discriminant validity using the heterotrait-monotrait correlation ratio is met. Additionally, the results of cross-loading indicators and the Fornell-Larcker criterion are presented in the Appendix 1 (Table A1 and Table A2).

Table 5: Discriminant validity: heterotrait–monotrait (HTMT) ratio of correlation

	EE	**GCE**	**CO**
EE			
GCE	0.507		
CO	0.677	0.422	

Source: Authors' research

Table 6 shows the results for the Variance Inflation Factor (VIF) for the inner model. All values are lower than criterion 3 (Hair et al., 2021), showing that collinearity does not pose a problem in this research model.

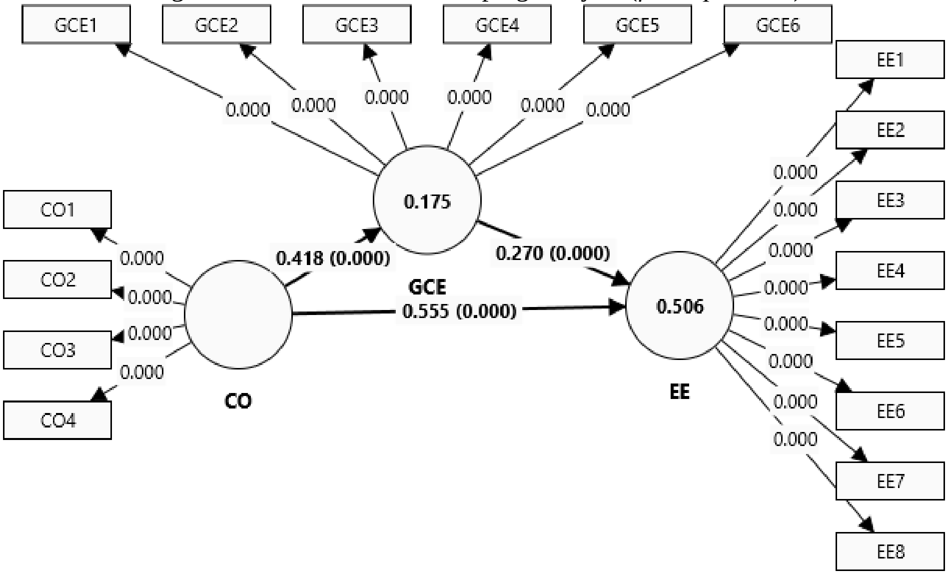
Table 6: Variance Inflaction Factor (VIF)

	Variance Inflation Factor (VIF)
GCE -> EE	1.212
CO -> EE	1.212
CO -> GCE	1.000

Source: Authors' research

To test the structural model, 10,000 random subsamples of the original data set were created (with replacement enabled). Results are presented on Figure 1.

Figure 1: Results from bootstraping analysis (β and p-values)



Source: Authors' research

Finally, Table 7 presents results regarding PLS-SEM ratio coefficients and their level of significance with the aim of evaluating the relationships between measured scales. The results revealed that the relationship between glass-ceiling effects and employee engagement is positive and statistically significant (β= 0.270, t = 6.374, p = 0.000). Similar results are obtained for the relationship between career opportunities and employee engagement – positive and statistically significant (β= 0.555, t = 20.557, p = 0.000). Furthermore, the relationship between career opportunities and glass-ceiling effect is positive and statistically significant (β= 0.418, t = 9.720, p = 0.000). Finally, the glass-ceiling effect has a mediation role in the relationship between career opportunities and employee engagement (β= 0.113, t = 4.940, p = 0.000).

Table 7: Statistical significance testing – total and specific indirect effect

	β	**t**	**p**	**Hypothesis**
GCE -> EE	0.270	6.374	0.000	H1: Approved
CO -> EE	0.555	20.557	0.000	H2: Approved
CO -> GCE	0.418	9.720	0.000	H3: Approved
CO -> GCE-> EE	0.113	4.940	0.000	H4: Approved

Source: Authors' research

Table 8 presents the coefficient of determination (R^2) in order to examine the percentage by which the independent variables explain the dependent variable (Seocanac, 2024). The results revealed that only 17.5% of the variance in GCE is predicted by CO (weak value), while 50.6% of the variance in EE is predicted by CO (moderate value).

Table 8: Coefficient of determination (R^2) results

	R^2	**R^2 adjusted**	**Interpretation of values**	**Criteria (Hair et al., 2011)**
EE	0.506	0.504	Moderate	R^2=0.25 weak R^2=0.50 moderate R^2=0.75 substantial
GCE	0.175	0.174	Weak	

Source: Authors' research

Table 9 presents the results regarding the effect size (f^2). Results revealed a large effect (0.514) of CO on EE, while the effect size of CO on GCE is medium (0.212). Finally, there is small effect size of GCE on EE (0.122).

Table 9: Effect size (f^2) results

	f^2	**Effect size**	**Criteria** (Cohen, 1988)
CO -> EE	0.514	Large	Above 0.35 large effect 0.15-0.35 medium effect 0.02-0.15 small effect
CO -> GCE	0.212	Medium	
GCE -> EE	0.122	Small	

Source: Authors' research

Conducted statistical analysis, which used a partial least squares method for structural equation modeling (PLS-SEM), resulted in the acceptance of *hypothesis 1* that broken glass-ceiling has a positive relationship on employee engagement among hospitality employees. Furthermore, research results showed that career oppotunities are positively related to employee engagement confirming on that way *hypothesis 2*, and that career opportunities are also positively related to elimination of glass-ceiling effect confirming on that way *hypothesis 3*. Finally, research results confirmed *hypothesis 4* that broken glass-ceiling mediates the relationship between career opportunities and employee engagement.

Those findings are not surprising given the recent trend toward more balanced gender equality, with an increasing proportion of women applying for leadership and higher-level managerial positions. Gender has historically played a crucial role in hospitality employment. Women's access to managerial roles in hospitality has recently been identified as an important topic in the literature (Albors-Garrigos et al., 2021). Furthermore, gender equality has become a global concern recognized as one of the important components in Agenda 2030 and its 17 Sustainable Development Goals (SDG). The fifth SDG aims to achieve gender equality and empower all women and girls, ensure their active participation in leadership and decision-making, and empower women through information and communication technologies, whereas the eighth SDG focuses on full and productive employment and decent work with equal pay for all people (United Nations, 2018).

Other research findings confirmed the observed relationship between variables. They also showed that career opportunities are a significant employment resource that promotes numerous positive organizational outcomes (Weng & McElroy, 2012). Having women on management teams increases a company's financial success (Martinez-Fierro & Lechuga Sancho, 2021), hence there are programs aimed at promoting workplace gender equality (Ryan, 2023). Research conducted among 467 women employees in India found that the existence of a glass-ceiling phenomenon in organizations has a negative influence on employee engagement (Balasubramanian & Lathabhavan, 2017). Similarly, a study conducted among 553 women on managerial positions in India (Punjab) highlighted that the presence of a glass-ceiling has a negative influence on employee engagement (Sharma & Kaur, 2019). Furthermore, a study conducted at hotels in South Korea (Seoul) with 214 employees found that glass-ceiling perceptions were negatively related to employee engagement (Min & Yoon, 2021). Consequently, decision-makers, leaders, managers and human resource professionals in the hospitality industry have clear evidence of the negative impact of the glass-ceiling phenomenon on career opportunities and employee engagement.

5. Conclusion

The research results confirmed all proposed hypotheses, i.e. broken glass-ceiling has positive impact on employee engagement among hospitality employees, career opportunities are positively related to employee engagement and elimination of glass-ceiling, while glass-ceiling mediates the relationship between career opportunities and employee engagement.

Theoretical implications of this paper include the fact that this is one of the pioneering studies which addresses the topics of glass-ceiling, career opportunities and employee engagement in the hospitality industry using specific methodology (questionnaire and PLS-SEM) and large sample size (567). The questionnaire was validated, and its reliability and validity were confirmed, which is important for future researchers. The paper's practical implications are focused on the ability to apply research findings to help retain hospitality employees by removing glass-ceiling effects, expanding career opportunities, and increasing employee engagement. Glass-ceiling effect can be eliminated or at least minimized by establishing clear and objective criteria for promotions, equal career opportunities for all employees, promoting work-life balance and flexible work arrangements, and fostering an inclusive organizational culture. By use of these practices, companies can create a more equitable workplace where all employees have the opportunity to reach their full potential. Removing the glass-ceiling effect not only benefits individual employees, but also enhances organizational performance, innovation, and competitiveness. That is why understanding the relationships between those constructs is crucial for all hospitality objects, leaders, managers, and human resource professionals.

This research is accompanied by several limitations. First and foremost, the conceptual research model used in this study included three variables (glass-ceiling, career opportunities, and employee engagement) and their relationships, without considering a broader range of other variables that may be important, such as organizational commitment, organizational climate, and leadership style. Second, the questionnaire employed in this study contained only closed-ended questions, with no opportunity for respondents to write down their views, perceptions, and opinions on the topic matter. Third, results regarding Cronbach alpha coefficient were higher than 0.95 indicating a possibility for redudancy in items (different semantics but similar meanings in some scales) and too long questionnaire.

Future research on this topic should include more variables in the conceptual research model in order to get more holistic and general results. Furthermore, in addition to closed-ended questions, questionnaires should include open-ended questions and be supplemented with data collection techniques such as interviews in order to provide more in-depth conclusions. Finally, it would be beneficial to conduct longitudinal research in order to examine whether and how activities oriented to elimination of glass-ceiling in hospitality objects impact on career opportunities and employee engagement.

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Conflict of interest

The authors declare no conflict of interest.

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Appendix

Additional tests regarding discriminant validity

Table A1: Discriminant validity: Cross-loadings results

	EE	GCE	CO
EE1	0.951	0.502	0.662
EE2	0.961	0.500	0.679
EE3	0.971	0.503	0.659
EE4	0.970	0.484	0.652
EE5	0.975	0.472	0.641
EE6	0.967	0.477	0.620
EE7	0.971	0.467	0.626
EE8	0.965	0.473	0.616
GCE1	0.335	0.818	0.230
GCE2	0.404	0.886	0.362
GCE3	0.502	0.939	0.411
GCE4	0.493	0.948	0.405
GCE5	0.506	0.954	0.426
GCE6	0.485	0.953	0.422
CO1	0.642	0.411	0.964
CO2	0.653	0.414	0.969
CO3	0.661	0.395	0.980
CO4	0.634	0.405	0.967

Source: Authors' research

Table A2: Discriminant validity: Fornell-Larcker criterion

	EE	GCE	CO
EE	0.966		
GCE	0.502	0.918	
CO	0.668	0.418	0.970

Source: Authors' research

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Navigating sustainability: Enhancing coastal and marine tourism through green skills, co-creation, and multi-stakeholder engagement

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Abstract

Purpose – Coastal and marine tourism, consolidated by national and local governments' aspirations to improve the vitality of the economy by developing the tourism sector, is considered one of the key contributors to the EU's blue growth. The challenge remains how to do this without compromising the sensitive nature and needs of local communities for environmental, social, economic and cultural sustainability. The aim of this research is to understand how to enhance sustainable coastal and marine tourism from the perspectives of green skills, value co-creation and multi-stakeholder engagement. **Methodology** – The applied methodology is mixed methods, including qualitative and quantitative approaches. **Findings** – The findings highlight the need to support stakeholders' capabilities, such as green skills, to be able to cooperate and engage in co-creating sustainable tourism with other stakeholders. Our case studies highlight the need for skills development at different levels to empower stakeholders to change their behaviour, engage in co-creation and acknowledge new technologies that support the transformation to sustainable tourism. **Implications** – Our study highlights the value of co-creation as a theoretical perspective in studying sustainable tourism, confirms the previous theoretical claim of a holistic, sustainable development view in coastal tourism and provides insights for its management.

Keywords: coastal and marine tourism, sustainability, green skills, co-creation, multi-stakeholder perspective
JEL classification: Z32, Q56

Navigacija održivosti: Unapređenje priobalnog i pomorskog turizma kroz zelene veštine, ko-kreiranje i angažovanje različitih zainteresovanih strana

Sažetak

Svrha – Priobalni i primorski turizam, konsolidovan aspiracijama nacionalnih i lokalnih vlada da unaprede vitalnost privrede razvojem turističkog sektora, smatra se jednim od ključnih faktora koji doprinose plavom rastu EU. Ostaje izazov kako navedeno sprovesti bez

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ugrožavanja osetljive prirode i potreba lokalnih zajednica za ekološkom, socijalnom, ekonomskom i kulturnom održivošću. Cilj ovog istraživanja je da se razume kako unaprediti održivi priobalni i primorski turizam iz perspektive zelenih veština, zajedničkog stvaranja vrednosti i angažovanja više zainteresovanih strana. **Metodologija** – Primenjena metodologija je kombinovana metoda, uključujući kvalitativni i kvantitativni pristup. **Rezultati** – Rezultati naglašavaju potrebu da se podrže sposobnosti zainteresovanih strana, kao što su zelene veštine, kako bi mogli da sarađuju i učestvuju u zajedničkom stvaranju održivog turizma sa drugim zainteresovanim stranama. Naše studije slučaja naglašavaju potrebu za razvojem veština na različitim nivoima kako bi se zainteresovane strane osnažile da promene svoje ponašanje, učestvuju u zajedničkom stvaranju vrednosti i priznaju nove tehnologije koje podržavaju transformaciju ka održivom turizmu. **Implikacije** – Ova studija naglašava značaj zajedničkog stvaranja vrednosti kao teorijske perspektive u proučavanju održivog turizma čime potvrđuje prethodnu teorijsku tvrdnju o holističkom, održivom pogledu na razvoj priobalnog turizma i pruža uvid u njegovo upravljanje.

Ključne reči: priobalni i primorski turizam, održivost, zelene veštine, ko-kreiranje, perspektiva više zainteresovanih strana
JEL klasifikacija: Z32, Q56

1. Introduction

Coastal and marine tourism is one of the fastest-growing segments of the tourism industry, accounting for approximately 50% of all global tourism (Northrop et al., 2022; Renfors, 2021). The European Union (EU) has recognised coastal and marine tourism as a crucial component of its blue growth strategies (ECORYS, 2018; European Commission, 2019), being the largest and fastest-growing sector within the blue economy in terms of gross value added and employment (European Commission, 2022b). The nature of coastal and sea areas is sensitive, and these areas can easily be exposed to pollution, as several researchers have noted. This can have long-term negative consequences (Stewart & Draper, 2007). On the one hand, tourism benefits from ecosystem services, such as clean water and beautiful landscapes that nature provides, but on the other hand, using these services can also harm nature. In the same way, tourism development may change the traditional ways of life and livelihoods of local people by restricting their access to and use of shore areas and making their economy highly dependent on tourism, for example (Leposa, 2020). A recent study by Fernández-Macho et al. (2024) provides fresh insights into how tourism affects European coasts. Among other destinations, they identified the western coast of Finland, Åland and Varsinais-Suomi as having great potential for development because of their high attractiveness to tourists, despite their somewhat underdeveloped tourism sectors. Finland has taken the development of sustainable tourism as one of its priorities with the strategic aim of doubling its tourism exports by the year 2028 while ensuring its sustainable growth (Ministry of Economic Affairs and Employment of Finland, 2020). These aims impact Finnish coastal and marine tourism, where a systemic view is needed to develop the green skills of local stakeholders, for example (Renfors, 2024).

The current paper further elaborates the ideas presented at the 31st Nordic Symposium on Tourism and Hospitality Research in a session chaired by the Susberg research group. We emphasise that the development of sustainable coastal and marine tourism requires the enhancement of green skills, co-creation practices and multi-stakeholder engagement to establish "a balance between the economic, environmental, and societal" (Wang et al., 2016, p. 652) and cultural dimensions (Duxbury, 2021; Soini & Birkeland, 2014) of sustainable tourism. The local stakeholders' perspective holds significant importance using not only a collaborative (Stewart & Draper, 2007) but also a co-creative approach (Font et al., 2023; Kang, 2020; Kastenholz & Gronau, 2022; Rinaldi et al., 2022). This approach could foster the development of a holistic coastal and marine tourism ecosystem, enabling the identification and understanding of potential conflicts and growth (Dimitrovski et al., 2021), which is crucial for enabling tourism destinations to move towards a sustainable future (Hoarau-Heemstra et al., 2023).

In this paper, we focus on the development of two coastal destinations in Finland, the Turku and Pori areas. Our main research question concerns how to enhance sustainable coastal and marine tourism from the perspectives of green skills, value co-creation and multi-stakeholder engagement. These themes are discussed in the following chapter of the Literature review. The cases of creating a sustainable (and smart) coastal city (Turku) and developing a novel cruise destination (Pori) are examined from the perspective of the overall need to discuss green skills, co-creation of value and multi-stakeholder engagement for sustainable tourism as critical tools. We first present the literature review on these topics, then follows the methodology section that presents how we conducted the two empirical case studies. The results and discussion section draws upon the analysis of the case studies, which are then further elaborated upon and summarised in the conclusion section.

2. Literature review

2.1. Green skills in coastal and marine tourism

Coastal and marine zones are critical areas for economic activity and recreation, making the integration of green skills within the tourism sector of these areas extremely important (European Commission, 2022a). Coastal and marine tourism requires specialised green skills related not only to minimising environmental impact but also to ensuring the sustainability of marine ecosystems and coastal communities. Furthermore, with climate change leading to rising sea levels and increasing threats to coastal and marine environments, tourism professionals equipped with green skills can play a leading role in adaptive and mitigation strategies (Cedefop, 2020).

The transition to a more sustainable and green economy is set to influence the requirements for skills significantly, as highlighted by Cedefop (2012). Structural changes in the economy will inevitably surge demand for specific occupations while causing a decline for others. At the same time, the evolution of new economic activities could lead to new occupations, which will require innovative skill profiles and adaptations of qualification and training frameworks to cater to these emerging needs. Furthermore, greening induces changes in numerous existing occupations and sectors, which necessitate modifications to existing job tasks, prompting a reevaluation and adjustment of the current training and qualification structures relevant to those occupations (Renfors, 2024). For example, an essential gap in green skills training for protected area specialists has already been discovered in the tourism industry (Hermans et al., 2019). This study highlights the need to use effective tools to assess the impact of tourism on the environment and economy and increase knowledge about various initiatives and groups working towards sustainable tourism in protected areas.

Green skills may include resource efficiency, climate change and transition to a low-carbon economy, biodiversity conservation, sustainability communication skills towards a green economy, and the encouragement of customers to be more responsible. Additionally, environmental management skills are necessary to manage companies' environmental impacts by planning, operating, monitoring, and improving their actions (Renfors, 2024).

Despite its known importance, education on green skills for coastal and marine tourism in higher EU educational institutions faces myriad challenges. Existing curricula may lean heavily towards traditional maritime operations or broad tourism management, sometimes overlooking specific sustainability concerns related to coastal regions (Renfors et al., 2023). Since maritime and coastal tourism often overlap with other activities, such as fisheries, transport, and marine conservation, the education system must ensure that green skills incorporate interdisciplinary knowledge that balances all these facets. Furthermore, the utilisation of green skills at coastal tourism destinations promotes cooperation among different groups involved, such as governments, businesses, non-profit organisations, and the local community (Dimitrovski et al. 2021; Hoarau-Heemstra et al., 2023). By working together, these parties can devise and execute well-rounded plans for sustainable tourism that encompass environmental, societal, and economic goals. This method of developing tourism aligns with the idea of creating value together, as it utilises each stakeholder's individual strengths and resources to attain shared advantages and lasting results. In the following subchapters, we discuss in more detail how to co-create value for sustainable coastal and marine tourism.

2.2. Co-creating value for sustainable tourism

Co-creation is essential for moving towards sustainable futures in various sectors (Arnold, 2017; Brandsen et al., 2018; Hakio & Mattelmäki, 2019; Leino & Puumala, 2021) because of the complexity of sustainability challenges, which cannot be addressed by acting alone (Rinaldi et al., 2022). In the tourism sector, there is an increasing need for actors to start collaborating more intensively (Eckhardt et.al, 2021; Sulyok et al., 2022) to reach the goals of sustainable tourism (Font et al., 2023; Kastenholz & Gronau, 2022; Rinaldi et al., 2022). The previous literature, which adopted a historical perspective on the concept of sustainable tourism, emphasises that sustainable tourism has evolved through stages and was initially seen as an alternative to mass tourism but later shifted towards making mass tourism more sustainable (Sharpley, 2020). Currently, in the context of cities, the New Urban Agenda as an accelerator for the Sustainable Development Goals (The New Urban Agenda, 2020) or the European Union's mission for Climate Neutral and Smart Cities will also highlight the development of the tourism sector by emphasising, for example, the promotion of local culture and products (Northrop et al., 2022). However, it has been indicated that tourists themselves, whether in the cruise sector (Kang, 2020) or more generally, can become co-creators of their tourism experience, where emerging technologies provide new avenues. This kind of empowerment of consumers is crucial for striving for businesses (Neuhofer, 2016), as consumers' participation in designing services contributes to meeting the expectations of service users (Leino & Puumala, 2021). Therefore, digitalisation and smart tourism have been recognised as potentially causing fundamental changes in tourism. However, the process of value creation, as well as to whom value is created, has remained unclear (Liburd et al., 2017; see also Saarijärvi et al., 2013). Value should be understood in terms of environmental, social, and cultural value in addition to economic value, and the question of whom value is created for should also be considered. However, even developments in ecotourism, tourism in marine protected areas and community-based tourism have been found to face difficulties addressing the challenges of social and environmental sustainability (Leposa, 2020). Understanding the positions and needs of crucial stakeholders in the tourism industry and constructing a shared understanding of these among the actors involved in value co-creation is challenging. As the skills and knowledge of several actors in the value creation process affect how value is created (Saarijärvi et al., 2013), their knowledge of all dimensions of sustainability plays an important role (see also Renfors, 2021).

The current paper draws from the approach of Liburd et al. (2017; 2022), who view tourists not as end-users but as crucial actors with whom smart and sustainable tourism should be co-designed. This approach is in line with the latest critiques on connecting sustainable tourism with smart cities with the top-down understanding of smart cities as sustainable tourist destinations that do not embrace enough "social participation mechanisms" (Ivars-Baidal et al., 2023, p. 1568). The shared premise for "the strategic role of co-creation for competitive performance, stressing a management and marketing approach" (Campos et al., 2018, p. 371–386) is essential. Simultaneously, it is crucial to consider that sustainability is seen as a factor for increasing the competitiveness (Cimbaljević et al., 2023) of various actors in the tourism sector, with multi-stakeholder cooperation elaborated upon in the next part of the literature review.

2.3. A multi-stakeholder perspective on the sustainable development of a coastal destination

In a recent study, Kulkov et al. (2023) reviewed the sustainable development of coastal areas, especially from the business perspective, by organising research in areas related to regional management, social responsibility and education in sustainable behaviour. The multi-stakeholder perspective on the sustainable development of a coastal destination means that the actors have a common vision of what sustainable development is like and what kind of future it leads to. The cooperation between sectors and conflict resolution enable the sustainable growth of coastal regions (de Andres Gonzalez et al., 2018). Barbier et al. (2011) call for improved institutional and legal frameworks for managing, controlling, and regulating economic activities that are destructive to coastal and marine ecosystems. Concerning cruise tourism, James et al. (2020) call for "intergovernmental agreements to address regulatory issues and coordination and collaboration between destinations" (p. 1425). Dimitrovski et al. (2021) studied stakeholders' holistic view of the sustainable development of cross-border coastal areas in the Baltic Sea (Finland and Estonia) by using mixed methods.

Regarding the key areas for future studies of sustainability in coastal tourism, Kulkov et al. (2023) called for more research on the basis of cooperation between stakeholders, what encourages and motivates them in sustainable development, and how the tourism industry survives and adapts to the challenges brought about by a global pandemic, such as COVID-19. For example, cruise tourism, as a part of coastal and marine tourism, experienced total stagnation caused by COVID-19 in 2020-21. Previously, the industry had grown exponentially over two decades. The COVID-19 pandemic has induced considerable financial losses, a risk of liquidity, and a reduction in the workforce (Radić et al., 2020). Despite this turmoil, the latest report by the Cruise Line International Association (CLIA, 2021) shared cautious optimism, arguing that "58% of international vacationers, who have never cruised, would likely to cruise in the next few years". The sustainability of cruise tourism has recently received attention; for example both CLIA (2018, 2020) and the World Tourism Organisation UNWTO (2018) have signalled a need for the development of cruise tourism practices and processes. Sustainable development is especially important when a new port of call is introduced to cruise passengers and operators. Both parties are well aware of the possible negative effects of cruise tourism on destinations (Weeden & Dowling, 2016). In a paper presented at the Susberg research group's chaired session (published in James et al., 2023), James and Halkier presented how the key actors of a cruise ecosystem implement a strategy path in their efforts to develop cruise tourism to be more sustainable. The researchers emphasised the need for a careful analysis and understanding of the future economic and social effects of these actions. By examining the economic and political goals of stakeholders and the mechanisms that shape their views on the future of Greenlandic cruise tourism, James et al. (2023) contribute to discussions about destination development path dynamics. Within a multi-stakeholder approach, they avoid dichotomous path development as the only means of conceptualisation.

3. Methodology

The research question of how to enhance sustainable coastal and marine tourism from the perspectives of green skills, value co-creation and multi-stakeholder engagement is approached through case study research (Yin, 2003; 2009) by focusing on the development of two Finnish coastal destinations, Turku and Pori (Figure 1).

Figure 1: Map showing the locations of the two case cities (marked with red)

Source: Google maps with authors' adding

Case 1 Turku

The analysis of the case of Turku draws from the research project Smart Port City funded by the City of Turku (Turku Urban Research Programme 2022-2025). Turku provides an interesting case because in the spring of 2022, this city was selected as one of the 100 frontrunner cities in Europe to become climate neutral by the end of the decade. This European Union's mission for Climate Neutral and Smart Cities programme supports Turku in the climate work outlined in the Turku Climate Plan (Turku Climate Plan 2029). In the plan, the city adheres to sustainable development and mitigates climate change in all its operations and urban development. As the city is located in Southwest Finland and surrounded by an archipelago of more than 22 000 islands (Siivonen, 2018), the city wants to connect its centre with the unique archipelago that is seen as having great potential for tourism. The study conducted in the Smart Port City project concentrates mainly on the area of Linnanniemi - starting from Turku Castle and reaching the harbour. The development of the area has just started, and the construction of a new terminal building will be realised by 2027. This will free land for urban development, including temporary art-related activities.

The research material used in the current paper consist of ten semistructured interviews carried out with the key persons at the city of Turku (7), the port of Turku (2) and the local DMO (1). The interviews (between 45 and 75 minutes in length) were recorded, transcribed and thematically analysed (Charmaz, 2006; Creswell, 2016; Creswell & Creswell Báez, 2021) in NVivo. The interviews covered several themes, such as the development of the port and Linnanniemi area, digitalisation, data collection, management and sharing, smart cities, and tourism. The questions were to some extent modified according to the knowledge area of the interviewees. In the current paper, we concentrate mainly on the theme of tourism, where the aim was to understand how the transformation of the Linnanniemi area supports tourism in Turku and how the role of tourists is seen in the process of supporting the city of Turku to become smart and sustainable.

Case 2 Pori

The second case city, Pori, is situated on the west coast of Finland. It was a new port in a British cruise company's itinerary, where Pori was one of the cruise destinations. The cruise ship visited Pori during one day in June 2016, when the quantitative data were gathered (180 completed surveys from 400 cruise passengers, Lemmetyinen et al., forthcoming). As noted by Weeden and Dowling (2016), in the case of a novel cruise destination, caring for sustainability is especially important for both parties involved in cruise tourism, passengers and operators, both of whom are well aware of the negative effects of cruise tourism. For a destination management organisation, a survey of cruise tourists provides valuable information about cruise travellers' relationships with sustainability: first, the motives of cruise passengers to choose the city as the stopover for their cruise and, second and more importantly, how they perceive their visit from the perspective of sustainability. The case study of Pori largely adopts the mixed-method approach and data triangulation to project the behavioural continuity of the senior cruise tourism market. The quantitative survey was followed by a qualitative part in 2020 with 30 qualitative interviews among the representatives of the creative tourism ecosystem to shed light on the stakeholders' views on how to develop the destination in a sustainable and inclusive way. The overall theme in the interviews was the informants' vision of the destination as sustainable and inclusive. The length of the interviews was approximately 60 minutes. The interviews conducted in Finnish were first transcribed and then translated to English since they were part of an international research project.

4. Results and discussion

Case 1 Turku

The interviews conducted in the context of Turku indicate different approaches for understanding future developments related to the transformation of the Linnanniemi area. The changes of Linnanniemi aim to connect the city centre to "one of the biggest archipelagos in the world" (Linnanniemen yleissuunnitelma, p. 31) by opening more riverbanks for public use and creating green, attractive public spaces for locals and visitors. The local DMO, Visit Turku Archipelago, has initiated changes in its organisation to increase Turku's competitiveness as a tourist destination. Collaboration with the two neighbouring cities, Naantali and Pargas, is essential for this change. Therefore, the view is broad when discussing the development of the Linnanniemi area and its potential for becoming attractive to tourists. "*...all these cultural developments and investments which Turku is doing, are wonderful. We definitely need that, but it's not gonna change the big picture unless we are working on that from the [destination] image perspective now already.*" (DMO).

The city representatives emphasise the construction of Linnanniemi's identity and the involvement of city inhabitants in contributing to the development of the area. The local cultural heritage, Turku Castle, has a central role in the construction of Linnanniemi's identity and in the development of its waterfront. In addition, the local city inhabitants are seen as key drivers for making the area attractive to tourists. "*I go back to this identity; it's the key thing. If there is a good spirit in the area, I think that's the main thing that will attract people, because where the local people want to be tourists want to be, I think that's the main thing.*" (City).

Emphasising the role of **the local context and its continuity** in a changing waterfront area in the city, as well as focusing on **local ways of life**, supports the main goals of sustainable tourism and principles of cultural sustainability (see also Northrop et al., 2022; Soini & Birkeland, 2014). However, establishing a shared understanding of the role of tourists, who could become part of shaping the value of their tourism experience, as indicated in the literature section of the current paper, is more complex on the basis of our analysis.

Our interviewees recognised tourists' needs for acquiring information about services and destinations when planning a trip or while travelling and thus considered tourists mainly as **users of information and services**, as illustrated in a quotation by the city: *"…that also attracts people to the area, as we get more services into the area and the artists are a big part of that livelihood in the areas that you have. Different kinds of happenings in the area."* The port brought up tourists' needs to acquire information and find transportation to or from the port and to consume their services related to boarding: *"There has been very initial discussion about providing users some sort of digital port map of the port area [showing them] how to navigate in it. Also, [there were] some very early discussions on interactive information screens."* Although these aspects are essential parts of tourist experiences, the more active role of tourists, becoming co-creators, was not perceived by the port. This may imply that the port considers shipping companies their primary customers and thus focuses its attention on them.

To some extent, tourists' role as **a source of information** that can be used in decision making, developing services or attracting investments was also recognised. The DMO was actively developing its practices of acquiring and analysing data about the current situation of tourism, as well as sharing information they had gained with the industry. Additionally, the city recognised the possibilities that new technology and digitalisation offer for understanding tourists' behaviour as consumers (e.g., big data). It was regarded as useful, although not yet properly utilised, as recognised by the DMO: *"Visa collects a huge amount of consumer data, and we can basically get quite an understanding of the consumer behaviour through that."* Larger and more detailed data could support the city's decision making regarding investments and service development. However, despite the opportunities provided by new technologies for acquiring tourism data, our study indicates that DMOs and especially small-scale service providers have limited resources and competences for analysing and utilising such data. This limitation has also been recognised as a barrier to smart tourism in earlier studies (Liburd et al., 2017).

The DMO and the city recognised the opportunity to **engage tourists in co-creation**. For example, tourists' engagement in developing tourism services was seen as highly potential and desirable by the DMO, which recognised opportunities provided by the technology for service design: *"there are so many methods in the service design. So, I mean it's the key element to success in the future…whether it's inhabitants or whether it's visitors. I think we definitely need to get them to join… There are such powerful… I would say engagement tools through [which] people can be part of the process."*. Interestingly, the tourists' ability to spread the word about the city as a destination and to contribute to a desired international atmosphere in the city were recognised by the city, although concrete ways to do this, or how to support it digitally, were not brought up. In our data, sustainability was conceived in terms of planning and building a city with more green areas and smart mobility solutions that contribute to an enjoyable atmosphere for city residents and visitors and mitigating climate change. In addition, the DMO speculated about the city's ability to attract more conscious travellers, indicating the responsibility and role of tourists in co-creating sustainable tourism. However, this type of tourism was seen likely to occur in the future and not to represent mainstream tourism. The future may also entail overtourism, a risk that was seen as something to be kept in mind. The local people's hesitant or suspicious attitudes towards tourists arriving in their communities were acknowledged by the DMO. This calls for engaging and giving voice to various stakeholders in developing tourism as well as acknowledging different conceptions of sustainable tourism. The DMO has taken actions to identify the stakeholders who should participate in the development. Orchestrating this is, however, challenging: the stakeholders vary from public organisations to associations and small businesses, which often lack resources, knowledge, and networking. On the bases of the data, there clearly exists a need for stakeholders to modify their mindset from competition to coopetition and collaboration. The same need was also observed by Björk (2023), who proposed that a more significant role should be given to the theory of marketing value co-creation in researching the development of destination interaction. He also saw the lack of cooperation and co-opetition as an obstacle to sustainability in coastal and marine tourism.

Moreover, technology could be utilised to facilitate the interaction between different stakeholders, offering opportunities for tourists to engage in co-creating their touristic experiences and participating in innovation processes (e.g., Neuhofer, 2016), as well as contributing to the development of the green skills of various stakeholders. However, in addition to harvesting the opportunities new technologies offer, reaching this in the context of Turku requires the coordinated collaboration of numerous stakeholders and a joint strategy; as one of our interviewees puts it: "*Everything starts from a common vision*".

Case 2 Pori

With respect to the multi-stakeholder aspect in developing a sustainable cruise destination, this study contributes to the earlier literature by considering the key stakeholders' viewpoints both on the demand (cruise passengers, individuals) and the supply side (destination marketers, policymakers, organisations).

A survey exploring the motivational grounds of cruise passengers (individual)

In the survey among the cruise passengers, the motivational grounds of the cruise passengers were identified with survey questions (measured on a Likert scale ranging from 1-7) measuring their intrinsic motivation for cruising, for example, asking whether the reason was to achieve a peace of mind or to completely escape from daily routines. More than half of the cruise passengers felt that getting away from their everyday life was the most important reason for taking a cruise. Another important reason motivating other passengers was to learn something new from the places where the cruise ship was visiting and to obtain new knowledge. A more comprehensive report on the survey findings will be published in a forthcoming article (Lemmetyinen et al., forthcoming). With respect to the passengers' environmental responsibility while cruising, the majority of them (53%) had a lower level of awareness of the negative impacts of cruise tourism on the environment, whereas nearly half of the passengers (47%) were characterised by less frequent cruise involvement, which might be interpreted from an environmentally conscious standpoint, with the aim of minimising the effect of cruise travel on the environment. The findings of the survey show that cruise passengers' norms and attitudes are valid aspects of understanding coastal and marine sustainability.

A qualitative interview completing the survey analysis (organisational)

These are the themes of sustainable development that appeared in the qualitative interviews with stakeholders: certified sustainable development, the importance of the coast and the archipelago and Pori as a city of events.

Certified sustainable development

Informant I19, representing the local DMO, said that responsibility in tourism has always been an important criterion for Finland, especially now that Visit Finland has launched a new sustainable development programme called *Sustainable Travel of Finland*. Satakunta, the province whose capital is Pori, has also joined that program, and Visit Pori has encouraged local businesses to follow its principles to attain a sustainability certificate. Informant I19: "*This is the strength of Finland, and this will be our strength because it has been carried out so well. So, let's say that this COVID-19 might have made us become a part of this sustainable travel in Finland process sooner than planned*." However, tourism businesses, especially small ones, may lack the resources and knowledge needed for developing their sustainability to match the accreditation requirements. Visit Finland has recognised this and offers training programs for businesses to support their knowledge and skills development (see also Renfors, 2021).

The importance of the coast and the archipelago

In the interviews with the stakeholders, Informant I19, representing the local destination marketing organisation, spoke of the importance of the coast and the archipelago and saw Yyteri beach as a top sustainable attraction of the whole province: "*So we go with our strengths, as Yyteri beach for example as a nature-based sustainable attraction…, and then …[]…we have our cultural services, which include events and other cultural services. And these of course, these exact things you can't find anywhere else".* Most of the beach areas in Yyteri are protected and belong to the Natura 2000 network. Moreover, Yyteri is one of Finland's most popular beaches, which is hoped to increase its number of visitors. This is one example of a site where nature protection and development as a tourist attraction need careful balancing. In Yyteri, visitors are offered information about fragile nature and proper ways to behave.

Informant I10, the leader of the cultural sector in Pori, praises Reposaari *"as its own, idyllic village in the archipelago"* as a sustainable coastal attraction, whereas Informant I1 represents a natural history museum called Luontotalo Arkki (in English The Ark Nature Centre), which conserves, produces and documents natural history material by conveying and communicating phenomena regarding nature and the environment to people and by producing many parallel programmes in the form of various lectures and expert events and excursions. As an example, informant I10 mentioned lighthouse excursions: *"Lighthouses are a fantastic cultural heritage because the environmental theme is strongly related to it, and they are popular destinations in local travel, coastal travel and sea travel".*

Pori, the city of events

Informant I27 is an entrepreneur who founded a music festival several years ago. For reasons of anonymity we do not reveal the name of the festival. He sees Pori as a city of events, and this could also be taken into consideration when planning itineraries for coastal tourists: "*Pori is good as a city of events on a principled level. Pori Jazz here surely has favoured the city. Or, however, it's one of the oldest festivals in Finland and has been here for so long,* *and it's an enormous deal, so a kind of event industry was generated around it. There are people here who understand the nature of the events*". Many people from the cultural scene have moved there, professional amateurs and even professionals, and they have organised, through community labour, the Reposfääri festival, which, according to Informant I10, is *"one of the best summer events ever, … somehow it has such a fantastic atmosphere that everyone is working just because they love it"*.

The results of the stakeholder interviews emphasise the importance of multi-stakeholder engagement and the importance of dialogue between stakeholders when managing the sustainable development of the Nordic coastal area and a new cruise destination. It is important to understand how cruise passengers' motivation towards sustainability issues is related to their loyal and pro-environmental behaviour towards the cruise industry (see also Dimitrovski et al., 2021; Han et al., 2018; Lemmetyinen et al., 2016).

Stakeholders, for example, local destination marketing organisations, were asked about their perceptions of whether COVID-19 had changed attitudes towards sustainable development in coastal areas. It seemed that in the era after the pandemic, the respondents saw that attitudes towards sustainability in tourism were becoming more positive. As one of the informants stated, it has always been important for Finland to follow the principles of sustainable and responsible development as a tourism country. Now that the national Visit Finland organisation launched the Sustainable Travel of Finland program, it was clear that the province of Satakunta, with Pori as its capital, would take part in the program (Renfors, 2021). Visit Pori encouraged enterprises in the tourism industry to join the program with the possibility of obtaining certificates of sustainability. "*After COVID-19, sustainability will be the new normal*" (Informant I19).

5. Conclusions

The development of coastal and marine tourism from the perspective of sustainability, considering its environmental, economic, social and cultural dimensions, is challenging but crucial for the enhancement of sustainable tourism. In this paper, we have concentrated on the importance of green skills, co-creation and multi-stakeholder approaches as ways to support the sustainability and viability of coastal and marine tourism, which respect the local way of life and do not harm the delicate balance of the ecosystem. Green skills are essential for ensuring that coastal and marine tourism remain viable and thrive without compromising the ecosystems that attract tourists. Addressing the challenges in imparting these skills necessitates innovative educational strategies, stronger industry–academia collaboration, and a deep-rooted commitment to sustainability (Renfors et al., 2023). Renfors' study (2024) summarised how "green skills in the tourism sector reflect systems thinking and require a holistic approach" (p. 12). This is in line with Hoarau-Heemstra et al. (2023), who stated that "tourism's impact ultimately depends on key stakeholders' willingness to collaborate to build a common envisioned future of sustainable [....] tourism" (p. 7). Green skills are needed to make all coastal tourism stakeholders aware of environmental sustainability and engage them in sustainable behaviour. The entire ecosystem of coastal destinations is interconnected with economic and social sustainability dimensions, which is why skills are required to understand these connections. As Renfors (2024, p. 12) concludes, green skills should be used to motivate and empower to change behaviours, and especially to make stakeholders actually do something to achieve this transition.

The results of the qualitative interviews among the organisational respondents in this study, again, follow Dimitrovski et al. (2021), emphasising pro-environmental behaviour from a multi-stakeholder perspective. Even though the interviews indicated that there has been a paradigmatic change caused by COVID-19 into more sustainable coastal tourism, we need to be cautious about drawing conclusions too quickly. A couple of years after the pandemic, Patrick Brouder, one of the keynote speakers at the Nordic Symposium, referred to his own article (Brouder, 2020) *Matrix of potential evolutionary pathways towards tourism transformation* and asked, “While the COVID-19 crisis offered a once in a generation opportunity for a radical transformation of the tourism sector, the nagging question is where is this transformation today?” (Brouder, 2023, keynote speech at the Nordic Symposium).

Furthermore, digital transformation has a pivotal role in advancing sustainable tourism (e.g., Ivars-Baidal et al., 2023). Digitalisation and new technologies offer new opportunities for the collaboration of several stakeholders and value co-creation. Even though cities and tourism ecosystems are rapidly developing their smartness, in our case study, smartness has not yet materialised in the extensive collaboration of stakeholders, including for example, engaging tourists in service development. However, participating in value co-creation also depends on the knowledge and skills of the participants (Saarijärvi et al., 2013). To be able to contribute to the co-creation of sustainable tourism, stakeholders need to have a shared vision of the targets of the collaboration, technological and collaboration skills in addition to the focal green skills. On the one hand, tourists’ expectations and requirements for the sustainable practices of destinations and service providers are important for the development of sustainability; on the other hand, not all tourists can be regarded as sustainability conscious. For example, according to Case Study 2, more than half of the senior cruise tourists did not perceive the sustainability of the destination as their primary motive for visiting it. Nevertheless, when visiting, the cruise passengers were pleased with the sustainability of the destination. The cruise passengers were also ready to share their positive experiences with their relatives and friends and to revisit the city later. Hence, investigating cruise travellers’ relationships with sustainability results in useful information for those who are responsible for managing and leading the destination into a sustainable future.

Our case studies indicate a desire for growing numbers of tourists because of their positive impact on the economy. The possibility of over tourism was recognised, but only as a risk that may become true someday in the future. Our case areas are in a good position to develop sustainable tourism practices and ecosystems for mitigating the potential negative impacts of increasing tourism and preserving the fragile coastal and marine ecosystems that tourism depends on. Sustainable tourism needs to be co-created by different stakeholders, such as authorities, local governments, DMOs, service providers, and the tourists themselves, and digitalisation and new technologies are essential for attaining sustainable tourism to find a balance between the different dimensions of sustainability. However, the opportunities these offer can be seized only if the stakeholders possess the motivation, knowledge and skills needed.

The studies reported in this article are not without limitations. The case studies represent North European coastal ecosystems and communities with developed infrastructure, coordinated efforts of national and regional DMOs to enhance the sustainability of tourism, and no problems related to over tourism. Rather than offering generalisable knowledge, the qualitative case studies (Case 1 and the stakeholder sub study in Case 2) offer exemplary insight that can be used for theoretical generalisation. The informants in the quantitative study in Case 2 were relatively aged, European cruise tourists, whose attitudes and behaviour do not represent the entire cruise tourist population.

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Conflict of interest

The authors declare no conflicts of interest.

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Exploring rural tourism potential in rural areas of Vrnjačka Banja

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Abstract

Purpose – The paper aims to examine the local populace's perceptions towards the possibilities and approaches of developing rural tourism in the rural areas of the Vrnjačka Banja municipality. The goal of the study is to contribute to the understanding of rural tourism development and the promotion of sustainable rural development while actively involving the local population. **Methodology** – The collected primary data underwent analysis employing descriptive statistics and factor analysis in IBM SPSS Statistics 26.0 software. **Findings** – The analyzed results of the empirical research has shown that rural tourism in rural areas of municipality of Vrnjačka Banja can be developed by including local population. **Implications** – The research makes a theoretical contribution by enriching the discourse on the socio and economic prosperity of the community and tourism in rural areas. The practical implications of the paper involve contributing to the formulation future strategies for advancing rural tourism in municipality of Vrnjačka Banja. Moreover, the paper can serve as a basis for future improvements in effective rural tourism management and enhancement of the overall quality of life for the rural community in the Vrnjačka Banja municipality.

Keywords: rural tourism, tourism destination, local population perceptions, Vrnjačka Banja
JEL classification: Z32, L26, Q13

Istraživanje potencijala za razvoj ruralnog turizma u ruralnim područjima Vrnjačke Banje

Sažetak

Svrha – Rad ima za cilj da ispita percepcije lokalnog stanovništva o mogućnostima i pristupima razvoja ruralnog turizma u ruralnim područjima opštine Vrnjačke Banje. Svrha ovog rada je da doprinese razumevanju razvoja ruralnog turizma i promociji održivog ruralnog razvoja uz aktivno uključivanje lokalnog stanovništva. **Metodologija** – Primarni podaci su analizirani korišćenjem deskriptivne statistike i faktorske analize u softveru IBM SPSS Statistics 26.0. **Rezultati** – Analizirani rezultati empirijskog istraživanja pokazali su da se ruralni turizam može razvijati u ruralnim oblastima opštine Vrnjačke Banje uz

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uključivanje lokalnog stanovništva. **Implikacije** – Teorijski doprinos istraživanja služi socio-ekonomskom prosperitetu ruralne zajednice i obogaćuje diskurs o ruralnom turizmu. Praktične implikacije istraživanja se odnose na značaj dobijenih rezultata u izradi budućih strategija razvoja ruralnog turizma Vrnjačke Banje. Osim toga, rad može poslužiti kao osnova za buduća unapređenja efikasnosti menadžmenta ruralnog turizma i poboljšanje ukupnog kvaliteta života lokalnog stanovništva u ruralnim područjima opštine Vrnjačke Banje.

Ključne reči: ruralni turizam, turistička destinacija, percepcije lokalnog stanovništva, Vrnjačka Banja
JEL klasifikacija: Z32, L26, Q13

1. Introduction

The paramount industry driving rural community development today is tourism (Milićević et al., 2023; Puška et al., 2019). As the 21st century began, rural tourism and other new forms of tourism were developed to meet the needs of contemporary tourists. Considering it offers serene surroundings for relaxation and the enjoyment of scenic beauty, rural tourism becomes a pleasant and convenient choice for tourists as well as a promoter of rural development. Furthermore, the development of rural tourism as a central force for the development of rural communities reflects a broader prevailing phenomenon in the 21st century. Contemporary tourists seeking respite from the fast pace of cities are increasingly attracted to the authenticity and tranquility that rural destinations offer. The experience offered by rural tourism goes beyond traditional attractions and embraces a deep connection with nature, local culture and sustainable practices.

The growing desire for tourism services within rural areas empowers community members to generate income through product sales and service provision (Nedeljković et al., 2022; Puška et al., 2021; Sanagustin Fons et al., 2011). In the sphere of tourism development, the local populace assumes a vital role as essential stakeholder. In order to formulate a strategy and policy geared towards tourism competitiveness and ensure the sustainable growth of the tourist destination, it is essential to include the perceptions and attitudes of the community regarding tourism (Milićević et al., 2020; Papastathopoulos et al., 2020). Furthermore, the symbiotic connection between tourism and the rural economy goes beyond income generation. By actively involving residents in supplying products and services to meet tourism needs, community pride and identity are nurtured.

The study area of this paper is Vrnjačka Banja. Vrnjačka Banja is a spa tourism destination and municipality located in the Raška District of central Serbia. The urban area of Vrnjačka Banja has 10,065 inhabitants, whereas with the population of the surrounding villages of Vrnjačka Banja included, the total number is 27,527 inhabitants (Statistical Office of the Republic of Serbia, 2022). The Vrnjačka Banja municipality has one urban and thirteen rural settlements (Municipality of Vrnjačka Banja, 2024). The paper aims to explore how the local population perceives the possibilities and approaches to advancing tourism in the rural zones of Vrnjačka Banja municipality. Also, the study seeks to contribute theoretically by enhancing discussions about the socio-economic well-being of rural communities and rural tourism, as rural communities are one of the crucial stakeholders in developing this form of tourism.

2. Theoretical framework

Rural tourism has been a topic of interest to numerous authors in recent years and represents a common name for various activities outside of cities and places where mass tourism has developed (Borović et al., 2022; Cvijanović & Ružić, 2017). An essential element in the affirmation and promotion of this kind of tourism is the local community's involvement, which is the focus of rural tourism (Crăciun et al., 2022). It has been believed that developing rural tourism can help the local population by fostering social and economic growth (Fang, 2020). Tourism within rural locales connects the economic, wider social and ecological elements of development. At the same time, it contributes positively to employment and the advancement of rural regions (Dimitrijević et al., 2022). According to Fleischer and Pizam (1997) "many studies show that rural tourism makes an important contribution to the local economy" (p. 368). Rural tourism encompasses "a sphere of double interests: native population (hosts) on the one hand and tourists (guests) on the other hand" (Paresishvili et al., 2017, p. 345).

According to OECD (2020) rural areas, given their essential nature and fundamental differences from urban areas, demand distinct interventions and policies tailored to enhance the income of their populations. Rural tourism has the potential to enhance the development of rural regions by elevating the quality of life for their residents (Njegovan et al., 2015). Dimitrovski et al. (2021) point out that certain researches have shown that tourism in rural areas develops spontaneously, without adequate strategic development elements, while Fleischer and Felsenstein (2000) state that the efficacy of such growth strategies receives limited attention to establish local jobs and generate income. Today's rural tourists are looking for destinations that have natural beauty and diverse tourism products and that have the ability to provide authentic and transformative experiences (Li et al., 2020). It is precisely rural tourism that stands out as a specific form of tourism, which, in addition to other benefits, can enable this type of transformation. There is an increasing need for tourism destinations to motivate their residents to participate in the development and improvement of the tourist offer. The burgeoning interest of urban dwellers in rural areas has catalyzed the growth of rural tourism but rural revitalization not only embodies the requirement to satisfy rural residents' aspirations for a better life but also plays an integral role in enabling rural residents to better enjoy the "policy dividends" of rural revitalization (Brouder et al., 2015; Zhongwei & Ang, 2022).

The inception of research on the local population's perspectives regarding the impact of tourism dates back to 1970s (Kuvan & Akan, 2005). The analysis and understanding of the local population's stance on tourism development is crucial for the success of any tourism type (Blešić et al., 2015). A lot of research has been conducted to examine the attitudes residents and their perception of the possibilities of developing rural tourism and the benefits of this development aimed at enhancing the quality of rural life (Abdollahzadeh & Sharifzadeh, 2014; Andriotis & Vaughn, 2003; Ap, 1992; Blešić et al., 2015; Chang et al., 2018; Kuvan & Akan, 2005; Látková & Vogt, 2012; Muresan et al., 2016; Podovac et al., 2019; Remoaldo et al., 2017; Scutariu & Scutariu, 2023; Verbole, 2000; Wilson et al., 2001). Látková and Vogt (2012) state that, although research indicates a connection between the population's perception and economic benefits as well as their support for tourism, there is also a need to establish theoretical frameworks. Residents recognize that tourism development leads to job creation, improves living standards, and boosts demand for local products (Scutariu & Scutariu, 2023).

Podovac et al. (2019) state that residents drive rural tourism by selling agricultural products to tourists and providing accommodation in their homes. Incorporating the views of the local population forms the foundation for supporting tourism (Chang et al., 2018). Ap (1992) states that acknowledging tourism's role in rural community development has sparked heightened interest in examining its impacts, both positive and negative, on residents' perceptions. Numerous studies indicate that residents' satisfaction with tourism's impact significantly influences their perceptions and attitudes. The support from residents and the attitudes of individuals working in tourism significantly shape how tourists are treated and their overall impressions of the destination. (Wilson et al., 2001). The results of the study of Abdollahzadeh and Sharifzadeh (2014) show that residents values tourism in a way that is consistent with social exchange theory. Host community attitudes are favorable when perceived benefits outweigh perceived impacts, creating a positive social exchange (Andriotis & Vaughn, 2003). Based on case studies conducted in Slovenia, the author Verbole (2000) came to the conclusion that communities do not have the same attitude towards the development of rural tourism, because not everyone benefits equally from its development. Lane (1994) states that for rural tourism, it is of great importance that local communities control it. Rural tourism development is increasingly perceived as an opportunity for the development of rural communities (Long & Lane, 2000).

3. Materials and methods

The research focuses on analyzing the potential and methods for developing rural tourism within rural areas in the Vrnjačka Banja municipality. The paper aims to examine the perceptions of the residents with regard to the possibilities and approaches for the development of rural tourism in this municipality.

Based on the defined subject and research aim, the following research hypotheses were formulated:

H_1: Rural tourism in the Vrnjačka Banja municipality can be developed by engaging the local population in the production and sale of agricultural products.

H_2: Rural tourism in the Vrnjačka Banja municipality can be developed by engaging the local population in the provision of accommodation services for tourists.

H_3: Rural tourism in the Vrnjačka Banja municipality can be developed through the organization of traditional village events.

H_4: The involvement of tourists in the daily activities of the local population is an important factor for rural tourism development in the Vrnjačka Banja muncipality.

The empirical research was conducted using an anonymous questionnaire in June and July 2023. The questions were formulated relying on the previous study Podovac et al. (2019), which dealt with the analysis of rural tourism in the function of improving the quality of life of the population of the Goč Mountain, which is located in the immediate vicinity of Vrnjačka Banja. The survey questionnaire is divided into three parts. The first part comprised five questions relating to the socio-demographic characteristics of the respondents. The second part consisted of eleven questions and refers to the assessment of the current state of the individual elements of the rural tourist offer of Vrnjačka Banja and the degree of involvement of the local population in the development of rural tourism. The third part contains twenty statements on the approaches to the development of rural tourism in the rural areas of the municipality of Vrnjačka Banja, with an emphasis on the involvement of the local population.

A convenient sample was used and a total of 200 people completed an online survey questionnaire, but only 193 respondents met the basic condition that they live within the territory of the municipality of Vrnjačka Banja (Vrnjačka Banja, Otroci, Vukušica, Vraneši, Vrnjci, Goč, Gračac, Podunavci, Lipova, Štulac, Rsavci, Ruđinci, Novo Selo, Stanišinci). The answers of respondents were examined and presented in the paper. The data was processed and analyzed using descriptive statistics and factor analysis, with IBM SPSS Statistics 26.0.

4. Results

4.1. Descriptive statistics

The respondents of the survey were 71.5% female (138) and 28.5% male (55). The most of respondents (36.8%) belong to the 26-35 age group, while the least respondents (5.7%) are over 55 years old. As per the *level of education*, most of respondents have a *college* degree (33.7%) and *high school* diploma (31.1%), while the 2.1% of respondents have a *PhD*. In terms of *employment status*, the 71% of respondents are *employed* while the 3.1% of respondents *are retired*. Even 92.7% of the respondents agreed that the Vrnjačka Banja municipality has the potential for the development of rural tourism (Table 1).

Table 1: Characteristics of respondents

		F	%	SD
Gender	Male	55	28.5	0.452
	Female	138	71.5	
Age	20-25	60	31.1	1.169
	26-35	71	36.8	
	36-45	30	15.5	
	46-55	21	10.9	
	More than 55 years	11	5.7	
Level of education	High school	60	31.1	1.161
	College	65	33.7	
	Faculty	26	13.5	
	Master	38	19.7	
	PhD	4	2.1	
Professional status	Unemployed	20	10.4	0.620
	Employed	137	71.0	
	Student	30	15.5	
	Retired	6	3.1	
Does the municipality of Vrnjačka Banja have potential for the development of rural tourism?	Yes	179	92.7	0.260
	No	14	7.3	

Source: Authors' research

In the latter section of the questionnaire, participants assessed the present condition of individual elements of the rural tourism offer in the Vrnjačka Banja municipality, by using a 5-point Likert scale. Based on the data, it could be concluded that the average rating of the elements of the offer of rural tourism in the Vrnjačka Banja municipality ranges from 3.21 to 3.96. The aspects garnering the most favorable ratings include *natural beauty* (M=3.96), as well as *hospitality of the local population* (M=3.95). Conversely, *preserving rural areas* (M=3.21) and *sports-recreational offerings* (M=3.26) receive comparatively lower ratings, as indicated in Table 2.

Table 2: The quality of elements of the offer of rural tourism in the Vrnjačka Banja municipality

Elements of rural tourism offer	**Very bad**	**Bad**	**Average**	**Very good**	**Excellent**	**M**	**SD**
	%	**%**	**%**	**%**	**%**		
Natural beauties	3.6	6.7	19.2	30.1	40.4	3.96	1.094
Cleanliness	6.7	10.4	35.8	30.1	17.1	3.40	1.095
Preservation of rural areas	7.3	16.1	34.7	31.6	10.4	3.21	1.067
Peace and quiet	6.2	14.5	24.9	31.6	22.8	3.50	1.173
Cultural and historical heritage	2.6	10.4	32.1	31.6	23.3	3.62	1.033
Number and quality of restaurants	6.2	14.5	24.9	30.6	23.8	3.51	1.181
Quality and variety of gastronomic specialties	5.7	13.0	29.0	28.5	23.8	3.51	1.155
Volume and quality of accommodation offer	6.2	6.7	17.6	33.2	33.6	3.86	1.164
Sports and recreational offer	6.7	17.6	31.6	30.1	14.0	3.26	1.113
Traffic availability	6.2	7.8	25.4	38.3	22.3	3.62	1.101
The hospitality of the local population	3.1	3.6	19.7	42.0	31.6	3.95	0.969

Source: Authors' research

The third part of the questionnaire refers to the perceptions of approaches to the tourism development in the rural areas of the Vrnjačka Banja municipality. Employing a 5-point Likert scale respondents expressed their agreement/disagreement with the offered statements. The majority of participants believe that the rural tourism offerings can be enhanced by *financial and institutional backing from local authorities in order to bolster agriculture and tourism* – S3 (M=4.47), as well as by *increased use of agricultural produce in creating culinary experiences for tourists* – S7 (M=4.47). Besides this, the results suggest that the residents can primarily contribute to the rural tourism development by *supplying catering establishments with agricultural products* – S14 (M=4.53), as well as by *producing and selling agricultural products to tourists* – S13 (M=4.48) (Table 3).

Table 3: Perceptions of approaches to the development of rural tourism in the rural areas of the municipality of Vrnjačka Banja

Statements	**Completely disagree**	**Disagree**	**Not sure**	**Agree**	**Completely agree**	**M**	**SD**
	%	**%**	**%**	**%**	**%**		
S1 – Enhancement and development of sports, recreational, and entertainment offerings for tourists	0.5	3.1	14.0	40.4	42.0	4.20	0.832
S2 – By raising the level of understanding and education of the residents about the importance of rural tourism	0	4.7	13.0	28.5	53.9	4.31	0.871

S3 – Financial and institutional backing from local authorities in order to bolster agriculture and tourism	1.0	3.1	7.3	24.9	63.7	4.47	0.841
S4 – By developing sustainable rural tourism (tourism development that doesn't endangers economic, socio-cultural and ecological development of destination)	0.5	3.6	17.1	30.1	48.7	4.22	0.895
S5 – By integrating the offer of rural areas with the entire tourist offer of Vrnjačka Banja	0.5	1.0	12.4	26.4	59.6	4.43	0.788
S6 – By involving local population in agriculture production	2.1	6.2	15.5	28.0	48.2	4.13	1.028
S7 – Increased use of agricultural produce in creating culinary experiences for tourists	1.0	2.1	6.7	28.5	61.7	4.47	0.797
S8 – By improving the quality of existing and building new accommodation facilities for tourists	4.1	4.7	17.1	31.6	42.5	4.03	1.077
S9 – By employing the local population in offering accommodation for tourists	2.1	3.1	10.9	28.5	55.4	4.32	0.935
S10 – By including tourists in the daily activities of the local population	4.7	6.7	16.1	31.6	40.9	3.97	1.124
S11 – By organizing traditional authentic manifestations	1.0	3.1	8.3	28.5	59.1	4.41	0.850
S12 – Incorporating fishing and hunting as supplementary tourist offer	5.2	8.3	17.1	26.4	43.0	3.93	1.184
S13 – Selling agricultural products to tourists	0.5	0.5	9.3	29.5	60.1	4.48	0.729
S14 – By supplying catering establishments with agricultural products	0.5	0	9.3	25.4	64.8	4.53	0.706
S15 – By providing accommodation services within households of the local population	2.1	2.6	17.6	21.2	56.5	4.27	0.980
S16 – By providing tourists with activities such as: picking mushrooms, plants,	2.6	3.6	18.7	26.4	48.7	4.15	1.017

and forest fruits with an expert local guide							
S17 – By active participation of tourists in agricultural work	7.3	6.7	21.8	24.9	39.4	3.82	1.229
S18 – By organizing attractive manifestations (gastronomic manifesta-tions, rural manifestations)	0.5	1.0	9.3	30.1	59.1	4.46	0.749
S19 – By teaching local people about old authentic trades that can be part of rural tourism offer	1.0	2.1	16.6	24.9	55.4	4.31	0.894
S20 – With the opening of an ethnic restaurant	2.1	0.5	12.4	22.8	62.2	4.42	0.881

Source: Authors' research

4.2. Factor analysis

Factor analysis was undertaken to group the twenty statements from the study and highlight observable factors. Factor analysis was used in conjunction with Cronbach's alpha coefficient (α) to provide complementary information regarding the validity and reliability of the scales. According to Melović (2022), factor analysis looks for "a pattern of relationships between a large number of variables" (p. 16). In this research, factor analysis was applied with the aim of grouping a significant amount of independent variables (findings) into factors. The authors Gašević et al. (2017) point out that factor analysis is applied to group a large number of variables into a smaller number of variables. According to Pallant (2006), one of the three main steps that factor analysis consists of is the test of the justification of the application of factor analysis – the Kaiser-Meier-Olkin indicator of sample adequacy and Bartlett's test, which was applied in this paper. Using Kaiser-Meier-Olkin-KMO and Bartlett's Test as well as the factor analysis, the conclusion is reached that the results obtained validate the use of factor analysis since the measure of KMO (0.892) exceeds the lower threshold. A statistically significant correlation exists between the variables because Bartlett's sphericity test showed a statistical value (p= 0.000) (Table 4). Based on the correlation matrix, where correlation coefficients exceed 0.3 and there are no signs of multicollinearity (no values greater than 0.7), the use of factor analysis is justified (Pallant, 2006).

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.892
Bartlett's Test of Sphericity	**Approx. Chi-Square**	1979.261
	Df	190
	Sig.	0.000

Source: Authors' research

Through further processing and factor extraction by employing the principal component analysis method, five factors that explain 67.01% of variance were identified (Table 5). To simplify factors interpretation Oblimin rotation was used. At the end, the factors are named, taking into account the level of correlations and the sign of the loading (Penić, 2016).

Table 5: Factor extraction using the method of principal components

Total Variance Explained						
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Total**	**Total**	**% of Variance**	**Cumulative %**
1	8.079	40.396	40.396	8.079	40.396	40.396
2	1.833	9.166	49.561	1.833	9.166	49.561
3	1.363	6.814	56.375	1.363	6.814	56.375
4	1.066	5.332	61.707	1.066	5.332	61.707
5	1.061	5.305	67.012	1.061	5.305	67.012
6	0.859	4.296	71.309			
7	0.752	3.762	75.070			
8	0.680	3.402	78.472			
9	0.598	2.989	81.461			
10	0.517	2.583	84.044			
11	0.465	2.325	86.368			
12	0.428	2.142	88.511			
13	0.410	2.050	90.561			
14	0.359	1.797	92.358			
15	0.333	1.665	94.023			
16	0.307	1.537	95.560			
17	0.266	1.331	96.891			
18	0.226	1.131	98.021			
19	0.205	1.026	99.048			
20	0.190	0.952	100.000			

Source: Authors' research

Based on the results displayed in Pattern Matrix (Table 6), that two variables are excluded from further analysis as their factors loadings are below 0.5: S4 – *developing sustainable rural tourism (tourism development that doesn't endanger economic, socio-cultural and ecological development of destination)* and S5 – *by integrating the offer of rural areas with the entire tourist offer of Vrnjačka Banja*. It is concluded that the first factor has the highest factor loadings for the variables that describe that the local population of Vrnjačka Banja can be involved in the rural tourism development in rural areas of this municipality through *enhancement and development of sports, recreational, and entertainment offerings for tourists* – S1 (0.817), *by raising the level of understanding and education of the local residents about the importance of rural tourism*— S2 (0.775), *financial and institutional backing from local authorities in order to bolster agriculture and tourism* – S3 (0.534) so this factor can be named **Stakeholder inclusion and community awareness in rural tourism development** (α=0.717). The second factor has the highest factor loading for the variables that indicate that the local population can be involved in rural development by being *involved in agricultural production* – S6 (0.753), *increased use of agricultural produce in creating culinary experiences for tourists* – S7 (0.632), *improving the quality of existing and building new accommodation facilities for tourists* – S8 (0.609) and *employing the local population in offering accommodation for tourists* – S9 (0.500), so this factor can be named **Community involvement in accommodation and agricultural products for rural tourism advancement** (α=0.743).

The third factor has the highest factor loading for the variables that show that rural development can be achieved *by including tourists in the daily activities of the local population* – S10 (0.898), and *organizing traditional authentic manifestations* – S11 (0.620), and this factor can be named **Involvement of tourists in community activities and local traditional events** (α=0.660).The fourth factor has the highest factor loading for variables that show that rural development can be achieved by *incorporating fishing and hunting as supplementary tourist offer* – S12 (0.800), *selling agricultural products to tourists* – S13 (0.795), *supplying catering establishments with agricultural products* – S14 (0.676), *providing accommodation services within households of the local population* – S15 (0.642) and *providing tourists with activities such as: picking mushrooms, plants, and forest fruits with an expert local guide* – S16 (0.631), and this factor can be named **Promoting rural tourism through active participation of tourists and locals in activities concerning local natural assets** (α=0.745). The fifth factor has the highest factor loading for the variables indicating that rural development can be achieved by *active participation of tourists in agricultural work* – S17 (0.751), *organizing attractive manifestations (gastronomic manifestations, rural manifestations)* – S18 (0.745), *by teaching local people about old authentic trades that can be part of rural tourism offer* – S19 (0.717) and *with opening of the ethno-restaurant* – S20 (0.615), therefore this factor can be named **Traditional values revival via tourism events and offerings** (α=0.714). (Table 6). Looking at the Cronbach's alpha coefficient for each factor, the reliability of the scales is considered satisfactory (α > 0.7), with the exception of the third factor, where the alpha value indicates almost satisfactory reliability.

Table 6: Pattern Matrix

	1	**2**	**3**	**4**	**5**
S1	0.817				
S2	0.775				
S3	0.534				
S4					
S5					
S6		0.753			
S7		0.692			
S8		0.609			
S9		0.500			
S10			0.898		
S11			0.620		
S12				0.800	
S13				0.795	
S14				0.676	
S15				0.642	
S16				0.631	
S17					0.751
S18					0.745
S19					0.717
S20					0.615

Note: Values below 0.5 are excluded
Source: Authors' research

5. Discussions

Regarding the quality of rural tourism offerings, the participants rated the *natural beauty* as well as the *hospitality of the local population* the highest, while the *sports and recreational offer* was rated the lowest. Conversely, the residents believes that the offer of rural tourism in the Vrnjačka Banja municipality can be developed through the *financial and institutional backing from local authorities with the aim of bolster agriculture and tourism and with increased use of agricultural produce in creating culinary experiences for tourists*, while the residents is involved in the rural tourism can include *the supply of catering facilities with agricultural products and selling agricultural products to tourists*. The study by Maksimović et al. (2015, p. 163) describes that rural tourism offers a holistic experience that goes beyond natural and architectural beauty and allows visitors to engage in the distinctive culture and customs and way of life of local communities through personal contact, traditional hospitality and a deep connection with nature. Similar results were obtained in this research, where participants feel it is essential to involve visitors in the activities of the local population, such as traditional events, production, and sale of agricultural products, preparation of gastronomic specialties, and other daily activities of the local community. In the of Remoaldo et al. (2017) conducted in Boticas-Portugal, the results show that residents and stakeholders believe that the rural tourism development can achieve local and regional competitiveness by achieving economic development. Also, two main structural factors of tourism development were identified: religion and tradition, as well as culture and sport. According to the results of this research, the quality of sports and recreational equipment is rated the lowest. The results of the study conducted by Muresan et al. (2016) indicate that in the North-West Region of Romania, the development of rural tourism is viewed positively by the local population, because they are conscious of the advantages, such as employment and welfare increase. Also, the results of this study and findings about residents' attitudes toward tourism development lead to the conclusion that tourism development improves the quality of life of residents due to its effect on economic development of the area, which in turn leads to new employment opportunities. An interesting finding of the research is that the residents of Vrnjačka Banja included in this research has mostly secondary or higher education, which could be related to their prevailing belief that raising understanding and educating the residents about the importance of rural tourism development (S2) is essential for the advancement of rural tourism in the region.

The research in this paper, as mentioned above, was conducted based on previous research by the authors Podovac et al. (2019) who were engaged in the analysis of rural tourism in the function of improving the quality of life of the residents of Goč Mountain. A similarity can be observed in terms of the results obtained. Namely, when it comes to the possibility of developing rural tourism on Goč Mountain, the residents of Vrnjačka Banja believes that this mountain has potential for the rural tourism. Based on the research conducted in this paper, the local population of Vrnjačka Banja believes that the villages within the Vrnjačka Banja municipality have the potential for this type of tourism. The results obtained by the research of the authors Podovac et al. (2019), are also similar to the research of this paper regarding the level of involvement of the residents of Vrnjačka Banja in the development of rural tourism within the territory of the municipality.

In this study, factor analysis unveiled five influential factors based on conducted research on rural tourism development in rural areas of the municipality of Vrnjačka Banja: (1) Stakeholder inclusion and community awareness in rural tourism development, (2) Community involvement in accommodation and agricultural products for rural tourism advancement, (3) Involvement of tourists in community activities and local traditional events, (4) Promoting rural tourism through active participation of tourists and locals in activities concerning local natural assets, (5) Traditional values revival via tourism events and offerings. Drawing from the findings of the study, the municipality of Vrnjačka Banja shows significant potential for the rural tourism, with 92.7% of respondents affirming this view. Additionally, respondents highlighted the natural beauty of the rural areas in the Vrnjačka Banja municipality and the hospitality of the local population, which can be used as key factors in promoting rural tourism. Based on the results of descriptive statistics, the following research hypotheses were confirmed:

- H_1: *Rural tourism in the Vrnjačka Banja municipality can be developed by engaging the local population in the production and sale of agricultural products* (M_{S6}=4.13; M_{s7}=4.47; M_{s13}=4.48; M_{s14}=4.53);
- H_2: *Rural tourism in the Vrnjačka Banja municipality can be developed by engaging the local population in the provision of accommodation services for tourists* (M_{s8}=4.03; M_{s9}=4.32; M_{s15}=4.27);
- H_3: *Rural tourism in the Vrnjačka Banja municipality can be developed through the organization of traditional village events* (M_{s11}=4.41; M_{s18}=4.46);
- H_4: *The involvement of tourists in the daily activities of the local population is an important factor for rural tourism development in the Vrnjačka Banja muncipality* (M_{s10}=3.97; M_{s17}=3.82);

6. Conclusions

Rural tourism is fundamental for both economic growth and the preservation of culture. Involving the residents in the rural tourism of the Vrnjačka Banja municipality would ensure authenticity and community empowerment. Local knowledge is important in creating experiences that highlight the uniqueness of the region while respecting its environment and traditions. This collaboration fosters a sense of pride and ownership among locals and enriches the overall tourist experience.

Limiting factors of the research are reflected in the small sample of respondents. The exclusion of tourists from this research is another limitation, as their perspectives play a pivotal role in shaping rural tourism. In addition to examining the perception and attitudes of residents and the carriers of the tourist offer, it is of great importance to examine the perception of other interested parties for the development of rural tourism in Vrnjačka Banja municipality. Therefore, the obtained results leave room for further research. Future research can be conducted on a larger sample of respondents, including tourists and other stakeholders.

This research enriches the scholarly discourse on the socio and economic dynamics of rural communities and their interplay with rural tourism. The possibility of a future direction of research exists in terms of carrying out more detailed research and examination of the development of rural tourism starting from the identified factors from this research.

On a practical level, the paper recognizes unused potential in the rural areas of Vrnjačka Banja. It goes beyond mere identification by inspiring greater involvement from stakeholders, including residents. By emphasizing the significance of rural tourism and local community, the paper motivates informed decision-making, fostering a collaborative environment. This practical contribution lays the groundwork for sustainable rural tourism development in the region, benefitting both the community and those interested in its growth.

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Conflict of interest

The authors declare no conflict of interest.

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Warnings of financial fraud in travel agencies in the Republic of Serbia during the COVID-19 pandemic

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Abstract

Purpose – The purpose of this paper is to determine the change in warning signs of fraud in the financial reports of travel agencies during the COVID-19 pandemic compared to the pre-pandemic period and to investigate a potential increase in the risk of bankruptcy in travel agencies during the same period. **Methodology** – The methodology used in the research comprises the analytical methods of forensic accounting (Beneish model and Altman Z-score), as well as descriptive statistics. **Findings** – The results of the research show that there is a certain increase in warning signs during the pandemic compared to the period before the pandemic and there the risk of bankruptcy in travel agencies increases during the pandemic. **Implications** – The theoretical implications of the study relate to expanding our knowledge about the importance of analytical techniques of forensic accounting and quantifying the probability of manipulation in the travel agencies' financial reports. The practical implications of the work relate to the usefulness of the results for authorized fraud investigators as well as for investors in travel agencies. On the other hand, the results can be useful for clients of travel agencies when selecting travel agencies.

Keywords: warning signs, fraud, travel agencies, COVID-19 pandemic
JEL classification: M48, Z39

Znakovi upozorenja na postojanje finansijskih prevara u turističkim agencijama u Republici Srbiji tokom pandemije COVID-19

Sažetak

Svrha – Cilj ovog rada je utvrđivanje promene u znakovima upozorenja na prevare u finansijskim izveštajima turističkih agencija tokom pandemije COVID-19 u odnosu na period pre pandemije i proučavanje potencijalnog povećanja rizika od stečaja turističkih agencija tokom istog perioda. **Metodologija** – Metodologija koja je u istraživanju korišćena jesu analitičke metode forenzičkog računovodstva (*Beneish*-ev model i *Altman*-ov Z-score), kao i deskriptivna statistika. **Rezultati** – Rezultati istraživanja pokazuju da postoji izvesno povećanje znakova upozorenja tokom pandemije u odnosu na period pre pandemije, kao i da postoji povećanje rizika stečaja kod turističkih agencija u periodu tokom pandemije.

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Implikacije – Teorijske implikacije rada se odnose na proširivanje teorijskih znanja o značaju analitičkih tehnika forenzičkog računovodstva i kvantifikovanju verovatnoće izvršenih manipulacija u finansijskim izveštajima turističkih agencija. Praktične implikacije rada se ogledaju u koristima rezultata za ovlašćene istražitelje prevara u poslovanju, kao i za investiture u turističke agencije. S druge strane, klijentima turističkih agencija rezultati mogu biti korisni u smislu izbora turističke agencije.

Ključne reči: znakovi upozorenja, prevara, turističke agencije, pandemija COVID-19
JEL klasifikacija: M48, Z39

1. Introduction

The pandemic caused by the COVID-19 virus might have been expected from a medical perspective at some point. However, no one expected such scope of the pandemic. The consequences of the pandemic are still being felt, not only on people's lives and their physical and mental health, but also on the growth and development of economies in all countries. Not a single country, regardless of its economic power, was prepared for the negative consequences of the COVID-19 pandemic. In their study, Milunović et al. (2023) found that the inflation rates in the countries they examined rose after 2020 as a result of the COVID-19 pandemic. The fact is that more economically developed countries had more resources to help their citizens and their economies, but no a single country expected such a negative economic impact and was not adequately prepared. The characteristics of this pandemic (isolation of people, keeping distance, easy transmission of the virus, wearing masks etc.) led to the fact that the negative impact of the COVID-19 pandemic was not the same for all industries.

Certain industries adapted more quickly to the situation, some were not affected to a large extent, while some were severely impacted. One of these industries was tourism and hospitality. Hotels were closed, the number of tourists decreased significantly, trips and flights were canceled, resulting in a complete shutdown of the industry at one point. It should be noted that many countries tried to financially help tourism companies, but the consequences, however, had a huge negative impact on their operations. In such circumstances, companies resorted to various tactics in order to survive the crisis period. Some of them took on additional debt, others cut costs, some went bankrupt, while some made frauds in financial statements (i. e. created false financial statements) in order to present their business as more successful.

The subject of the paper is potential fraudulent behavior of travel agencies during the COVID-19 pandemic. In this regard, we employ some well-known models for fraud detection, such as the Beneish model and Altman Z-scores, in order to examine the extent of travel agencies with potential fraudulent behavior. These models have been widely employed in recent research, both in developed and developing countries (e.g. Atik Yildirim & Kovačević, 2022; Ebaid, 2023; Kukreja et al., 2020; MacCarthy, 2017; Suffian et al., 2022), Serbia being no exception (Dimitrijević & Danilović, 2017; Dimitrijević et al., 2018; Knežević et al., 2021; Milašinović et al., 2022) and even in the tourism and hospitality industry (Milašinović et al., 2022).

The aim of the research is to analyze, using analytical techniques of forensic accounting, the existence of warning signs of possible fraud in the financial reports of travel agencies in the Republic of Serbia during the COVID-19 pandemic.

Besides the introduction and conclusion, the paper consists of three parts. The theoretical background is given in the second part of the paper, while the research materials and methods are presented in the third part of the paper. The fourth part of the paper covers the main research results and their discussion.

2. Background

The negative effects of the COVID-19 pandemic are the subject of numerous studies. Since the negative impact of the pandemic have been transfered to tourism and hospitality in particular, many scholarly papers focus on this industry. Saputra (2023) states that the COVID-19 pandemic has had a significant adverse impact on the tourism sector in Europe, particularly affecting the hotel industry. This indicates that the hotel sector in various countries has been severely affected by the rising number of COVID-19-related deaths. Suffian et al. (2022) explore the impact of fraudulent activities committed by Malaysian tourism sector companies during the COVID-19 pandemic on their financial performance. Their research provides evidence supporting the notion that corporate fraud influences firm performance, in line with the principles of agency theory. Specifically, involvement in fraudulent practices appears to bolster financial performance, as indicated by an increase in return on equity. However, the authors ultimately conclude that engaging in unethical behavior of this nature could have detrimental effects on the long-term performance of the company. However, their conclusion highlights the potential long-term repercussions of such unethical behavior on the company's performance.

Jagtap et al. (2023) conducted an analysis of the COVID-19 pandemic's impact on the tourism sector in India. Their findings indicate a substantial effect on India's tourism industry, resulting in considerable economic losses, job reductions, and a notable decline in household income. Pavlović et al. (2021) examined how the COVID-19 pandemic has influenced the tourism sector in Serbia. Their conclusion suggests that the Serbian tourism industry will require several years to recover from the impact of the pandemic. Despite the implementation of various measures by the national government to support the sector, it is evident that this assistance alone will not suffice to safeguard and rescue all participants in the tourism market. Radivojević (2020) stresses that the Republic of Serbia belongs to the countries with a moderate risk related to the changes in the tourism sector due to pandemic, since the tourism industry has a significant share (but, on the other hand, still lower than in some other countries) in the aggregate exports and overall workforce size within the Republic of Serbia.

Despite the substantial impact of the pandemic on tourism, the loss of jobs may not significantly disrupt population movement in the short term. The reasons "behind this population resilience may be related to government and familiar support" (Sass et al., 2023, p. 9). The public health crisis has markedly altered the perception of travel and prompted shifts in tourist behavior. A crucial factor influencing tourist travel is the preservation of both mental and physical well-being, highlighting that destinations offering a secure environment for tourists are poised for long-term competitiveness. Accordingly, on a national scale, there has been a notable rise in domestic tourist demand for destinations within Serbia during the COVID-19 period (Mandarić et al., 2022).

We have tested two research hypotheses in this paper:

H_1: The COVID-19 pandemic has led to an increase in warning signs of fraud in travel agencies in the Republic of Serbia;

H_2: In addition to the existence of a larger number of warning signs, analytical techniques of forensic accounting do not indicate the possibility of bankruptcy of travel agencies in the Republic of Serbia.

3. Materials and methods

The research in this paper employs analytical methods of forensic accounting (Beneish model and Altman Z-score) to analyze warning signs in the official financial reports of travel agencies during the COVID-19 pandemic. For these purposes, fifty travel agencies registered in the Republic of Serbia were analyzed. The officially published financial reports (retrieved from the Serbian Agency for Business Registers (2024)) of these travel agencies for the period 2019-2022 are used in the analysis. This period was considered in order to study the travel agencies before and during the COVID-19 pandemic. The sample and the analytical techniques used to study the warning signs in the travel agencies are briefly explained below.

3.1. Sample description

The sample used in the paper includes 50 travel agencies that are members of the National Association of Travel Agencies (YUTA). Of the observed 50 travel agencies, 35 belong to the group of micro enterprises, 13 belong to the group of small enterprises, while 2 belong to the group of medium-sized enterprises, whereby the number of employees was used as the criterion for the size of the enterprise (micro enterprise: less than 10 employees; small enterprise: between 10 and 50 employees; medium-sized enterprise: between 50 and 250 employees and large enterprise: more than 250 employees), according to the Law on Accounting (Official Gazette of the Republic of Serbia, 2021). Sampled travel agencies are travel agencies with a high reputation in the Republic of Serbia and are representative of the tourism sector.

Tables 1 and 2 present the results of the descriptive statistics of the main financial indicators of the sampled travel agencies. In these tables, ratio indicators of profitability (ROA - Return on Assets and ROE - Return on Equity), liquidity (CR - Current Ratio; QR - Quick Ratio and LR - Liquid (Cash) Ratio) and leverage (LEV) are calculated.

Table 1: Descriptive statistics for the main financial indicators

	Mean	**Median**	**Minimum**	**Maximum**	**Standard deviation**
ROA	0.005	0.017	-1.171	0.412	0.165
ROE	-0.116	0.062	-25.242	5.310	2.310
CR	2.340	1.207	0.000	74.214	6.301
QR	1.588	0.845	0.000	44.633	4.176
LR	0.411	0.215	0.000	5.431	0.582
LEV	0.898	0.797	0.000	7.428	0.826

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

Table 2: Dynamics of median values for the main financial indicators

	2019	**2020**	**2021**	**2022**
ROA	0.022	0.005	0.016	0.046
ROE	0.144	0.013	0.062	0.135
CR	1.227	1.111	1.214	1.358
QR	0.852	0.760	0.875	0.975
LR	0.221	0.212	0.183	0.240
LEV	0.799	0.831	0.816	0.736

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

Based on Tables 1 and 2, it can be unequivocally concluded that the main financial indicators are the most unfavorable in 2020, that is, the year in which the pandemic was declared. In 2020, compared to 2019, there is a deterioration in the main financial indicators that were analyzed, while in 2021, there is a slight improvement in the situation, since the effects of the pandemic were less pronounced in 2021 compared to 2020. In other words, the indicators in 2021 were close to the level identified in 2019. Then, in 2022, when the consequences of the pandemic were even less noticeable, it can be seen that almost all of the analyzed main financial indicators were at a level that is more favorable than in 2019, i.e. the year before the pandemic.

3.2. Beneish model

The Beneish model is based on some ratios developed specifically for the fraud investigation. Then, based on the calculated ratios, conclusions are made about the reliability of the financial reports of the company under the investigation. In addition, this model provides information about warning signs ("red flags") in a company's financial statements, thus directing fraud investigators to critical balance sheet items. However, this analytical technique does not provide guarantees that the fraud has occurred within a critical balance sheet item, but rather warns the fraud investigator to further investigate this balance item.

In the 1999 research, Indiana University professor Messod Beneish developed a quantitative model for fraud detection in financial reporting. This model assesses the probability that a company has manipulated its reporting by calculating various ratios that indicate the degree of change between certain financial statement positions. Searching for variables that could be included in a model for detecting fraud in financial statements, Beneish came up with a model that includes a maximum of eight variables. These variables are (Dimitrijević et al., 2018, p. 1324-1325):

1. Days' Sales in Receivables Index (DSRI): used to measure changes in the ratio of trade receivables and sales turnover;
2. Gross Margin Index (GMI): represents the ratio of the current year's gross margin to the previous year's gross margin;
3. Asset Quality Index (AQI): it is obtained by comparing fixed assets (without plant, property and equipment) and total assets in two consecutive years;
4. Sales Growth Index (SGI): it is obtained by comparing the sales turnover in the current year with the sales turnover from the previous year;
5. Depreciation Index (DEPI): used to compare depreciation costs (related to the property, plant and equipment) in previous and current year;
6. Leverage Index (LVGI): used to measure ratio of total debt and total assets in two consecutive years;
7. Total Accruals to Total Assets (TATA): it is obtained as a ratio of total accruals and total assets. Total accruals are calculated as the change in net working capital (excluding cash) less depreciation;
8. Sales, General and Administrative expenses Index (SGAI): used to measure the ratio of sales, general and administration expenses (related to sales turnover) for the current year compared to the previous year.

Based on these variables, Beneish developed two indicators – M(5) and M(8), which consist of five and eight variables, respectively (Kušter, 2021, p. 19):

$$M(5): -6.065 + 0.823\ DSRI + 0.906\ GMI + 0.593\ AQI + 0.717\ SGI + 0.107\ DEPI \qquad (1)$$

$$M(8): -4.840 + 0.920\ DSRI + 0.528\ GMI + 0.404\ AQI + 0.892\ SGI + 0.115\ DEPI - 0.172\ SGAI + 4.679\ TATA - 0.327\ LVGI \qquad (2)$$

According to Beneish, the M-score greater than -2.22 indicates that there is a possibility that a company is involved in fraudulent financial reporting. However, the limit values for each of the eight indicators of this model are defined (Table 3), so the possibility of fraud in financial statements can be investigated at the indicator-level. The limit values suggest investigator how to interpret the calculated ratios.

Table 3: Limit values of variables in Beneish model

Variables	Financial reports without fraud	Fraudulent financial reports
DSRI	1.031	1.465
GMI	1.014	1.193
AQI	1.039	1.254
SGI	1.134	1.607
DEPI	1.001	1.077
SGAI	1.054	1.041
LVGI	1.037	1.111
TATA	0.018	0.031

Source: Beneish (1999, p. 27)

3.3. Altman Z-score

In 1968, Professor Edward Altman developed a model that can be used to predict bankruptcy. In Altman model, five indicators are calculated in order to indicate whether the company will fall bankrupt. Mathematically, the model may be expressed as follows (Altman, 1968, p. 594):

$$Z = 1.2\ X_1 + 1.4\ X_2 + 3.3\ X_3 + 0.6\ X_4 + 0.999\ X_5 \tag{3}$$

where Z is the Altman Z-score and the other elements marked with X are calculated as follows:

- X_1 = Net current assets / Total assets;
- X_2 = Net current assets / Total assets;
- X_3 = EBIT (Earnings before interest and taxes) / Total assets;
- X_4 = Market value of equity / Book value of total liabilities;
- X_5 = Sales revenue / Total assets

It should be noted that for companies whose Z-score is less than 1.80, there is a high probability of bankruptcy. If the Z-score is greater than 3.00, the probability of bankruptcy is very low. The range between 1.81 and 2.99 represents the so-called “zone of ignorance” or “uncertainty zone” as it is difficult to determine the probability of bankruptcy. Since the Z-score was only applicable to public stock companies (due to the X_4 indicator), Altman developed a new model with new weights, which can also be applied to companies whose shares are not publicly listed (Altman et al., 2017, p. 142):

$$Z' = 0.717\ X_1 + 0.847\ X_2 + 3.107\ X_3 + 0.420\ X_4 + 0.998\ X_5 \tag{4}$$

where X_4 is calculated as the ratio of the book value of equity to the book value of total liabilities. For companies with Z’ less than 1.23, there is a high probability of bankruptcy, while when the Z’ is greater than 2.90, there is a very low probability of bankruptcy. When the value of the Z’-score is between 1.23 and 2.90, the probability of bankruptcy cannot be determined with certainty (“uncertainty zone”).

Although improved, Altman score still had an important shortcoming – it did not consider the differences in the industries, since in certain cases the likelihood of financial distresses depends on the industry, as some activities are riskier than others. In order to solve such problem and enable better comparability between companies, a model with four variables was developed, as follows (Altman & Hotchkiss, 2006, p. 248):

$$Z'' = 3.25 + 6.56\ X_1 + 3.26\ X_2 + 6.72\ X_3 + 1.05\ X_4 \tag{5}$$

where the X_4 variable is calculated as in the Z' model, and for companies that have a negative value of Z", the probability of bankruptcy is very high.

4. Results and discussion

The following part of the paper presents the results of the research using the previously explained analytical methods of forensic accounting. Tables 4, 5 and 6 show the results of the Beneish model, while Tables 7, 8 and 9 show the results of the Altman Z-scores. In this regard, it should be noted that in the case of the Beneish model in 2019, only 49 travel agencies (not 50) are studied, as it was not possible to calculate M-indicators for one tourist agency.

In general, the number of travel agencies with "red flags", based on the Beneish model, is approximately the same in 2019 and 2020, while this number significantly increases in 2021. After this, the number of such companies significantly decreased in 2022. The presented results indicate that the most frequent occurrence of "red flags" was in the second year of the pandemic, in 2021. Although the pandemic started in 2020, its effects were most pronounced in 2021 – similar is the situation with frauds in the financial statements as travel agencies were the most motivated in the given period to commit frauds. Considering the limited movement and travel of the population, along with the applied health and other measures to overcome the pandemic, it can be clearly concluded that the greatest risk for the existence of fraud in the financial statements of travel agencies was in 2021.

Investigating at the indicator-level, it can be seen for each indicator that a significant number of travel agencies appear to submit fraudulent financial statements. In addition, a significant number of them lie in the "uncertainty zone". It may be noted that SGAI is the variable of the Beneish model where the limit value is exceeded the most frequently. However, it should be noted that a certain adjustment of this variable has been made. Since the costs of sales, management and administration are not explicitly stated in the official income statement applied in the Republic of Serbia, the labor costs are used instead of them. This is due to the fact that in the Republic of Serbia, the method of total costs is used (where the expenses are classified according to their nature, and not according to their function as in cost of goods sold method).

On the other hand, summarized indicators M(5) and M(8) indicate that the number of travel agencies with suspicions of the fraud is significantly higher in 2021 than in the previous two observed years. In 2019, there were 21 travel agencies in which at least one of these two M-indicators exceeded the limit of -2.22. In addition, according to the M(8), the number of travel agencies that exceeded the limit of -2.22 is the same in 2019 and 2020, despite the fact that the pandemic appeared at the end of the first quarter of 2020.

Table 4: Descriptive statistics for the Beneish model

	Mean	**Median**	**Minimum**	**Maximum**	**Standard deviation**
DSRI	2.385	0.739	0.000	96.668	7.846
GMI	0.638	0.303	-367.716	445.897	45.548
AQI	2.087	0.000	-58.720	185.883	15.535
SGI	1.797	1.139	0.000	29.970	3.049
DEPI	0.681	0.634	0.000	16.250	1.331
LVGI	1.058	0.993	0.000	4.001	0.386
TATA	-0.030	-0.027	-3.165	1.757	0.364
SGAI	1.678	0.921	0.000	31.839	3.019
M(5)	-0.925	-3.387	-334.547	406.125	42.752
M(8)	-0.561	-2.695	-193.440	241.378	25.989

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

Table 5: Dynamics of median values for the Beneish model

	2019	**2020**	**2021**	**2022**
DSRI	0.795	1.918	0.697	0.407
GMI	0.902	-0.023	0.376	0.473
AQI	0.000	0.000	0.000	0.000
SGI	1.102	0.309	1.474	1.723
DEPI	0.548	0.684	0.311	0.817
LVGI	0.990	1.034	0.971	0.989
TATA	-0.026	-0.014	-0.025	-0.038
SGAI	0.947	1.847	0.532	0.826
M(5)	-3.496	-3.516	-2.244	-3.531
M(8)	-2.782	-3.257	-1.685	-2.652

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

Table 6: Distribution of sampled travel agencies by Beneish model values

	Without fraud risk				**Uncertainty zone**				**Fraud risk**			
	2019	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
DSRI	31	17	29	45	9	3	5	1	9	30	16	4
GMI	28	47	30	36	5	0	3	4	16	3	17	10
AQI	42	38	40	42	4	2	2	2	3	10	8	6
SGI	27	47	20	5	16	2	8	17	6	1	22	28
DEPI	39	37	38	42	2	2	4	1	8	11	8	7
LVGI	39	27	34	32	3	6	6	3	7	17	10	15
TATA	30	29	32	32	3	2	2	2	16	19	16	16
SGAI	14	7	9	14	0	0	1	0	35	43	40	36
M(5)	32	35	25	38	/	/	/	/	17	15	25	12
M(8)	31	31	22	31	/	/	/	/	19	19	28	19

Note: In the table is presented number of sampled travel agencies

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

However, the situation worsens in 2021, since as many as 28 of the 50 travel agencies (58% of the sample) have the M(8) above the limit. This may be taken as a direct consequence of financial reporting in the conditions of the COVID-19 pandemic, because in 2021 the pandemic had a far greater impact than in the year it appeared. After a certain time of presence of the pandemic, it should be talked about massive manipulative financial reporting, since more than a half of the analyzed travel agencies included in the sample had at least one of the two M-indicators exceeding the limit value. However, in 2022, 19 travel agencies had warning signs of fraud in their financial statements (according to M(8) indicator), which means that the number of travel agencies with warning signs of fraud in their financial statements returns to the level from period before 2021.

Table 7: Descriptive statistics for Altman Z-scores

	Mean	**Median**	**Minimum**	**Maximum**	**Standard deviation**
Z'	2.625	1.251	-6.855	60.164	6.954
Z''	6.733	5.517	-41.562	155.196	15.952

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

Table 8: Dynamics of median values for Altman Z-scores

	2019	**2020**	**2021**	**2022**
Z'	1.493	0.636	1.080	1.564
Z''	5.874	4.450	5.417	6.284

Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

Table 9: Distribution of sampled travel agencies by Altman Z-scores

	Without bankruptcy risk				**Uncertainty zone**				**Bankruptcy risk**			
	2019	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Z'	13	4	7	13	17	13	14	21	20	33	29	16
%	26%	8%	14%	26%	34%	26%	28%	42%	40%	66%	58%	32%
Z''	48	46	45	47	/	/	/	/	2	4	5	3
%	96%	92%	90%	94%	/	/	/	/	4%	8%	10%	6%

Note: In the table is presented number of sampled companies
Source: Authors' calculation, based on the Serbian Agency for Business Registers (2024)

In the next part of our empirical analysis, we extended our research with the Altman Z-scores. The original Z-score was not used because this model requires the analyzed companies to be public stock companies, while none of the sampled travel agencies operate in this legal form. Out of the sampled 50 travel agencies, 20 agencies had a high probability of entering bankruptcy and financial difficulties in 2019, while in 2020 that number is as high as 33, and then in 2021 it drops to 29 travel agencies. In 2022, the number of travel agencies with a high probability of financial difficulties is only 16. Thus, the trend that existed in the Beneish model may be only partially found in the Altman model, since the largest number of travel agencies with warning signs to accounting fraud (according to the Beneish model) is present in 2021, while the largest number of travel agencies with a high probability of bankruptcy (according to Altman model) is present in 2020. Also, if the change in the structure of the sample is observed in the context of the risk of bankruptcy according to the Z'-score, it can be unequivocally concluded that the largest number of travel agencies with a high risk of bankruptcy is present in 2020 (66%), as well as that the smallest number of travel agencies that have no risk of bankruptcy (8%) is present in the same year.

Considering the data from Altman Z”-score, it is clear that there are some important differences compared to the Z’-score, as it can be noted that there is a significantly smaller number of companies with a high probability of financial difficulties. Namely, it may be noted that the largest number of travel agencies with a high probability of bankruptcy (5 travel agencies) occurred in 2021, which is in accordance with the results of the Beneish model presented earlier, according to which most companies had indications of fraud in their financial statements for 2021.

In addition, special attention should be paid to the situation in 2021. Although the Benish model showed that there are indications of manipulative financial reporting in the extremely large number of travel agencies, Altman Z’-score shows that in 2021 there is a smaller number of travel agencies with a high probability of financial distress compared to 2020. It should also be considered that in 2021 there were extremely unfavorable business conditions for travel agencies, so there is a well-founded suspicion that some travel agencies opted for fraudulent financial reporting in order to present the performance in 2021 better than it actually was.

5. Conclusion

The pandemic caused by COVID-19, which swept the world in early 2020, had a negative impact on all industries around the world. However, some of them were affected to a greater extent, as is the case with tourism and hospitality. Various factors influenced this negative effect (quarantine, travel ban, social distancing etc.). Many countries have applied various economic measures to help this industry, but the negative financial effect was felt by travel agencies and hotels, restaurants and other companies belonging to this industry. For these reasons, this paper applies two analytical techniques of forensic accounting (the Beneish model and Altman Z-scores) to the financial reports of 50 travel agencies in the Republic of Serbia in order to examine whether some of the travel agencies manipulated their financial data and commit fraud to improve their financial performance.

Despite a certain discrepancy in the trend of Beneish model and Altman Z-scores, the research results showed that both the number of travel agencies with suspicions of fraudulent financial reporting and number of travel agencies with a high probability of bankruptcy increased after the declaration of the pandemic and the state of emergency in the Republic of Serbia. In this regard, the first research hypothesis is confirmed (H_1: The COVID-19 pandemic has led to an increase in warning signs of fraud in the travel agencies in the Republic of Serbia).

In addition, it is important to note that there is a particular risk for travel agencies that appeared (according to the Beneish model) to have fraudulent financial reporting. Therefore, we employed Altman Z-scores and showed that there is an increase in probability of financial difficulties in 2020, observing total number of sampled travel agencies. This means that along with the increase in the number of travel agencies that have reported warning signs of fraud, there is also an increase in warning signs of bankruptcy, observed in the total number of travel agencies, which means that second research hypothesis is not confirmed (H_2: In addition to the existence of a larger number of warning signs, analytical techniques of forensic accounting do not indicate the possibility of bankruptcy of travel agencies in the Republic of Serbia). For that reason, it may be concluded that, despite the increase in the number of warning signs during the pandemic, there is increase in the risk of bankruptcy. This fact could indicate that there is a possibility that travel agencies with warning signs of frauds did not necessarily commit those fraudulent acts to conceal the risk of bankruptcy, but might have done so for other reasons, such as borrowing under more favorable conditions, retaining competitiveness, clients, and so on.

The results presented in the paper have certain theoretical and practical implications. The theoretical implications of this work relate to the expansion of knowledge about the importance of analytical techniques of forensic accounting. The theoretical considerations in the paper can help to understand the quantification of the probability of the manipulation in the financial statements. The practical implications refer to the fact that forensic accountants, fraud investigators, as well as economic and financial analysts can use the results of this research to conduct other similar research studies in future. In addition, since the results indicated that certain travel agencies manipulated their financial reports during the pandemic, the results of the work have implications in terms of predicting and preventing travel agency fraud if similar crisis occur in the future. Since the objective is not only to detect fraud, but also to prevent it, we believe that presented results can contribute to it. Also, the results of the work can have an impact on the travel agencies, which prepare financial reports. This impact is reflected in the fact that preparers of financial statements will be discouraged from committing financial statement fraud if they know that such fraud may be detected by forensic accounting. Therefore, travel agencies should strengthen their internal controls to reduce the vulnerability of financial statements to fraud. Finally, the results can be useful to business partners and clients of travel agencies, since clients have a certain degree of aversion to any type of travel agency fraud. Therefore, clients will choose those travel agencies where there is a low probability of manipulations, and avoid those travel agencies where there is a high probability of manipulations.

This research also has certain limitations. The analysis was conducted on a sample of only 50 travel agencies over a period of four years. Also, no information on sales revenue was available for certain travel agencies, so the amount of total business revenue was used. Approximate values were also used for certain expenditures. Since for the Beneish model, the information on the amount of the purchase value of the goods sold is required, for majority of the travel agencies this information was not available, because travel agencies do not sell goods, and therefore do not have the amount of purchase value of the goods sold in their profit and loss account, which is why instead of the amount of the purchase value of the goods sold, the amount of total business expenses was used. Then, for the SGAI indicator, it is necessary to have information on administrative expenses that do not exist in the official balance sheet in the Republic of Serbia, which is why administrative expenses are taken as salary expenses, salary compensation and other personal expenses. The next limitation of this study is related to the fact that lower ratings of the Z'-score could simply reflect the fact that business entities due to pandemic had worse financial performance and were therefore more exposed to bankruptcy to a greater extent.

Further research could include larger samples, as all travel agencies that are members of the National Association of Travel Agencies (YUTA) might be included in the sample. Also, future research could include travel agencies from neighboring countries, where a comparison of the results obtained for travel agencies in the Republic of Serbia and those neighboring countries could be made. The time period of observation could also be longer.

Conflict of interest

The authors declare no conflict of interest.

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Appendix

List of sampled travel agencies

Name of the travel agency	ID number	Name of the travel agency	ID number
1A Travel	20405317	Kontiki Travel & Service	20899999
Allegra Krstarenja	21490423	Lui Travel	17170368
Amigo Travel	17474294	Maestro Travel	21072907
Amos Travel	20850779	Malutas Travel	20104112
A-Superturs	20800585	Mediteraneo Holidays	17380699
Bancor Sea & Ski	21260436	Minos Travel	08795312
Belvi Travel	06037763	Montesol Travel	07524579
Beosonic	06932894	Namesis	06211283
Bon Voyage	08589046	Nitravel	17468898
Calypso Tours International	20317779	Odeon World Travel	20370424
Champions Travel	21007412	Oktopod	17205196
Cosmopolis	20721979	Olympic Travel	20807628
Dream Land Travel	21399752	Omega Travel	20096268
Elnos Tours	08580006	Pierre Travel	07914253
Fantast Tourist	20024925	Plana Tours	07613857

Felix Travel	20957654	Ponte Travel	06176275
Filip Travel	06963838	Robinzon	17075365
Galileo Tours	21132535	Rubicon Travel	20653655
Globus Travel	17132300	Sabra Company	17130609
Halo Tours	17307398	STUP Travel	08009961
Holiday	07361491	Sunline Travel	17463977
International Line	08660263	Supernova Travel	20243988
Jumbo Travel	20117826	TraveLux	21146692
Jungle Travel	20211857	Turisttrade	07755384
Karavan International	07690886	Viva Travel	21214035

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The impact of the quality of gastronomic services on tourist satisfaction in agritourism farms in Eastern Serbia

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Abstract

Purpose – The study aimed to analyze the quality of gastronomic services in the agrarian regions of Eastern Serbia, focusing on the experiences of tourists visiting these destinations. The research was motivated by the increasing importance of gastronomic services in contemporary studies, particularly in rural areas like Eastern Serbia, known for its unique offerings in agritourism. **Methodology** – The research was conducted in 2024 on a sample of 189 respondents across 14 agritourism farms in Eastern Serbia. Data were analyzed using SPSS software, version 26.00, and multiple regression analysis was employed to identify the key predictors influencing overall service quality. **Findings** – The results revealed a statistically significant impact of the quality of gastronomic services on tourist satisfaction. The analysis identified key predictors of the quality of gastronomic services that significantly contribute to the overall tourist experience, highlighting the importance of high-quality service in enhancing visitor satisfaction. **Implications** – The study's findings contribute to the theoretical understanding of service quality in rural tourism and provide practical insights for agritourism operators in Eastern Serbia. By improving the quality of their gastronomic offerings, these operators can enhance tourist satisfaction and potentially increase visitor numbers.

Keywords: gastronomic service, tourism, quality, agritourism farms
JEL classification: L83, Q13, Z32

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Uticaj kvaliteta gastronomskih usluga na zadovoljstvo turista u agroturističkim gazdinstvima Istočne Srbije

Sažetak

Svrha – Studija je imala za cilj da analizira kvalitet gastronomskih usluga u agrarnim regionima Istočne Srbije, fokusirajući se na iskustva turista koji posećuju ova odredišta. Istraživanje je motivisano sve većim značajem gastronomskih usluga u savremenim studijama, posebno u ruralnim područjima poput Istočne Srbije, poznate po svojim jedinstvenim ponudama u oblasti agroturizma. **Metodologija** – Istraživanje je sprovedeno 2024. godine na uzorku od 189 ispitanika sa 14 agroturističkih gazdinstava u Istočnoj Srbiji. Podaci su analizirani korišćenjem SPSS softvera, verzije 26.00, a primenjena je analiza višestruke regresije kako bi se identifikovali ključni prediktori koji utiču na ukupni kvalitet usluge. **Rezultati** – Rezultati su pokazali statistički značajan uticaj kvaliteta gastronomskih usluga na zadovoljstvo turista. Analiza je identifikovala ključne prediktore kvaliteta gastronomskih usluga koji značajno doprinose ukupnom iskustvu turista, ističući važnost visokokvalitetne usluge u povećanju zadovoljstva posetilaca. **Implikacije** – Nalazi studije doprinose teorijskom razumevanju kvaliteta usluge u ruralnom turizmu i pružaju praktične uvide za operatere u agroturizmu u Istočnoj Srbiji. Poboljšanjem kvaliteta svojih gastronomskih ponuda, ovi operateri mogu povećati zadovoljstvo turista i potencijalno povećati broj posetilaca.

Ključne reči: gastronomska usluga, turistička ponuda, kvalitet, agroturistička gazdinstva
JEL klasifikacija: L83, Q13, Z32

1. Introduction

Gastronomic service plays a significant role in the development of the tourism offer, but there is also a reciprocal influence, where tourism generally contributes to the development of gastronomy (Andersson et al., 2017). Gastronomy is an essential need, as well as an activity, profession, and science, associated with the art of food preparation and serving (Aguilera, 2018). It is an inseparable part of everyday life, maintaining health and life satisfaction, and enabling products characteristic of a particular destination to be marketed in the food industry. The special importance of gastronomic service is reflected in its contribution to the national economy, as tourists leave significant financial resources in the tourist destinations they visit. Gastronomic service in agritourism destinations, in particular, has been gaining increasing importance in promotion and prominent positions in the tourism market over the last few decades, especially in developing countries like Serbia (Koufadakis & Manola, 2020; Vukolić et al., 2022). The development of gastronomic services in a particular tourist destination contributes to the enhancement of the overall tourism offer of that destination (Folgado-Fernández et al., 2017).

Agritourism includes a wide range of activities carried out on agritourism farms, extending beyond what is typically categorized as traditional or agricultural tourism. This form of tourism integrates two economic sectors – tourism and agriculture – which together create a distinct tourism offering, implemented within agricultural households or rural settings (Streifeneder, 2016). Eastern Serbia plays a significant role in terms of population and resources. Currently, 85% of Serbia's territory is classified as rural, with between 44% and 55% of the population residing in these areas, and it is estimated that rural regions contribute approximately 41% to the country's GDP (Erdeji et al., 2013). The rural economy of Eastern Serbia is heavily reliant on agriculture, with around 75% of the rural population engaged in agricultural activities (Petrović et al., 2017). Despite numerous challenges and opportunities for enhancing competitiveness and sustainability, the agrarian economy of Eastern Serbia requires a balanced approach that incorporates agricultural production, other economic activities, environmental protection, and social development (Ristić, 2013). Several studies on agritourism and gastronomic services have expanded the notion that tourism plays a vital role in revitalizing and repurposing resources in agrarian regions (Palmi & Lezzi, 2020; Sachaleli, 2022). However, limited research has focused on evaluating the quality of gastronomic services in the agrarian areas of Eastern Serbia.

Most research in this area primarily examines how the gastronomic identity of a destination can be projected and promoted. Several studies highlight that gastronomic identity is shaped by environmental and cultural factors, which influence the characteristics, textures, and flavors of food and beverages (Harrington, 2005). In contrast, this paper seeks to assess the quality of gastronomic services from the tourists' perspective. Furthermore, multiple regression analysis was applied to evaluate the significance of various predictors in determining the quality of gastronomic services and their impact on overall tourist satisfaction. The results clearly indicate that specific predictors have a significant influence, leading to the rejection of the first hypothesis and acceptance of the second. The importance of this research lies in establishing the current quality standards of gastronomy in agrarian regions, particularly in agritourism settings. These findings provide a foundation for further, more detailed research and offer strategic insights for future development and corrective actions aimed at enhancing both gastronomic services and agritourism.

2. Literature review

Most research on this topic focuses on studying how gastronomic identity can be projected and promoted. Some studies also emphasize that the gastronomic identity of a destination is determined by the environment and cultural elements that influence the characteristics, textures, and flavors of food and drink (Harrington, 2005). In recent decades, agritourism has gained significance, particularly in the context of offering specific gastronomic services. Tourists whose primary motivation is food, specifically gastronomy, visit certain agrarian areas primarily to taste the food and drinks characteristic of that region (Sidali et al., 2011). Agritourism includes various food and drink offerings, tastings, visits to food producers, participation in food fairs and festivals, exhibitions of indigenous dishes and drinks, as well as various workshops (Streifender, 2016). In addition, several other services can be found on agritourism farms. Gastronomic service, in combination with the cultural development of the local population, confirms that it can be a primary motivation for visiting an agritourism destination (Vukolić et al., 2023).

Gastronomic service encompasses a wide array of expertise, extending beyond the realm of human nutrition to include the historical evolution of food culture within local communities. In order to achieve a cohesive representation of a country's tourism identity, the gastronomic service must be independently robust. It plays a pivotal role in comprehending the cultural fabric of a society (Rinaldi, 2017). For certain travelers, local cuisine holds significant appeal, influencing their choice of destination. Unlike other destination activities, tourists are often more willing to experiment with new and diverse flavors, although for some individuals, the unfamiliarity of local dishes may provoke a sense of discomfort (Santich, 2004).

Agritourism brings numerous benefits, including the preservation of the natural environment, protection of cultural heritage and traditions, and support for agritourism farms. Agritourism encourages the preservation of values that could be threatened in the future, while simultaneously offering an alternative way of life and work, promoting responsible and sustainable behavior at tourist destinations (Streifeneder, 2016). Agritourism primarily relies on two basic sectors – agriculture and tourism (Phillip et al., 2010). According to some authors, the offering of national cuisine is a part of cultural tourism and heritage, development following natural conditions, the type of land, social customs, religion, and other factors, and reflects cultural norms, the struggle with nature, geographical location, historical influences, and tradition (Ancuța & Jucu, 2023; Bessiere, 1998; Hall et al., 2003).

Recent studies highlight agritourism as an important and expanding sector within the global tourism market. Agrarian destinations provide rich anthropogenic assets and offer an authentic traditional setting. Agritourism is deeply intertwined with cultural tourism, and their combination creates a distinctive experience for visitors (Streifeneder et al., 2023). Ethnographic elements, such as traditional houses, historic workshops, windmills, and farmsteads, are frequently repurposed as museums or exhibition spaces, further enhancing the tourism experience (Knapik & Król, 2023). The agritourism product emerges from the interaction between the agricultural environment, the local inhabitants, and the region's products and activities. The quality of the agritourism offering is contingent on the conservation of the natural landscape, cultural heritage, visitor demographics, and the destination accessibility (Popescu et al., 2023). Agritourism is defined as tourism occurring in rural settings that preserve the authentic features of the local environment and history. However, not all tourism in rural areas qualifies as agritourism, particularly if it does not support the rural economy or utilize local resources (Streifeneder et al., 2023; Widawski et al., 2023).

Although Eastern Serbia possesses significant natural wealth, its rural economy lacks sufficient diversification. Agrarian areas in Eastern Serbia have significant tourism potential, but that potential remains largely underutilized. The development of agritourism can contribute to increased employment and income, as well as the diversification of the local economy, relying on the urban population's need for rest in peaceful and natural environments. Agritourism is characterized by the aspiration to provide an authentic experience, including personal contact with the local population and the opportunity to participate in agritourism activities (Jurjević et al., 2023; Mijatović & Zavadjil, 2023).

Demand for agritourism includes activities such as outdoor recreation, engaging in sports such as horseback riding, hiking, fishing, or simply enjoying nature and cultural heritage, participating in agricultural and other activities on the agritourism farm (such as picking fruits and vegetables, preparing gastronomic products, etc.) (Prasiasa et al., 2023). Gastronomic service, as part of agritourism, cannot survive without modern technology and technical equipment that allows for better quality meals, reduced resource waste, adherence to standards, economical preparation, and flexibility in service (Muwani et al., 2024; Rinaldi, 2017). Traditional gastronomic service represents the authenticity of the people and their environment, combining history, culture, and education. With an adequate tourist offer, agritourism destinations can attract younger generations, who have the opportunity to learn about places of historical significance, culture, and the traditions of their ancestors (Muñiz-Martinez & Florek, 2023). Gastronomic service in Eastern Serbia, although recognized as a brand, is still not adequately positioned on the market. Despite the potential for developing an authentic cuisine, this part of Serbia has not fully utilized its gastronomic resources, indicating the need for better strategic planning and promotion of this segment of tourism (Obradović et al., 2023; Tominc, 2023).

Research highlights the importance of gastronomy as a key factor in attracting tourists and enhancing the tourist experience. Gastronomic service, based on authentic and traditional dishes, can significantly contribute to the perception of agritourism destination and its branding (Đurkin Badurina et al., 2023). In the agrarian areas of Eastern Serbia, traditional cuisine plays a central role in preserving cultural heritage, but also in creating a unique experience for visitors. The quality of gastronomic service, which includes not only the quality of food but also the presentation, service, and ambiance, can be a crucial factor in tourist satisfaction (Hossain et al., 2023).

Furthermore, literature sources emphasize that gastronomic tourism is an increasingly important segment within agritourism, especially in regions with a rich gastronomic tradition. In the case of Eastern Serbia, which is known for its authentic cuisine and local specialties, gastronomic service can become one of the main motivations for tourists to visit. Research shows that tourists increasingly value the opportunity to try local specialties in an authentic environment, which not only contributes to their satisfaction but also encourages their intention to revisit the destination or recommend it to others (Streifeneder et al., 2023; Vukolić et al., 2023). The quality of gastronomic service also has a significant impact on the overall tourism offer of the destination. Literature often highlights that destinations that manage to align high-quality gastronomic service with other elements of tourism infrastructure have a better chance of becoming recognizable and competitive on the market (Kivela & Crotts, 2006; Kovalenko et al., 2023). In Eastern Serbia, where tourism often includes elements of cultural and rural tourism, the quality of gastronomic services can further enhance the tourism offer, attract different segments of tourists, and extend their stay (Dašić et al., 2020; Dimitrijević et al., 2022).

Based on previously researched literature and the presented facts, the null and alternative hypotheses of the research are defined as follows:

H1: The quality of food has a positive and statistically significant impact on overall tourist satisfaction with gastronomic services on agritourism farms in Eastern Serbia.

H2: The authenticity of gastronomic services has a positive and statistically significant impact on overall tourist satisfaction on agritourism farms in Eastern Serbia.

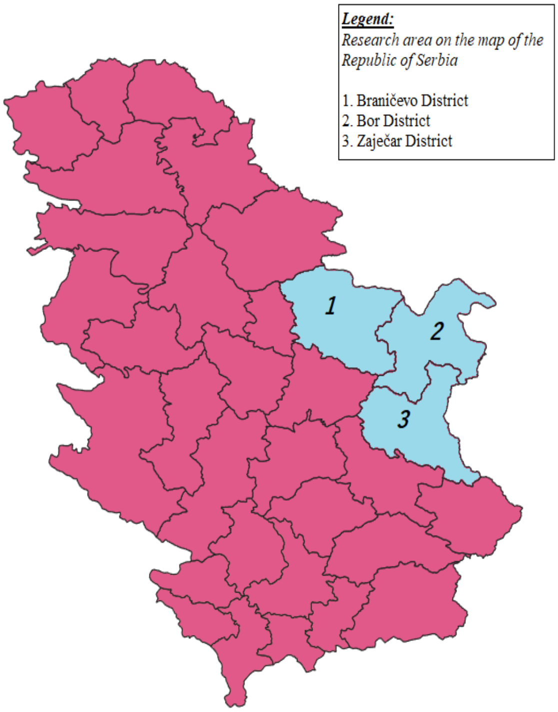
H3: The atmosphere and experience during the stay have a positive and statistically significant impact on overall tourist satisfaction on agritourism farms in Eastern Serbia.

H4: The presence of hosts and their expertise have a positive and statistically significant impact on overall tourist satisfaction with gastronomic services on agritourism farms in Eastern Serbia.

3. Methodology

The research was conducted with the aim of examining the impact of the quality of gastronomic services on tourist satisfaction at agritourism farms in Eastern Serbia. Below is a detailed methodology, including the sample, data collection methods, instruments, and statistical analyses used in the study. The research was carried out on a sample of 189 respondents, selected through random sampling. Data were collected using a structured questionnaire, which was distributed to 14 agritourism farms in Eastern Serbia from January to June 2024. Out of the 200 questionnaires distributed, only 189 fully completed surveys were considered. The questionnaires were collected through direct contact with farm visitors, ensuring a valid and representative sample for the research. The data collection sites included various farms known for their gastronomic services, allowing for the capture of different tourist preferences and experiences.

Figure 1: Research area on the map of the Republic of Serbia



Source: Author's research

The questionnaire used in the study consisted of several sections. The first part covered the basic demographic information of the respondents, including gender, age group, education level, and frequency of visits to agritourism farms. The second part focused on various aspects of the quality of gastronomic services, including questions on ingredient freshness, authenticity of preparation, farm atmosphere, and host expertise. These questions were rated on a Likert scale from 1 to 5, where 1 indicated "strongly disagree" and 5 indicated "strongly agree". The third part of the questionnaire concerned the overall visitor satisfaction with the services and their intention to return or recommend the farm. The questionnaire was designed to avoid moral hazards, which could arise if respondents did not provide accurate or honest answers due to social desirability bias. To mitigate this risk, respondents were assured of the anonymity and confidentiality of their answers.

For data analysis, the statistical software SPSS, version 26.00, was used to analyze all the collected data. The internal reliability of the scales measured by the questionnaire was assessed using Cronbach's alpha coefficient, which was 0.877, indicating high reliability. The reliability of the scale after standardization was 0.871.

Descriptive statistical analysis was applied to calculate the mean ratings for each question and determinant of quality, and the results were presented in tables. Categorical variables were represented by relative and absolute frequencies, while numerical variables were analyzed using the arithmetic mean (M) and standard deviation (SD). The distribution of numerical variables was examined using measures of skewness and kurtosis, and the normality of the distribution was confirmed by the Shapiro-Wilk test ($W = 0.98$, $p = 0.35$), justifying the use of parametric statistical methods. To group the relevant predictors of the quality of gastronomic services, factor analysis was conducted. Before conducting the analysis, the sample adequacy was tested using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. The KMO coefficient was 0.842, indicating a high level of sample adequacy for factor analysis, while Bartlett's test was statistically significant ($\chi^2 = 735.18$, $p < 0.001$), confirming that there was sufficient correlation among the variables for further analysis.

To examine the impact of various predictors on overall satisfaction, multiple regression analysis was applied. The results of the analysis showed that all factors – food quality, service authenticity, atmosphere, and host presence – had a statistically significant impact on overall tourist satisfaction. All p-values were less than 0.05, confirming the statistical significance of the model. The prediction of service quality through multiple regression enabled the identification of the most important factors contributing to tourist satisfaction.

4. Results

The total sample of 189 respondents encompassed various demographic characteristics. Of the total number, 54% were women and 46% were men. Regarding age distribution, 28% of respondents were in the 18-25 age group, 48% were in the 26-40 age group, and 24% were over 40 years old. The majority of respondents (60%) have a higher education, and there were no respondents without at least an elementary school education. Geographically, about 70% of the respondents came from urban areas (Belgrade, Novi Sad, Valjevo, Niš, and other places), while the rest were residents of rural areas. The respondents' occupations were diverse, with a significant number employed in the fields of tourism, education, and entrepreneurship.

Table 1 presents a summary of the descriptive statistics for the assessed quality statements. In total, 22 elements representing the quality of gastronomic services at agritourism farms, referred to as research variables, were evaluated. The evaluation utilized a five-point Likert scale. Some statements addressed the quality of the agritourism facility itself and the host's interaction with tourists, while others focused specifically on the quality of the gastronomic service. These statements were formulated and modified based on prior studies by Bichler et al. (2020) and Yang and Luo (2021).

The highest average score was given to the item related to the variety of local beverages (M = 4.43), indicating that tourists highly value the authenticity and diversity of the local offerings. Similarly, high ratings were recorded for items related to staff expertise (M = 4.52) and the personalization of meals according to guest preferences (M = 4.25), suggesting that these dimensions are key factors in satisfaction. Cronbach's alpha coefficients, ranging from 0.821 to 0.867, demonstrate a high level of reliability within each dimension, confirming that the questionnaire and its items are consistent. This means that respondents answered the questions consistently, and the various aspects of the quality of gastronomic services are interrelated and coherent.

Factor loadings, ranging from 0.659 to 0.783, indicate a strong correlation between individual items and the factors representing the quality of gastronomic services. The highest factor loadings were observed for items related to staff expertise (0.783) and the variety of local beverages (0.767), further confirming their importance in shaping overall tourist satisfaction. These high values suggest that these items strongly contribute to the factor structure and accurately represent the dimensions of service quality being measured.

Table 1: Descriptive values of quality predictors

Quality Predictors	M	SD	Factor loading
I believe that the authenticity of dishes positively influences my perception of quality	3.62	1.690	0.673
I prefer it when the ingredients are fresh	3.69	1.740	0.701
I value dishes prepared with locally grown ingredients more highly	3.91	1.510	0.745
I perceive a higher quality of gastronomic service if organic food is used	3.57	1.590	0.688
I appreciate the experience more when the hosts are present and attentive to me	3.47	1.390	0.664
I consider hygiene a key factor contributing to satisfaction	3.56	1.650	0.712
I prefer menus that offer a variety of dishes	3.84	1.760	0.693
I am more satisfied when dishes are tailored to my specific requests	4.25	1.390	0.742
I value high-quality food preparation	3.45	1.610	0.698
I consider the aesthetics of food presentation important for the overall experience	3.36	1.270	0.677
I am attracted to agritourism farms with a pleasant atmosphere	3.17	0.960	0.659
I appreciate it when the interior of the agritourism farm is adapted to a traditional style	3.44	1.450	0.671
I am more likely to return because of the good atmosphere and hospitality	4.20	1.750	0.748
I believe that staff expertise is crucial for complete satisfaction	4.52	1.200	0.783
I enjoy interactive activities such as cooking workshops	3.79	1.460	0.710
I value sustainable practices and environmental protection at agritourism farms	3.81	1.440	0.724
I prefer traditional preparation techniques that maintain the authenticity of gastronomic service	4.04	1.830	0.735
I am more satisfied when I have access to information about the dish and the origin of the ingredients	3.58	1.770	0.711
I believe that pricing should reflect the quality and value of the service	4.05	1.380	0.759
I value a rich selection of local homemade beverages	4.43	1.590	0.767
I emphasize the importance of high standards of service	3.86	1.720	0.721
I consider safety and security as fundamental requirements for a good experience	3.51	1.440	0.688

*M=arithmetic means, SD =standard deviation

Source: Authors' research

The results of the factor analysis indicate four key factors that significantly influence overall tourist satisfaction with gastronomic services in agritourism (Table 2).

Table 2: Factor Analysis Results

Factor	Items	Statistical Metrics
F1: Food quality	I prefer it when the ingredients are fresh I value dishes prepared with locally grown ingredients more highly I perceive a higher quality of gastronomic service if organic food is used I prefer menus that offer a variety of dishes I am more satisfied when dishes are tailored to my specific requests I value high-quality food preparation I believe that pricing should reflect the quality and value of the service I value a rich selection of local homemade beverages	M = 3.72 SD = 1.613 α = 0.852 % of Variance = 25.6% CR = 0.89 AVE = 0.65
F2: Authenticity of service	I believe that the authenticity of dishes positively influences my perception of quality I prefer traditional preparation techniques that maintain the authenticity of gastronomic service I value sustainable practices and environmental protection on agritourism farms I am more satisfied when I have access to information about the dish and the origin of the ingredients I appreciate it when the interior of the agritourism farm is adapted to a traditional style	M = 3.70 SD = 1.710 α = 0.867 % of Variance = 19.2% CR = 0.87 AVE = 0.60
F3: Atmosphere and experience	I am attracted to agritourism farms with a pleasant atmosphere I am more likely to return because of the good atmosphere and hospitality I enjoy interactive activities such as cooking workshops I consider the aesthetics of food presentation important for the overall experience I believe that safety and security are fundamental requirements for a good experience	M = 3.46 SD = 1.393 α = 0.844 % of Variance = 15.3% CR = 0.85 AVE = 0.58
F4: The presence and expertise of the host	I appreciate the experience more when the hosts are present and attentive to me I believe that staff expertise is crucial for complete satisfaction I am more satisfied when the hosts provide detailed information about the dish and the origin of the ingredients I value the sustainable practices applied by the hosts and their commitment to environmental protection I emphasize the importance of high standards of service	M = 3.83 SD = 1.350 α = 0.873 % of Variance = 18.5% CR = 0.88 AVE = 0.63
Overall satisfaction	I consider hygiene a key factor contributing to satisfaction I believe that pricing should reflect the quality and value of the service	M = 4.17 SD = 1.506 α = 0.869 % of Variance = 21.4% CR = 0.90 AVE = 0.66

Source: Authors' research

The greatest impact is attributed to food quality (25.6% of the variance), which includes freshness, local origin, and organic preparation of dishes. Service authenticity (19.2% of the variance) also proved to be important, as tourists value traditional preparation techniques and the authenticity of the dishes. Atmosphere and experience (15.3% of the variance) encompass factors such as a pleasant atmosphere and interactive activities, while the presence and expertise of the hosts (18.5% of the variance) are essential in creating a positive experience. All factors exhibit high internal consistency, confirming their significance in shaping overall tourist satisfaction.

Table 3 provides a summary of the multiple regression analysis models, showing how the 22 questions about the quality of gastronomic services at agritourism farms, as predictors, influence the dependent variable.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.786[a]	0.623	0.583	0.568
a. Predictors: 22 Questions on Quality				

Source: Authors' research

A correlation coefficient (R) of 0.786 indicates a strong positive correlation between the predictors and the dependent variable, suggesting that as the values of the predictors increase, the value of the dependent variable also rises. This implies that the predictors have a significant impact on the dependent variable. The R-squared value of 0.623 explains 62.3% of the variance in the dependent variable through the models, indicating that the predictors are effective in explaining changes in the dependent variable. This value is useful for evaluating the strength of the model in explaining variations in the dependent variable using the given predictors. The Adjusted R-squared value is 0.583, which represents the adjusted percentage of variance in the dependent variable explained by the model. This value accounts for the number of predictors and the sample size, and it remains high, suggesting that the model adequately explains the dependent variable even with the potential for overfitting due to a large number of predictors. The standard error of the estimate is 0.568, indicating that the model's predictions are relatively accurate, as this value represents the average deviation of the measured values from the predicted values of the model.

In the context of researching the impact of various quality factors of gastronomic service at agritourism farms on overall quality, Analysis of Variance (ANOVA) was conducted. ANOVA is useful for testing hypotheses about whether there are significant differences between groups and whether the independent variables effectively explain the variation in the dependent variable (Sawyer, 2009). In this case, the model uses 22 quality-related questions as predictors.

Table 4 presents the results of the ANOVA test, which was used to examine the overall statistical significance of the regression model. The results indicate that the model is statistically significant, with $F = 15.853$ and a p-value of 0.001, suggesting a significant influence of the predictors (22 questions on the quality of gastronomic services) on the dependent variable, namely, the overall quality of gastronomic services. These results confirm that the predictors collectively explain a significant portion of the variance in tourist satisfaction, making the model relevant for further analysis and interpretation.

Table 4: ANOVA results for regression analysis of overall quality of gastronomic service

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.660	22	4.758	15.853	0.001[b]
	Residual	59.440	201	0.301		
	Total	163.1	223			
a. Dependent Variable: OVERALL QUALITY OF GASTRONOMIC SERVICE						
b. Predictors: 22 Questions on Quality						

Source: Authors' research

Table 5 presents the results of multiple regression analysis for individual predictors. This table represents the regression analysis results that evaluate how different factors influence overall satisfaction with service in the context of agritourism farms. The key elements of the table include independent variables (quality factors), coefficients (B), standard errors, standardized coefficients (Beta), t-values, and p-values, which together provide a comprehensive insight into the significance and impact of each factor on service satisfaction (Hung et al., 2016; Scaglione & Mendola, 2017).

Table 5: Regression analysis and confirmation of hypotheses

Hypo thesis	Coeffici ent	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	Confirmation
	Model	B	Std. Error	Beta		
	(Constant)	0.990	0.165	5.991	0.000	
H1	F1	0.310	0.055	2.288	0.000	Confirmed
H2	F2	0.370	0.058	2.535	0.023	Confirmed
H3	F3	0.260	0.049	3.021	0.012	Confirmed
H4	F4	0.390	0.060	7.713	0.003	Confirmed

Source: Authors' research

The results of the regression analysis show that all key factors significantly contributed to explaining the dependent variable, i.e., the overall tourist satisfaction with gastronomic services on agritourism farms in Eastern Serbia. The constant in the model has a B = 0.990 and t = 5.991 (p = 0.000), indicating that even in the absence of specific factors, there is a baseline level of satisfaction that could be attributed to other unaccounted-for variables. This baseline satisfaction may be related to the general pleasantness of the environment, natural beauty, or the inherent structure of services on the farms. The analysis of food quality reveals a significant positive impact on overall satisfaction. With B = 0.310, a t-value of 2.288, and a p-value of 0.000, it is evident that the higher the quality of the ingredients, their freshness, and the method of food preparation, the greater the tourist satisfaction. These findings indicate that food plays a central role in shaping a positive tourist experience at agritourism farms. Fresh, local, and well-prepared food not only contributes to a positive experience but can also significantly increase the likelihood of tourists returning or recommending the destination to others.

Service authenticity also emerged as a significant factor in satisfaction, with B = 0.370, t = 2.535, and p = 0.023. These results suggest that tourists value authentic gastronomic experiences, such as traditional preparation techniques and local specialties. Authenticity contributes to creating a unique sense of connection with the culture and traditions of the area, which further enhances their sense of satisfaction. Atmosphere and the overall experience during the stay, which include traditional interior design, a pleasant atmosphere, and interactive activities such as cooking workshops, also have a positive impact on satisfaction, with B = 0.260, t = 3.021, and p = 0.012. This result underscores the importance of ambiance and creating a welcoming environment for tourists. A positive atmosphere helps shape the overall impression of the destination, while additional activities allow tourists to immerse themselves more deeply in local culture and traditions.

The greatest impact on tourist satisfaction is attributed to the presence and expertise of the hosts, as evidenced by B = 0.390, t = 7.713, and p = 0.003. These results highlight that interaction with the hosts is crucial for creating a positive experience. The expertise of the hosts, their attentiveness, and their engagement in service delivery directly influence tourist satisfaction, creating a sense of hospitality and care for the guests. This factor is particularly important as it directly contributes to tourists' sense of safety and comfort, significantly fostering their loyalty and encouraging repeat visits.

5. Discussion

This study provides valuable insights into the factors influencing the overall quality of gastronomic services on agritourism farms in Eastern Serbia. The findings reveal that certain aspects, such as dish authenticity, food preparation quality, and host presence, are critical determinants of tourist satisfaction. These results align with existing literature that emphasizes the importance of authenticity and quality in shaping positive tourist experiences in rural and agritourism contexts (Björk & Kauppinen-Räisänen, 2016; Moral-Cuadra et al., 2023). One of the most intriguing findings is the paradoxical negative impact of high-quality food preparation on satisfaction. This outcome suggests that while tourists may have high expectations regarding food quality, the reality may not always meet these expectations, leading to dissatisfaction. This discrepancy highlights the importance of managing tourist expectations through clear communication and transparency about what can realistically be delivered. It also underscores the need for continuous training and development of staff to ensure that food quality not only meets but exceeds tourist expectations.

The study also uncovered that while factors such as the freshness of ingredients were not statistically significant in the regression analysis, they may still play an indirect role in shaping overall satisfaction. This finding suggests that the interplay between different service components is complex and that some factors may exert their influence through interactions with others. For instance, the freshness of ingredients might be more appreciated when combined with other elements, such as traditional preparation techniques or the host's attentiveness. Another important aspect of this research is the role of sustainable practices and environmental responsibility. Although these factors were found to have a lesser impact on satisfaction, they remain crucial in the broader context of sustainable tourism development. Educating tourists about the benefits of sustainable practices and integrating these practices into the overall experience could enhance their perceived value and potentially increase satisfaction in the long term. The study's methodological approach, particularly the use of regression analysis, demonstrates the effectiveness of quantitative methods in uncovering and explaining complex relationships between service quality factors and tourist satisfaction. The results provide a solid foundation for future research, particularly in exploring how different cultural and geographic contexts may influence the impact of these factors.

In practical terms, the findings offer valuable guidance for agritourism farm operators and tourism policymakers. By focusing on the key drivers of satisfaction identified in this study, stakeholders can develop strategies that enhance the overall tourist experience, leading to increased loyalty and repeat visits. Additionally, the insights gained from this research can inform the development of targeted marketing campaigns that highlight the most valued aspects of the gastronomic experience. Overall, this study contributes to the growing body of literature on service quality in agritourism, offering both theoretical and practical implications. The findings underscore the importance of understanding the specific needs and expectations of tourists in this niche market, and they provide a roadmap for improving the quality and competitiveness of agritourism services in Eastern Serbia. Further research is encouraged to explore these relationships in different settings and to continue refining the models of service quality that can best support the sustainable development of agritourism.

6. Conclusion

This research provides significant insights into the impact of various quality predictors on the overall quality of gastronomic service on agritourism farms in Eastern Serbia. The regression analysis reveals that certain service aspects, such as dish authenticity, quality of food preparation, and host presence, have a statistically significant impact on overall service satisfaction. These results indicate that not only do certain quality factors positively influence user perception, but inadequate execution of those same factors can also negatively affect the user experience. The analysis also reveals that although some predictors, such as the freshness of ingredients, were deemed insignificant, they may have an indirect impact on satisfaction through their interactions with other factors. This highlights the complexity of the relationships between different service components and their effect on ultimate user satisfaction. The significant implications of this analysis lie in providing a foundation for a deeper understanding of the key factors that contribute to successful service in agritourism, which is particularly important for planning and implementing service strategies on these farms.

6.1. Theoretical implications

Theoretically, this research contributes to the literature on tourism and hospitality by deepening the understanding of specific factors that influence satisfaction with gastronomic services in the context of agritourism. Specifically, the study examines how different predictors of gastronomic service impact tourists' perceptions in Eastern Serbia, adding value to existing service quality models. The research also explores paradoxical findings, such as the negative impact of high-quality food preparation on satisfaction, which may stimulate further academic discussion and theoretical revision concerning user expectations and service standards. This work also extends the application of regression analysis in tourism, demonstrating how quantitative methods can effectively uncover and explain complex relationships between various service variables and tourist satisfaction. Through detailed statistical analysis, the study provides a methodological framework that can serve as a model for future studies in similar contexts.

6.2. Practical implications

The research provides deep insights into the impact of various quality factors of gastronomic service on overall satisfaction with services on agritourism farms in Eastern Serbia, highlighting practical implications that can be of great benefit to farm operators as well as decision-makers in the tourism sector. Key factors such as dish authenticity, food preparation quality, and host presence have been identified as significant predictors of service satisfaction, indicating the need for their emphasis on product and service development. Farms should focus on training their staff to ensure that dishes not only reflect local traditions but also exceed tourists’ expectations. At the same time, marketing strategies should effectively communicate the high quality and originality of the offerings, using promotional materials and online content that highlight these attributes. Managing tourists’ expectations is also crucial, especially in the light of findings that high expectations can sometimes lead to negative perceptions. Transparency about what tourists can realistically expect can help minimize disappointment and improve satisfaction.

Sustainable practices and environmental responsibility, although showing a somewhat lesser impact, should not be overlooked. Instead, agritourism farms should work on educating tourists better about the benefits of these practices, perhaps through educational programs that increase tourists' appreciation for these efforts. Collecting feedback from tourists through regular surveys and online reviews can further inform agritourism farms about guests' needs and desires, allowing for quick and effective responses to issues related to gastronomic service. Strategic planning at both the farm level and broader regional level should rely on these insights to guide investments and development activities. Understanding the key factors that contribute to guest satisfaction can maximize the efficiency of any investment, increase guest satisfaction, and improve the overall success of agritourism initiatives. Ultimately, effective management of these aspects of gastronomic service can lead to a better overall experience for tourists, greater loyalty, and broader appeal of agritourism areas to tourists.

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Conflict of interest

The authors declare no conflict of interest.

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From global Doughnut sustainability to local tourism destination management

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Abstract

Purpose – This paper explores the intersection of global sustainability frameworks and local tourism management applying the Doughnut Economy model. The study aims to understand how destinations can bridge the gap between multidimensional, multilevel sustainability objectives and local execution, ultimately promoting a paradigm shift towards sustainable tourism. **Methodology –** We review the sustainable destination management literature as well as the Doughnut Economy framework and evaluate how the Doughnut model allows for an examination of how destinations can simultaneously address local needs and broader, systemic impacts. **Findings –** The integration of the Doughnut Economy model can help to ensure that the benefits and costs of tourism are in balance. Tourism destinations need to adopt consistent sustainable practices that align with both local aspirations and global sustainability targets. Digitalization can enhance the measuring and modelling of impacts and aid in steering behaviour. **Implications –** Destination managers have a role in the broader sustainability of tourism, and they will be required to apply comprehensive approaches such as the Doughnut model supported by digital solutions to balance social and ecological demands at local and global levels.

Keywords: tourism destination management, Doughnut economy, paradigm shift, sustainability
JEL classification: Z32, Q56

Od globalne održivosti tipa „šuplje krofne” do upravljanja lokalnim turističkim destinacijama

Sažetak

Svrha – Ovaj rad istražuje presek globalnih okvira održivosti i lokalnog upravljanja turizmom, primenjujući model ekonomije krofne. Studija ima za cilj da razume kako destinacije mogu premostiti jaz između višedimenzionalnih, višeslojnih ciljeva održivosti i lokalne realizacije istih, promovišući promenu paradigme ka održivom turizmu. **Metodologija –** Literaturu o održivom menadžmentu destinacije, kao i okvir ekonomije krofne smo pregledali, kako bi se procenilo da li model krofne omogućava ispitivanje načina na koje destinacije mogu istovremeno da odgovore na lokalne potrebe i šire, sistemske

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uticaje. **Rezultati –** Integracija modela ekonomije krofne može pomoći u postizanju ravnoteže između troškova i koristi turizma. Turističke destinacije treba da usvoje dosledne održive prakse koje su u skladu sa lokalnim težnjama i globalnim ciljevima održivosti. Digitalizacija može poboljšati merenje i modeliranje uticaja i pomoći u upravljanju. **Implikacije –** Menadžeri destinacija imaju ulogu u široj održivosti turizma, i od njih će se tražiti da primenjuju sveobuhvatne pristupe, kao što je model ekonomije krofne, koji treba da budu podržani digitalnim rešenjima kako bi se uravnotežili društveni i ekološki zahtevi na lokalnom i globalnom nivou.

Ključne reči: menadžment turističkih destinacija, ekonomija krofne, promena paradigme, održivost
JEL klasifikacija: Z32, Q56

1. Introduction

Globalization has brought the people from around the world closer together. Our common understanding about different countries and regions and our awareness of our common problems has grown, including global economic, social, and environmental problems. At the same time, the world has become more complex to manage concerning our common challenges such as climate change, loss of biodiversity and ecosystem services, child labor, or sex tourism that violates human rights. Managing the desired development is difficult due to decentralized decision-making: citizens make decisions about consumption, businesses try to survive in global competition, regions aspire to enhance local vitality, states pursue economic and political influence, international organizations try to co-operate, but no one has the power to coordinate and control the total system. We can call these wicked problems because there seldom are easy and unambiguous solutions to such multidimensional problems.

In principle, when acting as consumers, workers or managers, people want to make right and ethical choices. Local tourism destination management faces more challenges than ever in pursuing the co-existence of multiple dimensions (economic, social, environmental) and levels (from global and systemic to local and specific) of sustainability. Coordinating the demands and finding the balance is almost a mission impossible. For example, there may be a conflict between the pressing global climate targets and local targets, if wind or solar energy disturbs nature, landscape, or culture. The need for correct, topical, and relevant information is huge.

Obviously, there is a need to adopt a consistent framework that considers local and global demands at the same time. This paper applies the Doughnut economy model (Hartman & Heslinga, 2023; Raworth, 2012; Raworth, 2017) to sustainable tourism destination management. The core idea is that destination management at the local level must implement the different dimensions of sustainability and targets from different levels in a systematic way avoiding inconsistencies.

The big question, then, is how to find the best practices for local tourism destination management. We propose that a first step is adopting the Doughnut model as a global framework. This framework, however, is quite an abstract one and it does not convert easily into practical local actions. We believe that because of the complex nature of the wicked problems, multidisciplinary research and expertise is needed. A possible consensus or mutual understanding within the scientific community can gradually lead to a conceptual understanding, which can lead to strategically coherent choices and concrete actions at tourism destinations. Within the unified framework, technology can aid us with the information problems in the context of 'smart' tourism destination management.

Because of recent advances in technology, the role and potential of smartness and digital solutions toward the sustainability goal in a tourism destination are also considered here. The rapid development of digitalization, big data, artificial intelligence, and digital twins is promising, and it may offer a realistic possibility for systematic and consistent management of wicked problems in the near future. To tackle the problems, we must be able to gather and screen the relevant data, to recognize fundamental relations between variables and their intensities and finally, to convert all of it into strategic and operative knowledge.

Therefore, we will address the following research questions:

- what does a Doughnut approach to destination management mean as guiding principles?
- what is the role of smartness and digital solutions in managing local and global sustainability?

The paper proceeds as follows. Section 2 reviews the literature on sustainable destination management to identify gaps in the understanding of systemic sustainability. Section 3 presents the Doughnut economy model (3.1.), applies it to the challenges of tourism destination management (3.2.), and discusses the role and potential of digitalization as a means to achieve the Doughnut goals (3.3.). Section 4 discusses the differences between traditional destination management and managing towards Doughnut-type sustainability. Section 5 concludes the paper.

2. Sustainable tourism destination management: Literature review

There is broad global consensus on the need for sustainable tourism. The UN resolution on "Promotion of sustainable and resilient tourism, including ecotourism, for poverty eradication and environmental protection" (UN General Assembly, 2022b) was supported by all UN member states. The Glasgow Declaration on Climate Action in Tourism (One Planet Sustainable Tourism Programme, 2021) is open for governments, companies, and NGOs to sign.

The tourism marketing paradigm has long emphasized the importance of sustainability (Jamrozy, 2007; Pomering, 2011). It is widely agreed that sustainable tourism destination management must embrace the economic, sociocultural, and environmental elements of sustainability (European Commission, 2016; Sveisndottir et al., 2023; UNWTO, 2004). A multidisciplinary approach to sustainability in tourism, encompassing environmental responsibility, cultural vitality, social equity, and economic and financial aspects, is claimed to be crucial for destination management (Jenkins, 2013). The role of entrepreneurship and networking ability in achieving a sustainable destination is highlighted, emphasizing the need for a coordinated system (Ferri, 2017). Sustainability needs to be operationalized in the managerial and governance practices (Sveinsdottir et al., 2023). All things 'smart' are omnipresent (Fyall & Garrod, 2020). Artificial intelligence, Internet of Things, the circular economy, big data, and augmented or virtual reality are major trends (Loureiro & Nascimento, 2021).

Locally at the destinations, *overtourism* has emerged as a central sustainability issue, with both ecological and sociocultural factors setting limits on growth (Fyall & Garrod, 2020; Hartman & Heslinga, 2023; Reinhold et al., 2023). Destinations desire the benefits of tourism while upholding destination quality and avoiding the worst burdens. Fyall and Garrod (2020) see the task as protecting the welfare of two groups of people: tourists and residents. The number of tourists as well as their behavior may need to be controlled. Svalbard, Norway, is now paying attention to sociocultural issues, and in Nuuk, Greenland, emphasis is shifting to environmental regulation (Sveinsdottir et al., 2023). In Western

Norway, red zones prohibiting camping have been established to protect nature from surfers (Engeset et al., 2023). Locals desire control over the influxes of tourists in time and space (Engeset et al., 2023). According to Sveinsdottir et al. (2023), the solution to locally sustainable tourism is adaptive co-management, where targets are jointly agreed on, and regulation is set as needed. Constructive agency of all co-managers may aid in building tourism that is locally sustainable in both ecological and sociocultural sense (James & Halkier, 2023).

Tourists and destination residents are not, however, the only actors relevant to the sustainability of tourism. In their ecotourism footprint study, Mancini et al. (2022) found that international travel to and from destinations and the production of food and drink consumed by tourists can have much heavier impacts on ecosystems than their stay. Overtourism with all its impacts is a local but also a systemic, global, and planetary problem.

Reinhold et al. (2023) believe that future work on destination management might pay more attention to planetary boundaries. Hartman and Heslinga (2023) propose a need for a paradigm shift in tourism destination management. They see the Doughnut model as resonating with regenerative tourism, resilience, transitions thinking, and purpose economy.

3. Doughnut economy model and its application to sustainable tourism destination management

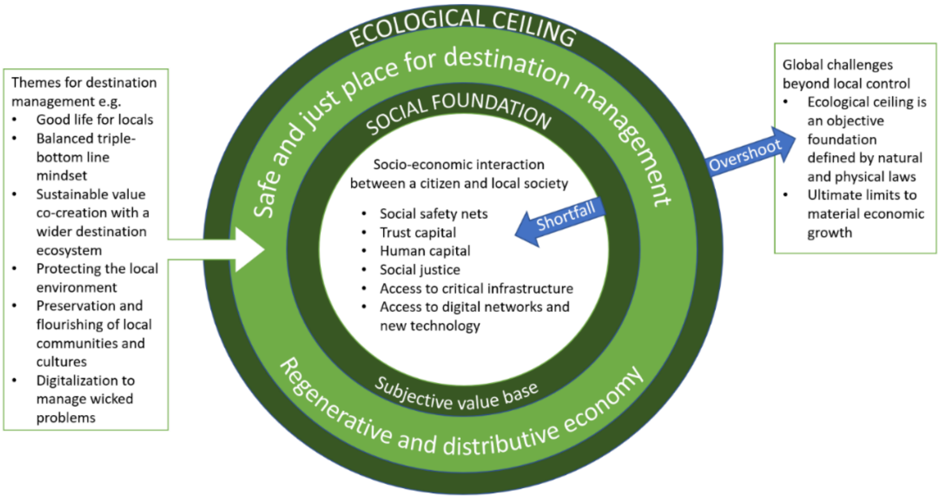
3.1. The Doughnut model

The *Doughnut economy*, coined by Kate Raworth (2012; 2017), is an approach to sustainability that has attracted considerable attention. The Doughnut model can provide a balanced perspective and target for sustainability transformation. It provides a holistic and systemic approach to operationalizing the Brundtland report's framework (WCED, 1987) on sustainable development with three dimensions: economic, social, and environmental sustainability.

The Doughnut economy model is characterized first by an objective element, the ecological ceiling, which cannot be overshot. Staying within the outer boundary of the Doughnut means that humanity is in a safe space where planetary boundaries are respected. Nine planetary boundaries have been defined (Rockström et al., 2009; Steffen et al., 2015) to guide humanity. Unfortunately, six of the boundaries have now been exceeded: biogeochemical flows, freshwater change, land system change, biosphere integrity, climate change and novel entities (Richardson et al., 2023). In addition, we are close to exceeding the ocean acidification boundary. With atmospheric aerosol loading and stratospheric ozone depletion, humanity is currently in the safe space.

Second, the Doughnut has its inner boundary. It is the social foundation, where humanity can flourish in an equitable way based on its prerequisites for a good life, including basic necessities (water, food, energy, housing) as well as health, education, and cultural community. Staying within the inner boundary of the Doughnut means staying in the just space. Between the ecological ceiling and the social foundation, the economy can be arranged in a balanced way (Raworth, 2017). The doughnut shape presumes that too much of good things can exert a too heavy burden on the planet, making the system unsafe, unsustainable, and ultimately unjust. Figure 1 applies Raworth's Doughnut to destination management.

Figure 1: The Doughnut model applied to destination management



Source: Authors' research

It is worth noting that the two parts of the Doughnut model are interesting from a philosophical point of view. Firstly, the ecological ceiling presents an objective sustainability target based on natural laws, defined by sciences such as physics and chemistry. Recognizing the ecological ceiling as objective, absolute, and set by the boundaries of the planet is useful for any field of business, including tourism destination management.

Secondly, the social foundation is subjective, and value based, which means it is a social construction of subjectively expressed human wants or moral beliefs. It is defined by humans themselves. Whether societies around the world are genuinely and broadly committed to the moral principles of just space can be questioned. However, we can see that many prerequisites for good life in the inner circle of the Doughnut have been recognized as human rights in the UN agreements (International Covenant on Civil and Political Rights 1966; International Covenant on Economic, Social and Cultural Rights 1966; Convention on the Rights of the Child 1989). Consequently, one can say that the just space in the Doughnut model represents shared human values. Our vision of the Doughnut sees a society based on trust capital and human capital where citizens have the capacities and the will to set balanced compromises if not shared goals.

3.2. Downscaling the Doughnut model to sustainable tourism destination management

We believe broad, systemic, and global perspectives on sustainable tourism deserve more attention in business and local destination governance. In the absence of a global body to regulate tourism, system level macro controls are missing, and no actor or organization can manage or control system level optimization. This underlines the significance of transparency and ethical considerations for safe and just choices *locally* by tourism service providers and their organizations, cities, and regional developers. Destinations can make the tourism economic system sustainable through their decisions. Tourism destination management processes traditionally have had limited possibilities to control macro-level issues. Today, individual operators are increasingly demanded to acknowledge and be transparent about their indirect and systemic impacts.

The Doughnut approach is planetary, and the safe and just space refers to the space for the whole humanity. The challenge with the Doughnut approach to global and planetary issues is that it must be downscaled and operationalized for local decision-making.

A few scholars have attempted to advance the quest of downscaling the Doughnut to a regional level (Turner, 2022; Warnecke, 2023), and some states and cities have adopted Doughnut targets. The Amsterdam City Doughnut Project is an example of an attempt to apply the Doughnut model in city-level decision-making. Amsterdam aims at sustainability in a local social, local ecological, global social, *and* global ecological sense. The local lenses are based on envisioning a good life in Amsterdam, and the global lenses are derived from the UN Sustainable Development Goals (SDGs) and the planetary boundaries. For destination management, the Doughnut approach is concretized by defining how it should steer tourism operations locally as well as the management of global supply chains and footprints of products and services. A Doughnut destination looks at four dimensions of sustainability (Table 1).

Table 1: Dimensions of a Doughnut destination

Local social: good life for the locals	**Global social**: good life for everyone in the tourism economic system
Local ecological: protecting the local environment	**Global ecological**: a tourism system respecting the planetary boundaries

Source: Authors' research

Locally, the ecological impacts are related, for example, to building sites, water use, waste recycling, and the trails in nature taken by tourists. Sustainable destination management could include the participation of residents in land use planning, transport solutions that do not worsen local air quality, and educating tourists about protecting local biodiversity and local cultural heritage. A good life for locals means not only income from tourism but also affordable housing and freedom from increased traffic, noise, and other disturbances. Employees also deserve a good life. Seasonal tourism workers come from all over the world. With decent salaries and working conditions and free from discrimination, workers can enjoy their fundamental rights both in their home and host countries and cultures (Ioannides et al., 2021).

For global social and global ecological sustainability, the *footprints* of tourism services and products are taken into focus. Negative impacts can be mitigated through sustainable supply chain management, and governments can support transformation by setting binding laws and targets concerning due diligence in supply chains. The EU Corporate Sustainability Due Diligence Directive (2024/1760) addresses both the global ecological and global social elements of sustainability, but only sets duties on large companies.

Decent jobs and livelihoods in global supply chains are a major element in the sociocultural sustainability of tourism. All goods and services used in tourism destinations, including buildings, boats, fishing tackle, electronics, and food, have their social footprints, including issues around workers' rights in supply chains. Some of the products used in Western destinations are made by enslaved people (see ILO et al., 2022), and the working conditions of particularly migrant workers may be dangerous and out of standards. The new EU Forced Labour Regulation will prohibit forced labor goods from entering the EU markets. Mining and agriculture providing goods for tourists may have negative spillovers on the traditional land uses, cultures, and livelihoods of indigenous peoples far from the destination (Kennedy et al., 2023). Human rights due diligence in supply chains of all products and services is a necessary part of managing a Doughnut destination.

The carbon, biodiversity and water footprints are integral for assessing the environmental sustainability of tourism in a global sense. Tourism is currently responsible for 8% of the world's carbon emissions (Sustainable Travel International, n.d.). Flights, air-conditioned hotels, and destroying forests and mangroves to build tourism infrastructure are among the worst problems for the climate. Replacing fossil fuels with renewable energy is needed. Carbon neutral destinations are a popular idea (Gössling, 2009). Even if all destinations operated on renewable energy, flights are integral to the system and must be accounted for. There is no human right to fly, but there is a human right to a clean, safe, healthy, and sustainable environment (UN General Assembly, 2022a; UN Human Rights Council, 2021). Individual passengers voluntarily offsetting their emissions (see Bösehans et al., 2020) does not solve the problem. In view of the climate planetary boundary, the aviation industry as a sector must target carbon neutrality. Destination managers have a role as they can demand or recommend low-carbon travel and compensated flights. The target for destination managers should be low-carbon, high-value tourism, where tourist arrivals are stabilized or reduced (Gössling & Higham, 2021).

A particular issue for Doughnut destination managers is the trade-off between climate and nature goals: renewable energy production can destroy local ecosystems, and electric vehicles and nuclear power need metals and minerals that cause the opening of new mines. Tourism also needs buildings, and additional buildings need additional materials. A partial solution may be the no-net-loss principle of biodiversity, including mitigation hierarchy and ecological compensation: if a company, for example, in the energy, mining, or construction industries, cannot avoid destroying an ecosystem, it must fully compensate for the destruction by protecting or restoring an ecosystem elsewhere (Gelcich et al., 2017). Tourism destination managers should require both a low carbon footprint and biodiversity no-net-loss from both local operators and from companies in their supply chains. Promoting a circular and sharing economy can save limited natural resources.

Cruise tourism is a growing segment in international tourism. Beyond the welfare of tourists and destination locals, a Doughnut cruise line pays attention to the rights of shipbuilders and ship staff alike. For environmental sustainability, not only shipping emissions, but the whole value chain must be considered from ship design (Könnölä et al., 2020) to vessel production (Gilbert et al., 2017) and ship recycling (Tola et al., 2023). Cruise tourism needs to negotiate with destinations and all their other stakeholders on how to avoid local and global environmental and sociocultural problems while ensuring a fair division of economic benefits (Klein, 2011).

Food and drink services are a major part of the tourism footprint. Breakfast, lunch, and dinner are crucial for the planetary boundaries for biodiversity, land conversion, and freshwater withdrawals as well as for the right to water and the right to a healthy environment of individuals and communities in the producing countries. The planetary boundaries for nitrogen and phosphorus loading and chemical pollution are connected to food via fertilizer and pesticide use. For example, coffee served at breakfast could be contributing to deforestation in Colombia (see Naranjo Barrantes et al., 2023) and orange juice to water scarcity in South Africa (see Munro et al., 2016). The Deforestation Regulation (EU 2023/115) will improve the environmental footprints of beef, soy, palm oil, coffee, cocoa, timber, rubber, and derived products sold in Europe and exported from Europe. In addition to forests, Doughnut destinations must pay attention to savannah, wetland, freshwater, and marine ecosystems in the supply chains of products used. Food waste should be reduced across the tourism system, including flights, cruise ships, hotels, and restaurants.

The marketing orientation towards respective, restorative, and ethical tourism requires transparency and honesty on the value promises and customers targeted. Ecotourism marketing should be based on sincere values, intentions, and actions instead of greenwashing such as referring to minor benefits to distract from major problems. Safari tourism should aid in the long-term welfare of ecosystems and species, instead of benefiting from the animals while causing them stress that results in reproductive problems (Szott et al., 2019). Slow tourism is one trend that can contribute to the realization of human and planetary health (Klarin et al., 2023).

3.3. Applying digital solutions towards Doughnut goals

Digital transformation in tourism destinations is firmly linked to the overarching sustainability narrative. It is not just a technological shift, but a multi-layered phenomenon involving tourism destination ecosystem development, stakeholder engagement, and value co-creation. Digitalization and technological innovations now enable the utilization of rich data and modeling complex systems to monitor, analyze, test, and simulate sustainable solutions. Models such as digital twins may aid in finding solutions to wicked problems that were previously too complex to manage, such as overtourism (Rahmadian et al., 2023). Digitalization can also foster stakeholder engagement and facilitate adaptive governance models.

Technology can be used to strengthen environmental awareness and can aid in reducing stress on the environment. For example, combining data on the number of visitors and the routes taken by them to data on the condition of natural ecosystems and the ecosystem services they provide can aid in setting proper environmental targets and rules (Loureiro & Nascimento, 2019).

The ecosystem approach is often used to contextualize digital transformation in tourism destinations. In business research, ecosystem means a perspective that incorporates multiple stakeholders, including tourists, service providers, and governance bodies (Gretzel et al., 2015; Gutierriz et al., 2022). These ecosystems are increasingly becoming ‘smart’, facilitated by technologies like the Internet of Things (IoT), artificial intelligence (AI), and augmented reality (AR) (Buhalis, & Law, 2008; Neuhofer, 2016). IoT technologies, such as sensor networks and data analytics, have proven instrumental in environmental monitoring and sustainable resource management (Miorandi et al., 2012).

Digital platforms are becoming avenues for value co-creation, enabling tourists to transition from passive consumers to active participants in their experiences (Chen et al., 2018; Prahalad & Ramaswamy, 2004). This transformation is particularly relevant in the sustainability context, where engagement by stakeholders can significantly impact the long-term viability and responsible management of tourism destinations (Presenza et al., 2014).

Despite the numerous opportunities, digital transformation also brings challenges, including digital inequality and the pressing need for digital literacy for both service providers and consumers (Frenzel et al., 2022). That need necessitates a paradigm shift in management and governance, requiring investments in digital infrastructure and skill development among local communities to ensure that technology genuinely acts as an enabler for sustainable development (Law et al., 2014). Artificial intelligence and other digital technologies also raise some concerns about data privacy and security (Grundner & Neuhofer, 2021).

Data is not immaterial: it needs a physical infrastructure. Huge amounts of data require huge amounts of energy. Digitization of tourism is accompanied by a surge in photos and videos, contributing to environmental degradation (Guedes et al., 2022). Hence, there are also challenges in the environmental sustainability of digitalization. We must avoid the risk of energy-intensive data-based technologies offsetting their potential benefits for sustainability (Gössling, 2021).

4. Sustainable tourism at both destination level and systemic level

We apply the idea of Doughnut economy to tourism destination management as a systemic way to manage sustainability, in order to reach a safe and just space of tourism. Table 2 below illustrates the paradigm shift in tourism destination management from traditional approaches that prioritize economic growth and high tourist volumes toward more sustainable models.

Table 2: Traditional vs. Doughnut tourism destination management

Dimension	**Traditional tourism destination management**	**Doughnut tourism destination targets**	**Sustainable tourism destination management**
Value Premise	Economic growth, profit maximization, destinations as market commodities	Safe and just space for humanity, SDGs	Balancing economic, social, cultural, and environmental objectives for long-term sustainability
Economic Approach	Prioritizes short to mid-term revenue, overtourism driven by investor interests, pro-business policy	Regenerative and distributive economy	Seeks long-term economic benefits and support for local and regional development, pro-total welfare policy
Environmental Approach	Reactive environmental management, potential overuse of natural resources	Planetary boundaries, earth systems, global footprints	Circular economy, minimizing waste and environmental footprints, conservation, local ecological compensation/ biodiversity offsets
Social and Cultural Approach	Often commodifies culture without ensuring preservation, overlooking local community impacts	Equity, voice, transparency, accountability, universal human rights, justice	Promotes well-being and preservation of local communities and cultures, integrating traditions respectfully
Marketing Orientation	Focuses on short-term gains and mass marketing for immediate tourist attraction	Ecotourism, regenerative tourism, slow tourism	Long-term resilience and adaptability, sustainable value co-creation with wider destination ecosystem

Source: Authors' research

The left-hand column in Table 2 describes how traditional tourism destination management embraces growth, short-term decision-making, and incremental and reactive micro-level management. Macro-level controls for longer-term strategic planning and systemic thinking are lacking.

The middle column proposes that Doughnut tourism destination management gives instructions to consider the balance between the destination and earth systems. The economic approach in the Doughnut model describes a regenerative and distributive economy. On a local level, a question arises whether we can recognize a maximum economic scale to which tourism can and should grow. New forms of regenerative and zero-growth economic models, as well as the equalization of income distribution, may be necessary to employ. The environmental approach of the Doughnut model is planetary. Contradictions and trade-offs between local and global environmental impacts can be a severely wicked problem to tackle.

The right-hand column highlights how the focus has evolved from short-term gains to embracing practices that promote environmental conservation, social equity, community, and cultural respect. The shift to sustainable tourism destination management recognizes the critical need to balance economic, social, cultural, and environmental objectives to ensure the long-term viability and resilience of tourism destinations. Adverse impacts associated with tourism are mitigated, and the benefits to local communities and the environment are enhanced. Local community needs, a balanced local economy, and well-being are adhered to. The growth targets of individual businesses are adjusted to support the wider needs of the local destination. This requires the adoption of systemic thinking to understand the complex interactions between tourism and the destination ecosystems and communities. The long-term impacts of tourism activities and informed decisions that consider local environmental limits and social foundations are required (Gössling, 2018).

Without a Doughnut approach, sustainable destination management can lead to *sub-optimization* on the tourism system level. This can occur if destinations have a will and ability to control local sustainability, but no one considers the inevitable negative spillovers back to global concerns, and vice versa. These negative spillovers include, for example, the environmental impacts of transportation, energy, construction, and food supply chains connected to the destination. They also include the extortion of workers in global supply chains. Bridging the gap between local tourism management and the safe and just space for humanity requires complex analysis to account for all relevant and controllable spillovers within the destination.

5. Conclusions

Drawing from Kate Raworth's Doughnut model (2017), we explore the paradigm shift to bridge the gap between global sustainability aims and tourism management at a local level. The Doughnut economy model illustrates a compelling pathway toward operationalizing sustainable tourism practices within a systemic framework. This paper continues from Hartman and Hesling (2023) by explicating how the Doughnut perspective on global sustainability is a step forward from small-minded sustainability management. In our version of the Doughnut, we highlighted the objective nature of the planetary boundaries which cannot be negotiated. We referred to international human rights as setting standards for the just space, including Indigenous rights at the destination and beyond. We also highlighted how digitalization can and should contribute to reaching the Doughnut goals and realizing the sustainability transformation.

We present two, interconnected conclusions as answers to our research questions:

1) Doughnut tourism destination management can impact socio-economic systems far beyond the destination and should address human rights, climate, biodiversity, and water footprints in global supply chains of goods and services used in tourism. At the same time, attention to global concerns only may seriously ignore and harm local sustainability. Consequently, two-way effects and processes should always be recognized, micro to macro and vice versa.

2) Digitalization and smart tourism can and should be used to enable knowledge-based decision-making for detecting and reconciling sustainability challenges and conflicts locally and in the larger system.

Thorough explorations of the local and global social and ecological impacts of tourism can provide invaluable insights into the broader sustainability discourse. The negative global externalities of tourism may in many cases be worse than the negative impacts at the destination, and conversely, local improvements to contribute to global benefits can lead to large negative local adverse effects. Future inquiries could delve deeper into the practicalities and challenges of downsizing global sustainability models like the Doughnut economy to regional or local scales in diverse geographical and cultural contexts. Additionally, empirical investigations are needed on the efficacy and impact of digital transformation initiatives, particularly in facilitating stakeholder engagement in sustainability goals and adaptive governance towards sociocultural and environmental sustainability.

Regulators and policy makers should aim for sustainability beyond destinations, although the sustainability of the whole tourism system includes wicked problems to govern. Setting effective restrictions and negative economic incentives against the socially and ecologically most harmful forms of tourism is a good start.

Continued dialogue among academia, industry stakeholders, policy makers and local communities, augmented by rigorous empirical research, will be instrumental in achieving sustainability goals in destination ecosystem and tourism system contexts.

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Conflict of interest

The authors declare no conflicts of interest.

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Exploring adventure tourism trends through image content analysis of Instagram posts

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Abstract

Purpose – The main objective of the paper is to contribute to testing the usefulness of image content analysis in the assessment of trends in the tourism market, as well as to draw conclusions about contemporary tendencies in the adventure tourism market. **Methodology** – The image content analysis is a key methodological tool in this research, supported by comparative and cluster analysis. A detailed analysis of trends in adventure tourism is carried out through the assessment of geographical and temporal characteristics, types of adventure activities and user representation by gender. **Findings** – The results of the research indicated the significant role of developing countries as adventure tourism destinations, the absence of seasonality, the dominance of soft adventure activities and women as participants in this type of tourism. In addition, the research made it possible to identify certain new activities and conclude on the diversification of the offer, as well as the classification of activities according to the gender structure of the participants. **Implications** – The results can be useful to the creators of the offer on the adventure tourism market, but also to the tourists themselves in terms of ideas and motivation. In a theoretical sense, the paper should contribute to highlighting the prevailing views in the literature on the key features of adventure tourism.

Keywords: adventure tourism, adventure activities, image content analysis, geotag analysis, Instagram
JEL classification: Z32

Istraživanje trendova u avanturističkom turizmu putem analize sadržaja slika Instagram objava

Sažetak

Svrha – Glavni cilj ovog rada je pružanje doprinosa u oceni korisnosti analize sadržaja slika u oceni trendova na turističkom tržištu, kao i zaključivanje o savremenim tendencijama na tržištu avanturističkog turizma. **Metodologija** – Analiza sadržaja slika je ključni metodološki alat u ovom istraživanju, dopunjena komparativnom i klaster analizom. Detaljna analiza trendova u avanturističkom turizmu izvršena je kroz ocenu geografskih i vremenskih

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karakteristika, vrsta avanturističkih aktivnosti i zastupljenosti korisnika prema polu. **Rezultati** – Rezultati istraživanja ukazali su na značajnu ulogu zemalja u razvoju kao destinacija avanturističkog turizma, odsustvo sezonalnosti, dominaciju „mekih" avanturističkih aktivnosti, kao i žena kao učesnika u ovom vidu turizma. Pored toga, istraživanje je omogućilo identifikovanje određenih novih aktivnosti i zaključak o diverzifikaciji ponude, kao i klasifikaciju aktivnosti prema polnoj strukturi učesnika. **Implikacije** – Rezultati mogu biti korisni kreatorima ponude na tržištu avanturističkog turizma, ali i samim turistima u smislu ideje i motivacije. U teorijskom smislu, rad bi trebalo da doprinose podvlačenju preovlađujućih stavova u literaturi o ključnim karakteristikama avanturističkog turizma.

Ključne reči: avanturistički turizam, avanturističke aktivnosti, analiza sadržaja slika, geotag analiza, Instagram
JEL klasifikacija: Z32

1. Introduction

The changed wishes and demands of modern tourists are a chance and motivation for the development of specific forms of tourism. Adventure tourism is one of the trends in the tourism market that is supported by the changes taking place on the side of tourist demand. Adventure tourism records worldwide dynamic growth and an increased number of people year after year exercise some type of adventure activity (ATTA, 2024). Its growth and development follow certain social changes, modification of lifestyle and the desire for a personalized experience, but also the need of modern tourists to spend their time in a unique and preserved natural environment (Gross et al., 2023). Adventure tourists are particularly motivated to visit unknown or newly discovered destinations. This fact gives the possibility of successful market positioning of unestablished and less established destinations by promoting their uniqueness and attracting tourists who want rare and authentic experiences, something new and unusual. Adventure is becoming a desirable, recognizable and increasingly sought-after part of the tourism product. Understanding the travel behaviours, characteristics, choices or activity preferences of tourists can be very useful in assessing trends in the adventure tourism market (Pomfret & Bramwell, 2016). Stories and photos on social media are an important aspect of modern tourist travel (Filipović et al., 2023; Haddouche & Salomone, 2018). Their posts are potentially a significant source of information for drawing conclusions about market trends.

Images play a very important role in tourism research as a medium that allows creating perceptions about the tourist destination, but also represent a way to understand the minds of tourists (Wang et al., 2024; Xiao et al., 2020). Particularly significant for the tourism industry among social media platforms is the dominantly image-based platform Instagram, due to the visual component of travel-related content (Smith, 2021). In parallel with the increase in the number of users on Instagram, its scientific contribution registered in the relevant scientific databases is also growing (Vaz, 2023). In addition, research shows that Instagram is the most important social media platform for adventure tourism (ATTA, 2024). Taking this into account, the subject of this paper is to analyze adventure tourism on Instagram using image content and geotag analysis. Image content analysis provides a comprehensive insight into tourist preferences, can determine tourism trends and is a valuable resource for more in-depth research. The aim of this research is twofold. First, the data obtained from the analysis will be compared with the official data of the Adventure Travel Trade Association (ATTA). Second, the aim is to determine recent adventure tourism trends on Instagram, with a detailed focus on location, type, temporal and gender features of adventure activities. Location or destination, type of activity, and gender are the usual criteria for classifying adventure activities (ATTA, 2020; ATTA, 2024). The analysis of the temporal distribution of adventure activities is important in the context of assessing the potential of alternative forms of tourism in mitigating seasonality (Garanti, 2022). The motive of this research is the assessment of the usefulness of the aforementioned analysis as a research tool, as well as the fact that there is a lack of papers that analyze adventure tourism on social media platforms, especially for the purpose of assessing global trends.

2. Background

In understanding adventure tourism, it is perhaps best to start from the fact that it is used as an umbrella concept to theoretically cover the engagement of tourists in a wide range of activities, events and services, worldwide (Rantala et al., 2018). Adventure tourism or adventure travel, as it is often called alternatively, can include numerous activities, from those that are of low level of demand and risk to those that are highly demanding, and represents a certain way of combining adventure, specific experience and excitement. Adventure tourism is seen as a positive concept and is often explored in the context of sustainability and well-being. It helps to reconnect people and nature and encourages pro-environmental behaviors (Hanna et al., 2019). Adventure tourism enhances hedonic and eudaemonic subjective well-being and improves wellness of tourists (Houge Mackenzie et al., 2023; Hung & Wu, 2021; Lötter & Welthagen, 2020). With the growing market of adventure tourism, the interest of the scientific public in looking at different aspects of this form of tourism is also growing. The review of recent literature in the field of adventure tourism leads to the conclusion that three of its four characteristics that will be the basis of empirical research in this paper (geographical and gender features and type of activity) are highly represented in research. In the context of the temporal feature, adventure tourism is viewed as a discrete product that can be a solution and response to seasonality (Higham & Hinch, 2002; Pegg et al., 2012).

When it comes to specific destination of adventure tourism, it is a form of tourism that is present all over the world, less developed countries and regions seem to be more interesting to researchers although. McKay (2016) investigates the state of adventure tourism in South Africa and points to a satisfactory level of development, but also an uneven distribution between provinces, where the advantages are used to a greater extent by those provinces that adequately manage important tourism resources. In the context of adventure tourism, he emphasizes the importance of physical landscape, as well as transportation. Tibet in Asia, for example, is described in the literature as a paradise for adventure tourists and a destination of slow adventure tourism (Chen et al., 2020). Nepal is the subject of research not only in the context of high mountain adventure tourism, but also of certain emerging activities (Mu & Nepal, 2016; Wengel, 2021). Adventure tourism in Costa Rica has been considered one of the pro-environmental forms of tourism (Hunt & Harbor, 2019). Rivers, villages and mountain national parks are, for example, explored destinations of adventure tourism in Thailand (Bott, 2015; Ritpanitchajchaval et al., 2023; Tirasattayapitak et al., 2015). This brief review of research on adventure tourism destinations and the fact that less developed countries and regions are the preferred choice of researchers emphasize the importance of adventure tourism for this type of destination. In addition, although adventure tourism does not necessarily have to be related to the natural environment, destinations characterized by a preserved environment and quality natural resources are most often described in the literature.

When it comes to the type of activity, researchers often start from the general division of adventure activities into hard and soft, and in this context they design their research. It can be easily assumed that the motivation for engaging in hard adventure activities is adrenaline and even the desire to face a high level of risk. Research by Mason et al. (2016) shows that the natural environment plays an equally important role as a motivating factor in these activities. Relaxation, exploration and socialization have been confirmed as motivational factors for the involvement of tourists in soft adventure activities (Bichler & Peters, 2020). In some destinations, due to an increasing number of tourists, the need for softening of adventure tourism is observed (Rantala et al., 2018). In addition to the broader context and the division of adventure tourism into soft and hard, specific types of activities are often the subject of research. For example, at the beginning of the 21st century, Beedie and Hudson (2003) talk about the blurring of social boundaries between mountaineers and tourists and explain the emergence and causes of the rapid growth of mountain-based adventure tourism. Only twenty years later, mountain-based adventure tourism is considered as a factor of eudaimonic well-being and hedonism (Ritpanitchajchaval et al., 2023). Ramoa et al. (2021) investigate motorcycling in the context of participants' motivation to get involved in adventure tourism and find that the excitement of such a trip has the power to transform the trip itself into a destination. The experience of tourists and their feelings while involved in adventure activities have been investigated, for example, in the context of paragliding (Ayazlar, 2015). Welling et al. (2015) turn the research focus to a very rare topic in the adventure tourism literature such as glacier tourism and the growing popularity of glaciers as tourist sites. This certainly does not exhaust neither the list of adventure activities, nor the research that focuses on the type of activity.

The specificities of adventure tourism and adventure activities have led to the fact that research often considers the issue of gender as an important characteristic of tourists. Originating in the 1960s and 1970s, the gender theories (Kohlberg, 1966; Maccoby, 1966; Tajfel, 1969) have provided fertile ground for numerous empirical research that examines different consumers' behavior associated with gender (Palan, 2001). In one of the first papers on gender in tourism, the authors stated that women and men play distinct roles in the development and consumption of tourism, thus shaping tourism marketing, tourists' motivation and actions of hosts (Kinnaird et al., 1994). Gender is a crucial factor in human interaction and must be considered as an important aspect of tourism research (Swain, 1995). In the context of the subject of research in this paper, Gross et al. (2023) find a connection between male participants and hard adventure activities, or they empirically confirm that there is a negative interdependence between female respondents and the probability that they belong to the group of hard adventure tourists. The fact that adventure activities are easily associated with male participants is perhaps the reason why theorists more often focus on women as adventure tourists in their research. Women as adventure tourists are not only more numerous, but also seem more challenging in terms of research compared to male participants. The inclusion of women in adventure tourism means for them to take control and improve their lives by introducing a dose of adventure, which enables them to actively empower themselves (Doran, 2016). Interaction and togetherness with fellow travelers in adventure tourism results in greater satisfaction for women compared to men (Su et al., 2022). Mackenzie et al. (2020) investigated the challenges, experiences and psychological well-being of female adventure tourism guides. In addition to the above mentioned, but limited research on adventure tourism as a family choice confirms a number of benefits that family engagement in adventure activities has for all members, regardless of gender and age. This way of spending time encourages positive personal development, improves health and psychophysical abilities, contributes to family bonding, family togetherness and relationship-building (Pomfret, 2019; Pomfret & Varley, 2019).

3. Materials and methods

The image content analysis was used in the paper in order to meet the defined aim of the research. This analysis is a widely used tool in examining the preferences of various social media platforms' users on certain issues, especially when it comes to tourism, since a large number of them use this channel for travel inspiration and decision-making. In order to examine the content of adventure tourism on Instagram, the images shared by users of this social platform containing hashtag #adventuretourism were used. The first 600 images, under "top post" category on 25th July, 2024, were coded. "Top posts" were selected as these posts had the greatest response (likes, shares and/or comments). This analysis was conducted following an example of similar studies of hashtag #fitspiration (Boepple & Thompson, 2016; Tiggemann & Zaccardo, 2018) and #slowtourism (Lazarević at al., 2024; Le Busque et al., 2021) on Instagram. Images were classified according to activities using the categorization of adventure activities given by ATTA, the worldwide association that links adventure tourism destinations and organizers (Table 1).

Table 1: Categorization of adventure activities

<table>
<tr><td rowspan="3">Activity</td><td colspan="3">Type of adventure</td></tr>
<tr><td>Hard adventure</td><td colspan="2">Soft adventure</td></tr>
<tr><td>- Caving
- Climbing (on mountains/ rocks/ice)
- Heli-skiing
- Kite surfing
- Paragliding
- Trekking</td><td>-Archaeological expeditions
- Backpacking
- Birdwatching
- Camping
- Canoeing
- Cycling (road/paved surface)
- Cycling (mountain/non-paved surface)
- Eco-tourism
- Environmentally sustainable activities
- Fishing/flyfishing
- Hiking
- Horseback riding
- Hunting
- Kayaking</td><td>- Orienteering
- Motorized sports
- Rafting
- Research expeditions
- Safari
- Sand boarding
- Sailing
- Scuba diving
- Snorkeling
- Skiing/Snowboarding
- Stand-up paddle boarding
- Surfing
- Volunteer tourism</td></tr>
</table>

Source: ATTA, 2013, p. 4

In addition to the image content analysis, comparative and cluster analysis were conducted in the paper. Comparative analysis found wide application in the presentation of data obtained by the image content analysis. Cluster analysis was used to group adventure activities according to the gender structure of the participants. The ATTA report was used to compare the data obtained by analyzing the content of Instagram images and official available data on trends in adventure tourism. As regards the intention of determining recent adventure tourism trends on Instagram, a set of research questions for each of the mentioned features was formulated. The research questions are summarized in Table 2.

Table 2: Research questions aimed to evaluate adventure tourism trends on Instagram

Feature	Research questions
Geographical	What is the geographical diffusion of posted images by country? What are the main adventure tourism destinations? Is there a dominance of developed countries as adventure tourism destinations compared to developing ones?
Activity type	What are the most popular adventure tourism activities? Are soft adventure activities more popular than hard ones? Is there further diversification of adventure activities?
Gender	What is the distribution of participants in adventure tourism according to gender? Is there a dominance of female adventure tourists compared to men? Is it possible to group activities according to the gender structure of the participants?
Temporal	Are there seasonal peaks in adventure tourist activity? Is it possible to determine the seasonality of adventure tourism?

Source: Authors

Using Instagram geotag, the location of images was determinated. Further analysis included determining the month in which the image was posted and the gender of Instagram account users. Besides the female and male gender category, the analysis also included the group account category, which refers to the accounts of certain associations, organizations, communities and/or fans of adventure tourism. In addition, the participation of Instagram posts by month was also analyzed.

4. Results and discussion

By the end of July 2024, the hashtag #adventuretourism had 90.4 thousand posts, whereas hashtag #tourism has had 52.4 million posts on Instagram. All of the analyzed images had location geotag, which are shown in Table 3. Among the top ten most associated countries with adventure tourism, judging by Instagram posts, are: India, USA, Malaysia, Australia, Canada, Nepal and Peru, South Africa, New Zealand, Japan, and Spain. These results are in line with the latest ATTA's trend report, which ranks the regions of Mediterranean, North-East Asia, South America, United States, South-East Asia, Southern Africa, Canada, India/South Asia and Oceania as the most popular adventure tourism destinations (ATTA, 2024).

Table 3: Location of Instagram posts

Percentage of posts	Country
18.5%	India
11%	USA
6.33%	Malaysia
4.5%	Australia
3.33%	Canada
3.17%*	Nepal, Peru
3%	South Africa
2.83%	New Zealand
2.5%	Japan
2.17%	Spain

1.83%*	Jordan, Pakistan, Uganda
1.5%	Qatar
1.33%*	Norway, Vietnam
1.17%*	Chile, Dominican Republic, Namibia
1%*	Guatemala, Scotland
0.83%*	Columbia, Kenya, Lebanon, Mexico
0.67%*	Costa Rica, Indonesia, Lesotho, Portugal, Rwanda, Sri Lanka, Tanzania, Trinidad, UAE
0.5%*	Belize, Brazil, China, Georgia, Ireland, Kyrgyzstan, Nicaragua, North Macedonia, Philippines, Serbia, Slovenia, Turkey
**	Algeria, Bulgaria, Congo, Island, Luxembourg, Morocco, Mongolia, Montenegro, Romania, Thailand, Tunisia
***	Albania, Antarctica, Argentina, Armenia, Austria, Bahamas, Bhutan, Bolivia, Borneo, Botswana, Croatia, Ecuador, Egypt, France, Guyana, Iceland, Laos, Madagascar, Maldives, Mauritania, Micronesia, Oman, Panama, Papua New Guinea, Paraguay, Puerto Rico, Saint Vincent, Saudi Arabia, Somalia, United Kingdom, Uzbekistan, Yemen

Legend: * means percent of posts for each country; ** means two Instagram posts for each country; *** means one Instagram post for each country

Source: Authors' research

As can be seen from Table 3, adventure tourism destinations refer to both developed and developing countries. The specific characteristics of adventure tourism are its direct dependence on the environment and preserved nature. Therefore, there is a good chance that developing and less developed countries will join the adventure tourism market. Adventure tourism can be one of the key development options for these countries. The data presented in Table 3 show that half of the top ten countries were developing ones. Among developing countries, India is the one with the most Instagram posts related to adventure tourism (18.5%). By comparison, according to the Adventure Tourism Development Index (ATDI), India ranks 78th in 2020 (ATTA, 2020). Malaysia follows when it comes to Instagram posts in developing countries (124th rank according to ATDI), then Nepal and Peru with an equal share (132nd and 138th rank according to ATDI, respectively) and South Africa (195th rank according to ATDI). The results, as well as their comparison with the ATDI ranking, indicate that new destinations from developing countries have established themselves in the adventure tourism market. However, since ATDI was last calculated for 2020, it is possible that the ranking situation will be different when ATTA calculates a new, modified index for 2024, as announced (ATTA, 2023).

The most represented adventure activity in the analyzed images is hiking (Table 4). Among the other, top ten leading adventure activities are: backpacking, trekking, rafting, kayaking, motorized sports, camping, eco-tourism, safari and cycling (road/paved surface). The results of the image content analysis are in line with ATTA's research, as hiking and trekking have been the most popular activities for years, according to ATTA's recent trend reports (ATTA, 2024). Apart from these two, among the ten most popular adventure activities are also safari (4th place) and cycling (road/paved surface) (5th and 10th place, whether it is about cycling electric or ordinary bicycles on paved roads, respectively). Among the other top 10 adventure activities according to the ATTA's trend report are cycling (mountain/non-paved surface) (7th place) and birdwatching (8th place), which are also listed as key adventure activities in Instagram posts.

Table 4: Key adventure activities of images

Percentage of posts	Activity
15%	Hiking (S)
10%	Backpacking (S)
6.17%	Trekking (H)
6%	Rafting (S)
5.17%	Kayaking (S)
4.83%	Motorized sports (S)
4.5%	Camping (S)
4%*	Eco-tourism (S), Safari (S)
3.67%	Cycling (road/paved surface) (S)
3.17%	Surfing (S)
2.83%	Canoeing (S)
2.67%	*Zipline (S)*
2.33%	Environmentally sustainable activities (S)
1.83%*	Caving (H), Horseback riding (S)
1.67%	Scuba diving (S)
1.5%*	*Arctic/Glacier observation (H)*, Climbing (on mountains/rocks/ice) (H), Orienteering (S)
1.33%*	Cycling (mountain/non-paved surface) (S), Paragliding (H), *Rail Biking (S)*
1.17%*	Archaeological expeditions (S), *Jet-skiing (S)*, Sailing (S)
1%*	*Bungie jumping (S)*, Skiing (S), Stand-up paddle boarding (S)
0.83%	*Via ferrata (H)*
0.67%	*Flight seeing via helicopter (S)*
0.5%*	Birdwatching (S), Fishing/fly fishing (S), *Sled dogs riding (S)*, Snorkeling (S), *Volcano observation (S)*
**	*Ballooning (S)*, Kite surfing (H)
***	Sand boarding (S), *Tight trope walking (H)*, Volunteer tourism (S)

Legend: * means percent of posts for each activity; ** means 2 Instagram posts for each activity; *** means 1 Instagram post for each activity; S - soft activity; H - hard activity
Source: Authors' research

Furthermore, one can infer the dominance of soft adventure activities. The reason for such results may be a wider offer of soft adventure activities compared to hard ones, as well as the easier involvement of participants in soft adventure tourism. The fact that should also be taken into account is that the division of adventure activities into hard and soft is often difficult to do precisely and it is often a matter of the subjective perception of the participants. However, the ATTA classification of adventure activities is followed in the paper.

Content analysis revealed that Instagram users associate adventure tourism with new activities that are not categorized by ATTA. Among them are: zipline, arctic/glacier observation, rail biking, jet-skiing, bungie jumping, via ferrata, flight seeing via helicopter, sled dogs riding, volcano observation, ballooning (two posts) and tight trope walking (one post). This leads to the conclusion about the further development of the offer on the adventure tourism market and the diversification of activities. It is interesting to note that some of these new adventure activities are exercised by women and/or groups, not men alone, such as: zipline, arctic/glacier observation, via ferrata, flight seeing via helicopter, sled dogs riding and tight trope walking (Table 4). Also, rail biking, as a new way of sightseeing, is only present in the USA.

The next step in the image content analysis was to analyze the content by user gender, with the aim of confirming the dominance of female adventure tourists compared to men which has been present for years. Namely, according to ATTA (2024), women are a more dominant type of adventure tourists compared to men (53% compared to 46%), and they also tend to travel alone more often than men (55% compared to 38%). The image content analysis showed that group accounts are the most numerous when it comes to the appearance of the hashtag #adventuretourism (66.17%). Among the rest, women (participation of 18%) dominate relative to men (participation of 15.83%).

Table 5 shows which adventure activities are preferred and portrayed in images by women and which by men. The adventure activity most often featured in women's account images is hiking, followed by backpacking, canoeing, kayaking and zipline. Motorized sports are the most represented adventure activity in men's account images. This is followed by hiking, backpacking, cycling (road/paved surface) and cycling (mountain/non-paved surface).

Table 5: Comparative review of the participation of men and women in adventure tourism activities

Activity	**Percentage of posts**	
	Female (out of 18%)	**Male (out of 15.83%)**
Archaeological expeditions	2.78%	/
Arctic/Glacier observation	5.56%	/
Backpacking	9.26%	9.47%
Ballooning	0.93%	/
Camping	/	2.11%
Canoeing	6.48%	3.16%
Caving	2.78%	1.05%
Climbing (on mountains/rocks/ice)	1.85%	1.05%
Cycling (road/paved surface)	1.85%	9.47%
Eco-tourism	1.85%	5.26%
Environmentally sustainable activities	4.63%	1.05%
Flight seeing via helicopter	0.93%	/
Hiking	16.67%	16.84%
Horseback riding	1.85%	2.11%
Kayaking	6.48%	3.16%
Kite surfing	0.93%	1.05%
Motorized sports	1.85%	17.89%
Cycling (mountain/non-paved surface)	0.93%	6.32%
Orienteering	0.93%	2.11%
Paragliding	0.93%	2.11%
Rafting	4.63%	1.05%
Rail Biking	/	9.47%
Safari	1.85%	3.16%
Sand boarding	0.93%	/
Skiing	0.93%	2.11%
Sled dogs riding	0.93%	/
Stand-up paddle boarding	0.93%	/
Surfing	4.63%	4.21%
Tight trope walking	0.93%	/
Trekking	4.63%	4.21%
Via ferrata	2.78%	/
Volcano observation	0.93%	1.05%
Zipline	6.48%	/

Source: Authors' research

It is interesting to emphasize that women alone participate in some adventure activities, unlike men, judging by the image content analysis, such as: archaeological expeditions, arctic/glacier observation, ballooning, flight seeing via helicopter, sand boarding, sled dogs riding, stand-up paddle boarding, tight trope walking, via ferrata, zipline. In contrast, camping is the only adventure activity exercised solely by men.

Cluster analysis was used to group the activities according to the gender structure of the participants. The intention was to single out predominantly female activities, predominantly male activities, as well as activities that are relatively equally represented as choices of both genders. In this sense, three clusters were distinguished, and the final cluster centers are shown in Table 6. The variables on the basis of which the grouping was performed are the participation of men and women in each type of activity (percentage participation).

Table 6: Final Cluster Centers

	Cluster		
	1	2	3
Female participation	95.83	6.21	49.46
Male participation	4.17	93.80	50.54

Source: Authors' research

Activities that are predominantly chosen by female participants are grouped in cluster 1. Cluster 2 contains activities that are predominantly chosen by male participants. Cluster 3 stood out as a cluster with activities that are relatively equally represented as choices by both genders. An overview of activities by clusters is shown in Table 7.

Table 7: Classification of activities according to the gender structure of the participants

Cluster	**Activities**
Cluster 1 (Female)	Archaeological expeditions (S), Arctic/Glacier observation (H), Ballooning (S), Caving (H), Cycling (road/paved surface) (S), Environmentally sustainable activities (S), Flight seeing via helicopter (S), Rafting (S), Sand boarding (S), riding (S), Stand-up paddle boarding (S), Tight trope walking (H), Via ferrata (H), Zipline (S)
Cluster 2 (Male)	Rail Biking (S), Camping (S), Motorized sports (S), Cycling (mountain/non-paved surface) (S)
Cluster 3 (Female/Male)	Backpacking (S), Canoeing (S), Climbing (on mountains/rocks/ice) (H), Eco-tourism (S), Hiking (S), Horseriding (S), Kayaking (S), Kite surfing (H), Orienteering (S), Paragliding (H), Safari (S), Skiing (S), Surfing (S), Trekking (H), Volcano observation (S)

Source: Authors' research

The classification of activities in Table 7 points to two conclusions. First, there is a wider range of adventure activities in which predominantly women are involved compared to those predominantly chosen by men. Second, not only are soft activities reserved for women, but they also appear as participants in numerous hard adventure activities, which is contrary to general social expectations and some theoretical findings (Gross et al., 2023). In order to confirm the statistical significance of the difference between the clusters, the Post Hoc Test was applied. The results shown in Table 8 confirm that it is justified and possible to classify the activities according to the gender structure of the participants, since there is a statistically significant difference between all three clusters.

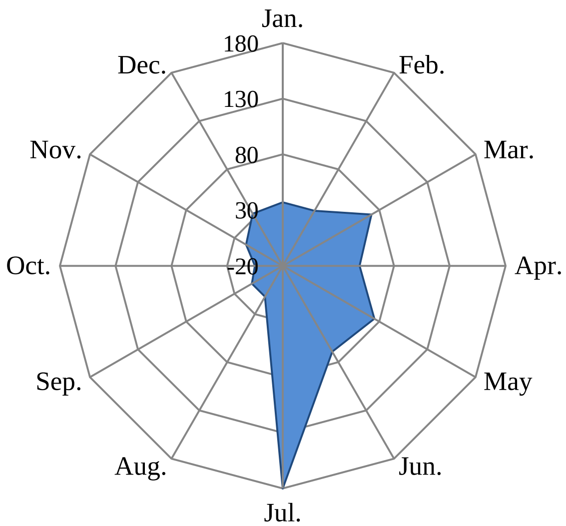
Table 8: Post Hoc Test

Dependent Variable	**(I) Cluster**	**(J) Cluster**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Female participation	1.00	2.00	89.62786(*)	6.24721	0.000
		3.00	46.37152(*)	4.09481	0.000
	2.00	1.00	-89.62786(*)	6.24721	0.000
		3.00	-43.25633(*)	6.20076	0.000
	3.00	1.00	-46.37152(*)	4.09481	0.000
		2.00	43.25633(*)	6.20076	0.000
Male participation	1.00	2.00	-89.62786(*)	6.24721	0.000
		3.00	-46.37152(*)	4.09481	0.000
	2.00	1.00	89.62786(*)	6.24721	0.000
		3.00	43.25633(*)	6.2007 6	0.000
	3.00	1.00	46.37152(*)	4.09481	0.000
		2.00	-43.25633(*)	6.20076	0.000
* The mean difference is significant at the 0.05 level					

Source: Authors' research

Finally, in order to observe peaks in adventure tourism activities and draw conclusions about the potential seasonality of adventure tourism, a temporal analysis of posted Instagram images was also performed. The distribution of posts by month is shown in Figure 1.

Figure 1: Monthly distribution of Instagram posts



Source: Authors' research

The peak of adventure activities in July is clearly evident. This is followed by May, March and June. It is interesting that after the most dynamic July, the activity of adventure tourists on Instagram is extremely low in August. Also, more posts were recorded in December, January and February, as distinctly winter months, than in September, October or November. Based on this, it can be concluded that it cannot be claimed that adventure activities and activities of adventure tourists on Instagram are predominantly related to the summer or winter season.

5. Conclusion

Adventure tourism is a form of tourism that records dynamic growth in the number of tourists and popularity. As such, it is becoming increasingly prevalent in the posts of social media users. Adventure tourism is considered to be any type of nature-related tourist activity. Although this is the most common case, the destination of adventure activities does not necessarily have to be a natural environment. Certain types of adventure activities can also be realized in urban areas. What is important is that adventure tourism is associated with a certain type of risk, excitement, the desire to overcome one's own psychological and physical limits, although in its milder forms it can also represent a type of tourist relaxation. Therefore, there are many activities that can be classified as a part of adventure tourism, whether they are realized in nature or in urban areas, whether they are classified as hard or soft. The aim of this paper was to compare the results obtained from the analysis with the existing data on adventure tourism, as well as to draw conclusions about the trends in the adventure tourism market.

It can be concluded that the results of the research are in line with the results of the ATTA report. This conformity can be an argument that justifies the use of image content analysis in the evaluation of trends in the tourism market. When it comes to a more detailed analysis of adventure tourism trends, the results provided insights into the geographical diffusion of Instagram posts and led to the conclusion that India is the most popular adventure tourism destination on Instagram. Also, the results indicate that developing countries are significantly represented as adventure tourism destinations. Hiking is the most represented adventure activity in the analyzed images. In addition to highlighting some other highly represented activities and confirming the higher population of soft compared to hard adventure activities, the research led to the conclusion that new adventure activities are appearing, which diversifies the offer on the adventure tourism market. When it comes to the gender structure of the users, the research has confirmed the higher participation of women compared to men, which has been present for a long time. Also, activities were divided into those that are predominantly the choice of female participants, predominantly the choice of male participants and those for which there is a relatively equal interest of participants of both genders. This division made it possible to conclude that women are involved in a wider range of adventure activities, but also that, in addition to soft activities, they are also actively involved in hard activities. Although a peak in posted images is evident in July, which may be explained by the limitation of the survey, no clear seasonality of adventure activities is observed. This is in line with the view that niche tourism such as adventure tourism shows a relatively lower level of seasonality. Moreover, involving tourists in adventure activities can be a solution for seasonality.

Theoretically, the paper contributes to enriching the adventure tourism literature. Empirically, the research provides an insight into the Instagram users' preferences when it comes to adventure tourism: which adventure activities are the most popular, participation of adventure activities by month, which gender is dominant adventure tourist, as well as which countries are the most popular adventure tourism destinations. Practically, the research provides insights into new adventure activities that tourists associate with adventure tourism, which can be beneficial to all stakeholders. Nevertheless, the research has some limitations. The highest participation of images posted in July may also be a consequence of the conducted date of analysis. Also, the existence of a large number of the group category Instagram accounts distorts the results of the representation of adventure tourists between the genders. For the purpose of a more detailed analysis, future research should include, in addition to image content analysis, a survey of the Instagram account users' preferences.

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Conflict of interest

The authors declare no conflict of interest.

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A model for preparing manuscripts for submission to the journal Hotel and Tourism Management

Title of the paper in English

Name Surname[1*], Name Surname[2], Name Surname[3]

[1] Institution
[2] Institution
[3] Institution

Abstract

This document presents a model for preparing the camera-ready manuscripts to be submitted for publishing in the journal Hotel and Tourism Management. The abstract briefly summarizes the article, at the same time enabling a reader to assess its relevance. All submissions **must** include a **structured abstract**. These four sub-headings and their accompanying explanations must be included: **Purpose** – This is where you explain 'why' you undertook this study and what is the main goal of the research. **Methodology** – This is 'how' you did it. **Findings** – Here you can explain 'what' you found during your study. **Implications** – Here you explain what are the implications of the study to theory and practice.

The abstract in English should be between **150 and 200** words long.

Keywords: 4-6 keywords
JEL classification: 10pt (http://www.aeaweb.org/jel/jel_class_system.php)

Naslov rada na srpskom jeziku

Sažetak

Ovaj dokument predstavlja obrazac za formatiranje radova tako da izgledaju kao da su već spremni za štampu. Sažetak predstavlja kratak informativni prikaz sadržaja članka koji čitaocu treba da omogući brzu i tačnu ocenu njegove relevantnosti. Radovi **moraju** da sadrže **strukturirani sažetak**. Naredna četiri podnaslova i njihova prateća objašnjenja moraju biti uključeni: **Svrha** – Ovde objašnjavate „zašto" ste sproveli istraživanje i koji je glavni cilj rada. **Metodologija** – Ovde objašnjavate kako ste to uradili. **Rezultati** – Ovde možete objasniti „šta" ste otkrili tokom istraživanja. **Implikacije** – Ovde objašnjavate koje su implikacije studije na teoriju i praksu.

Sažetak na engleskom jeziku treba da sadrži od **150 do 200** reči.

Ključne reči: 4-6 ključnih reči
JEL klasifikacija: 10pt (http://www.aeaweb.org/jel/jel_class_system.php)

[*] Corresponding author: e-mail address

1. Introduction

Papers should be written **in English** using Microsoft Word for Windows. The paper should be between **10** and **15** full pages long including the figures, tables, references list and appendices. The page should be formatted as **B5 (JIS)**. Allow **20mm** for the bottom and top margins and **25mm** for the left and right margins on a page. The line spacing within a paragraph is single whereas the spacing between two paragraphs is **6pt**. The text should be written using **Times New Roman** font. The maximum number of authors per paper is **three**, however, the Editor-in-Chief has an exclusive right to approve the submissions with four authors per paper in exceptional situations.

2. Background

The title page should contain the Title of paper in English (14pt). Names of authors, institutional affiliation and e-mail addresses should be typed as shown at the previous page. After the affiliation of the last author, leave an empty row followed by an abstract (10pt). Keywords should follow the abstract. Below the keywords, the title of paper and the abstract are to be given in Serbian.

For numbered first-level subtitles use a bold font of 12pt whereas a bold font of 10pt is used for second-level subtitles. The text and the references list should be written using the font size 10pt.

Author(s) is(are) encouraged to propose the **hypotheses** or **research questions** in the line with the aim and type of conducted research.

3. Materials and methods

Materials and methods section should provide a reader with sufficient details and argue all the necessary aspects in order to allow other researchers to replicate the research and build the published results.

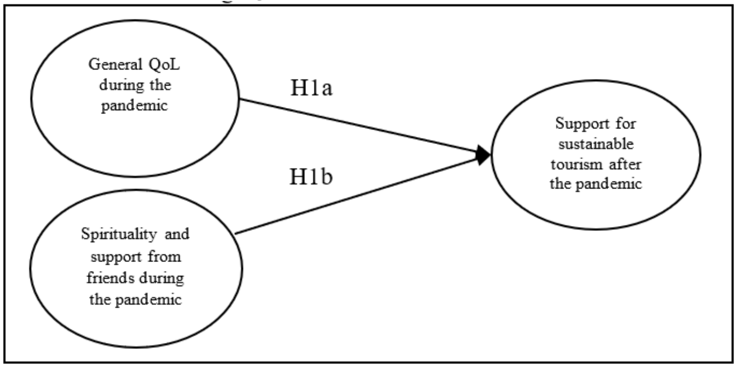
4. Results and discussion

The results obtained in the research should be described in this section. The discussion should highlight the main findings.

Figures, tables and equations

All illustrations whether diagrams, photographs or charts are referred to as Figures. The name and number of figures should be centered on the line above a figure.

Figure 1: Research model



Source: Authors' research

The equations are written using Microsoft Word (MathType); they are consecutively numbered and centered.

$$\mathrm{PVo} = \frac{\mathrm{FVn}}{(1+\mathrm{i})^{\mathrm{n}}} \tag{1}$$

The name and number of tables should be centered above the table.

Table 1: Results of multiple regression analysis

Variable	ß	T	Sig.	VIF
Textual comments	0.609	14.071	0.000*	1.000
Photos	0.484	11.172	0.000*	1.000
Rating	0.152	3.513	0.001*	1.000

* The value is significant at the level equaling 0.05
Source: Authors' research

If the study findings were presented graphically or in a table, author(s) is(are) encouraged to state the source below the figure or table in the following form: **Author's research** (single-authored paper) or **Authors' research** (co-authored paper).

5. Conclusion

The conclusion summarizes the results achieved during the research, along with the **limitations of the conducted research** and **future research recommendations**.

Acknowledgement

For papers that came as a result of the project or programme, the title and number of the project, i.e. programme, and the name of the institution supporting the project would be appreciated. If persons other than authors were involved in important aspects of the preparation of the manuscript, their contribution should be acknowledged. If the paper was previously presented at a scientific conference (with the same or similar title), author(s)

is(are) encouraged to specify it within this section. If submitted paper, or some part of the paper, represents an excerpt from the author's PhD thesis, the author must clearly specify it within this section.

Conflict of interest

The author(s) declare no conflict of interest.

References

The reference list should not contain sources which were not used in the paper. Try to use the most recent references and most of them should be from scientific journals. **Following the acceptance of the paper**, all the cited sources **should be hyperlinked to the corresponding references in the bibliography** (e.g.: Harish, 2008; Luque-Martinez et al., 2007; Tew & Barbieri, 2012). **Use the initials of the first author of the submitted paper together with the first author's surname and the year of publication of the cited paper as a bookmark** (e.g.: ML_Harish_2008; ML_Luque_Martinez_et_al_2007; ML_Tew_Barbieri_2012) **(video instructions)**.

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When citing an author in the text, if the author and the original words are mentioned, the year of publication of the cited text should be given in parentheses after the author's name, whereas the number of the cited page should follow the last sentence of the citation, e.g. according to Đurković (2007), "the cited text" (p. 10) **(use of curved quotation marks (" ") is mandatory)**. When the author is not mentioned in the sentence, his surname, the publishing year and the cited page number should be given in parentheses at the end of a sentence. When paraphrasing or summarizing, the page number is not necessary (Đurković, 2007). Citations of two or more references of the same author published in the same year should be stated in the following way: (Harish, 2008a; Harish, 2008b). If there are two authors of the cited text, surnames of both authors should be given in the following way (Tew & Barbieri, 2012). Citations of references in the text to papers of three or more authors should be stated as follows: (Luque-Martinez et al., 2007). When citing the resource without pagination (e.g. electronic resources), the author's surname and the publishing year should be given. The author being a corporation or an organization, name of the organization/corporation and the publishing year should be provided (Ministry of Finance and Economy of the Republic of Serbia, 2013). If you refer to multiple sources in the same sentence, **list them alphabetically** (Harish, 2008; Luque-Martinez et al., 2007; Tew & Barbieri, 2012).

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There follow the examples of APA style for citing different types of text (a book, a paper published in a journal, a paper published in proceedings, electronic resources, etc.).

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A multiple-author book
If there are more authors, they are all named. Before the name of the last author '&' is used. When there are more than seven authors, the names of the first six are given and the name of the last author is preceded by '…'.
E.g.: Barrows, C. W., & Powers, T. (2009). *Introduction to the hospitality industry* (7th ed.). Hoboken, New Jersey: John Wiley&Sons, Inc.

A book, translation
E.g.: Spic, E. H. (2011). *Umetnost i psiha: Studija o psihoanalizi i estetici [Art and psyche: A study of psychoanalysis and aesthetics]*. (A. Nikšić, Transl.). Beograd, Srbija: Clio.

A book with an editor, anthology
If a book is an anthology, editor is considered to be the author of the book. In such a case, his or her name is followed by (Ed.). If there is more than one editor, then use (Eds.).
E.g.: Đurković, M. (Ed.) (2007). *Srbija 2000-2006: Država, društvo, privreda [Serbia 2000-2006: State, society, economy]*. Beograd, Srbija: Institut za evropske studije.

A paper published in proceedings
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One-author paper published in a journal
E.g.: Harish, R. (2008). Brand architecture and its application in strategic marketing. *The Icfai University Journal of Brand Management*, *7*(2), 39–51.

Two-author paper published in a journal
If the cited paper is given a **DOI number**, it **should also be included as a link**.
E.g.: Tew, C., & Barbieri, C. (2012). The perceived benefits of agritourism: The provider's perspective. *Tourism Management*, *33*(6), 215–224. https://doi.org/10.1016/j.tourman.2011.02.005

A paper with more than two authors published in a journal
E.g.: Luque-Martinez, T., Castaneda-Garcia, J. A., Frias-Jamilena, D. M., Munoz-Leiva, F., & Rodriguez-Molina, M. A. (2007). Determinants of the use of the Internet as a tourist information source. *The Service Industries Journal*, *27*(7), 881–891. https://doi.org/10.1080/02642060701570586

An article with a known author
E.g.: Mišić, M. (2012, February 1). Ju-es stil smanjio gubitke [US steel has cut losses]. *Politika*, p. 11.

An article with no author given
E.g.: Straževica gotova za dva meseca [Straževica finished in two months]. (2012, February 1). *Politika*, p. 10.

A thesis
E.g.: Dewstow, R. A. (2006). *Using the Internet to enhance teaching at the University of Waikato* (Unpublished master's thesis). University of Waikato, Hamilton, New Zealand.

Documents or data bases taken from the Internet, a private or official Internet page with a known author

E.g.: Kraizer, S. (2012). *Safe child*. Retrieved October 29, 2012 from http://www.safechild.org/

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E.g.: *Penn State Myths*. (2006). Retrieved December 6, 2011 from http://www.psu.edu/ur/about/myths.html

Documents or data bases taken from the Internet, a private or official Internet page with an organization or corporation as an author
E.g.: Ministarstvo finansija i privrede Republike Srbije [Ministry of Finance and Economy of the Republic of Serbia]. (2013). *Informacije o turističkom prometu u Srbiji [Information on tourist traffic in Serbia]*. Retrieved February 6, 2013 from http://www.turizam.mfp.gov.rs/index.php/sr/2010-02-11-17-24-30

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