Vol. 12, No. 1, 2024 · UDC 005:338.48 · ISSN 2620-0279

МЕНАЏМЕНТ У ХОТЕЛИЈЕРСТВУ И ТУРИЗМУ

HOTEL AND TOURISM MANAGEMENT

УНИВЕРЗИТЕТ У КРАГУЈЕВЦУ

UNIVERSITY OF KRAGUJEVAC

ФАКУЛТЕТ ЗА ХОТЕЛИЈЕРСТВО И ТУРИЗАМ У ВРЊАЧКОЈ БАЊИ

FACULTY OF HOTEL MANAGEMENT AND TOURISM IN VRNJAČKA BANJA

Vol. 12, No. 1, 2024 ·UDC 005:338.48· ISSN 2620-0279

МЕНАЏМЕНТ У ХОТЕЛИЈЕРСТВУ И ТУРИЗМУ

HOTEL AND TOURISM MANAGEMENT

УНИВЕРЗИТЕТ У КРАГУЈЕВЦУ
UNIVERSITY OF KRAGUJEVAC

ФАКУЛТЕТ ЗА ХОТЕЛИЈЕРСТВО И ТУРИЗАМ У ВРЊАЧКОЈ БАЊИ
FACULTY OF HOTEL MANAGEMENT AND TOURISM IN VRNJAČKA BANJA

Менаџмент у хотелијерству и туризму
Hotel and Tourism Management
No. 1/2024

Publisher:
Faculty of Hotel Management and Tourism
in Vrnjačka Banja, University of Kragujevac

For publisher:
Prof. Drago Cvijanović, Dean

ISSN 2620-0279 (Printed)
ISSN 2620-0481 (Online)

UDC 005:338.48

Editorial office:
Менаџмент у хотелијерству и туризму – Hotel and Tourism Management
Faculty of Hotel Management and Tourism in Vrnjačka Banja, Vojvođanska 5a, 36210 Vrnjačka Banja, Serbia
Tel./Fax No: 036 515 00 25
E-mail: m.lekovic@kg.ac.rs

The journal is published semiannually
Circulation: 100 copies

The journal is indexed in scientific databases:

ERIHPLUS	CABELLS	Ulrich's Web	CNKI
CEEOL	EBSCO	CyberLeninka	Mendeley
DOAJ	SCIndeks	ProQuest	WorldCat

Printed by:
InterPrint Kragujevac

Financially supported by:

Ministry of Science, Technological Development and Innovation of the Republic of Serbia

National categorization for 2023:

national journal of international importance – M24

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

005:338.48

МЕНАЏМЕНТ у хотелијерству и туризму = Hotel and Tourism Management / editor in chief Drago Cvijanović. - Vol. 6, no. 1 (2018)- . - Vrnjačka Banja : Faculty of Hotel Management and Tourism in Vrnjačka Banja, 2018- (Kragujevac : Interprint). - 26 cm

Polugodišnje. - Je nastavak: ХиТ менаџмент = ISSN 2334-8267. - Drugo izdanje na drugom medijumu: Менаџмент у хотелијерству и туризму (Online) = ISSN 2620-0481
ISSN 2620-0279 = Менаџмент у хотелијерству и туризму
COBISS.SR-ID 264085772

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-two 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

Original Scientific Papers

Review Articles

Original Scientific Paper

UDC: 338.48-6:005(497.11)
005.311:338.48-6
DOI: 10.5937/menhottur2400000I

Received: 4 December 2023
Revised: 4 January 2024
Accepted: 14 February 2024
Published online: 21 February 2024

Measuring stakeholders' attitudes toward sustainable development of conference and congress tourism: Serbia case study

Milan Ivkov[1*], Srđan Milošević[2], Nemanja Dimić[3], Filip Đoković[3]

[1] University of Novi Sad, Faculty of Sciences, Department of Geography, Tourism and Hotel Management, Novi Sad, Serbia
[2] Educons University, Novi Sad, Serbia
[3] College of Organisational Studies "Eduka", Belgrade, Serbia

Abstract

Purpose – Scientific publications regarding business tourism, especially those which incorporate elements of sustainable development, still remain scarce in the existing literature. Therefore, the aim of this paper is to examine attitudes of local tourist organizations, travel agencies, catering establishments, chambers of commerce and other relevant stakeholders towards the sustainable development of conference and congress tourism (CCT) in Vojvodina, Serbia. **Methodology** – In order to investigate the attitudes of stakeholders (n=174), the adapted sustainable tourism attitude scale (SUS-TAS) was used in this paper. Moreover, the responses of the directors (managers) of local tourism organizations to several open-ended questions, which make an integral part of the survey, are also presented. **Findings** – The research instrument proved to be reliable. Based on other applied analyses (t-test and ANOVA), the existence of numerous statistically significant differences in the responses in relation to gender, job position, sector of work, age and education were identified. **Implications** – Apart from theoretical contribution, this paper reveals what aspects of CCT are in stakeholders' main focus and what seems to be out of their radar. This should help defining necessary actions for further improvements of CCT. Lastly, study limitations and future research guidelines are discussed.

Keywords: conference and congress tourism, sustainability, events, stakeholders' attitudes, SUS-TAS scale
JEL classification: L83, G14, Q01

Istraživanje stavova stejkholdera povodom održivog razvoja konferencijskog i kongresnog turizma: Studija slučaja Srbija

Sažetak

Svrha – Naučne publikacije o poslovnom turizmu, posebno one koje sadrže elemente održivog razvoja, i dalje su oskudne u postojećoj literaturi. Stoga je cilj ovog rada da se ispitaju stavovi lokalnih turističkih organizacija, turističkih agencija, ugostiteljskih objekata, privrednih komora i drugih relevantnih stejkholdera prema održivom razvoju konferencijskog i kongresnog turizma (KKT) u Vojvodini, Srbija. **Metodologija** – U cilju istraživanja stavova stejkholdera (n=174), u radu je korišćena prilagođena skala stavova održivog turizma (SUS-TAS). Takođe,

* Corresponding author: milan.ivkov@dgt.uns.ac.rs

prikazani su i odgovori direktora lokalnih turističkih organizacija na nekoliko otvorenih pitanja, koja čine sastavni deo ankete. **Rezultati** – Instrument korišćen u istraživanju se pokazao kao pouzdan. Na osnovu drugih primenjenih analiza (t-test i ANOVA), utvrđeno je postojanje brojnih statistički značajnih razlika u odgovorima u odnosu na pol, radno mesto, sektor rada, godine i obrazovanje. **Implikacije** – Osim teorijskog doprinosa, ovaj rad otkriva koji su aspekti KKT-a u glavnom fokusu stejkholdera, a na šta ne obraćaju mnogo pažnje. Ovo bi trebalo da pomogne u definisanju neophodnih akcija za dalja poboljšanja KKT-a. Konačno, razmatraju se ograničenja studije i daju smernice za buduća istraživanja.

Ključne reči: konferencijski i kongresni turizam, održivost, događaji, stavovi stejkholdera, SUS-TAS skala
JEL klasifikacija: L83, G14, Q01

1. Introduction

Business tourism is a segment of tourism industry that refers to trips conditioned by work, i.e., for professional reasons (Davidson, 1996). These business events include meetings, incentive trips, fairs (trade fairs, exhibitions), and probably the most dominant forms – conferences, congresses, conventions, symposiums. This segment of tourism is also known as MICE tourism (Meetings, Incentives, Conferences and Exhibitions), and has a very significant economic and social impact on a local and regional level. However, it has been recommended moving away from the abbreviation MICE, even though it is popular, because it does not reflect completely the complex nature of this tourism phenomenon. Recently, the term *meetings industry* has been gaining popularity and more detailed differentiation between commonly used terms are presented in paper by Wroblewski and Ussenbayev (2022). According to the World Travel and Tourism Council (WTTC), business tourism accounted for 20% of total tourism industry spending in 2021 (WTTC, 2022).

Business tourists strongly contribute to the tourism industry. It is a generally known fact that business tourists are a high-paying category (Davidson, 2003), in part also due to the fact that travels are mainly financed by organizations that employ them (WTTC, 2022). In this regard, many organizers of these business events add elements of leisure activities in order to create a better experience for tourists and ensure a stronger economic impact on the destination. If we take into account the predictions that this segment of tourism will grow by 188% by 2028, as well as that 21% of business tourists perceive care for the environment as a top priority while 56% of them perceive it as a moderate priority (Williams, 2023), it is necessary to be more specific in the efforts to connect business events and sustainable development at the destination. The topic of sustainable development in tourism has been present for decades (Ap & Crompton, 1998) and is gaining more and more importance over time (Anuar et al., 2012; Turker et al., 2016). However, when it comes to business tourism and the impact on sustainable development of the destination, research is scarce.

Destination sustainability in the context of business tourism development implies the involvement of all stakeholders. There are numerous studies related to the local population, i.e. their attitudes towards sustainable tourism (Lee, 2013; Obradović et al., 2021; Sharpley, 2014). In contrast, the attitudes of local tourist organizations and other crucial stakeholders and service providers who create and shape business tourism at the destination have not been sufficiently examined in the context of sustainable development. Therefore, the goal of this paper is to examine the attitudes of local tourist organizations, catering establishments and other relevant stakeholders towards the sustainable development of CCT in the province of Vojvodina, Serbia. In this paper, the term CCT refers to business trips for participation in congresses, conferences, conventions, symposiums and similar gatherings.

2. Literature review

2.1. CCT and sustainability

The concept of sustainable development has long been present in literature and permeates all the economic activities. It is especially pronounced in the field of tourism as one of the fastest growing industries with a great impact on economic and social development. According to the World Tourism Organization (UNWTO, 2005), sustainable tourism is defined as: "*Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities*." This definition refers to all the aspects of tourism, including CCT. So, this is about establishing a balance between the economic, social and environmental development. According to Weaver (2006), it is about minimizing the negative and maximizing the positive impacts of tourism. Residents of areas that thrive on tourism are the ones who are most aware of the benefits of tourism, which is why over time they have become more and more tolerant of the negative effects of tourism (Milošević et al., 2021). This is very important because it has been proven that sustainable development of tourism is possible only with the involvement of the local community, including the initial stages of planning (Mijatov Ladičorbić et al., 2023; Stylidis et al., 2014; Wang & Xu, 2015; Wang et al., 2019). Therefore, only destinations that take care of all three segments (also known in the literature as The Triple Bottom Line – profit, people and planet) (Gu et al., 2022) can talk about responsible behaviour and sustainable development of CCT.

Bearing in mind the very rapid growth of this sector of tourism (Lu et al., 2020), the principle of sustainability gains additional importance because it provides benefits for the event itself but also for the destination (Getz & Page, 2016; Kim et al., 2022), and these benefits are visible before, during and after the event (Lu et al., 2020). Although the Covid pandemic slowed down the aforementioned growth in previous years, it surely emphasized the importance of sustainability. Apart from the reasons for traveling for business, participants who participate in congresses and similar business events use all services like other tourists at the destination (Štetić et al., 2014), with the fact that they usually spend more money (Davidson, 2003) – even up to five or six times more (Šušić & Mojić, 2014) – making this segment of tourism generally profitable (Štetić, 2007).

Congress tourists generally travel more often during the year than tourists that travel to vacation. For them, it is true that they are an exclusive type of tourist who are very demanding in every way. Unfortunately, sometimes this is difficult to reconcile with the principles of sustainable development of the destination (Tršić & Arsenov-Bojović, 2018). It should be noted that almost all congresses and similar business events last at least two days, that many participants of these gatherings arrive at least a day or two before the event and usually stay at the destination after the end of the event, often accompanied by their spouse or family in order to combine private and business travel (Davidson, 2003). It is worth mentioning that nowadays many business events are shifting to a one-day event. This further implies a greater impact of business tourists on a local or regional level, including the impact on the natural environment. The importance of sustainability in tourism, including CCT, is seen through national strategies and development plans in many countries (Graci, 2013; Sharpley, 2020).

When it comes to Serbia, the importance of CCT and the principles of sustainability were also recognized, and the Serbia Convention Bureau was founded in 2007 as a special department of the Tourism Organization of Serbia, with the aim of achieving better positioning on the global congress map. As pointed out, this positioning is framed by the goals of sustainable development, where the participants, the wider community and environmental protection are in focus (Serbia Convention Bureau, n.d.).

2.2. The role of stakeholders in sustainable CCT

What is characteristic of the organization of business events is that they are planned in advance. This fact represents an opportunity for long-term business development and the involvement of many stakeholders at the destination. Bearing in mind that business events are organized throughout the year and are not related to the seasonality of a certain destination, the number of stakeholders who are, or who can be involved in the development of sustainable CCT, is really large, making this segment of tourism very complex. Stakeholders can generally be divided into three categories: 1) supply, 2) demand, 3) intermediaries (Skopjak Kresović, 2015) and belong to the public, civil and private sectors. According to Timur (2012), stakeholders are distributed across tourism industry, environment support and local community and government, while Ritchie and Crouch (2003) see them as suppliers, supporting industries, members of public, marketing merchandise and facilitators. Regardless of the classification of stakeholders, what is evident is the necessity of their cooperation and exchange of information in order to successfully realize an event (Raj et al., 2013). Wroblewski and Ussenbayev (2022) point out that the most important stakeholder is the one who makes decisions and describe it as the "meeting/event owner", which is not always the same as the "organizer" (e.g. local companies specialized for organization of business events). Apart from that, other stakeholder could fit into category "meeting/event participants".

Harrison and Wicks (2015) suggest that the Triple bottom line concept could help managers to become aware of the company's overall performance and contribute to a rise in corporate accountability. Stakeholders can also impact whether a firm pursues a corporate social responsibility (CSR) or sustainability strategy. According to Sulkowski et al. (2017), social activists, regulators, and non-governmental organizations contribute to beneficial social and environmental development. Some studies have indicated that CSR and sustainability initiatives are the product of stakeholder influence, and corporations will not implement them unless forced to (Campbell, 2007). Sulkowski et al. (2017) emphasizes that the cooperation strategy among stakeholders should enable organizations to have a larger impact by influencing their supplier chains, changing cultural norms and attitudes, or striving toward circularity in the economy. In this way a long-term profitability could be achieved while eliminating social and environmental damages.

Multi-stakeholder involvement can cause numerous obstacles in business activities, not sharing the same goals as the main reason. A similar conclusion is drawn by the group of authors (Hörisch et al., 2014) who have also acknowledged several challenges that may arise while managing stakeholder relationships towards sustainability. These challenges include the company's ability to organize shared goals among stakeholders and enable stakeholders to act as environmental intermediaries. They also point out that in the case where a stakeholder who would like to work with another stakeholder committed to sustainable development, sustainability must be one of their own priorities. In other words, establishing shared sustainability goals is thus dependent on the distinct sustainability interests of various stakeholders (different goals, values, expectations, etc.).

The role of stakeholders can be observed from two aspects: global (macro environment) and local (micro environment). Ritchie and Crouch (2010) look at macro factors from six different perspectives: economic, technological, ecological, political and legal advances, socio-cultural challenges, and demographic. In contrast, at the local level, these are government institutions, tour operators, travel agencies, tourist organizations, congress bureaus, expo centres, chambers of commerce, the hotel and catering sector, the entertainment sector, transport and the public (residents, media, etc.). The importance of stakeholders in the context of sustainable development has changed over time, the focus has shifted from state institutions and companies to local communities, i.e., from economic development to the empowerment of local communities (Ruhanen, 2013), all with the aim of transforming local economies and strengthening the capacity of local communities in a sustainable way (Richards & Hall, 2000).

Examining the views of stakeholders regarding the sustainable development of tourism is a frequently discussed topic in literature. However, mainly the attitudes of local communities, i.e., the population living at the destination, were examined (Albu, 2020; Burns, 2004; Hunter, 1995; Stylidis et al., 2014; Thetsane, 2019; Zhang & Chan, 2016). This is partially justified because residents are considered a key factor in the development of tourism and are directly affected by activities within its development (Kihima & Musila, 2019; Thetsane, 2019). Among rarer studies that have been conducted taking into account other stakeholders in CCT, we can mention the paper of Kim et al. (2022). Experts from the economy, state agencies and representatives of the academy participated in their research.

Clear views of all stakeholders are very important because an understanding of market trends is necessary for the management of complex events (Ivkov et al., 2015) and in order to maximize the positive effects of business events, continuity in their maintenance is necessary (Daniels & Norman, 2003). Holding an event at a certain destination also presents the destination and the local community through an economic, social and cultural prism. In this regard, the success of business events mostly depends on stakeholders at the local level, i.e., their connection and the level of quality of cooperation (Dolasinski et al., 2021; He et al., 2020; Jucu, 2020).

3. Methodology

The research was conducted during the organization of the Tourism Summit of Vojvodina, which was held for the second time in June 2023, in Inđija (Vojvodina, Serbia). The idea of the Summit was to unite all relevant stakeholders from the field of CCT and to discuss the challenges in this sector through several panels, as well as to improve the quality of the offer through joint action, above all in Vojvodina. The Summit was attended by over 200 participants, more than 30 representatives of local tourism organizations, as well as 15 speakers (local government, tourism organisations, travel agencies, hotel industry, congress bureau, etc.).

Data was collected from March to June 2023 through a survey distributed online. A Google form was created, and the link to the questionnaire was distributed directly to stakeholders, as well as indirectly through tourism organizations and the chamber of commerce. The respondents were informed that the research was anonymous and that it was being conducted for scientific purposes. The questionnaire consisted of three parts. The first part primarily related to sociodemographic questions, the second part consisted of the adapted SUS-TAS scale (Choi & Sirakaya-Turk, 2005) of 44 questions divided into 7 factors, used in the research of the group of authors Mijatov Ladičorbić et al. (2023). The questions were slightly changed to emphasize CCT, not tourism in general. The third part of the questionnaire consisted of open-ended questions to be answered only by directors (managers) of local tourism organizations. The survey was answered by 174 respondents.

The research used 5-point Likert scale (1 – absolutely disagree, 2 – partially disagree, 3 – neutral, 4 – partially agree, and 5 – absolutely agree), while IBM SPSS 23 was used for data processing and performing descriptive statistical analyses, scale reliability, t-test and ANOVA analyses.

4. Results and discussion

The results of descriptive data analysis are presented in Table 1.

Table 1: Descriptive data analysis

Gender	Education	Age (yrs)	Sector of employment	Work position	Travel expenses are covered by:	Media influence
Male 33.3%	Secondary school 10.9%	26-35 yrs 17.8%	Public 76.4%	Managerial position 46%	Organisation 78.2%	None 23%
Female 66.7%	College 5.2%	36-45 yrs 46.6%	Private 23.6%	Employee 54%	Personal sources 9.2%	Small 55.2%
	Bachelor 52.3%	46-55 yrs 19%			Combination 12.6%	Big 21.8%
	MSc 28.2%	>55 yrs 16.7%				
	PhD 3.4%					

Source: Authors' research

Based on the results from Table 1, it can be concluded that significantly more women participated in the research, as many as two thirds. Most respondents were in the 36-45 age category (46.6%), and if younger respondents are added to that, the percentage is as high as 64.4%. In other words, it can be concluded that the people up to 45 years of age are primarily engaged in this sector. What deserves admiration is that the vast majority of respondents completed university level education, i.e. slightly less than 84%, out of which 31.6% have completed postgraduate studies.

A little less than a quarter of respondents are from the private sector, while all the rest are from the public sector (tourism organizations, etc.). The situation is relatively uniform in terms of the positions in which they are employed, but still there are slightly fewer of those (46%) who are in some of the management positions (all levels). The results of this research support other studies (López, 2022) which point out that the costs of business trips are borne by the organization. The percentage of 78.2% shows that there is still room for improvement in this matter, i.e. organizations should cover the costs of business trips they initiate, not employees.

An interesting fact is that the majority of respondents are influenced by the media at some level when it comes to choosing and visiting a business event, i.e. a congress. A little more than half of the respondents state that the media has some influence, and almost a quarter claims that this influence is great. This is very important information for all stakeholders and above all, the organizers of these events, in order to implement the necessary marketing activities and ensure more successful promotion and implementation of the event.

The first part of the questionnaire included four more questions. When asked to what extent the destination is important to them when making a travel decision, most respondents said that it was partly important to them (48.9%), 17.8% of them did not have a particular opinion on this issue and 14.4% thought that the destination was a very important factor. Therefore, when choosing a destination for a business event, the attractiveness of the destination is important, not only the event itself. When choosing a destination, the organizers can also take into account the fact that for 19% of respondents the simplicity of the trip is crucial, i.e. the traffic connection to the destination/location, attractions and available activities (5.2%), while for the majority (74.1%) of respondent it is the combination of several factors what is important.

Table 2: Scale items (questions) grouped within seven factors (categories)

Factors (α) Items	**M**	**SD**
Perceived social costs (0.809)	2.79	0.84
I think that arrival of congress tourists to my local community could jeopardize the quality of my life	2.33	1.31
I believe that the quality of my life could be threatened with development of congress tourism.	2.09	1.15
I am often irritated by a representation of congress tourism in my community.	2.42	1.17
I think that congress tourists could overuse the tourist resources.	2.40	1.16
I think that development of congress tourism could lead to crowds in my local environment	2.63	1.08
I do not feel comfortable or welcome in the local tourist facilities.	2.11	1.12
I think that congress tourism will develop too fast in my local environment.	2.12	0.89
I believe that interpersonal relations in my community could be ruined due to development of congress tourism.	2.03	0.98
Environmental sustainability (0.895)	4.37	0.54
Cultural and natural heritage should be protected now, as well as in the future.	4.93	0.25
Diversity of the cultural and natural heritage must be valued and protected.	4.87	0.33
I think that development of congress tourism would lead to an intensification of efforts aimed at preserving the industrial heritage	3.92	0.83
Congress tourism must protect cultural and natural heritage of the local community	4.24	0.93
Congress tourism should be developed in accordance with cultural and natural environment.	4.23	0.95
Proper development of congress tourism means that cultural and natural heritage is protected every moment.	4.15	1.11
Congress tourism development must promote a positive attitude towards cultural and natural heritage among all participants in tourism.	4.53	0.86
Laws are required in order to reduce the negative impacts of congress tourism development.	4.27	1.12
I believe that congress tourism must improve the environment for future generations.	4.19	0.93
Long-term planning (0.944)	4.36	0.50
The congress tourism industry must have a plan for the future.	4.84	0.58
I believe that successful congress tourism management requires an advanced planning strategy.	4.61	0.64
I believe that a long-term view should be taken when planning the development of congress tourism.	4.55	0.75
I think that members of the local community need to be encouraged to take the lead in congress tourism planning committees.	3.44	1.02
I believe that a good planning coordination is needed for congress tourism development.	4.38	0.69
Congress tourism development plans should be constantly updated.	4.36	0.66

Perceived economic benefits (0.710)	4.47	0.65
I believe that congress tourism could provide new incomes to our local community.	4.61	0.58
I believe that congress tourism could provide a strong economic contribution to the local community	4.49	0.71
I believe that congress tourism could bring significant tax revenues to the local government.	4.33	0.85
I believe that development of congress tourism is good for the local economy	4.48	0.79
Congress tourism could provide an access to new markets for our local products.	4.45	0.75
Congress tourism could enable development of the local economy diversity.	4.43	0.77
Congress tourism could also provide benefits for the other activities in the local community.	4.49	0.73
Community-centered economy (0.765)	4.40	0.67
The congress tourism sector should use at least half of the goods and services from the local community.	4.39	0.91
Congress tourism companies should strive to hire at least half of their employees from the local community.	4.52	0.87
Members of the local community should have a significant share of benefits from congress tourism.	4.54	0.75
The congress tourism sector must contribute to development of the local community improvement funds.	4.26	0.89
Members of the local community should be given more opportunities to invest in congress tourism development.	4.29	0.78
Ensuring visitor satisfaction (0.819)	4.38	0.62
Congress tourism companies have a responsibility to meet the needs of the visitors.	4.45	0.77
Visitors' satisfaction must be monitored.	4.59	0.76
The congress tourism sector must provide a quality tourism experience for the future visitors.	4.50	0.66
The attractiveness of the local community is a basic element of interest to visitors.	3.95	0.91
Maximising community participation (0.852)	3.80	0.68
I believe that decisions about congress tourism must be made by all representatives of the local community, regardless of what they do.	3.70	1.22
I believe that an involvement of the local community representatives in a decision-making process regarding congress tourism development is a needed aspect of successful development of this activity.	3.96	1.02
It is sometimes acceptable to exclude the local community representatives from congress tourism development decisions.	3.44	1.24
Representatives of the local community should have an opportunity to be involved in congress tourism development.	3.77	1.04
The congress tourism sector must respect the values recognized by all members of the local community.	4.16	0.85

α – Cronbach's alpha coefficient; M – Mean; SD – Standard deviation

Source: Authors' research

Attractive destinations certainly attract the attention of tourists. However, the organization of congress events certainly contributes to its popularization and attractiveness. When asked whether they would visit a certain destination even if there was no business event, 41.4% of respondents said that they were absolutely convinced that they would, 28.2% of them were partially convinced, while 27% of them did not know. Only 3.4% of respondents would not visit the destination if there was no business event. When asked if they had already been to Inđija, 28.3% of the respondents answered that they had not, while the rest had. Thus, it can be concluded that due to the organization of the Tourism Summit of Vojvodina, a significant number of tourism professionals visited Inđija for the first time in their lives.

The reliability of the questionnaire was checked using Cronbach's alpha coefficient, which is the most commonly used method (Peterson & Kim, 2013; Taber, 2017). Although some authors state that the scale's acceptance threshold is a coefficient value of 0.6 (Gilbert, 1979; Hinton et al., 2004; van Griethuijsen et al., 2015), most often 0.7 is taken as the lowest acceptable value (Nunnally & Bernstein, 1994). In this paper, the value of the Cronbach's alpha coefficient by factors ranged from 0.710 (lowest) to 0.944 (highest), while at the level of the entire scale it is 0.905. Based on these results, it can be said that the used scale is adequate and reliable for the relevant research (Table 2).

Like in other global researches (Choi & Sirakaya-Turk, 2005; Scaccia & De Uriostne-Stone, 2016; Yu et al., 2009), but also in those conducted in Serbia (Obradović et al., 2021) and in this study, which refers to sustainable CCT, a factor related to the involvement of the local community in the management of tourism development is detected as a possible problem. Local community, i.e. the local population, has no or very little influence on the decisions that are adopted regarding the development of tourism. This problem is even greater when it is taken into account that it is about sustainable tourism.

4.1. T-test

A great difference in responses between men (M=4.16) and women (M=4.5) can be seen in the Community-centered economy factor (p=0.03, t=-3.093), which indicates that women value this segment significantly more. Moreover, women give statistically notably higher scores when Long-term planning is concerned (M=4.43, p=0.021, t=-2.332) compared to men (M=4.24), and they also favour Maximizing community participation (M=3.89, p=0.027, t=-2.225) much more than men (M=3.65). Surveys that analysed the attitudes of the population regarding the development of sustainable tourism (Obradović et al., 2021; Rathnayake & Darshi, 2020) did not establish statistically significant differences in responses in relation to gender of respondents. In contrast, this research shows that men and women view congress tourism and sustainable development rather differently. It can be concluded that awareness among women is far more developed and that their starting point is long-term planning of the development of congress tourism as well as the involvement of the local community in order to maximize the benefits from tourism. The importance of the key role of women in community development has been recognized by other authors as well (Hassan & Silong, 2008).

If we compare answers of the respondents from the public and private sector, one statistically significant difference can be seen. The difference is in relation to Perceived economic benefits, where employees in the private sector believe that congress tourism brings more economic benefits to the community including the local government, which has additional income through taxes (M=4.73, p=0.03, t=-2.980), whereas the employees from the public sector agree with this statement to a lesser extent (M=4.39).

Statistically significant differences in the responses of respondents also exist in relation to whether they hold a managerial position or not. Those who hold managerial positions give significantly lower ratings to the factors Perceived social costs (M=2.60, p=0.005, t=-2.840), Environmental sustainability (M=4.26, p=0.021, t=-2.337), Community-centered economy (M=4.28, p=0.037, t=-2.105) and Maximizing community participation (M=3.54, p=0.000, t=-4.994) compared to those who are not (M=2.94, M=4.46 , M=4.5, M=4.03, respectively). This is an unfavourable result because it is mainly the people in management positions who make the decisions and create the business environment. What further makes the present situation unfavourable is the fact that among the respondents who are in managerial positions, majority are those who are from the public sector (tourism organizations, etc.), a bit over 56%.

4.2. ANOVA

The ANOVA test was used in order to establish statistically significant differences in the respondents' answers in relation to age and education. The results of the analysis are presented in Tables 3 and 4.

Table 3: ANOVA test according to respondents' age

Factors	**Age**				**F**	**p**	**LSD Post-hoc test**
	(1) 26-35	**(2) 36-45**	**(3) 46-55**	**(4) 55+**			
Perceived social costs					8.181	0.000	1,2>3,4
Environmental sustainability					3.563	0.015	4>1,2,3
Long-term planning					5.460	0.001	4>1,2,3
Perceived economic benefits					2.781	0.043	4>1,2,3
Community-centered economy					4.989	0.002	2,3,4>1
Ensuring visitor satisfaction					3.954	0.009	3,4>1,2
Maximising community participation					5.306	0.002	2,3,4>1

Source: Authors' research

Based on the results presented in Table 3, it can be concluded that there are statistically significant differences in the responses in relation to the age of respondents, regarding all seven factors. Differences in answers in relation to the age were also recorded in the research conducted by Scaccia and De Uriostne-Stone (2016). What can easily be seen from Table 3 is that the respondents who are over 55 years old give notably higher marks to the following factors: Environmental sustainability, Long-term planning and Perceived economic benefits. As a result of their life and professional experience, they give importance to these segments of the development of congress tourism. The older generation observe tourism differently than the younger one and for them tourism represents a component that can inevitably improve the quality of life (Tuo et al., 2022; Wang & Luo, 2014). The situation is similar regarding the following factors: Community-centered economy, Ensuring visitor satisfaction and Maximizing community participation, where the perception of the importance of these segments of tourism increases with age. The views of respondents from the 26-45 age group regarding the Perceived social costs factor are as well quite interesting. They believe that their quality of life has been impaired due to tourism (massive number of tourists in the local community, excessive use of resources, etc.). There are 64.4% of these respondents in the sample and they represent a group of working age stakeholders, which means that further research into the causes that have led to these results is necessary.

Table 4: ANOVA test according to respondents' education

Factors	**Education**				**F**	**p**	**LSD Post-hoc test**
	(1) Secondary school	**(2) College**	**(3) Bachelor**	**(4) MSc/ PhD**			
Perceived social costs					5.734	0.001	1>2>3,4
Environmental sustainability					2.655	0.049	4>1,2,3
Long-term planning					3.893	0.01	4>1,2,3
Perceived economic benefits					5.265	0.002	4>1,2,3 2,3>1
Community-centered economy					9.951	0.000	4>1,2,3 3>1,2
Ensuring visitor satisfaction					7.857	0.000	3,4>1,2
Maximising community participation					4.719	0.003	4>1,2,3

Source: Authors' research

Not only based on the respondents' age, answers also differ based on the level of the education among respondents (Table 4). Statistically significant differences can be seen with all factors, and it is rather evident that education has a positive effect on the attitudes of the respondents. To put it in other way, the more educated the respondents are, the greater their awareness of all examined segments of sustainable development of congress tourism is. It is encouraging that 84% of respondents in the sample have completed university education, while almost a third have finished postgraduate studies. The negative impact of the absence of higher education can be seen when Perceived social costs factor is concerned. Namely, the respondents with completed secondary or college education believe that the development of tourism impairs the quality of their life as well as the environment, and they do not see the positive aspects of the development of this economic activity. A practically identical influence of education on attitudes was also recorded in the study conducted by Obradović et al. (2021) and Scaccia and De Uriostne-Stone (2016). Even if the education is informal, it has a significant effect on tourism stakeholders and it further influences the loyalty of tourists (Machado Toffolo et al., 2022). An additional advantage is if the education is in the field of tourism, because, according to Moisescu et al. (2020), it has a positive effect on the destination, i.e. the local community (increase in the number of overnight stays, income, etc.). When sustainable tourism is concerned, education plays a major role in the development of social awareness regarding sustainable development.

4.3. Attitudes of directors of tourism organizations

The last part of the questionnaire consisted of six open-ended questions intended to be answered only by the directors (managers) of local tourism organizations. These questions were aimed at providing a better insight into the attitudes of tourism development leaders, i.e. to connect congress tourism with the attractiveness of the destination and the local community itself. The most important answers are presented.

1. How can congress events and activities contribute to the attractiveness and competitiveness of a tourist destination?

Some stated the following: "They increase the number of overnight stays - business people usually travel in the company of a partner who is free and spends time sightseeing – based on a good experience, companies recommend a destination to their foreign partners, awareness grows about the economic benefits for the local community through increasing competitiveness, empowering caterers, paying taxes…"

Some other provided answers were: "Revitalization and promotion of the municipality", "Through the development of services and products", "More tourists of different target groups", "Through the positive experience of the participants", etc.

2. What are the key factors that influence the planning and implementation of successful congress events and activities at a tourist destination?

Some of the responses were: "Level of the infrastructural equipment, important companies that choose the destination, good preparation and communication with business clients at fairs and events (large corporate ones) in the country and abroad that would attract big congressmen to the destination (free time - if there is any, can be complemented by certain tours, larger congresses generally do not allow extra free time since they require participants to be present at the venue all the time).

Others also mentioned: "Location, capacity and technical equipment", "Accommodation facilities, their quality and offer as well as tourist and cultural-historical offer on the destination", "Capacities, infrastructure for quick arrival to the destination, cooperation with the local population...", "Good exchange of information" and "Adequate accommodation facilities".

3. How do congress events and activities affect the local economy and community at a tourist destination?

"Significantly because it is about people who have influence in their communities, professions, who spread information about the destination, which thus increases the number of guests, and therefore more money remains for the local community. Participants of conferences and congresses are the biggest consumers of food, drinks, souvenirs, artistic artifacts of the destination..."

Others see this through: "Mainly through the rental of luxury facilities for presentations and overnight stays", "Increasing traffic leads to higher incomes", or "By increasing income and interest for the destination, but also by initiating ideas from the local community aimed at improving the offer".

4. What are the best practices for the development and management of congress events at a destination?

"After extremely strong promotion at important events, when the first congresses are agreed upon (preferably through successful business people from your place), business people should be offered luxurious facilities with equipped conference rooms as well as assistants who will help the event run smoothly. Good food, high-end hotels and restaurants, trained staff".

Others also pointed out: "Determination and dedication to creating a tourist product" and "additional activities". You can organize a congress in any hotel, university, etc., but if there is no quality content outside that area, the congress venue itself is less attractive...

5. How would you rate the current level of the development of congress tourism and its impact on the local community?

"In my environment, congress tourism is extremely developed, the impact on the environment is multiple (but not visible to an ordinary person). It has the greatest influence on restaurant owners and local self-government (through taxes, increase in the number of overnight stays and project activities), as far as the presentation of tourism is concerned, it changes its form here, the name of the municipality - the city is mentioned at important business events throughout Europe, but it has no great influence on wider forms of tourism."

On the other hand, many believe in the opposite: "Weakly developed, insufficiently affirmed", "Non-existent, negligible", "Very bad situation", "Extremely low grade. Insufficient commitment. Even when something is organized, the organization is very low-quality."

6. What are the key elements that must be addressed in order for the local community to benefit more from congress tourism in the future?

"Attract important people from the world of business who would invest in the congress infrastructure, then invest money on presentations at important business events (initially throughout Serbia and then in Europe) and then present small food producers to restaurant owners (known only for that region), then open hospitality schools to train as many qualified people as possible so you can offer the best service which ensures sustainability."

"Infrastructure and urbanism", "More facilities that meet the conditions for this form of tourism, we currently have only few facilities that can enable faster development", "Accommodation, its content and quality, the possibility of servicing the needs of congress tourism and promoting local cultural and historical attractions in its broadest sense", "Including all relevant parties in the process of planning, presenting local community to tourists at destinations."

Another interesting perspective is the following: "Individual initiative; standardization of service; continuous improvement of the quality of the organization; education; education; education!"

"Accommodation, its content and quality, the possibility of servicing the needs of CCT and the promotion of local cultural-historical and other attractions in the broadest sense", "Inclusion of all interested parties in planning, presentations of the local community to tourists at destinations."

5. Conclusion

This study shows that stakeholders in Serbia (local tourism organizations, travel agencies, catering establishments, etc.) generally support the sustainable development of CCT. However, they pay most attention to the economic benefits of its development. Also, their focus is on the local community, and hence the involvement of the population in the processes and activities that tourism entails. Members of the private sector are much more convinced that congress tourism brings benefits to the local economy and community, so this is an additional confirmation of the need for involvement of the local community in the planning of congress tourism.

Responses of managers related to Environmental sustainability, Community-centered economy and Maximizing community participation are particularly interesting. Namely, it has been proven that respondents who are not in managerial positions attach significantly more importance to these segments of the development of congress tourism. However, there is a need for additional research and the education of management staff in the context of sustainable tourism development. The level of education has long been recognized as a factor that influences people's attitudes (Jew & Bonnington, 2011), and involvement of the academic community is also necessary in order to provide education, provide innovative solutions, improve sustainable development, but also provide other benefits (Atterton & Thompson, 2010; Tomasi et al., 2020; Trencher et al., 2013; Wardle et al., 2018), which is the opinion of the authors of this paper as well.

Sustainable development of tourism, including business tourism, requires involvement of all the stakeholders in the plans, development and evaluation of tourism, i.e., better communication and closer cooperation, which is often not the case in practice. This paper is a part of the necessary set of research among stakeholders in CCT, which the authors of previous research referred to as well (Obradović et al., 2021). Apart from theoretical contribution, this paper should serve as in insight into stakeholders' attitudes. Knowing what aspects of CCT are in stakeholders' main focus and what seems to be out of their radar should help defining necessary actions for further improvements of business tourism. Organization of meetings or panels with representatives of all relevant stakeholders in business tourism, should be the first step towards such improvements, with the emphasis on necessary education of stakeholders including managers and other decision makers. This is especially necessary because Serbia has been chosen to host the prestigious business mega-event Expo 2027, which will be held in Belgrade in 2027 (Bureau International des Expositions, 2023). In this regard, the results of this paper will be public and also delivered to relevant stakeholders. This study has certain limitations. First, it is necessary to conduct a survey on a larger sample in order to get a better picture of sustainable CCT in the whole country. Second, due to the sample size, all types of stakeholders are treated as a one sample. Hence, further research should include more types of stakeholders (e.g. "meeting owners", event organizers, professional associations, media, etc.) and the results could be presented separately for each category for a better insight. Also, further research could include additional variables (e.g. field of education, length of experience in business tourism industry, etc.) which can be seen as another limitation of the present study. Bearing in mind the overall situation regarding CCT in Serbia, as well as the presented research results, there is a lot of work ahead to improve the area of sustainable CCT.

Conflict of Interests

The authors declare no conflict of interest.

References

1. Albu, R. (2020). Study on the effects of tourism development on the local community of Brasov. *Series V – Economic Sciences*, *12*(61), 37–42. https://doi.org/10.31926/but.es.2019.12.61.2.5
2. Anuar, A. N. A., Ahmad, H., Jusoh, H., & Hussain, M. Y. (2012). Understanding the role of stakeholder in the formation of tourist friendly destination concept. *Journal of Management and Sustainability*, *2*(2), 69–74. https://doi.org/10.5539/jms.v2n2p69
3. Ap, J., & Crompton, J. L. (1998). Developing and testing a tourism impact scale. *Journal of Travel Research*, *37*(2), 120–131. https://doi.org/10.1177/004728759803700203

4. Atterton, J., & Thompson, N. (2010). University engagement in rural development: A case study of the northern rural network. *Journal of Rural Community Development*, *5*, 123–132.
5. Bureau International des Expositions (2023). *Serbia elected host country of Specialised Expo 2027*. Retrieved July 11, 2023 from https://www.bie-paris.org/site/en/news-announcements/expo-2027-28-en/serbia-elected-host-country-of-specialised-expo-2027
6. Burns, P. M. (2004). Tourism planning a third way? *Annals of Tourism Research*, *31*(1), 24–27. https://doi.org/10.1016/j.annals.2003.08.001
7. Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *The Academy of Management Review*, *32*, 946–967. https://doi.org/10.2307/20159343
8. Choi, H. S. C., & Sirakaya-Turk, E. (2005). Measuring residents' attitude toward sustainable tourism: Development of sustainable tourism attitude scale. *Journal of Educational Technology Systems*, *43*(4), 380–394. https://doi.org/10.1177/0047287505274651
9. Daniels, M. J., & Norman, W. C. (2003). Estimating the economic impacts of seven regular sport tourism events. *Journal of Sport Tourism*, *8*, 214–222. https://doi.org/10.1080/1477508032000161528
10. Davidson, R. (1996). *Business Travel*. Longman, UK.
11. Davidson, R. (2003). Adding pleasure to business. *Journal of Convention & Exhibition Management*, *5*, 29–39. https://doi.org/10.1300/J143v05n01_03
12. Dolasinski, M. J., Roberts, C., Reynolds, J., & Johanson, M. (2021). Defining the field of events. *Journal of Hospitality and Tourism Research*, *45*, 553–572. https://doi.org/10.1177/1096348020978266
13. Getz, D., & Page, S. J. (2016). Progress and prospects for event tourism research. *Tourism Management*, *52*, 593–631. https://doi.org/10.1016/j.tourman.2015.03.007
14. Gilbert, A. C. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*, 64–73. https://doi.org/10.1177/002224377901600110
15. Graci, S. (2013). Collaboration and partnership development for sustainable tourism. *Tourism Geographies*, *15*(1), 25–42. https://doi.org/10.1080/14616688.2012.675513
16. Gu, W., Pan, H., Hu, Z., & Liu, Z. (2022). The triple bottom line of sustainable entrepreneurship and economic policy uncertainty: An empirical evidence from 22 countries. *International Journal of Environmental Research and Public Health*, *19(13)*, 7758. https://doi.org/10.3390/ijerph19137758
17. Harrison, J. S., & Wicks, A. C. (2015). Stakeholder theory, value, and firm performance. *Business Ethics Quarterly*, *23*(1), 97–124. https://doi.org/10.5840/beq20132314
18. Hassan, Z., & Silong, A. D. (2008). Women leadership and community development. *European Journal of Scientific Research*, *23*(3), 361–372.
19. He, H., Lin, Z., & Li, H. (2020). Key survival factors in the exhibition industry. *International Journal of Hospitality Management*, *89*, 102561. https://doi.org/10.1016/j.ijhm.2020.102561
20. Hinton, P. R., McMurray, I., & Brownlow, C. (2004). *SPSS Explained*. Routledge: Taylor & Francis, New York.
21. Hörisch, J., Freeman, R. E., & Schaltegger, S. (2014). Applying stakeholder theory in sustainability management. *Organization & Environment*, *27*(4), 328–346. https://doi.org/10.1177/1086026614535786
22. Hunter, C. (1995). On the need to reconceptualize sustainable tourism development. *Journal of Sustainable Tourism*, *3*(3), 155–165. https://doi.org/10.1080/09669589509510720

23. Ivkov, M., Blešić, I., Popov Raljić, J., Ivkov Džigurski, A., Pivac, T., & Jovanović, T. (2015). Visitors motives for attending a hybrid event: A case study of agricultural fair. *Economics of Agriculture*, *62*(1), 9–28. https://doi.org/10.5937/ekoPolj1501009I
24. Jew, E., & Bonnington, C. (2011). Socio-demographic factors influence the attitudes of local residents towards trophy hunting activities in the Kilombero Valley, Tanzania. *African Journal of Ecology*, *49*, 277–285. https://doi.org/10.1111/j.1365-2028.2011.01260.x
25. Jucu, I. S. (2020). Rebranding the cultural legacy of communism: The golden stag festival (Braşov, Romania) and local placemaking. *Journal of Balkan and Near Eastern Studies*, *22*, 478–493. https://doi.org/10.1080/19448953.2020.1775400
26. Kihima, O. B., & Musila, P. M. (2019). Extent of local community participation in tourism development in conservation areas: A case study of Mwaluganje conservancy. *Parks*, *25*(2), 47–56. https://doi.org/10.2305/IUCN.CH.2019.PARKS-25-2BOK.en
27. Kim, I., Kim, S., Choi, S., Kim, D., Choi, Y., Kim, D., … & Yin, J. (2022). Identifying key elements for establishing sustainable conventions and exhibitions: Use of the Delphi and AHP approaches. *Sustainability*, *14*(3), 1678. https://doi.org/10.3390/su14031678
28. Lee, T. H. (2013). Influence analysis of community resident support for sustainable tourism development. *Tourism Management*, *34*, 37–46. https://doi.org/10.1016/j.tourman.2012.03.007
29. López, A. M. (2022). Global business travel – statistics & facts. Retrieved June 15, 2023 from https://www.statista.com/topics/2439/global-business-travel-industry/#topicOverview
30. Lu, S., Zhu, W., & Wei, J. (2020). Assessing the impacts of tourism events on city development in China: A perspective of event system. *Current Issues in Tourism*, *23*, 1528–1541. https://doi.org/10.1080/13683500.2019.1643828
31. Machado Toffolo, M., Simoncini Ginevra A., Marchini C., Meschini M., Caroselli E., Franzellitti S., … & Goffredo S. (2022). Long-term effects of an informal education program on tourist environmental perception. *Frontiers in Marine Science*, *9*, 830085. https://doi.org/10.3389/fmars.2022.830085
32. Mijatov Ladičorbić, M., Dragin, A., Stojanović, V., Lazić, L., Janjušević, B., Carmer, A., & Hansen, B. (2023). Do we want to be involved? Tourism promotion and the industrial heritage of Germans in Vojvodina. *Sociologija i prostor*, *61*, *226*(1), 79–104. https://doi.org/10.5673/sip.61.1.4
33. Milošević, S., Perić, D., & Škrbić, I. (2021). How do residents assess the social impact of tourism? *Hotel and Tourism Management*, *9*(1), 103–119. https://doi.org/10.5937/menhottur2101103M
34. Moisescu, O. I., Gică, O. A., Coroş, M. M. (2020). The impact of tourism education on tourism destination performance and sustainability. In S. Hugues and A. C. Yallop (Eds.), *Overtourism and Tourism Education* (*1st ed*.), Routledge, Taylor & Francis Group.
35. Nunnally, J. C., & Bernstein, I. H. (1994). The assessment of reliability. *Psychometric Theory*, *3*, 248–292.
36. Obradović, S., Stojanović, V., Kovačić, S., Jovanović, T., Pantelić, M., & Vujičić, M. (2021). Assessment of residents' attitudes toward sustainable tourism development – A case study of Bačko Podunavlje Biosphere Reserve, Serbia. *Journal of Outdoor Recreation and Tourism*, *35*, 100384. https://doi.org/10.1016/j.jort.2021.100384
37. Peterson, R. A., & Kim, Y. (2013). On the relationship between coefficient alpha and composite reliability. *Journal of Applied Psychology*, *98*(1), 194–198. https://doi.org/10.1037/a0030767
38. Raj, R., Walters, P., & Rashid, T. (2013). *Event management: Principles and practice*. Sage Publications, London, UK.

39. Rathnayake, C. V., & Darshi, G. A. N. (2020). An application of sustainable tourism attitude scale (sus-tas) in three coastal tourist destinations in the southern province of Sri Lanka. *The Sixth International Conference on Business Management*, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura.
40. Richards, G., & Hall, D. (2000). *Tourism and sustainable community development*. Routledge, London, UK.
41. Ritchie, J. R. B, & Crouch, G. I. (2010). A model of destination competitiveness/sustainability: Brazilian perspectives. *Revista de Administracao Publica 44*(5), 1049–1066. https://doi.org/10.1590/S0034-76122010000500003
42. Ritchie, J. R. B., & Crouch, G. I. (2003). *The competitive destination: A sustainable tourism perspective*. Cabi, Oxon, UK.
43. Ruhanen, L. (2013). Local government: Facilitator or inhibitor of sustainable tourism development? *Journal of Sustainable Tourism*, *21*(1), 80–98. https://doi.org/10.1080/09669582.2012.680463
44. Scaccia, M., & De Uriostne-Stone, S. (2016). Resident perceptions of sustainable tourism in Maine. *International Journal of Sustainable Development and Planning*, *11*(3), 375–384. https://doi.org/10.2495/SDP-V11-N3-375-384
45. *Serbia Convention Bureau* (n.d). Retrieved June 19, 2023 from https://www.scb.travel/sr/centar-za-odrzivost
46. Sharpley, R. (2014). Host perceptions of tourism: A review of the research. *Tourism Management*, *42*, 37–49. https://doi.org/10.1016/j.tourman.2013.10.007
47. Sharpley, R. (2020). Tourism, sustainable development and the theoretical divide: 20 years on. *Journal of Sustainable Tourism*, *28*(11), 1932–1946. https://doi.org/10.1080/09669582.2020.1779732
48. Skopjak Kresović, S. (2015). *MICE tourism and sustainable development – the challenge and potential for Belgrade*. Master thesis, Singidunum University, Belgrade.
49. Štetić, S. (2007). *Posebni oblici turizma [Special forms of tourism]*. Forma B, Beograd.
50. Štetić, S., Cvijanović, D., & Šimičević, D., (2014). *Posebni oblici turizma Dunavskog regiona Srbije [Special forms of tourism in the Danube Region of Serbia]*. Institut za ekonomiku poljoprivrede, Beograd.
51. Stylidis, D., Biran, A., Sit, J., & Szivas, E. M. (2014). Residents' support for tourism development: The role of residents' place image and perceived tourism impacts. *Tourism Management*, *45*, 260–274. https://doi.org/10.1016/j.tourman.2014.05.006
52. Sulkowski, A. J., Edwards, M., & Freeman, R. E. (2017). Shake your stakeholder: Firms leading engagement to cocreate sustainable value. *Organization & Environment*, *31*(3), 223–241. https://doi.org/10.1177/1086026617722129
53. Šušić, V., & Mojić, J. (2014). Kongresni turizam kao tržišna niša poslovnog turizma [Congress tourism as a market niche of business tourism]. *Ekonomske teme*, *52*(4), 523–539. https://doi.org/10.1515/ethemes-2014-0031
54. Taber, K. (2017). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*, 1273–1296. https://doi.org/10.1007/s11165-016-9602-2
55. Thetsane, R. (2019). Local community participation in tourism development: The case of katse villages in Lesotho. *Athens Journal of Tourism*, *6*(2), 123–140. https://doi.org/10.30958/ajt.6-2-4
56. Timur, S. (2012). *Analyzing urban tourism stakeholder relationship: A network perspective*. Haskayne School of Business, University of Calgary, Working Papers.
57. Tomasi, S., Paviotti, G., & Cavicchi, A. (2020). Educational tourism and local development: The role of universities. *Sustainability*, *12*(17), 6766. https://doi.org/10.3390/su12176766

58. Trencher, G. P., Yarime, M., & Kharrazi, A. (2013). Co-creating sustainability: Cross-sector university collaborations for driving sustainable urban transformations. *Journal of Cleaner Production*, *50*, 40–55. https://doi.org/10.1016/j.jclepro.2012.11.047
59. Tršić, I., & Arsenov-Bojović, V. (2018). Tre role of MICE industry in tourism development. In D. Cvijanović et al. (Eds.), *Tourism in Function of Development of the Republic of Serbia: Tourism in the Era of Digital Transformation (Thematic Proceedings II)* (pp. 275–293). Faculty of Hotel Management and Tourism in Vrnjačka Banja, Serbia.
60. Tuo, J., Deng, R., Tao, M., Xu, Z., Peng, Y., Linghu, Y., … & Yu, C. (2022). Cultural factors and senior tourism: Evidence from the Chinese context. *Frontiers in Psychology*, *13*, 1030059. https://doi.org/10.3389/fpsyg.2022.1030059
61. Turker, N., Alaeddinoglu, F., & Ali Selcuk, C. (2016). The role of stakeholders in sustainable tourism development in Safranbolu, Turkey. *International Conference on Hospitality, Leisure, Sports, and Tourism – Conference Proceedings*, Kyoto, Japan.
62. United Nation World Tourism Organization (UNWTO) (2005). *Making tourism more sustainable – A guide for policy makers*. UNEP and UNWTO, 2005, 11–12.
63. van Griethuijsen, R. A. L. F., van Eijck, M. W., Haste, H., den Brok, P. J., Skinner, N. C., Mansour, N., … & BouJaoude, S. (2015). Global patterns in students' views of science and interest in science. *Research in Science Education*, *45*(4), 581–603. https://doi.org/10.1007/s11165-014-9438-6
64. Wang, H., & Luo, Y. (2014). A primary research on the development of the aged migration tourism for summer holiday in Yichun based on aging society. *Forestry Economics*, *9*, 31–35. https://doi.org/10.13843/j.cnki.lyjj.2014.09.007
65. Wang, S., & Xu, H. (2015). Influence of place-based senses of distinctiveness, continuity, self-esteem and self-efficacy on residents' attitudes toward tourism. *Tourism Management*, *47*, 241–250. https://doi.org/10.1016/j.tourman.2014.10.007
66. Wang, S., Chen, S., & Xu, H. (2019). Resident attitudes towards dark tourism, a perspective of place-based identity motives. *Current Issues in Tourism*, *22*(13), 1601–1616. https://doi.org/10.1080/13683500.2017.1390553
67. Wardle, C., Buckley, R., Shakeela, A., & Castley, J. G. (2018). Ecotourism's contributions to conservation: Analysing patterns in published studies. *Journal of Ecotourism*, *20*, 99–129. https://doi.org/10.1080/14724049.2018.1424173
68. Weaver, D. (2006). *Sustainable tourism*. Elsevier, Butterworth-Heinemann, Oxford, UK.
69. Williams, B. (2023). 100+ Business Travel Statistics (2023). Retrieved June 25, 2023 from https://www.dreambigtravelfarblog.com/blog/business-travel-statistics
70. World Travel & Tourism Council (WTTC) (2022). *Travel & Tourism Economic Impact 2022, Global Trends*. Retrieved January 25, 2024 from https://wttc.org/Portals/0/Documents/Reports/2022/EIR2022-Global%20Trends.pdf
71. Wroblewski, S., & Ussenbayev, N. (2022). A new paradigm for meetings and events studies. *Hotel and Tourism Management*, *10*(1), 107–123. https://doi.org/10.5937/menhottur2201107W
72. Yu, C. P., Charles, H., Chancellor, & Cole, S. (2009). Measuring residents' attitudes toward sustainable tourism: A reexamination of the sustainable tourism attitude scale. *Journal of Travel Research*, *50*(1), 57–63. https://doi.org/10.1177/0047287509353189
73. Zhang, S., & Chan, C. S. (2016). Nature-based tourism development in Hong Kong: Importance–Performance perceptions of local residents and tourists. *Tourism Management Perspectives*, *20*, 38–46. https://doi.org/10.1016/j.tmp.2016.07.002

Original Scientific Paper

UDC: 338.46:005.3(497.11)
005.35
DOI: 10.5937/menhottur2400002D

Received: 7 February 2024
Revised: 27 March 2024
Accepted: 15 April 2024
Published online: 25 April 2024

How does internal social responsibility affect organizational commitment? Empirical evidence from Serbian service companies

Milena Damnjanović[1*], Dejana Zlatanović[2], Jelena Nikolić[2]

[1] University of Kragujevac, Faculty of Technical Sciences in Čačak, Serbia
[2] University of Kragujevac, Faculty of Economics, Kragujevac, Serbia

Abstract

Purpose – Despite the increasing importance of internal social responsibility (ISR), there has been limited research on employees' perceptions regarding social responsibility (SR) and its influence on employees' behavior within service companies. Employees play a crucial role in service delivery in these companies. The present study specifically concentrates on the effects of ISR on organizational commitment with a special emphasis on service companies. The primary goal of this study is to investigate the impact of ISR on organizational commitment components, i.e. affective, continuance and normative commitment in service companies. **Methodology** – Data were collected using an adapted questionnaire. Descriptive, correlation and regression analysis were applied to examine the hypotheses. **Findings** – The findings indicate a meaningful positive influence of ISR on affective, continuance and normative commitment among employees. **Implications** – This emphasizes the importance of integrating ISR into companies' business strategies, especially those oriented towards employees. Recognizing and prioritizing ISR can enhance employees' commitment, motivation and retention, ultimately contributing to organizational success.

Keywords: internal social responsibility, commitment, service companies
JEL classification: J28, M14

Kako interna društvena odgovornost utiče na posvećenost zaposlenih? Istraživanje u uslužnom sektoru u Srbiji

Sažetak

Svrha – Istraživanja o percepcijama zaposlenih o društvenoj odgovornosti (DO) i njenom uticaju na ponašanje zaposlenih u uslužnim kompanijama su retka iako se može uočiti porast značaja interne društvene odgovornosti (IDO). Zaposleni imaju ključnu ulogu u pružanju usluga u ovim kompanijama. Realizovano istraživanje se fokusira na uticaj IDO na organizacionu posvećenost, sa posebnim akcentom na uslužne kompanije. Primarni cilj istraživanja je utvrditi kako IDO utiče na tri glavne komponente organizacione posvećenosti,

* Corresponding author: milena.damnjanovic@ftn.kg.ac.rs

afektivnu, normativnu i kontinualnu posvećenost, u uslužnim kompanijama. **Metodologija** – Podaci su prikupljeni pomoću adaptiranog upitnika. Deskriptivna, korelaciona i regresiona analiza su primenjene kako bi se testirale hipoteze. **Rezultati** – Rezultati ukazuju da IDO ima pozitivan uticaj na afektivnu, normativnu i kontinualnu posvećenost zaposlenih. **Implikacije** – Naglašen je značaj integrisanja IDO u poslovne strategije kompanija, naročito u one koje su usmerene prema zaposlenima. Posvećenost, motivacija i zadržavanje zaposlenih mogu se povećati primenom IDO, a time se konačno utiče na uspeh kompanija.

Ključne reči: interna društvena odgovornost, posvećenost, uslužni sektor
JEL klasifikacija: J28, M14

1. Introduction

Many studies have been conducted in order to explore the influence of social responsibility (SR) on consumers, performance and the environment. Research from the standpoint of employees on SR has received limited attention, particularly regarding the impacts of SR on employees. This oversight is surprising, especially considering the significant influence of attitudes and behavior of employees on companies' success. Moreover, there is still a shortage of research on perceptions of employees about SR and its behavioral implication within the service sector (e.g. Bogan & Dedeoglu, 2020; Damnjanović, 2023; Damnjanović et al., 2022; Kim et al., 2021; Wang et al., 2020), particularly in developing countries (e.g. Bogan & Dedeoglu, 2020; Chan & Hasan, 2019; Wang et al., 2020). Analysis of SR literature within the hospitality industry revealed that out of 158 articles published between 2007 and 2018, only 19 addressed the impact of SR on employees, with just 10 focusing on research in developing countries (Guzzo et al., 2019). Given the paramount importance of employees to a companies' success, particularly in hospitality, the lack of research on the influence of SR on employees is indeed surprising. A comprehensive review of articles on SR in hotel industry published from 2006 to 2015 concluded that research in this area was relatively scarce and mainly focused on environmental issues (Serra-Cantallops et al., 2017). Hence, the objective of this research is to fill this notable gap in literature.

There are three major reasons why SR practices are highly significant in the hotel industry (Madanaguli et al., 2023). Firstly, SR practices provide intangible services, reputational benefits and increased financial performance to the hotel industry, so more and more hotels are adopting SR business practices. Secondly, the hotel industry, known for being labor-intensive, faces significant turnover of staff and offers jobs that are often characterized by low pay, insecurity, and stress, with minimal opportunities for advancement and insufficient support for work–life balance (Serra-Cantallops et al., 2017). SR has the potential to alleviate the negative facets of work in hospitality by reducing turnover intentions, increasing commitment, and enhancing well-being (Guzzo et al., 2019). Moreover, hotels' responsibility to the natural, economic, social and cultural environment is crucial, as they are integral to tourist arrangement and significantly influence the quality and customer satisfaction of tourist service (Ettinger et al., 2018). Being representatives of the service sector, hotels can achieve meaningful benefits in terms of SR through investment in employee development, relationships with suppliers, and the preservation and improvement of location's attractiveness (Milovanović, 2014). Hotels also possess the capacity to affect substantial changes within tourism host communities. They can strengthen their relationships with government by engaging in SR programs (Kucukusta et al., 2013). Good relations with local government and residents are essential aspects of hotels' business operations and need to be part of their SR strategy (Serra-Cantallops et al., 2017). Many research studies have demonstrated that SR exerts a positive influence on employees' attitudes and behavior. This has underscored the strategic significance of SR for companies in the tourism and hospitality sector, prompting them to intensify communication about their commitment to SR (Camilleri, 2020; Ettinger et al., 2018; Fu et al., 2014). Furthermore, the impact of the perceptions of employees about SR in the hospitality industry is considered an area of study lacking sufficient research (Bogan & Dedeoglu, 2020; Fu et al., 2014).

Organizational commitment is a central topic in human resources, organizational psychology, and organizational behavior research. It "represents the psychological condition of employees, with respect to their relationship with the organization and their decision to remain employed by it" (Kim et al., 2021, p. 1). It is "a bond or link between an individual and the organization" (Kim et al., 2017, p. 28). Meyer and Allen's (1997) model of organizational commitment, used in this research, explained commitment through three components: affective, normative and continuance commitment. Employees' commitment to their company reflects a "combination of desire (affective commitment), cost (continuance commitment) and obligation (normative commitment)" (Thang & Fassin, 2017, p. 8). Each component of organizational commitment explains how employees behave and react in different circumstances. Organizations that provide socially responsible activities perceived as valuable by employees are likely to increase positive attitudes, including organizational commitment (Oh et al., 2021). Therefore, internal social responsibility (ISR) activities could positively influence organizational commitment.

Research on the association between ISR and organizational commitment has been prevalent in manufacturing companies (George et al., 2020; Low & Ramayah, 2018) compared to service companies in developing countries. Some research in developing countries, primarily from the Asian region, has shown a positive association between SR and the affective commitment of employees in the service industry, particularly in the hotel and casino industry (Fu et al., 2014; Kim et al., 2021; Kim et al., 2017; Kim et al., 2016; Wang et al., 2020). Several studies in developing countries have also identified positive relation between ISR and organizational commitment (Ekawati & Prasetyo, 2016; Oh et al., 2021; Radwan, 2015; Shibeika & Abdalla, 2016; Thang & Fassin, 2017), as well as between ISR and affective commitment (Al-bdour et al., 2010; Low et al., 2017; Nguyen & Tu, 2020; Shibeika & Abdalla, 2016; Story & Castanheira, 2019; Turker, 2009) in service sector. However, similar research has not been conducted in Serbia within the service sector, particularly in hospitality. Hence, the objective of this research is to bridge this gap and improve understanding of the relationship between ISR and organizational commitment in service companies in Serbia.

Employees' perceptions of SR activities of a company significantly influence their attitudes toward the company. When a company's goals and values align with those of its employees, it can significantly strengthen and improve the relationship between employees and the company. In service companies, the serving process itself demands direct contact of employees with customers, making employees' attitudes and behavior critical in achieving business goals. This underscores the increasing importance of ISR for service companies. Therefore, our research focuses on ISR and its influence on the organizational commitment of employees in service companies, particularly those in hotels and restaurants. The goal is to assess the effect of ISR on affective, continuance and normative commitment.

The paper is structured in such a way as to begin with a literature review focusing on SR in service companies, with particular emphasis on ISR and organizational commitment. The literature review serves as the foundation for developing hypotheses. The methodology, i.e. the sample and measures, is then explained. Following this, the results and their discussion are presented. Finally, the main conclusions, practical and theoretical implications are presented, followed by the limitations of the study and suggestions for future research.

2. Literature review and hypothesis development

2.1. Social responsibility in service companies

There has been an increasing focus on the concept of SR within the service sector, especially in hospitality, over the past two decades (Radwan, 2015). The service sector holds increasing significance in the global economy, contributing substantially to revenue generation, GDP growth and employment rates. The development of the service sector has been the primary driver of economic growth in many developing countries over the past thirty years. Currently, the service sector accounts for two-thirds of GDP growth in developing economies, while employing approximately 50% of the workforce (Statistical Office of the Republic of Serbia, 2023). In Serbia, the service sector has consistently contributed over 50% to GDP creation, with contributions of 52% in 2022, 51.4% in 2021, 51.9% in 2020, a trend that has been evident since 2009 (Chamber of Commerce and Industry of Serbia, 2023). According to data for the third quarter of 2023, the service sector employs the highest number of individuals (57%), followed by the industry sector (23.3%), and agriculture (13.5%), reflecting similar trends observed in previous years (Statistical Office of the Republic of Serbia, 2023).

In the hospitality sector, adopting a strategic approach to SR can significantly enhance work conditions for employees. It ensures decent work standards for both local labor and migrants, provides health and safety at work, offers appropriate wages and recognitions for all employees, facilitates training and opportunities for personal development, promotes good work-life balance, among other initiatives (Camilleri, 2020). Research within hotel industry has demonstrated that ISR activities encompass hiring local individuals and members of ethnic minorities, offering internship and scholarship for students, supporting career development, demonstrating concern for retired employees (Kucukusta et al., 2013). Hotel employees are important stakeholders who directly influence customers' experiences, and their behavior, ultimately, impacts financial success (Su & Swanson, 2019). Implementing socially responsible practices in hotels can boost loyalty, morale, and retention rates of employees, which can finally result in higher productivity (Kucukusta et al., 2013). Moreover, prioritizing SR practices in hotels can improve reputation and boost revenues (Madanaguli et al., 2023). Research has indicated that the impact of a service company's SR initiatives on company performance can surpass that of manufacturing companies (Jeon et al., 2020).

2.2. Internal social responsibility

Numerous scholars have clearly differentiated between internal and external SR in their research (Al-bdour et al., 2010; Chan & Hasan, 2019; Damnjanović, 2023; Damnjanović, 2019; Damnjanović et al., 2022; George et al., 2020; Low & Ramayah, 2018; Mory et al., 2016; Shibeika & Abdalla, 2016; Stojanović-Aleksić et al., 2016; Story & Castanheira, 2019). The Green Paper 'Promoting European Framework for Corporate Social Responsibility', issued by European Commission in 2001, also emphasized the importance of distinguishing between internal and external dimensions of SR. External SR deals with issues concerning external stakeholders, while ISR focuses on employees.

Socially responsible activities that target external stakeholders (business partners and suppliers, customers, public authorities and NGOs representing local communities, environment) are categorized as part of external SR (European Commission, 2001). These initiatives often involve various aspects of corporate engagement with external entities and communities. On the other hand, ISR activities encompass issues directly related to employees, like investing in employees' development, healthy and safe work environment, managing change (European Commission, 2001).

ISR represents a company's orientation where employees are viewed as internal customers. Turker (2009) defines ISR as encompassing all socially responsible activities directed to employees that directly impact their physical and psychological working environment. These activities encompass aspects such as "health and well-being of employees, their training and participation in the business, equality of opportunities, work-family relationship" (Low & Ong, 2015, p. 263). Turker's (2009) explanation is widely accepted in recent research on ISR, including the present study. ISR initiatives encompass training and development, constant educational programs, ensuring workplace safety, managing diversity, providing daycare for children and ensuring compliance with ethical employment practices (Chan & Hasan, 2019; Story & Castanheira, 2019). Implementing ISR in the company shows that managers do responsible work in managing employees. That is crucial for attracting and retaining talented individuals, as it increases employees' job satisfaction and organizational commitment through improved working environment and positive internal relations. Sometimes companies may prioritize external socially responsible activities at the expense of internal initiatives. Employees, on the other hand, expect and demand to be treated equally to external stakeholders. When employees recognize a company's commitment to ISR, they tend to exhibit positive attitudes and behaviors towards the company. Establishing a strong relationship between employees and the company could be a key outcome of strategic use of ISR (Chan & Hasan, 2019; Damnjanović, 2019).

2.3. Organizational commitment

Since the 1970s, there has been an observed evolution in the definition of organizational commitment, but a simple definition would be "the individual's attachment to his or her company, which may affect personal intention to leave or stay" (Bouraoui et al., 2020, p. 3). Another definition states that "organizational commitment is the psychological attachment individuals feel for the company" (Low & Ong, 2015, p. 263). Meyer and Allen (1997) pointed out what was in common among most definitions, explaining organizational commitment as a psychological state that reflects the relationship between employees and the company. This state influences employees' decision to remain with the company. They explained organizational commitment through a three-component model, which includes affective, continuance and normative commitment (Meyer & Allen, 1997).

Affective commitment explains how an employee is emotionally attached to the company, how they identify with the company and how they are involved in the company (Meyer & Allen, 1997). An affectively committed employee desires to remain within the company because they see achieving the company's goals as the best possible way for achieving their own goals. When employees are emotionally committed to the company, it can foster employees' loyalty and motivate them to work harder in order to meet the company's goals (Nguyen & Tu, 2020). Affective commitment is the topic in the majority of research studies on SR (Im et al., 2016; Low & Ramayah, 2018; Mory et al., 2016). Empirical evidence suggests that affective commitment tends to be higher in socially responsible companies (Im et al., 2016).

The second component of organizational commitment, continuance commitment, reflects the employee's awareness that leaving the company would cause some costs (Meyer & Allen, 1997). Hence, the employee needs to remain in the company. Over time, employees invest significant time and efforts in building relationships with colleagues and achieving their position within the company. These are assets they would lose if they were to leave the company. Consequently, continuance commitment often arises from the acknowledgment of the personal expenses incurred when leaving the company.

The third component of organizational commitment, normative commitment, explains that the employee feels obligated to stay in the company because of the feelings of obligation towards the company (Meyer & Allen, 1997). They believe it is the right thing to do because they owe a debt of gratitude to the company. If employees benefit from the company, an obligation to demonstrate commitment arises, so that employee can repay for those benefits (Oh et al., 2021). Employees often develop normative commitment as a form of reciprocation for the support, opportunities and rewards provided by the company. Research suggests that affective commitment can influence normative commitment, because employees, who experience positive feelings towards the company, may also have a feeling that they are obligated to stay in the company (Mory et al., 2016).

Recent research indicates that the most powerful dimension of employees' commitment is affective commitment (Bouraoui et al., 2020). It has been identified as "the best predictor of performance compared to normative and continuance commitment" (George et al., 2020, p.4).

2.4. Hypotheses development

When employees acknowledge the company's engagement in socially responsible activities beyond profit maximization, they are more likely to exhibit higher levels of commitment to the company. It is expected that the stronger their belief in the relevance of SR is, the more pronounced the association between SR and organizational commitment will be (Turker, 2009). In the hospitality industry, organizational commitment significantly influences service quality (Youn et al., 2018). SR is often associated with ethical principles and organizational values such as warmth, community, morality. These values foster employees' affective commitment toward their company, leading to higher levels of affective commitment in socially responsible companies (Im et al., 2016). "Employees in socially responsible firms are more likely to be happy and proud of being a members of the reputable company, so they will identify themselves with the goals of the company and that is affective commitment to the company" (Kim et al., 2017, p. 28). Committed employees are more likely to invest additional effort in improving the company's performance, prompting companies to seek methods for strengthening organizational commitment.

There is insufficient research regarding the influence of SR on employees in the hotel industry. Studies conducted in hotels in China and South Korea revealed a positive relationship between perceptions about SR and organizational commitment (Wang et al., 2020; Youn et al., 2018). Similarly, research in hotels in the USA demonstrated a positive relationship between employees' perceptions of SR and affective commitment (Kim et al., 2021). Several studies in hotels in Asian countries also identified a positive relationship between employees' perceptions of SR and affective commitment (Fu et al., 2014; Kim et al., 2021; Kim et al., 2017; Kim et al., 2016; Wang et al., 2020).

Research in the service sector in developing countries has identified a positive relationship between ISR and organizational commitment (Ekawati & Prasetyo, 2016; Oh et al., 2021; Radwan, 2015; Shibeika & Abdalla, 2016; Thang & Fassin, 2017), and positive relationship between ISR and affective commitment (Al-bdour et al., 2010; Low et al., 2017; Nguyen & Tu, 2020; Shibeika & Abdalla, 2016; Story & Castanheira, 2019; Turker, 2009).

Employee-related SR had positive impact on organizational commitment in Korean hotels (Oh et al., 2021). ISR has positively influenced organizational commitment within Indonesia's hospitality industry (Ekawati & Prasetyo, 2016). Research in hotel industry in

Egypt showed that ISR is significantly associated with organizational commitment (Radwan, 2015). Low et al. (2017) found a positive relationship between ISR and affective commitment of the service sector employees in Malaysia. The relationship between ISR and normative and continuance commitment has been researched in only a few papers (Al-bdour et al., 2010; Mory et al., 2016; Shibeika & Abdalla, 2016; Thang & Fassin, 2017). Nguyen and Tu (2020) found a positive correlation between SR to employees and affective commitment, as well as normative commitment, among employees in food processing enterprises in Vietnam. Similarly, Thang and Fassin (2017) conducted research in Vietnam's service sector, demonstrating a positive relationship between ISR and all components of organizational commitment. In Germany, Mory et al. (2016) conducted research which revealed that ISR strongly influences affective commitment, but has a lesser impact on normative commitment. Analyzing the banking sector in Sudan, Shibeika and Abdalla (2016) found that ISR has a significant and positive relationship with all components of organizational commitment. Furthermore, a study in the banking sector in Jordan showed that ISR has a positive influence on normative commitment, but it does not have a significant impact on continuance commitment (Al-bdour et al., 2010). As such, these results indicate the relevance of employees' behavior and attitudes in the service sector. Service companies ought to allocate considerable resources towards SR initiatives to elicit favorable responses from their employees. Companies in the service sector could improve organizational commitment through conducting socially responsible activities which result in long-term strategic competitive advantage and improving the quality of life in the local community. While literature generally supports the existence of a positive relationship between SR and affective commitment, research in this area is scarce, particularly in developing countries.

Accordingly, we formulated three hypotheses.

H_1: ISR has a significant and positive influence on affective commitment in service companies.

H_2: ISR has a significant and positive influence on continuance commitment in service companies.

H_3: ISR has a significant and positive influence on normative commitment in service companies.

3. Methodology

An adapted questionnaire comprising three sections was used in order to collect the data. The first section of the questionnaire included questions about respondents' gender, age, working experience, education, position within the company and the size of the company. The next section featured the ISR scale, which was adapted from the works of Turker (2009), Akremi et al. (2018), and Stojanović-Aleksić et al. (2016) and comprised 8 items. Following this, organizational commitment was evaluated using an adapted questionnaire from Meyer and Allen's (1997) Organizational Commitment Scale, widely utilized in similar research contexts. This section consisted of 24 items, with 8 items each assessing affective, normative and continuance commitment. The items are given in Appendix 1. The survey utilized a five-point Likert-type scale, with response options in range from 'strongly agree' to 'strongly disagree' for all items. The data analysis was conducted using the SPSS program. Descriptive, correlation and regression analysis were performed. The reliability analysis was conducted using Cronbach's alpha coefficient.

The data were collected during October and November 2023. The questionnaires were distributed online via email, with one thousand questionnaires sent out, resulting in 100 responses. The respondents were employees from Serbian hotels and restaurants. Male employees accounted for 30% of the sample, while women comprised 70%. The majority of employees were 20-40 years old (62%). In terms of educational attainment, 31% held a bachelor's degree while 33% held a master's degree. Regarding work experience, one-third of employees reported working less than five years, while 50% worked more than ten years in hotels and restaurants. Managers accounted for 55% of the respondents. In terms of company size, 88% of employees worked in SMEs, while 22% of employees worked in larger companies.

4. Results and discussion

The Cronbach's alpha coefficient was used to assess the reliability of the ISR scale and Organizational commitment scale. The Cronbach' alpha coefficient for the ISR scale was 0.907, indicating high internal consistency (exceeding the recommended limit of 0.7). Similarly, Cronbach' alpha coefficient for the Affective commitment sub-scale was 0.878. However, the initial Cronbach' alpha coefficients for the Normative and Continuance commitment sub-scale were 0.658 and 0.635, respectively. To improve the reliability of these sub-scales, certain items were removed based on corrected item-total correlations below 0.3. When two items were removed, the Cronbach' alpha coefficients for the Normative commitment sub-scale increased to 0.777. Similarly, after removing three items, the Cronbach' alpha coefficient for the Continuance commitment sub-scale was 0.7. This analysis has established the satisfactory reliability and internal consistency of the scales utilized within the sample for this study.

The assumption of normal distribution for affective commitment was not met, as indicated by Kolmogorov-Smirnov test, 0.114, $p=0.003$. The distribution of values skewed right from the mean (-0.721) and exhibited higher kurtosis than normal (0.047). However, upon visual inspection of histograms and Normal Q-Q plots, the distribution appeared relatively normal with no apparent outliers. For continuance commitment, the Kolmogorov-Smirnov test yielded a statistic of 0.08, with $p=0.11>0.05$, indicating a normal distribution. Similarly, the Kolmogorov-Smirnov test for normative commitment resulted in a statistic of 0.07, with a $p=0.2>0.05$, confirming the assumption of normal distribution for these variables.

Descriptive analysis was conducted for all variables, including ISR and affective, normative and continuance commitment. These findings are showcased in Table 1.

Table 1: The findings of descriptive analysis

Variable	Mean	Std. Deviation	Variance
ISR	3.821	0.956	0.913
Affective commitment	3.661	0.971	0.943
Normative commitment	3.002	0.822	0.675
Continuance commitment	3.414	0.823	0.675

Source: Authors' research

The findings of the descriptive analysis indicate that companies are perceived to have high ISR by their employees, as evidenced by the mean value of 3.821. In terms of organizational commitment, affective commitment exhibited the highest mean value ($M=3.661$) compared to normative ($M=3.002$) and continuance commitment ($M=3.414$).

The relationship between the perceptions about ISR and affective, continuance and normative commitment was assessed using Pearson correlation coefficient. The preliminary analysis confirmed that the assumptions concerning normality, linearity and homogeneity of variance were fulfilled. In Table 2, the correlation analysis findings are showcased.

Table 2: The findings of correlation analysis between employees' perceptions about ISR and affective, continuance and normative commitment

Variable	**Affective commitment**	**Continuance commitment**	**Normative commitment**
ISR	0.702**	0.426**	0.303**

** Correlation is significant at the 0.01 level (2-tailed).
Source: Authors' research

A strong positive correlation, with a coefficient of 0.702 and a significance level of 0.01 based on a sample size of 100, was observed between employees' perceptions of ISR and affective commitment. This suggests that higher levels of perceived SR within the company are associated with increased levels of affective commitment among employees. Additionally, a moderate correlation, with coefficients of 0.426 and 0.303 respectively, based on a sample size of 100 and a significance level of 0.01, was found between ISR and continuance commitment, as well as between ISR and normative commitment.

The simple linear regression analysis was conducted to explore the influence of ISR variability in predicting affective, normative and continuance commitment among employees, respectively.

The simple linear regression analysis was conducted to explore the influence of ISR variability in predicting affective commitment. The regression analysis fulfilled the assumptions of linearity, normality, and homoscedasticity. Additionally, the absence of extreme outliers and a Durbin-Watson statistic of 1.733 suggest that the indication of the independence of observations was satisfied. In Table 3, the findings of the simple regression analysis for the impact of ISR and affective commitment are displayed.

Table 3: Impact of ISR on affective commitment – Results of simple regression analysis

Model	**Unstandardized coefficients**		**Standardized coefficients**	**t**	**Sig.**	**95% confidence interval for B**	
	B	**Std. Error**	**Beta**			**Lower bound**	**Upper bound**
(Constant)	0.937	0.288		3.253	0.002	0.365	1.508
ISR	0.713	0.073	0.702	9.748	0.000	0.568	0.858

Source: Authors' research

The coefficient of determination, R^2, was determined to be 0.492, suggesting that ISR explains 49.2% of the variability in affective commitment (AC). Adjusted R^2 was 0.487, giving a similar result as R^2. The statistical significance of the model was confirmed by an F-statistic, F (1, 98)=95.024, p=0.000. The regression model is expressed as: AC=0.937+0.713*ISR. This shows that the affective commitment is expected to increase by 0.713 units for every one-unit increase in perceptions about ISR. The 95% confidence interval for the coefficient of ISR is from 0.568 to 0.858, indicating the range within which we are 95% confident the true population coefficient lies.

The simple linear regression analysis was conducted to explore the influence of ISR variability in predicting continuance commitment. The regression analysis fulfilled the assumptions of linearity, normality, and homoscedasticity. Additionally, the absence of extreme outliers and a Durbin-Watson statistic of 1.808 suggest that the indication of the independence of observations was satisfied. The results of the simple linear regression analysis for ISR and continuance commitment are presented in Table 4.

Table 4: Impact of ISR on continuance commitment – Results of simple regression analysis

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	95% confidence interval for B	
	B	Std. error	Beta			Lower bound	Upper bound
(Constant)	2.014	0.309		6.510	0.000	1.400	2.628
ISR	0.366	0.079	0.426	4.664	0.000	0.210	0.522

Source: Authors' research

The R^2 value was calculated as 0.182, which suggests that 18.2% of the total variance in continuance commitment (CC) can be explained by ISR. Adjusted R^2 was 0.173, which is quite similar to R^2. The statistical significance of the model was confirmed by an F-statistic, F (1, 98)=21.749, p=0.000. The regression model is given as: CC=2.014+0.366*ISR. This means that for each one-unit increase in perceptions about ISR, continuance commitment is expected to increase by 0.366 units. The 95% confidence interval for the coefficient of ISR is 0.210 to 0.522, which implies that we are 95% confident that the true effect of ISR on continuance commitment falls between 0.210 and 0.522.

The simple linear regression analysis was conducted to explore the influence of ISR variability in predicting normative commitment. The regression analysis fulfilled the assumptions of linearity, normality, and homoscedasticity. Additionally, the absence of extreme outliers and a Durbin-Watson statistic of 1.663 suggest that the indication of the independence of observations was satisfied. The results of the simple linear regression analysis for ISR and normative commitment are presented in Table 5.

Table 5: Impact of ISR on normative commitment – Results of simple regression analysis

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	95% confidence interval for B	
	B	Std. error	Beta			Lower bound	Upper bound
(Constant)	2.007	0.326		6.157	0.000	1.360	2.654
ISR	0.260	0.083	0.303	3.143	0.002	0.096	0.425

Source: Authors' research

The R^2 value was calculated as 0.092, which suggests that ISR accounts for 9.2% of the total variance in normative commitment (NC). Adjusted R^2 was 0.082, giving a similar result as R^2. The statistical significance of the model was confirmed by an F-statistic, F (1, 98)=9.88, p=0.002. The regression model is given as: NC=2.007+0.26*ISR. This means that for each one-unit increase in perceptions about ISR, normative commitment is expected to increase by 0.26 units. The 95% confidence interval for the coefficient of ISR is 0.096 to 0.425, implying that we are 95% confident that the true effect of ISR on normative commitment falls between 0.096 and 0.425.

The results of the analysis support our first hypothesis, indicating a meaningful and positive effect of ISR on employees' affective commitment. Overall, the findings indicate a strong and statistically meaningful association between the perceptions of ISR and affective commitment, with ISR explaining almost half (49.2%) of the variance in affective commitment in the given model. These findings underscore the relevance of promoting an environment of ISR within the organization, as it enhances affective commitment. While research in the service sector has been limited, findings from various studies align with the results of our research. Nguyen and Tu (2020) found that ISR positively correlates with affective commitment of employees in food processing enterprises in Vietnam. Low et al. (2017) found a positive relationship between ISR and affective commitment in the service sector in Malaysia. Thang and Fassin (2017) found that ISR positively affects affective commitment in the service companies in Vietnam. Turker (2009) found a positive relationship between ISR and affective commitment (62% of the respondents were from the service sector) in Turkey. Shibeika and Abdalla (2016) conducted research in the banking sector in Sudan and found that ISR positively impacts affective commitment. The research in the banking sector in Jordan of Al-bdour et al. (2010) demonstrated a positive relationship between ISR and affective commitment. A positive relationship between ISR and affective commitment was also found in several research studies in other industry sectors (George et al., 2020; Low & Ong, 2015; Mory et al., 2016; Story & Castanheira, 2019). These findings underscore the significance of ISR initiatives in enhancing affective commitment. By prioritizing employees' well-being and providing fair treatment, organizations can foster stronger emotional attachment and commitment among their workforce.

The findings from our research confirm the second hypothesis, indicating a meaningful and positive effect of ISR on the employee's continuance commitment. It is important to acknowledge that the findings from other studies have been mixed. While research such as those conducted by Thang and Fassin (2017) in Vietnamese service companies and Shibeika and Abdalla (2016) in Sudan's banking sector, has revealed substantial and positive associations between ISR and continuance commitment, others, like the study by Al-bdour et al. (2010), have reported contrasting results. Therefore, further research is necessary to enhance our comprehension of the association between ISR and continuance commitment.

Our research findings support the third hypothesis, indicating a meaningful and positive effect of ISR on normative commitment among employees. As a reminder, normative commitment results from a feeling of obligation towards the company. These results emphasize the importance of cultivating ISR within company, in order to enhance normative commitment and loyalty among employees. Similar studies have found supportive results to our study. Nguyen and Tu (2020) found a positive correlation between SR towards employees and normative commitment among employees in food processing enterprises in Vietnam. Thang and Fassin (2017) found substantial and positive associations between ISR and normative commitment in Vietnamese service firms. Shibeika and Abdalla (2016) conducted research within Sudan's banking sector and identified substantial and positive associations between ISR and normative commitment. The research of Al-bdour et al. (2010) showed a significant and positive relationship between ISR and normative commitment.

In general, our research findings across the three parts of organizational commitment, demonstrate a positive and meaningful association between ISR and organizational commitment. These findings align with similar research conducted in the service sector of developing countries (Ekawati & Prasetyo, 2016; Oh et al., 2021; Radwan, 2015; Shibeika & Abdalla, 2016; Thang & Fassin, 2017).

5. Conclusion

The research findings demonstrate a positive effect of ISR on affective commitment, normative commitment, and continuance commitment. These results carry significant practical and theoretical implications.

First, the results indicate that companies in the service sector should prioritize ISR, focusing on areas such as career development, promotion opportunities, training and work-life balance. These needs correspond to higher-order needs in Maslow's hierarchy and contribute to increased employee commitment. Employees bring certain needs, skills and expectations to a company. They seek environments where they can effectively apply their skills and fulfill their needs. Thus, companies offering fair wages, safe working conditions, family support, and flexible working hours tend to foster higher levels of commitment among employees. Therefore, companies and managers should pay special attention to formulating SR strategy, especially those related to ISR, to enhance employee commitment and organizational performance.

Moreover, these findings underscore the relevance of incorporating the concept of ISR into companies' employment and human resources management strategies, especially for those aiming to invest in socially responsible activities directed to employees. The significance of ISR is emphasized in the service sector, especially in hospitality, where positive perceptions of SR can enhance the attractiveness of companies for both existing and potential employees. Seeking feedback from employees regarding the implementation and effectiveness of socially responsible activities can be useful in refining and improving those initiatives. ISR activities can serve as powerful tools for employees' retention within the company when they are well conducted and effectively communicated.

As for the theoretical implications of this study, in the light of the fact that the research explores the association between ISR and employee commitment in hotels and restaurants within the context of developing countries, the results contribute new insights to the existing literature. Furthermore, the study's emphasis on employees represents a significant contribution, as much of the existing research in the hospitality industry tends to focus on environment, customers, or financial performance.

Despite the contributions outlined above, several limitations of this research should be acknowledged. Firstly, the sample size represents a significant constraint. More reliable results would be attained with a larger sample size. Additionally, because the study solely concentrated on the employees within the hospitality sector, comparisons with some other sectors were not possible.

Future research should aim to include other industry sectors and a larger pool of respondents to increase the generalizability of the results. Moreover, the influence of external SR on employees' behavior could be investigated, and some other dimensions of employees' attitudes or behaviors could be included in the analysis, beside organizational commitment.

Conflict of interest

The authors declare no conflict of interest.

References

1. Akremi, A. E., Gond, J. P., Swaen, V., De Roeck, K., & Igalens, J. (2018). How do employees perceive corporate social responsibility? Development and validation of a multidimensional corporate stakeholder responsibility scale. *Journal of Management*, *44*(2), 619–657. https://doi.org/10.1177/014920631556
2. Al-bdour, A. A., Nasreddin, E., & Lin, S. K. (2010). The relationship between internal corporate social responsibility and organizational commitment within the banking sector in Jordan. *International Journal of Economics and Management Engineering*, *4*(7), 1842–1861.
3. Bogan, E., & Dedeoglu, B. B. (2020). Hotel employees' corporate social responsibility perception and organizational citizenship behavior: Perceived external prestige and pride

in organization as serial mediators. *Corporate Social Responsibility and Environmental Management*, 1–20. https://doi.org/10.1002/csr.1996

4. Bouraoui, K., Bensemmane, S., & Ohana, M. (2020). Corporate social responsibility and employees' affective commitment: A moderated mediation study. *Sustainability*, *12*(14), 5833. https://doi.org/10.3390/su12145833
5. Camilleri, M. A. (2020). Strategic corporate social responsibility in tourism and hospitality. *Sustainable Development*, *28*, 504–506. https://doi.org/10.1002/sd.2059
6. Chan, T. J., & Hasan, N. A. M. (2019). Internal corporate social responsibility practices and employees' job satisfaction in a Malaysian banking company. *Journal Pengurusan, 55*, 97–109. https://doi.org/10.17576/pengurusan-2019-55-08
7. Damnjanović, M. (2023). Relation between internal social responsibility and job satisfaction in Serbian service companies. In: I. G. Arraiano et al. (Eds.), *Corporate Social Responsibility in a Dynamic Global Environment* (pp. 247–259). CSR, Sustainability, Ethics & Governance, Springer, Cham. https://doi.org/10.1007/978-3-031-24647-0_13
8. Damnjanović, M., Zlatanović, D., & Leković, B. (2022). Relationship between external corporate social responsibility and affective commitment in service companies in Serbia. In G. Radosavljević and K. Borisavljević (Eds.), *Contemporary Issues in Economics, Business and Management EBM 2022* (pp. 39–48). Kragujevac, Serbia: Faculty of Economics University of Kragujevac.
9. Damnjanović, M. (2019). Investing in employees in Serbian companies – Internal dimension of CSR. In M. Milković et al. (Eds.), *Proceedings of the ENTRENOVA – ENTerprise REsearch InNOVAtion Conference, 5(1),* (pp. 441–448). Zagreb, Croatia: IRENET.
10. Ekawati, R., & Prasetyo, A. (2017). The effects of internal corporate social responsibility on employee's performance through organizational commitment in hospitality industry. *Proceedings of the International Conference on Tourism, Gastronomy, and Tourist Destination (ICTGTD 2016): Advances in Economics, Business and Management Research, 28,* (pp. 188–191). http://dx.doi.org/10.2991/ictgtd-16.2017.36
11. Ettinger, A., Grabner-Kräuter, S., & Terlutter, R. (2018). Online CSR communication in the hotel industry: Evidence from small hotels. *International Journal of Hospitality Management*, *68*, 94–104. https://doi.org/10.1016/j.ijhm.2017.09.002
12. European Commission. (2001). *Green paper: Promoting a European framework for corporate social responsibility*. Retrieved January 5, 2024 from https://ec.europa.eu/commission/presscorner/detail/en/DOC_01_9
13. Fu, H., Ye, B. H., & Law, R. (2014). You do well and I do well? The behavioral consequences of corporate social responsibility. *International Journal of Hospitality Management*, *40*, 62–70. https://doi.org/10.1016/j.ijhm.2014.03.004
14. George, N. A., Aboobaker, N., & Edward, M. (2020). Corporate social responsibility, organizational trust and commitment: A moderated mediation model. *Personnel Review*, *50*(4), 1093–1111. https://doi.org/10.1108/PR-03-2020-0144
15. Guzzo, R. F., Abbott, J., & Madera, J. M. (2019). A micro-level view of CSR: A hospitality management systematic literature review. *Cornell Hospitality Quarterly*. https://doi.org/10.1177/1938965519892907
16. Im, S., Chung, Y. W., & Yang, J. Y. (2016). Employees' participation in CSR and organizational outcomes. *Sustainability*, *9*(28), 1–14. https://doi.org/10.3390/su9010028
17. Jeon, M. M., Lee, S., & Jeong, M. (2020). Perceived corporate social responsibility and customers' behaviors in the ridesharing service industry. *International Journal of Hospitality Management*, *84*, 10234. https://doi.org/10.1016/j.ijhm.2019.102341

18. Kim, H. L., Rhou, Y., Uysal, M., & Kwon, N. (2017). An examination of the links between corporate social responsibility (CSR) and its internal consequences. *International Journal of Hospitality Management*, *61*, 26–34. https://doi.org/10.1016/j.ijhm.2016.10.011
19. Kim, J., Milliman, J. F., & Lucas, A. F. (2021). Effects o CSR on affective organizational commitment via organizational justice and organization-based self-esteem. *International Journal of Hospitality Management*, *92*, 102691. https://doi.org/10.1016/j.ijhm.2020.102691
20. Kim, J. S., Song, H. J., & Lee, C. K. (2016). Effects of corporate social responsibility and internal marketing on organizational commitment and turnover intentions. *International Journal of Hospitality Management*, *55*, 25–32. https://doi.org/10.1016/j.ijhm.2016.02.007
21. Kucukusta, D., Mak, A., & Chan, X. (2013). Corporate social responsibility practices in four and five-star hotels: Perspectives from Hong Kong visitors. *International Journal of Hospitality Management*, *34*, 19–30. https://doi.org/10.1016/j.ijhm.2013.01.010
22. Low, M. P., & Ong, S. F. (2015). The manifestation of internal corporate social responsibility on employee’s behaviour in small medium sized enterprises. *Journal of Social Science Studies*, *2*(2), 259–277. http://dx.doi.org/10.5296/jsss.v2i2.7659
23. Low, M. P., & Ramayah, T. (2018). Adopting consistent PLS in assessing the influence of internal corporate social responsibility among small medium sized enterprises employees. *Management Research Journal*, *8*(1), 46–62. https://doi.org/10.37134/mrj.vol7.5.2018
24. Low, M. P., Ong, S. F., & Tan, P. M. (2017). Would internal corporate social responsibility make a difference in professional service industruy employees’ turnover intentions? A two-stage approach using PLS-SEM. *Global Business and Management Research: An International Journal*, *9*(1), 24–41.
25. Madanaguli, A. T., Dhir, A., Kaur, P., Mishra, S., & Srivastava, S. (2023). A systematic literature review on corporate social responsibility (CSR) and hotels: Past achievements and future promises in the hospitality sector. *Scandinavian Journal of Hospitality and Tourism*, *23*(2-3), 141–175. http://dx.doi.org/10.1080/15022250.2023.2221214
26. Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory. research. and application*. SAGE Publication Inc. https://doi.org/10.4135/9781452231556
27. Milovanović, V. (2014). Društvena odgovornost hotela u Srbiji kao element menadžmenta ukupnog kvaliteta [Corporate social responsibility of hotels in Serbia as an element of total quality management]. *Ekonomija – teorija i* praksa, *7*(2), 61–73. https://doi.org/10.5937/etp1402061M
28. Mory, L., Wirtz, B. W., & Gottel, V. (2016). Factors of internal corporate social responsibility and the effect on organizational commitment. *The International Journal of Human Resource Management*, *27*(13), 1393–1425. https://doi.org/10.1080/09585192.2015.1072103
29. Nguyen, T. H., & Tu, V. B. (2020). Social responsibility, organizational commitment, and organizational performance: Food processing enterprises in the Mekong River Delta. *The Journal of Asian Finance, Economics and Business*, *7*(2), 309–316. https://doi.org/10.13106/jafeb.2020.vol7.no2.309
30. Oh, K.-S., Han, J. R., & Park, S. R. (2021). The influence of hotel employees’ perception of CSR on organizational commitment: The moderating role of job level. *Sustainability*, *13*(22), 12625. https://doi.org/10.3390/su132212625
31. Privredna komora Srbije [Chamber of Commerce and Industry of Serbia]. (2023). *Osnovni ekonomski pokazatelji privrede Srbije za period 2007-2022 [Basic economic industry indicators of Republic of Serbia for 2007-2022]*. Retrieved January 5, 2024 from https://pks.rs/strana/makroekonomski-indikatori

32. Radwan, H. R. I. (2015). The impact of corporate social responsibility on employees in the hotel sector. *International Journal of Tourism & Hospitality Reviews*, *2*(1), 85–96. https://doi.org/10.18510/ijthr.2015.216
33. Republički zavod za statistiku Republike Srbije [Statistical Office of the Republic of Serbia]. (2023). *Trendovi, III kvartal 2023 [Trends, III Quarter 2023]*. Retrieved January 5, 2024 from https://publikacije.stat.gov.rs/G2023/Pdf/G20238004.pdf
34. Serra-Cantallops, A., Peña-Miranda, D. D., Ramón-Cardona, J., & Martorell-Cunill, O. (2017). Progress in research on CSR and the hotel industry (2006-2015). *Cornell Hospitality Quarterly*, *59*(1), 15–38. https://doi.org/10.1177/1938965517719267
35. Shibeika, A. M., & Abdalla, Y. A. (2016). Investigation of the organizational commitment towards internal corporate social responsibility practices in Sudanese banking sector. *Journal of Global Business and Social Entrepreneurship (GBSE)*, *2*(1), 88–97.
36. Stojanović-Aleksić, V., Erić-Nielsen, J., & Bošković, A. (2016). Društvena odgovornost u bankarskom sektoru: Iskustva iz Srbije [Social responsibility in the banking sector: Experience from Serbia]. *Bankarstvo*, *45*(2), 34–55. https://doi.org/10.5937/bankarstvo1602034S
37. Story, J. S. P., & Castanheira, F. (2019). Corporate social responsibility and employee performance: Mediation role of job satisfaction and affective commitment. *Corporate Social Responsibility and Environmental Management*, *6*, 1361–1370. https://doi.org/10.1002/csr.1752
38. Su, L., & Swanson, S. (2019). Perceived corporate social responsibility's impact on the well-being and supportive green behaviors of hotel employees: The mediating role of the employee-corporate relationship. *Tourism Management*, *72*, 437–450. https://doi.org/10.1016/j.tourman.2019.01.009
39. Thang, N. N., & Fassin, Y. (2017). The impact of internal corporate social responsibility on organizational commitment: Evidence from Vietnamese service firms. *Journal of Asia-Pacific Business*, *18*(2), 100–116. https://doi.org/10.1080/10599231.2017.1309617
40. Turker, D. (2009). How CSR influence organizational commitment. *Journal of Business Ethics*, *89*, 189–204. http://dx.doi.org/10.1007/s10551-008-9993-8
41. Wang, C., Hu, R., & Zhang, T. (2020). Corporate social responsibility in international hotel chains and its effects on local employees: Scale development and empirical testing in China. *International Journal of Hospitality Management*, *90*, 102598. https://doi.org/10.1016/j.ijhm.2020.102598
42. Youn, H., Lee, K., & Lee., S. (2018). Effects of corporate social responsibility on employees in the casino industry. *Tourism Management*, *68*, 328–335. https://doi.org/10.1016/j.tourman.2018.03.018

Appendix 1

Items for variable measurement

Internal social responsibility scale 1. Employees are encouraged to enhance their skills and manage their careers. 2. The company prioritizes maintaining a healthy and safe working environment. 3. Employees are encouraged to engage in volunteer activities. 4. Employees' needs and desires are the primary concern of our management. 5. A good work-life balance is provided through the flexible polices of our company. 6. Management usually makes fair decisions regarding employees. 7. Employees are supported when they seek to improve their education. 8. All kinds of discrimination (based on age, gender, disability, ethnicity, or religion) during recruitment and promotion are avoided in our company.
Affective commitment scale 1. Choosing to remain with this company until the end of my career would always be my first preference. 2. I consider every problem the company faces as my own. 3. I willingly engage in discussions about my company with people who do not work in it. 4. I do not have strong emotions toward my company. 5. I would not say that "family" is the right word for my relationship with my company. 6. Working in my company is very meaningful for me personally. 7. A strong sense of belonging is not something that I experience with my company. 8. It could be easy for me to form an attachment to some other company, similar to the one I have here.
Normative commitment scale 1. I believe it wouldn't be fair to leave the company even if I received a better offer from another company. 2. I believe that people change jobs too frequently. 3. Employee loyalty should not always be mandatory. 4. Changing companies too often is not unethical in my opinion. 5. The importance of loyalty is the main reason why I remain in this company; I feel morally obligated to stay. 6. Even with a better job offer in some other company, I could not leave because it would not be the right thing to do. 7. Loyalty to the company is very important in my personal value system. 8. Being a "company man" or "company women" is no longer considered a valued characteristic.
Continuance commitment scale 1. If I were to quit now, it would significantly disrupt my life. 2. Despite any desire to do so, it would prove quite challenging for me to depart from my company at this time. 3. I do not fear the consequences if I leave my job, even if I do not have a new job waiting for me. 4. It would incur too many expenses if I quit my job soon. 5. At the moment, I feel that staying at the company is a mix of desire and need. 6. I think that there are not too many options for me if I leave my company. 7. The downside is that there are not many options for me if I quit my job. 8. I am staying with this company because I have a pretty good compensation package. Leaving would mean losing a lot and I do not think another company could offer conditions like here.

Original Scientific Paper

UDC: 316.722:338.46
005.6:640.432
DOI: 10.5937/menhottur2400009R

Received: 12 April 2024
Revised: 13 May 2024
Accepted: 3 June 2024
Published online: 7 June 2024

How culture shapes the restaurant experience: A study of Hofstede's dimensions and service quality

Tijana Radojević[1*], Nemanja Stanišić[2], Nenad Stanić[3]

[1] Singidunum University, Faculty of Tourism and Hospitality Management, Belgrade, Serbia
[2] Singidunum University, Faculty of Business Economics, Belgrade, Serbia
[3] Singidunum University, Faculty of Computer Science, Belgrade, Serbia

Abstract

Purpose – This study aims to determine the impact of cultural traits on restaurant service quality and infer implications for the hospitality sector. Specifically, it investigates which of Hofstede's cultural dimensions correlate with superior service. **Methodology –** The research analyzes 35,000 customer reviews from restaurants in 80 capitals worldwide. It employs a multivariate multilevel model to explore the effects of cultural dimensions on service ratings, complemented by qualitative evidence. **Findings –** The results reveal that positive customer service evaluations are significantly linked to low power distance, high uncertainty avoidance, and low indulgence (restraint). Additionally, sector-specific cultural traits such as collectivism for hotels and uncertainty avoidance for restaurants are found to be crucial. **Implications –** This study provides both theoretical and practical insights into the cultural influences on hospitality service quality. It offers valuable guidance for leveraging these insights in staff recruitment and training, ultimately enhancing service delivery and business performance in the hospitality industry. By understanding and integrating cultural dimensions, hospitality businesses can improve their service quality and customer satisfaction.

Keywords: restaurant services, hotel services, hospitality, culture, Hofstede, indulgence-restraint
JEL classification: L83, M12, Z1, Z13

Kako kultura oblikuje iskustvo gostiju u restoranu: Analiza Hofštedeovih dimenzija i kvaliteta usluge

Sažetak

Svrha – Ova studija ima za cilj da utvrdi uticaj kulturnih karakteristika na kvalitet usluge u restoranima i da izvuče zaključke za sektor ugostiteljstva. Konkretno, istražuje koje Hofštedeove kulturne dimenzije koreliraju sa vrhunskom uslugom. **Metodologija –** Istraživanje analizira 35.000 recenzija kupaca iz restorana u 80 glavnih gradova širom sveta. Koristi se multivarijantni multilevel model za istraživanje efekata dimenzija kulture na ocene usluge, dopunjeno kvalitativnim dokazima. **Rezultati –** Rezultati pokazuju da su pozitivne

* Corresponding author: tradojevic@singidunum.ac.rs

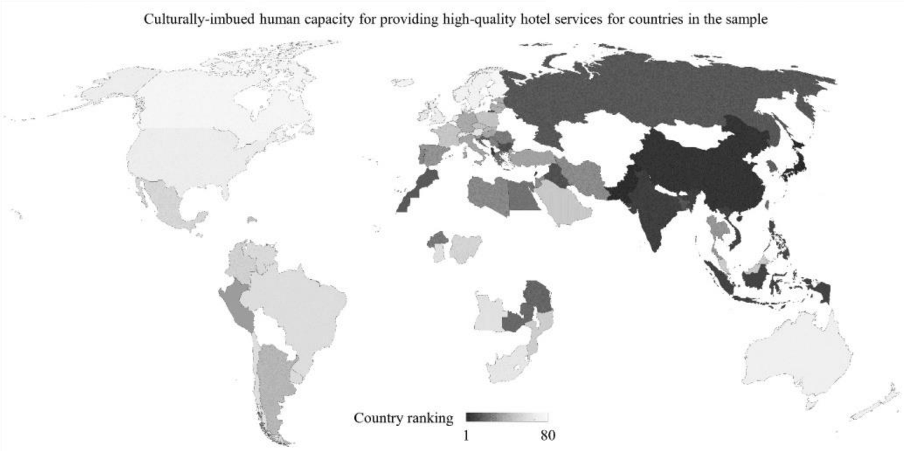
ocene usluga kupaca značajno povezane sa niskom distancom moći, visokim izbegavanjem neizvesnosti i niskom sklonosti ka uživanju (suzdržanost). Pored toga, specifične kulturne karakteristike sektora, kao što su kolektivizam za hotele i izbegavanje neizvesnosti za restorane, pokazale su se kao ključne. **Implikacije –** Ova studija pruža teorijske i praktične uvide u kulturne uticaje na kvalitet usluge u ugostiteljstvu. Nudi dragocene smernice za korišćenje ovih uvida u regrutaciji i obuci osoblja, što na kraju poboljšava pružanje usluge i poslovni učinak u industriji ugostiteljstva. Razumevanjem i integracijom kulturnih dimenzija, ugostiteljski objekti mogu unaprediti kvalitet svojih usluga i zadovoljstvo kupaca.

Ključne reči: restoraterske usluge, hotelske usluge, ugostiteljstvo, kultura, Hofstede, uživanje-suzdržanost
JEL klasifikacija: L83, M12, Z1, Z13

1. Introduction

In the hospitality industry, particularly in the food and beverage sector, it is of uttermost importance to understand the influence of culture and its diverse layers on service quality. The research conducted by Radojevic et al. (2019) showed a positive correlation between high-quality hotel services and some cultural dimensions such as collectivism, restraint, and low power distance. Based on the results obtained from the research, Figure 1 emphasizes the relevance of these dimensions through a visual representation of the culturally imbued capacity for providing high-quality hotel services.

Figure 1: Visual summary of the culturally imbued capacity for providing high-quality hotel services, as implied by the results of the model presented by Radojevic et al. (2019).



Source: Authors' research

Regarding hospitality services, Scandinavian and Anglo-Saxon nations tend to rank lower compared to other fields, such as education and innovation, where they excel, which indicates that cultural dimensions affecting service quality may be specific to the hospitality sector. Furthermore, given the similarities between the hotel and restaurant industries, there is a reasonable assumption that it is worth examining the impact of the aforementioned cultural dimensions on the restaurant industry.

In this study, we will focus on the restaurant sector and extend the previous findings by investigating the impact of these cultural dimensions on customer service quality. The research aims to explore the effects of Hofstede's cultural dimensions on restaurant service quality by analyzing a corpus of 35,000 customer reviews assessing 33,351 restaurants in 80 capitals. The methodology used in the research is similar to the one conducted by Radojevic et al., thus providing result comparability and addressing a gap in the literature that contains studies predominantly investigating hotel services. Namely, no study has been conducted on the effects of restaurant workers' cultural backgrounds on perceived service quality while controlling for guests' cultural characteristics and their interactions. Furthermore, no research has used an extensive dataset and a sophisticated model validated in earlier studies. Hence, due to the lack of research findings, there are limitations to our understanding of how workers' cultural backgrounds affect the perceived quality of restaurant services.

The study hypothesizes that cultural dimensions such as low power distance, high uncertainty avoidance, and low indulgence significantly improve customers' evaluations of services in restaurants. We posit this hypothesis based on the parallels between hotel and restaurant services. This study provides restaurant managers with insightful and actionable information on how to improve service quality by incorporating culturally informed practices, thus offering a foundation for practical applications in recruitment and training strategies in the hospitality sector.

2. Literature review

The main concepts structuring the theoretical framework of this study include customer satisfaction and service quality. Firstly, the construct "customer satisfaction" can be defined as "a customer's subjective reported evaluation of the extent to which products or services purchased help them satisfy their needs, interacted with their assessment of whether the time and the money spent for purchase and consumption could have been used better (i.e., to satisfy the same or other needs)" (Radojevic & Stanisic, 2022). Secondly, the definition also explains the construct "service quality" as "the extent to which products or services purchased help customers satisfy their specific needs." If applied to the context of restaurant services, this definition supports the perception of restaurant guest satisfaction as a subjective evaluation of the restaurant service quality, which includes their opinion on whether the service met their needs and is a good value for the money spent.

The abovementioned definition emphasizes the interplay between customer satisfaction, their specific needs and opportunity costs on the one side, and the qualities of the restaurant service providers on the other. Provided both dimensions are in accordance, a customer will have a positive dining experience that can result in high levels of reported customer satisfaction and a positive feedback loop between customer satisfaction and the restaurant's financial performance (Chen & Law, 2016; Zhang et al., 2010). Conversely, the discrepancy between the two dimensions yields an unfavorable perception of service quality, leading to dissatisfaction that can result in negative evaluation that can be worsened further if spread through word of mouth or via social platforms, thus harming the restaurant's reputation and reducing its revenues.

Another relevant factor influencing customer satisfaction includes customers' preferences and opportunity costs. Based on customers' needs and preferences, Yüksel and Yüksel (2003) identified five distinct clusters of restaurant customers: value seekers, service seekers, choice-of-food seekers, atmosphere seekers, and healthy food seekers. When evaluating all aspects of their dining experience, customers, even aware of all of them, still prioritize those that are more relevant according to their preferences and needs, and this distinction gives way to forming these clusters. To ensure customer satisfaction, restaurant managers should acknowledge these clusters and aim to attract those with preferences their restaurants can best meet.

The hospitality industry has recognized customer perception of service quality as an unavoidable factor, and empirical findings have proven its relevance. For instance, the study by Yüksel and Yüksel (2003) provided findings stating that service quality is the most significant aspect of the dining experience. Service quality explained 34.2% of the total variation in customer evaluations; on the other side, product quality, menu diversity, hygiene, convenience and location, noise, service speed, price and value, facilities, and atmosphere combined explained an additional 30.2%. The fundamental service quality indicators include attentive and competent staff, willingness to help, staff knowledge, and friendly interactions. Hence, the overall customer dining experience heavily depends on establishing a good rapport and interactions between customers and staff.

The quality of these interactions can significantly be affected by the cultural characteristics of both customers and service providers, influencing perceived restaurant service quality. Culture and its multiple layers play an important role in shaping restaurant customers' needs and preferences, a principle suggested by Kotler and Keller (2009) and verified in the hospitality industry (Huang & Crotts, 2019; Kozak, 2001) and the restaurant industry (Djekic et al., 2016). Surveying customers from Belgrade, Manchester, Thessaloniki, and Porto, Djekic et al. (2016) found that customers have meaningfully different expectations and preferences and consequently value and assess the same dining service differently.

One of the factors shaping service delivery encompasses the cultural characteristics of restaurant staff, primarily waiters/waitresses and managers, manifested mainly through social interaction. In the hospitality industry, the Hofstede Model is used to explain the influence of cultural dimensions on the interactions between guests and staff (Koc, 2020; Koc et al., 2017). Empirical research by Radojevic et al. (2019) provided evidence of a correlation between the cultural characteristics of the local labor force and the quality of service they provide. The research findings show significantly better evaluation scores for provided services in countries characterized by high collectivism, low indulgence, and low power distance. The authors ranked 80 countries based on their culturally imbued capacity for delivering high-quality hotel services, with Asian countries topping the list, followed by Eastern Europe, Sub-Saharan Africa, Mediterranean Europe, and Latin America; conversely, modern Western cultures ranked lower. These findings suggest that cultural traits rooted in the history of hospitality significantly impact service quality. The research conclusions also comply with Baum's (2006) analysis of vocational mobility in the hospitality sector throughout history - the findings show that during the 19th and 20th centuries, southern Europeans (ranked relatively high in the cited study) participated in developing hospitality sector in industrialized Europe (ranked low in this study). This tendency has continued into the 21st century. To support this stance, according to a study by May et al. (2007), in the United Kingdom (ranked 67 out of 80), more than two-thirds of workers in the hospitality sector come from Southern Europe (dominantly from Portugal), and more often from Central and Eastern Europe in recent years.

Such insights can greatly contribute to providing high-quality restaurant services, another pillar of the hospitality industry. Due to the lack of research evidence and findings, the insights are insufficient to get satisfactory support. Therefore, this study aims to bridge the current gap by examining and interpreting the correlation between the cultural characteristics of restaurant workers and reported levels of guest satisfaction.

The similarities between the hotel and restaurant industries and the positive results reported for the hotel industry provide an optimistic forecast for the context of restaurants. If a significant commonality between the results in the two areas arises, it would support the idea that the culture of hospitality is an actual phenomenon within Hofstede's cultural framework that would warrant further analysis of its roots and a thorough discussion of its implications for the modern hospitality industry.

3. Methodology

3.1. Data

The initial dataset comprised 1.7 million restaurant reviews collected from the TripAdvisor website, where users provide textual reviews and numerical ratings pertaining to their recent dining experiences. They rate their dining experience on the following five criteria: 'overall', 'value', 'service', 'food', and 'atmosphere'. In addition to the numerical scores, the dataset included information on the dates when the reviews were provided, restaurant identities and locations, as well as the reviewer's self-reported identities and their countries of origin. The dataset also included an indicator of the relative level of prices for each restaurant, with the following categories: 'cheap eats', 'mid-range', and 'fine dining'. This variable was intended to account for the 'opportunity cost' part of the definition of restaurant guest satisfaction that we provided in the prior section.

All 1.7 million reviews collected pertained to restaurants located in the capital cities of 80 countries for which Hofstede's cultural dimension scores were available, spanning the period from 2009 to 2021. We collected data from every restaurant with ratings on TripAdvisor in each of the 80 capital cities at the time of data collection. In the first step of data processing, we excluded cases where some of the five rating scores were missing. Next, we used Google Geocoding API to determine the country of origin for each reviewer and retained only reliable results. We then excluded reviews where the reviewer's country of origin was not one of the 80 countries or where it matched the restaurant's location, focusing on intercultural encounters. The dataset was appended with Hofstede's cultural scores for both restaurant locations and reviewers' countries of origin, with scores rescaled to range from 0 to 1. Due to computational intensity, we randomly sampled 35,000 cases for the final dataset.

This comprehensive data collection method minimizes sampling bias compared to random sampling, but potential biases related to the platform's user base and the nature of online reviews may still be present. Despite these potential biases, our approach ensures a robust dataset capturing a wide range of customer experiences across diverse cultural contexts.

3.2. The model

To achieve the aim of this study, we specified a statistical model that formally tests whether the empirical country-specific cultural scores of the locations of the restaurants had significant associations with the customer rating scores for the 'service' criterion. To account for the fact that guest expectations and evaluation scores vary significantly across cultures, we included in the model six cultural dimension scores ascribed to the guests' countries of origins, as well as their pairwise interactions with the dimension scores of the host country. To control for the opportunity costs of dining, which affect guests' satisfaction, we included the price level variable. To account for possible temporal changes in the average rating scores on TripAdvisor (see Figure 3 in Radojevic et al. (2017)), we included the review dates converted into numerical values.

To counter the 'spill-over effect' that takes place across customer ratings for different criteria under evaluation (see Radojevic et al., 2017, p. 5) and which thus can bias the inference, we used a multivariate specification that separately models the effects of cultural dimensions for each criterion and the correlations between the ratings for all five criteria. This enabled us to focus exclusively on the regression coefficients pertaining to the "service" criteria of the evaluation without concerns that they were cross contaminated by the guests' impressions of other aspects of their dining experiences, such as food quality or atmosphere. Furthermore, to better isolate the focal associations and prevent the problem of confounding variables, we controlled within the model for the other factors that have been previously found to be relevant in the context of providing hospitality services (Radojevic et al., 2017; 2018). These effects are those of the guest's (i.e. reviewer's) identity, guest's nationality, restaurant's location identity, and restaurant's identity. To account for the hierarchical structure in the data, we modelled the four identity variables as nested random effects (guests are nested within guest nationalities, while restaurants are nested within the countries). The final model specification is shown in Equation 1.

Equation 1 – Specification of the multivariate multilevel model

$$
\begin{aligned}
y_{ci} = {} & u_{c\,guest(i)}^{(2)} + u_{c\,guest\,nationality(i)}^{(3)} + u_{c\,restaurant(i)}^{(4)} + u_{c\,restaurant\,location(i)}^{(5)} \\
& + Restaurant\ location\ PDI\ score_i \times \beta 1_c \\
& + Guest's\ nationality\ PDI\ score_i \times \beta 2_c \\
& + Restaurant\ location\ IDV\ score_i \times \beta 3_c \\
& + Guest's\ nationality\ IDV\ score_i \times \beta 4_c \\
& + Restaurant\ location\ MAS\ score_i \times \beta 5_c \\
& + Guest's\ nationality\ MAS\ score_i \times \beta 6_c \\
& + Restaurant\ location\ UAI\ score_i \times \beta 7_c \\
& + Guest's\ nationality\ UAI\ score_i \times \beta 8_c \\
& + Restaurant\ location\ LTO\ score_i \times \beta 9_c \\
& + Guest's\ nationality\ LTO\ score_i \times \beta 10_c \\
& + Restaurant\ location\ IVR\ score_i \times \beta 11_c \\
& + Guest's\ nationality\ IVR\ score_i \times \beta 12_c \\
& + Restaurant\ location\ PDI\ score_i \times Guest's\ nationality\ PDI\ score_i \\
& \times \beta 13_c \\
& + Restaurant\ location\ IDV\ score_i \times Guest's\ nationality\ IDV\ score_i \\
& \times \beta 14_c \\
& + Restaurant\ location\ MAS\ score_i \\
& \times Guest's\ nationality\ MAS\ score_i \times \beta 15_c \\
& + Restaurant\ location\ UAI\ score_i \times Guest's\ nationality\ UAI\ score_i \\
& \times \beta 16_c \\
& + Restaurant\ location\ LTO\ score_i \times Guest's\ nationality\ LTO\ score_i \\
& \times \beta 17_c \\
& + Restaurant\ location\ IVR\ score_i \times Guest's\ nationality\ IVR\ score_i \\
& \times \beta 18_c + Date\ of\ review_i \times \beta 19_c + e_{ci}
\end{aligned}
$$

In the specification, y_{ci} stands for the *i*th rating score for the *c* criterion. We used R software developed and maintained by the R Core Team (2021) and its 'brms' library developed and maintained by Bürkner (2017) to fit this Bayesian model. After 40,000 iterations, the models successfully converged, according to all relevant diagnostics suggested by the leading experts in the field (e.g. see Gelman & Hill, 2007).

4. Results

The regression coefficient estimates, which detail the effects of the restaurant country's culture and the interactions with the guest's country of origin on reported guest satisfaction levels, are presented in Table 1. This table provides the foundational numerical data that informs the subsequent visual analysis.

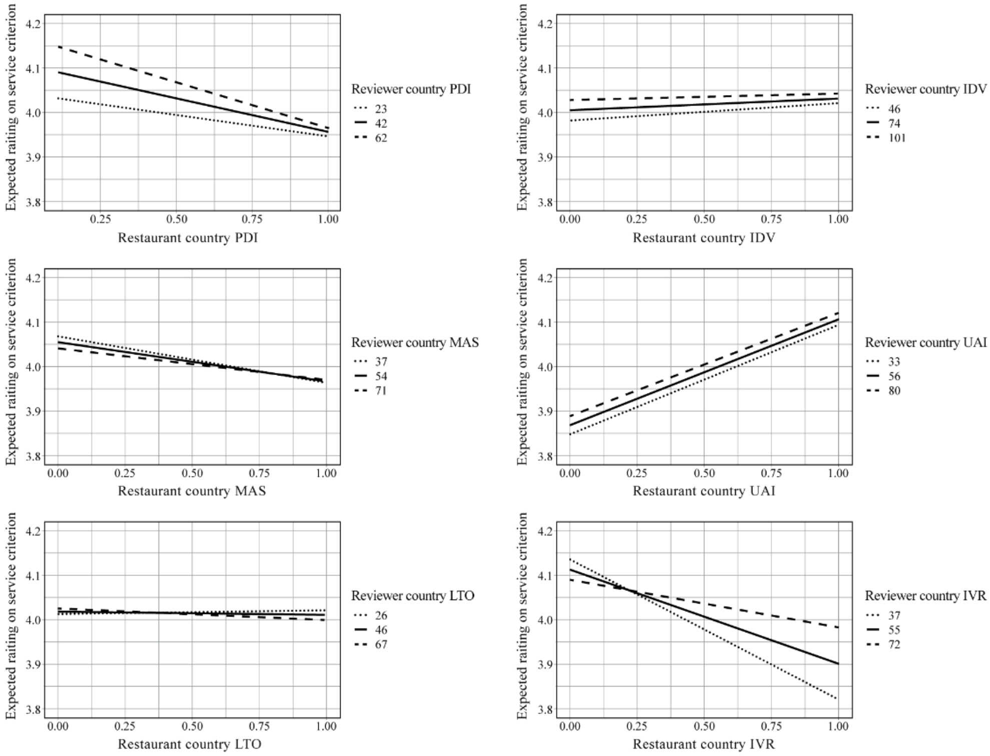
Table 1: Numerical model output for guest satisfaction including regression coefficient estimates, confidence intervals, and variance components across different aspects of service quality

	Value		**Food**		**Atmosphere**		**Service**		**Overall**	
Predictors	*Estimates*	*CI (95%)*	*Estimates*	*CI (95%)*	*Estimates*	*CI (95%)*	*Estimates*	*CI (95%)*	*Estimates*	*CI (95%)*
Intercept	4.27	3.96 – 4.58	4.24	3.97 – 4.51	4.17	3.90 – 4.45	4.17	3.86 – 4.47	3.9	3.57 – 4.23
Date of review	0.02	0.01 – 0.03	0.01	0.00 – 0.02	0.01	0.00 – 0.02	0.03	0.02 – 0.04	0.01	0.01 – 0.02
Restaurant location PDI	0	-0.00 – 0.00	0	-0.00 – 0.00	0	-0.00 – 0.00	0	-0.00 – 0.00	0	-0.00 – 0.00
Guest's nationality PDI	0.2	-0.03 – 0.43	0.26	0.02 – 0.49	0.2	-0.03 – 0.43	0.33	0.08 – 0.57	0.37	0.13 – 0.63
Restaurant location IDV	0.02	-0.16 – 0.21	-0.08	-0.26 – 0.10	0.03	-0.15 – 0.21	0.06	-0.14 – 0.26	0.07	-0.14 – 0.28
Guest's nationality IDV	0.03	-0.09 – 0.13	0.03	-0.07 – 0.13	0.11	0.01 – 0.22	0.09	-0.03 – 0.21	0.15	0.04 – 0.26
Restaurant location MAS	-0.16	-0.35 – 0.05	-0.21	-0.40 – -0.02	-0.24	-0.43 – -0.05	-0.14	-0.34 – 0.07	-0.19	-0.41 – 0.03
Guest's nationality MAS	-0.05	-0.19 – 0.10	-0.07	-0.21 – 0.08	-0.1	-0.25 – 0.04	-0.08	-0.24 – 0.07	-0.25	-0.41 – -0.09
Restaurant location UAI	0.28	0.10 – 0.45	0.12	-0.04 – 0.27	0.15	-0.01 – 0.31	0.25	0.08 – 0.43	0.32	0.13 – 0.51
Guest's nationality UAI	0.08	-0.07 – 0.24	0.15	-0.01 – 0.30	0.16	0.00 – 0.31	0.08	-0.08 – 0.25	0.12	-0.05 – 0.29
Restaurant location LTO	-0.07	-0.25 – 0.11	0.09	-0.07 – 0.26	0.07	-0.09 – 0.24	0.03	-0.15 – 0.21	0.01	-0.19 – 0.20
Guest's nationality LTO	-0.03	-0.17 – 0.11	0.01	-0.13 – 0.15	0.03	-0.11 – 0.17	0.03	-0.12 – 0.19	-0.07	-0.22 – 0.08
Restaurant location IVR	-0.33	-0.55 – -0.12	-0.33	-0.55 – -0.13	-0.41	-0.62 – -0.19	-0.53	-0.76 – -0.31	-0.56	-0.81 – -0.32
Guest's nationality IVR	-0.12	-0.31 – 0.08	-0.04	-0.24 – 0.15	-0.07	-0.26 – 0.12	-0.13	-0.33 – 0.08	0	-0.21 – 0.21
Restaurant location PDI × Guest's nationality PDI	0	-0.01 – -0.00	0	-0.00 – 0.00	0	-0.00 – 0.00	0	-0.01 – 0.00	0	-0.01 – 0.00
Restaurant location IDV × Guest's nationality IDV	-0.12	-0.28 – 0.03	-0.01	-0.17 – 0.16	-0.14	-0.31 – 0.02	-0.04	-0.22 – 0.14	-0.03	-0.21 – 0.15
Restaurant location MAS × Guest's nationality MAS	0.09	-0.17 – 0.33	0.17	-0.10 – 0.43	0.2	-0.07 – 0.47	0.1	-0.18 – 0.38	0.27	-0.01 – 0.55
Restaurant location UAI × Guest's nationality UAI	-0.1	-0.30 – 0.11	-0.13	-0.34 – 0.08	-0.12	-0.33 – 0.10	-0.02	-0.25 – 0.21	-0.22	-0.43 – 0.02
Restaurant location LTO × Guest's nationality LTO	0.03	-0.19 – 0.25	-0.07	-0.30 – 0.16	-0.09	-0.32 – 0.15	-0.08	-0.33 – 0.17	0.05	-0.19 – 0.30
Restaurant location IVR × Guest's nationality IVR	0.32	0.03 – 0.62	0.41	0.10 – 0.71	0.4	0.09 – 0.72	0.6	0.25 – 0.92	0.41	0.07 – 0.74
Random Effects										
σ^2	0.02									
τ_{00}	0.75									
ICC	0.02									
$N_{\text{Restaurant location}}$	80									
$N_{\text{Restaurant id}}$	4370									
$N_{\text{Guest's nationality}}$	79									
$N_{\text{Guest id}}$	30385									
Observations	35000									

Source: Authors' research

Following the numerical analysis in Table 1, Figure 2 offers a visual depiction of these effects. Here, the expected rating scores are plotted on the y-axis. The x-axis and line styles (dashed, solid, and dotted) differentiate the cultural scores of the guest and the waiter, representing the guest's self-reported country of origin and the country where the restaurant is located, respectively.

Figure 2: The effects of local culture on the expected rating for the restaurant service criterion



Source: Authors' research

Analysis of the individual and interactive effects

- ***Uncertainty Avoidance (UAI)***

The results show a strong and consistent effect for uncertainty avoidance and the correlation between the restaurant location's uncertainty avoidance and higher guest satisfaction, which does not depend on guest's cultural background. This positive relationship is evident in the visualization, showing a meaningful increase on the 1 to 5 satisfaction scale. Specifically, the effect size is significant (estimate = 0.25, CI: 0.08 – 0.43, $p < 0.01$).

- ***Indulgence (IVR)***

There is a significant negative effect of the dimension of indulgence on guest satisfaction. Namely, higher levels of indulgence correlate with lower guest satisfaction with the quality of a restaurant. This effect is more dominant in the case of the interaction between a restrained guest and an indulgent waiter, as shown by the steep negative slope in the visualization. The main effect of indulgence is significant (estimate = -0.53, CI: -0.76 – -0.31, p < 0.01). Additionally, the findings reveal a significant interaction effect between the restaurant location indulgence and the guest's nationality (estimate = 0.60, CI: 0.25 – 0.92, p < 0.01).

- ***Power Distance (PDI)***

The analysis shows the interaction effects of the cultural dimension of power distance. Even though the main effects may not be strong enough (estimate = 0, CI: -0.00 – 0.00, p = 0.45), the visualization suggests variability based on the guest's nationality. The most significant negative interaction effect shows when the guest and the waiter come from high power-distance cultures. Although the interaction effect does not have statistical significance (estimate = 0, CI: -0.01 – 0.00, p = 0.61), the visual representation points to possible resulting patterns, suggesting that guest satisfaction may be affected by cultural alignment or misalignment in power distance between the guest and the restaurant staff, which can serve as an incentive for further investigation going beyond the numerical significance.

- ***Individualism (IDV) and Masculinity (MAS)***

The results reveal no statistical significance as regards the effects of individualism and masculinity. The visualizations for these dimensions show relatively flat slopes, suggesting a minor influence of individualism (estimate = 0.06, CI: -0.14 – 0.26, p = 0.57) and masculinity (estimate = -0.14, CI: -0.34 – 0.07, p = 0.18) on guest satisfaction. Although these dimensions may be relevant in post-hoc analyses, they do not bear significance for the primary aims of this study.

- ***Long-Term Orientation (LTO)***

The effect of long-term orientation on guest satisfaction is negligible. The visualization shows that the estimate and the slope are close to zero (estimate = 0.03, CI: -0.15 – 0.21, p = 0.79), which indicates minimal impact.

Given the presented findings, we have ranked countries according to their capability to offer high-quality restaurant services. The top two criteria include high uncertainty avoidance and low indulgence. Power distance is the third criterion influencing the ranking, while individualism and masculinity are less significant for this representation. This methodology establishes a structured hierarchy for evaluating countries' hospitality service quality, with the rankings detailed in Table 2.

Table 2: Countries in the study sorted by their culturally-imbued human capacity for providing high-quality restaurant services, as implied by the results of the model

Ranking	Country	PDI	IDV	MAS	UAI	IVR	Key Conditions Met
1	Latvia	0.37	0.73	0.04	0.60	0.13	IVR low, UAI high, PDI low, IDV high, MAS low
2	Lithuania	0.35	0.61	0.15	0.62	0.16	IVR low, UAI high, PDI low, IDV high, MAS low
3	Estonia	0.33	0.61	0.26	0.57	0.16	IVR low, UAI high, PDI low, IDV high, MAS low
4	Pakistan	0.49	0.03	0.47	0.67	0.00	IVR low, UAI high, PDI low, MAS low
5	Hungary	0.39	0.86	0.87	0.80	0.31	IVR low, UAI high, PDI low
6	Italy	0.44	0.81	0.68	0.73	0.30	IVR low, UAI high, PDI low
7	Germany	0.27	0.70	0.64	0.62	0.40	IVR low, UAI high, PDI low
8	Japan	0.48	0.43	0.95	0.91	0.42	IVR low, UAI high
9	France	0.64	0.75	0.40	0.85	0.48	IVR low, UAI high, IDV high, MAS low
10	Russia	0.92	0.34	0.33	0.95	0.20	IVR low, UAI high, MAS low
11	Egypt	0.66	0.16	0.42	0.78	0.04	IVR low, UAI high, MAS low
12	Romania	0.89	0.23	0.39	0.89	0.20	IVR low, UAI high, MAS low
13	Bulgaria	0.66	0.23	0.37	0.84	0.16	IVR low, UAI high, MAS low
14	Portugal	0.58	0.19	0.27	0.99	0.33	IVR low, UAI high, MAS low
15	Poland	0.64	0.61	0.62	0.92	0.29	IVR low, UAI high, IDV high
16	Serbia	0.84	0.16	0.40	0.91	0.28	IVR low, UAI high, MAS low
17	South Korea	0.55	0.08	0.36	0.84	0.29	IVR low, UAI high, MAS low
18	Croatia	0.70	0.27	0.37	0.78	0.33	IVR low, UAI high, MAS low
19	Czech Republic	0.52	0.58	0.55	0.72	0.29	IVR low, UAI high, IDV high
20	Spain	0.52	0.49	0.39	0.85	0.44	IVR low, UAI high, MAS low
21	Peru	0.60	0.05	0.39	0.86	0.46	IVR low, UAI high, MAS low
22	Slovenia	0.67	0.19	0.15	0.87	0.48	IVR low, UAI high, MAS low
23	Turkey	0.62	0.32	0.42	0.84	0.49	IVR low, UAI high, MAS low
24	Burkina Faso	0.66	0.04	0.47	0.51	0.18	IVR low, UAI high, MAS low
25	Libya	0.78	0.33	0.49	0.65	0.34	IVR low, UAI high, MAS low
26	Jordan	0.66	0.23	0.42	0.62	0.43	IVR low, UAI high, MAS low
27	Taiwan	0.53	0.06	0.42	0.66	0.49	IVR low, UAI high, MAS low
28	Thailand	0.60	0.10	0.31	0.61	0.45	IVR low, UAI high, MAS low
29	Iran	0.53	0.37	0.40	0.55	0.40	IVR low, UAI high, MAS low
30	Iraq	0.94	0.23	0.68	0.84	0.17	IVR low, UAI high
31	Albania	0.89	0.10	0.79	0.67	0.15	IVR low, UAI high
32	Morocco	0.66	0.43	0.51	0.65	0.25	IVR low, UAI high
33	Bangladesh	0.78	0.10	0.53	0.57	0.20	IVR low, UAI high
34	Luxembourg	0.33	0.61	0.47	0.67	0.56	IVR low, UAI high, IDV high
35	Finland	0.25	0.65	0.22	0.55	0.57	IVR low, UAI high, IDV high
36	Austria	0.00	0.54	0.78	0.67	0.63	IVR low, UAI high
37	Switzerland	0.26	0.71	0.68	0.54	0.66	IVR low, UAI high
38	Argentina	0.43	0.43	0.54	0.85	0.62	IVR low, UAI high
39	Trinidad and Tobago	0.40	0.05	0.56	0.51	0.80	IVR low, UAI high
40	Malta	0.51	0.59	0.44	0.96	0.66	IVR low, UAI high, IDV high
41	Uruguay	0.56	0.30	0.35	0.99	0.53	IVR low, UAI high
42	Belgium	0.61	0.80	0.52	0.93	0.57	IVR low, UAI high, IDV high
43	Slovakia	1.00	0.51	1.00	0.47	0.28	IVR low, UAI high
44	Chile	0.58	0.14	0.24	0.85	0.68	IVR low, UAI high
45	Brazil	0.65	0.33	0.46	0.74	0.59	IVR low, UAI high
46	Tanzania	0.66	0.16	0.37	0.46	0.38	IVR low, UAI high
47	Indonesia	0.75	0.03	0.43	0.43	0.38	IVR low, UAI high
48	El Salvador	0.62	0.09	0.37	0.93	0.89	IVR low, UAI high
49	Zambia	0.55	0.29	0.37	0.46	0.42	IVR low, UAI high
50	Ghana	0.78	0.04	0.37	0.62	0.72	IVR low, UAI high
51	Vietnam	0.66	0.10	0.37	0.24	0.35	IVR low, UAI high
52	Angola	0.81	0.08	0.16	0.57	0.83	IVR low, UAI high
53	Singapore	0.71	0.10	0.45	0.00	0.46	IVR low, UAI high
54	Greece	0.55	0.29	0.55	1.00	0.50	IVR low, UAI high
55	Saudi Arabia	0.94	0.16	0.58	0.78	0.52	IVR low, UAI high
56	Lebanon	0.72	0.35	0.63	0.46	0.25	IVR low
57	India	0.74	0.46	0.54	0.35	0.26	IVR low

58	Hong Kong	0.64	0.16	0.55	0.23	0.17	IVR low
59	China	0.78	0.10	0.64	0.24	0.24	IVR low
60	Philippines	0.93	0.25	0.62	0.39	0.42	IVR low
61	Colombia	0.63	0.01	0.62	0.78	0.83	IVR low, UAI high
62	Mexico	0.79	0.23	0.67	0.80	0.97	IVR low, UAI high
63	Venezuela	0.79	0.00	0.72	0.74	1.00	IVR low, UAI high
64	Nigeria	0.78	0.23	0.58	0.51	0.84	IVR low, UAI high
65	Norway	0.22	0.72	0.03	0.46	0.55	IDV high
66	Netherlands	0.30	0.86	0.09	0.49	0.68	IDV high
67	Iceland	0.21	0.61	0.05	0.46	0.67	IDV high
68	Canada	0.31	0.86	0.49	0.43	0.68	IDV high
69	Denmark	0.08	0.78	0.12	0.16	0.70	IDV high
70	Sweden	0.22	0.75	0.00	0.23	0.78	IDV high
71	South Africa	0.43	0.67	0.61	0.45	0.63	IDV high
72	Australia	0.28	0.99	0.59	0.47	0.71	IDV high
73	United States	0.33	1.00	0.60	0.41	0.68	IDV high
74	New Zealand	0.12	0.85	0.56	0.45	0.75	IDV high
75	Ireland	0.19	0.73	0.66	0.29	0.65	IDV high
76	United Kingdom	0.27	0.97	0.64	0.29	0.69	IDV high
77	Malaysia	1.00	0.18	0.47	0.30	0.57	-
78	Mozambique	0.83	0.04	0.35	0.39	0.80	-
79	Cape Verde	0.72	0.10	0.11	0.35	0.83	-
80	Dominican Republic	0.61	0.23	0.63	0.40	0.54	-

Source: Authors' research

5. Discussion

Apart from the quantitative statistical effects analysis presented in the previous chapter, the research findings also point to the relevance of three cultural characteristics - high uncertainty avoidance, low indulgence, and low power distance. The discussion below explains how these significant cultural dimensions enhance restaurant services by referencing prior research and linking these characteristics with service performance. It ends with a proposal for the recruitment strategy and the evaluation of our findings through a qualitative analysis.

5.1 Effects of cultural dimensions: UAI, IVR and PDI

High Uncertainty Avoidance

High uncertainty avoidance is linked to reliability, responsiveness, assurance, and empathy in service (Furrer et al., 2000). The benefits of high uncertainty avoidance for restaurant service performance relate to high responsiveness to guests, attention to detail in orders, adherence to procedures, and hygiene. Restaurant staff also have better knowledge and recommendations of food and drink and longer job tenures, resulting in improved skills and enhanced experiences.

Low Indulgence (High Restraint)

Individuals from restrained cultures prioritize work, have strong work ethics, and control emotional outbursts (Hofstede et al., 2010). The benefits of a low indulgence dimension include long work hours with minimal frustration, strong work discipline and focus, conformity to professional roles, and emotional stability and humility, improving job performance (Dutta et al., 2023).

Low Power Distance

In cultures with low power distance, employees are more empowered, make decisions without consulting superiors, and deliver high-quality services (Humborstad et al., 2008; Kanjanakan et al., 2023). Low power distance dimension enhances restaurant services, yielding benefits that imply friendly, informal staff conduct, open communication with guests, smoother consultation with managers for nonstandard situations, and higher willingness to deliver quality service due to supervisor support.

5.2 Implications for restaurant industry practitioners and their recruiting strategy

Restaurant managers should prioritize applicants with high restraint, high uncertainty avoidance, and low power distance. They can follow two strategies: consult national scores and analyze individual profiles. The first implies attracting applicants from nations with advantageous scores, such as Latvia, Lithuania, Estonia, Pakistan, Hungary, Italy, Germany, and Japan, as listed in Table 2. This approach can enhance job satisfaction, reduce turnover, and improve customer satisfaction (Ivancevic & Ivanovic, 2022). The second strategy suggests identifying individuals with beneficial cultural profiles using validated questionnaires (see Heydari et al., 2021; Yoo et al., 2011).

Summary and Implications for the Hospitality Industry

The research findings comply with the study of Radojevic et al. (2019), and both point to the value of the low power distance and the low indulgence cultural dimensions. Both studies also conclude that hotel services benefit from high collectivism and restaurant services from high uncertainty avoidance. These findings suggest that restraint and low power distance are the key characteristics of high-quality hospitality services. Table 3 classifies nations by their culturally imbued talents for hotel and restaurant services.

Table 3: Classification of 45 nations according to their culturally imbued talent for rendering high-quality hotel and/or restaurant services, based on the effects observed in Radojevic et al. (2019) and in this study

	Hotels	Both, more hotels	Both	Both, more restaurants	Restaurants
Exceptional			Japan, Pakistan		
Excellent			Hungary, Italy, Germany		Latvia, Lithuania, Estonia
Very good	Lebanon, India, Hong Kong, China, Philippines	Iraq, Albania, Morocco, Bangladesh		Russia, Egypt, Romania, Bulgaria, Portugal, Serbia, South Korea, Croatia, Spain, Peru, Slovenia, Turkey, Burkina Faso, Libya, Jordan, Taiwan, Thailand, Iran	France
Good	Slovakia	Greece[4]	Tanzania, Indonesia, Zambia, Vietnam, Singapore, Poland, Czech Republic		

Source: Authors' research

[4] Greece has a borderline (i.e. average) score of 0.5 on the Indulgence dimension that is shown to negatively affect the quality of hospitality services. As a compromise, we decided to include Greece in the list of culturally talented nations, while slightly downgrading it from the Very good to the Good class to acknowledge the fact that the score for the Indulgence dimension is right on the cut-off value, rather than on the advantageous side.

To challenge the validity of our hard-data findings, we sought qualitative evidence that would support or disprove the findings.

5.3. Qualitative evidence

We began our qualitative research by examining written sources to determine if countries highly ranked in our table are perceived as hospitable, particularly Japan and Pakistan. Japan's *Omotenashi* reflects an intrinsic motivation to provide superb hospitality service (Belal et al., 2013; Sato & Al-alsheikh, 2014). The Nishiyama Onsen Keiunkan hotel, founded in 705 AD, exemplifies Japan's deep-rooted hospitableness (Oh, 2019). In Pakistan, the *Pashtunwali* code prioritizes hospitality (Melmastya) and asylum (Nanawatai), showcasing intrinsic hospitableness.

Historical and cultural support for the hospitableness of other high-ranking ethnic groups is also documented. Caravanserais along trade routes like the Silk Road provided shelter and services (Thareani-Sussely, 2007; UNESCO, 2021). In China, early lodging facilities staffed by soldiers and prisoners offered hospitality (Yang, 2015). Buddhist monasteries also provided shelter. In the Mediterranean, Homer's "Iliad" and Rome's *ius hospitia* highlighted the importance of hospitality (O'Gorman, 2006). Slavic hospitality is noted in "Strategikon" and proverbs like the Polish "Gość w dom, Bóg w dom" (Laskowski, 2016). Indian hospitality is exemplified by the Sanskrit phrase "Atithi Devo Bhava" (Banerjee, 2008).

Anecdotal evidence, such as the experiences of Finns in China (Stopniece, 2017), Danes in Russia (Chudnovskaya & O'Hara, 2022), and Australians in Lebanon (Lebanese Culture – Etiquette — Cultural Atlas, 2015), supports our findings. These accounts show that people from cultures ranked lower in hospitality are often delighted with the hospitality of their hosts, who rank high in our results.

However, anecdotal evidence is not the only piece supporting our conclusions. Interviews with industry professionals also confirmed that top-performing employees often come from Eurasian cultures. These workers accept lower wages, work longer hours, and take less leisure time, aligning with the concept of restraint. Essential traits for high-quality service identified by professionals include emotional and mental stability, empathy, strong work ethics, peak performance, perseverance under pressure, a positive attitude, and problem-solving abilities. These traits correspond to cultural characteristics advantageous for restaurant services: restraint (emotional and mental balance, work ethics, peak performance), low power distance (empowered problem-solving), and femininity (empathy).

In summary, our qualitative analysis found consistent support for our findings with minimal contradictory evidence. Thus, our quantitative analysis reveals genuine effects deserving further exploration and discussion.

6. Conclusion

Based on the quantitative and qualitative research conducted in this study and the results presented in a previous study by Radojevic et al. (2019), we conclude that low power distance and low indulgence (i.e., restraint) are cultural characteristics that are beneficial for providing high-quality frontline hotel and restaurant services, and possibly, hospitality services in general. When complemented with pronounced collectivism and pronounced uncertainty avoidance, these values make individuals particularly culturally gifted at providing high-quality services in the hotel and restaurant industry. Additionally, pronounced feminine values are beneficial for restaurant services, and masculine values are beneficial for hotel services. Based on these findings, we propose the classification of nations as presented in Table 3 and offer suggestions on how practitioners working in the hospitality industry can use our findings for the benefit of customers, workers, and their businesses.

Limitations and recommendations for future research

There are three major limitations of this study that we must acknowledge. The first limitation pertains to our use of Hofstede's cultural dimension framework and the associated empirically derived national scores across six cultural dimensions. If these empirical scores are inaccurately measured, the estimated regression coefficients presented in this study, as well as the resulting conclusions, could be biased. To mitigate potential inaccuracies, particularly when drawing inferences at the national level, we transformed the raw scores into two categories: "below average" and "above average". We then assessed whether the countries fell on the advantageous side of the scale for each dimension, as indicated by the regression coefficients. This limitation applies to all scientific analyses relying on Hofstede's estimates of national scores. Future large-scale studies aimed at accurately estimating national scores on the six dimensions within a predetermined margin of error may be necessary.

The second significant limitation revolves around our assumption that waiters generally possess cultural profiles similar to those of native residents in the cities where the restaurants are located. This is often violated, such as in London, where 75.3% of waitstaff are EU migrants (KPMG, 2017). While this may lead to an underestimation of our observed effects, it is unlikely to change their direction. However, countries rarely experience significant inbound and outbound migration of hospitality workers simultaneously. For instance, the UK has more UK waiters than any other country, and Pakistan has nearly 100% local hospitality workers despite high emigration. This suggests our findings remain relevant. Additionally, acculturation makes workers in their home country as culturally representative as those abroad, meaning the cultural effects we observed are likely diluted but not incorrect. This mitigates concerns about this limitation affecting our results.

The third limitation concerns the potential presence of confounding variables, which exhibit correlations with both cultural dimensions and customer satisfaction and impact service quality or customer satisfaction. If such variables exist, the effects we observe are more likely correlational rather than purely causal.

One prominent potential confounder is the economic development level of nations. Hotels and restaurants in high-income countries might face challenges in attracting and retaining high-quality employees due to the abundance of alternative job opportunities, potentially resulting in lower service quality (The Guardian, 2020). While the pattern of culturally ingrained capacity for delivering high-quality hotel and restaurant services somewhat mirrors GDP per capita, this correlation does not hold universally. For example, Japan, Hong Kong, and Singapore excel in hotel services and rank high in GDP per capita, contradicting the notion that affluent countries struggle to secure high-quality staff. Similarly, wealthy nations like Italy, Germany, and France lead in restaurant services, while many African and South American countries do not. While economic factors like GDP per capita may play a role in service quality disparities, they may not provide a comprehensive explanation for the observed variations. Instead, differences could be influenced by social norms, cultural perceptions, or societal regard for specific professions. Another potential confounding factor is pre-purchase expectations, where customer satisfaction is influenced by initial expectations based on national stereotypes. However, for countries ranking highly (such as Japan, Hong Kong, Singapore, Germany, Italy, France), this confounding likely did not significantly affect results. Other factors like language skills, education quality, employment types, salary levels, and tipping customs are beyond our research scope but worth considering.

Future research should apply the same methodological framework to other services related to the hospitality sector, such as Uber drivers or flight attendants, to see if cultural characteristics of restraint and low power distance are significant. Researchers should validate findings at the individual level through national studies, measuring restraint and low power distance in hospitality workers, to test the generalizability of these cultural effects (Heydari et al., 2021; Yoo et al., 2011).

Our conclusions mainly apply to frontline hospitality workers, shaping guest experiences on platforms like TripAdvisor. These insights should not be generalized to management or culinary roles, where cultural impacts may differ. Our findings are not indicative of a nation's overall service ethos. Further research could explore beneficial cultural attributes in other industries, enhancing customer satisfaction, employee engagement, and organizational performance across various contexts.

Acknowledgements

This research was supported by The Science Fund of the Republic of Serbia, GRANT No. 7739076, *Tourism Destination Competitiveness - Evaluation Model for Serbia* – TOURCOMSERBIA. We express our sincere gratitude to prof. Lazar Dražeta for his invaluable assistance in conducting the qualitative part of our research.

Conflict of interest

The authors declare no conflict of interest.

References

1. Banerjee, S. (2008). Dimensions of Indian culture, core cultural values and marketing implications. *Cross Cultural Management: An International Journal*, *15*(4), 367–378. https://doi.org/10.1108/13527600810914157
2. Baum, T. (2006). *Human resource management for tourism, hospitality and leisure: An international perspective*. Thomson Learning.
3. Belal, H. M., Shirahada, K., & Kosaka, M. (2013). Value co-creation with customer through recursive approach based on Japanese Omotenashi service. *International Journal of Business Administration*, *4*(1), 1923–4007. https://doi.org/10.5430/ijba.v4n1p28
4. Bürkner, P.-C. (2017). brms: An R package for Bayesian multilevel models using Stan. *Journal of Statistical Software*, *80*(1), 1–28. https://doi.org/10.18637/jss.v080.i01
5. Chen, Y. F., & Law, R. (2016). A review of research on electronic word-of-mouth in hospitality and tourism management. *International Journal of Hospitality & Tourism Administration*, *17*(4), 347–372. https://doi.org/10.1080/15256480.2016.1226150
6. Chudnovskaya, E. V., & O'Hara, L. L. S. (2022). Indulgence versus restraint: Exploration of a new cultural dimension in context. *Journal of Intercultural Communication*, *22*(2), 41–52. https://doi.org/10.36923/jicc.v22i2.54
7. Cultural Atlas Editors (2015). *Lebanese culture – Etiquette.* Retrieved January 10, 2024 from https://culturalatlas.sbs.com.au/lebanese-culture/lebanese-culture-etiquette
8. Djekic, I., Kane, K., Tomic, N., Kalogianni, E., Rocha, A., Zamioudi, L., & Pacheco, R. (2016). Cross-cultural consumer perceptions of service quality in restaurants. *Nutrition & Food Science*, *46*(6), 827–843. https://doi.org/10.1108/NFS-04-2016-0052

9. Dutta, D., Vedak, C., & Joseph, V. (2023). New hire performance: Identifying critical traits for hospitality industry. *Tourism Review*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/TR-11-2022-0565
10. Furrer, O., Shaw-Ching Liu, B., & Sudharshan, D. (2000). The relationships between culture and service quality perceptions basis for cross-cultural market segmentation and resource allocation. *Journal of Service Research*, *2*(4), 355–371. http://dx.doi.org/10.1177/109467050024004
11. Gelman, A., & Hill, J. (2007). *Data analysis using regression and multilevel/hierarchical models*. Cambridge University Press, Cambridge. https://doi.org/10.1017/CBO9780511790942
12. Heydari, A., Laroche, M., Paulin, M., & Richard, M. O. (2021). Hofstede's individual-level indulgence dimension: Scale development and validation. *Journal of Retailing and Consumer Services*, *62*, 102640 https://doi.org/10.1016/j.jretconser.2021.102640
13. Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations* (3rd ed.). McGraw Hill, New York.
14. Huang, S. (Sam), & Crotts, J. (2019). Relationships between Hofstede's cultural dimensions and tourist satisfaction: A cross-country cross-sample examination. *Tourism Management*, *72*, 232–241. https://doi.org/10.1016/J.TOURMAN.2018.12.001
15. Humborstad, S. I. W., Humborstad, B., Whitfield, R., & Perry, C. (2008). Implementation of empowerment in Chinese high power-distance organizations. *International Journal of Human Resource Management*, *19*(7), 1349–1364. https://doi.org/10.1080/09585190802110224
16. Ivancevic, S., & Ivanovic, T. (2022). Burnout syndrome. In D. Buhalis (Ed.), *Encyclopedia of Tourism Management and Marketing*. Edward Elgar Publishing, 385–387. https://doi.org/10.4337/9781800377486.burnout.syndrome
17. Kanjanakan, P., Wang, P. Q., & Kim, P. B. (2023). The empowering, the empowered, and the empowerment disparity: A multilevel analysis of the integrated model of employee empowerment. *Tourism Management*, *94*, 104635. https://doi.org/10.1016/J.TOURMAN.2022.104635
18. Koc, E. (2020). *Cross-cultural aspects of tourism and hospitality*. Routledge, London. https://doi.org/10.4324/9781003018193
19. Koc, E., Ar, A. A., & Aydin, G. (2017). The potential implications of indulgence and restraint on service. *Ecoforum*, *6*(3), 2013–2018.
20. Kotler, P. R., & Keller, K. L. (2009). *Marketing management* (13th ed.). Prentice Hall, New Jersey.
21. Kozak, M. (2001). Comparative assessment of tourist satisfaction with destinations across two nationalities. *Tourism Management*, *22*(4), 391–401. https://doi.org/10.1016/S0261-5177(00)00064-9
22. KPMG. (2017). *Labour migration in the hospitality sector – A KPMG report for the British Hospitality Association* (Issue March). Retrieved February 6, 2024 from https://www.hospitalitynet.org/file/152008175.pdf
23. Laskowski, M. (2016). Bridges or walls? A reflection on the concept of hospitality. *The Journal of Linguistic and Intercultural Education*, *9*(2), 93–102. https://doi.org/10.29302/jolie.2016.9.2.8
24. May, J., Wills, J., Datta, K., Evans, Y., Herbert, J., & McIlwaine, C. (2007). Keeping London working: Global cities, the British state and London's new migrant division of labour. *Transactions of the Institute of British Geographers*, *32*(2), 151–167. https://doi.org/10.1111/j.1475-5661.2007.00241.x
25. O'Gorman, K. D. (2006). Dimensions of hospitality: Exploring ancient and classical origins. In P. Lynch, A. Morrison & C. Lashley (Eds.), *Hospitality: A Social Lens*. Routledge, London. https://doi.org/10.4324/9780080465692

26. Oh, Y. (2019). Completion and further issues. *Sustainability Valuation of Business. Springer Briefs in Finance*. Springer, Cham. https://doi.org/10.1007/978-3-030-18648-7_5
27. R Core Team. (2021). *R: A language and environment for statistical computing* (3.1.1). R Foundation for Statistical Computing. Vienna, Austria. Retrieved March 4, 2024 from http://www.r-project.org
28. Radojevic, T., & Stanisic, N. (2022). Customer satisfaction. In D. Buhalis (Ed.), *Encyclopedia of Tourism Management and Marketing* (pp. 736–739). Edward Elgar Publishing. https://doi.org/https://doi.org/10.4337/9781800377486.customer.satisfaction
29. Radojevic, T., Stanisic, N., & Stanic, N. (2017). Inside the rating scores: A multilevel analysis of the factors influencing customer satisfaction in the hotel industry. *Cornell Hospitality Quarterly*, *58*(2), 134–164. https://doi.org/10.1177/1938965516686114
30. Radojevic, T., Stanisic, N., & Stanic, N. (2019). The culture of hospitality: From anecdote to evidence. *Annals of Tourism Research*, *79*, 102789. https://doi.org/10.1016/j.annals.2019.102789
31. Radojevic, T., Stanisic, N., Stanic, N., & Davidson, R. (2018). The effects of traveling for business on customer satisfaction with hotel services. *Tourism Management*, *67*, 326–341. https://doi.org/10.1016/j.tourman.2018.02.007
32. Sato, Y., & Al-alsheikh, A. (2014). *Comparative analysis of the western hospitality and the Japanese Omotenashi: Case study research of the hotel industry*. Retrieved December 10, 2023 from http://www.kwansei-ac.jp/iba/assets/pdf/journal/BandA_review_December_14p1-16.pdf
33. Stopniece, S. (2017). Chinese 'enormous hospitality' versus Finnish 'meeting among friends': Guest-host positioning in China Finland delegation visits. In F. Dervin (Ed.) *Encounters between East and West, Intercultural Perspectives* (pp. 145–161). Springer, Singapore. https://doi.org/10.1007/978-981-10-4014-6_9
34. Thareani-Sussely, Y. (2007). Ancient caravanserais: An archaeological view from 'Aroer. *Levant*, *39*(1), 123–141. https://doi.org/10.1179/lev.2007.39.1.123
35. The Guardian. (2020). *Why aren't waiters given the respect – or salary – they deserve*? Retrieved December 15, 2023 from https://www.theguardian.com/food/2020/jan/15/restaurant-waiters-front-of-house-service-britain-respect
36. UNESCO. (2021). *Did you know? Caravanserai along the Silk Roads in the north of the Indian subcontinent*. Silk Roads Programme. Retrieved December 16, 2023 from https://en.unesco.org/silkroad/content/did-you-know-caravanserai-along-silk-roads-north-indian-subcontinent
37. Yang, J. (2015). Transportation, boarding, lodging, and trade along the early silk road: A preliminary study of the Xuanquan manuscripts. *Journal of the American Oriental Society*, *135*(3), 421–432. https://doi.org/10.7817/jameroriesoci.135.3.421
38. Yoo, B., Donthu, N., & Lenartowicz, T. (2011). Measuring Hofstede's five dimensions of cultural values at the individual level: Development and validation of CVSCALE. *Journal of International Consumer Marketing*, *23*(3–4), 193–210. https://doi.org/10.1080/08961530.2011.578059
39. Yüksel, A., & Yüksel, F. (2003). Measurement of tourist satisfaction with restaurant services: A segment-based approach. *Journal of Vacation Marketing*, *9*(1), 52–68. https://doi.org/10.1177/135676670200900104
40. Zhang, Z., Ye, Q., Law, R., & Li, Y. (2010). The impact of e-word-of-mouth on the online popularity of restaurants: A comparison of consumer reviews and editor reviews. *International Journal of Hospitality Management*, *29*(4), 694–700. https://doi.org/10.1016/j.ijhm.2010.02.002

Original Scientific Paper

UDC: 005:338.46
005.52:005.33
DOI: 10.5937/menhottur2400001E

Received: 14 November 2023
Revised: 24 December 2023
Accepted: 21 February 2024
Published online: 6 March 2024

Employee innovation in the context of strategic change implementation in the service sector

Jelena Erić Nielsen[1], Julija Vidosavljević[1], Nikola Bošković[1*]

[1] University of Kragujevac, Faculty of Economics, Kragujevac, Serbia

Abstract

Purpose – The purpose of this paper is to determine whether variables – managerial support for innovative ideas, work autonomy, rewards/reinforcements, time availability, organizational barriers, and specific parameters of organizational climate, have an impact on the organizational performance of employees in the service sector of the Republic of Serbia. Additionally, the study will investigate whether there are differences in the perceptions of employees depending on their positions within the organization. **Methodology** – The sample consists of 105 participants. The study applied reliability analysis, correlation analysis, multiple regression analysis, and the T-test for two independent samples. **Findings** – Results indicate that managerial support, work autonomy, time availability, organizational barriers, and specific parameters of organizational climate positively influence the organizational performance of employees in companies that have undergone an organizational change process, while rewards/reinforcements do not have an impact. **Implications** – Meetings should be held to outline how innovations will be assessed, given the significant impact of management support on organizational performance. To enhance employee performance, it is advisable to align the reward system with innovative behavior by offering additional rewards for successfully implemented innovations. Moreover, establishing an “innovation budget” can provide employees with the necessary resources, thereby nurturing a culture of innovation within the organization.

Keywords: innovativeness, organizational changes, work autonomy, managerial support
JEL classification: O35, M14, L84

Inovativnost zaposlenih u uslovima implementacije strategijskih promena u sektoru usluga

Sažetak

Svrha – Ovaj rad za cilj ima da utvrdi da li varijable – podrška rukovodilaca inovativnim idejama; radna autonomija; nagrade/podsticaji; vremenska raspoloživost; organizacione prepreke i specifični parametri organizacione klime, imaju uticaj na organizacione performanse zaposlenih u uslužnom sektoru Republike Srbije. Pored toga, u radu će biti ispitano da li postoji razlika u percepcijama zaposlenih, zavisno od pozicije u organizaciji. **Metodologija** – Uzorak čine 105 ispitanika. U radu je primenjena analiza pouzdanosti,

* Corresponding author: nikolab@kg.ac.rs

korelaciona analiza, višestruka regresiona analiza i T test za dva nezavisna uzorka. **Rezultati** – Dobijeni rezultati pokazuju da podrška rukovodilaca inovativnim idejama; radna autonomija; vremenska raspoloživost; organizacione prepreke i specifični parametri organizacione klime pozitivno utiču na organizacione performanse zaposlenih u kompanijama koje su prošle proces organizacione promene, dok nagrade/podsticaji nemaju uticaj. **Implikacije** – Prreporučuje se organizovanje sastanaka na kojima će menadžment detaljno predstaviti način vrednovanja inovacija, s obzirom na to da podrška menadžmenta ima najznačajniji uticaj na organizacione performanse. Kako bi se unapredila efikasnost zaposlenih, preporučljivo je uskladiti sistem nagrađivanja sa inovativnim ponašanjem, kroz dodatno nagrađivanje za uspešnu implementaciju inovacija. Pored toga, uspostavljanje „budžeta za inovacije", može pružiti zaposlenima neophodne resurse, dodatno podstičući kulturu inovacija u okviru organizacije.

Ključne reči: inovativnost, organizacione promene, radna autonomija, podrška menadžmenta
JEL klasifikacija: O35, M14, L84

1. Introduction

Although very complex, numerous types of organizational transformation can be critical to an organization's long-term success. A key component of successful organizational transformation is effective leadership, communication with employees, and commitment from all members of the organization to ensure acceptance and implementation of change. Innovative employees are more willing to tackle the challenges associated with the transformation process and provide creative solutions to facilitate integration and help the organization adapt to changes. Competent and creative employees play a crucial role in the innovation process, which is especially significant in the service sector. In service businesses, new ideas often come from both employees and customers, rather than from traditional R&D projects. There is a need to enhance research, education, and training in humanities and social science areas related to service innovation, such as innovation management, user-driven innovation, consumer behavior, marketing, new business models, cultural understanding, and communication. Unfortunately, these aspects have been overlooked in transition economies, especially in small firms dominating the business services sector, where employees have limited opportunities for acquiring new knowledge and skills due to their engagement in daily activities (United Nations Economic Commission for Europe, 2011).

Several determinants influence employee innovation in the context of organizational change, affecting the level of performance and enhancing the competitive position of these companies. It can be concluded that innovation plays a critical role today (Smith & Tushman, 2005), and employee innovative behavior is one of the best ways to embrace innovation and ensure the organization's success (Mytelka & Smith, 2002). Innovative employee behavior has been a subject of research in various fields since it was first introduced as a concept (Scott & Bruce, 1994). It can be defined as the act of generating, promoting, and implementing innovative thinking within an organization, aiming at personal and organizational performance, enabling employees to use innovative thinking, respond promptly and accurately to market and consumer demands (Scott & Bruce, 1994; Woodman et al., 1993). Innovative employee behavior has long been considered a primary way for companies to gain a competitive advantage (Shanker et al., 2017) and improve organizational performance, representing the organization's ability to efficiently use resources and create outputs consistent with its goals and relevant to its users (Peterson et al., 2003).

As the service sector has expanded, researchers have increasingly focused on uncovering new sources for gaining a competitive edge within the sector, which encompasses a strong emphasis on innovation (Vincenzi & da Cunha, 2021). The complexity and dynamism inherent in many service activities demand a workforce with high adaptability and problem-solving skills, driving a culture of continuous improvement and innovation. Furthermore, the knowledge-intensive aspect of services cultivates an environment of continuous learning and experimentation, nurturing inventive approaches to problem-solving. Consequently, the significance of conducting research within the services sector and the urgency to cultivate novel perspectives on services has never been more apparent. Considering the significance of employee innovation in today's environment, this study seeks to explore the importance of various factors – such as supervisor support for innovative ideas, work autonomy, rewards, time availability, organizational barriers, and specific aspects of organizational climate – and their influence on organizational performance amidst organizational change. The identified determinants serve as the foundation for observing employees' innovative behavior. Additionally, the study explores whether there are differences in employee perceptions based on their positions within the organization.

The primary objective of this research is to determine whether the aforementioned determinants have an impact on the organizational performance of employees in the service sector of the Republic of Serbia. Within the framework of a CECI scale, determinants gauge five internal organizational factors that foster corporate entrepreneurship. The primary objective is to assess entrepreneurial behavior within the organization and examine the mechanisms facilitating its diffusion throughout the entire company. The research was conducted in Central Serbia, using the Corporate Entrepreneurial Climate Instrument (CECI) as the foundation. The empirical part of the research included descriptive statistical analysis, reliability analysis, correlation analysis, multiple regression analysis, and the T-test for two independent samples.

To the best of the authors' knowledge, prior research in this field does not take into account all variables of the CECI model, and the effects of the examined variables are mainly measured in terms of the level of employee innovation. Therefore, the main contribution of this study is testing the impact of all variables of the mentioned model on the organizational performance of companies.

2. Background

2.1. The effects of organizational change

According to Porras and Silver (1991), organizations usually experience change as a result of "an unintentionally generated response" due to internal or external factors. Precisely, organizational change encompasses substantial modifications in the structure, strategies, processes, or culture of companies or institutions. It is frequently instigated to accommodate external influences, enhance performance, navigate market dynamics, or tackle internal issues. Strategic organizational changes represent profound and essential shifts in how an organization functions, strategically implemented to boost efficiency, secure a competitive edge, enhance overall performance, and align with evolving market conditions. The process of organizational transformation is directed towards various categories of change, which can be classified as follows: changes originating from the external environment and changes within the organization (Appelbaum et al., 1998). External changes encompass alterations in competition, government regulations, economic conditions, and technological advancements. Changes may also originate from within the organization itself, such as a new corporate vision or mission, the adoption of new technologies, mergers and acquisitions, and a decline in company morale.

Griffin and Moorhead (2014) described organizational performance as the "extent to which the organization is able to meet the needs of its stakeholders and its own needs for survival". In other words, organizational performance refers to how well an organization achieves its objectives and fulfills its mission. Due to its numerous perspectives and relevance, organizational performance is chosen as the dependent variable in this research. Researchers reach varied conclusions about the impact of organizational changes, particularly mergers and acquisitions, emphasizing their critical significance for organizational performance. This performance is shaped by diverse employee behaviors, actions, motivations, and decisions. Managerial performance involves addressing daily challenges, monitoring competitive behavior, striving for performance objectives, and adhering to company policies. Assessment of organizational performance considers managerial and subordinate performance, the pursued strategy, and market conditions. Amidst frequent organizational changes in the service sector, both managers and employees play a crucial role in enhancing organizational performance, the key focus of much research in this area.

On the one hand, some of the researchers show the negative effects of organizational changes, both on the financial (King et al., 2004) and organizational performance (Correia et al., 2013) of companies that have undergone the process of organizational transformation. The effects of organizational transformation can lead to the improvement in the knowledge base and, consequently, to innovative outcomes (Chen et al., 2021). On the other hand, the high costs associated with the process of organizational transformation, as well as the consequences of integration and cultural adaptation, can result in below-average performance and an unclear effect on innovation (Zhou et al., 2019). Research by Savović et al. (2022) demonstrates that certain dimensions are of particular importance for the corporate culture of acquired firms: innovation, top management communication with employees, autonomy and decision-making, the reward system, and performance orientation. Consequently, a company should establish clear performance requirements and continuous improvement, as well as a transparent and fair employee reward system. It is precisely these dimensions that will be analyzed in this study.

2.2. Hypotheses and research model

Managerial support

As employees are a key element in a company's innovation process, especially given their daily interaction with procedures, processes, products, and services, providing support for their innovative behavior is essential to any company (Barham et al., 2020; Jankelova et al., 2021). Besides the importance of a pleasant business relationship with colleagues, a crucial factor of employee satisfaction is an open and trusting relationship with management, built through their support (Jakubiv et al., 2022). Managerial support creates an environment in which employees feel that their innovative ideas have value and will be supported, motivating them to contribute to innovation as a predictor of organizational performance. Employee innovative behavior orients all activities related to generating new ideas (e.g., ideas about products, processes, technology). The level of managerial support will depend on the organizational level at which the manager is positioned (Hornsby et al., 2009). It is emphasized that support for innovation is higher at higher organizational levels (Erić Nielsen et al., 2019), considering the different roles and responsibilities that different management levels have in the organization. At the strategic level, managers focus on defining or redefining ways to improve business. The middle management level is based on enhancing the organization's competitive position, while operational management is focused on key competencies. Overall, support for innovative ideas by supervisors creates a favorable work environment in which employees are often more productive and creative. Therefore, supervisor support has a direct impact on organizational performance (Khalid, 2020; Ogbonnaya & Valizade, 2016), as well as on other categories of performance, such as productivity and economic growth (Cainelli et al., 2004). Accordingly, the following hypothesis can be formulated:

H_1: Managerial support has a positive impact on organizational performance.

Work autonomy

Work autonomy can be defined as "the practice or set of practices that involve delegating responsibility down the hierarchy, giving employees greater authority to make decisions regarding the performance of their primary task" (Lin et al., 2011). Autonomy enables employees to self-regulate their emotions and behaviors, allowing them to pursue objectives aligned with their individual values. Numerous authors emphasize that work autonomy is one of the key drivers of innovative employee behavior (Akhter et al., 2022; De Spiegelaere et al., 2014; Galván Vela et al. 2021; Hammond et al., 2011). It is important to note that autonomy allows employees to take initiative and experiment with various work approaches and methods. It enables them to generate ideas and further develop them on a small scale of their application (Hammond et al., 2011). Organizations should provide appropriate support and guidance to ensure that autonomy is innovation-oriented. Numerous studies link work autonomy to employee performance (Leach et al., 2005; Muecke & Iseke, 2019), personal development (Zhou et al., 2019), trust in top management, and managerial support for innovative ideas. Accordingly, the following hypothesis can be formulated:

H_2: Work autonomy has a positive impact on organizational performance.

Rewards/Reinforcements

Employee innovation can be supported through various types of compensation, reward systems and employee recognition. In today's competitive world, it is important to note that compensation is often the biggest motivator (Anthony et al., 2007). People are more motivated to perform their jobs better when they believe they will receive appropriate rewards for their efforts. Organizations can reward employees for their innovative contributions to motivate them to continue generating new ideas. However, it can be observed that financial motivators are not the sole factors in enhancing employee performance, and there is an increasing emphasis on the importance of employee motivation, satisfaction, and a sense of usefulness after the successful completion of tasks. In a study conducted by Gede and Wayan Pradnyantha (2016), a positive impact of the employee reward system on performance and commitment to the job was demonstrated. Lomyati and Tridayant (2023) show an indirect influence of the employee reward system on organizational performance through employee performance. It is important to emphasize that the reward system affects performance only if it is adequate and specially adapted to employees. On the other hand, an inadequate reward system can even have a negative impact on results and performances (Manzoor et al., 2021). Accordingly, the following hypothesis can be formulated:

H_3: Rewards/Reinforcements have a positive impact on organizational performance.

Time availability

Time availability can be defined as (Kuratko et al., 2005) "determining the workload to ensure that individuals and groups have enough time to implement innovations and that their jobs are structured in a way that supports efforts to achieve the organization's short-term and long-term goals” or as “the degree to which employees can embrace innovative efforts in the process of achieving short-term and long-term goals” (Hornsby et al., 2002). It is emphasized that innovation is less likely to occur when there is insufficient time for experimentation (Kuratko et al., 2005) and that teamwork slows down the decision-making process, thereby increasing the necessary time for action. In situations where employees feel time pressure, they may show lower levels of innovative behavior, due to the complexity of the processes and activities involved. Excessive time pressure or a constant focus on routine tasks can stifle creativity and innovation. Providing employees with time, resources, and support to engage in innovative work can lead to a more innovative and adaptive organization (Alpkan et al., 2010; Galván Vela et al., 2021). Opposite to these findings, Agrawal et al. (2018) conducted research on the role of free time in the internal allocation of time and effort in innovative projects in the field of education in the United States and found that the availability of free time positively influences the development of new ideas and projects. Accordingly, the following hypothesis can be formulated:

H_4: Time availability has a positive impact on organizational performance.

Organizational barriers

Organizational barriers are often connected with the concept of “role clarity” and are originally defined as “precise explanations of expected outcomes of organizational work” (Kuratko et al., 2005). Organizational barriers or boundaries (Hornsby et al., 2002) in the context of innovation are precisely defined as business outcomes that are expected, along with the development of mechanisms for evaluating, selecting, and implementing innovations. They can arise between different parts of the organization, as well as within a team, in situations where a team member or team leader attempts to influence the behavior of other team members. When expected business outcomes are clearly defined, that can contribute to increased employee responsibility and engagement, ultimately improving their performance. However, a high degree of rigidity and constraints within the organization can stifle the creativity and innovative behavior of employees. Therefore, it is crucial to find the right balance between setting clear organizational boundaries and encouraging creativity and innovative behavior within the organization. Based on the above, the following hypothesis can be formulated:

H_5: Organizational barriers have a positive impact on organizational performance.

Specific parameters of the organizational climate

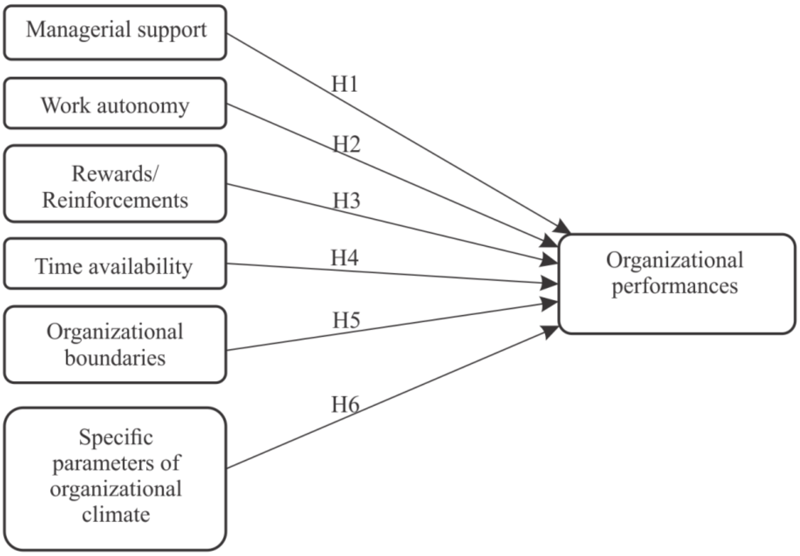
Organizational climate can be defined as “a way in which employees perceive the organization and its purpose” (Payne et al., 1971). Organizational climate reflects individual perceptions, recurring behavior patterns, attitudes, and feelings of employees (Griffin & Moorhead, 2014). Shanker et al. (2017) state that when organizations are able to develop an organizational climate that employees perceive as positive, it leads to increased motivation, commitment, and engagement, ultimately enhancing organizational performance. Dimensions of the organizational climate, such as autonomy or freedom have a positive effect on employee innovative behavior. On the other hand, a study conducted by De Jong and Den Hartog (2007) shows that there is no positive relationship between organizational climate and employee innovation. Previous research results indicate that a favorable organizational climate enhances employee satisfaction, as well as workplace performance, particularly innovative organizational climates (Atta et al., 2019), on organizational performance. Accordingly, the following hypothesis can be formulated:

H_6: Innovative organizational climate has a positive impact on organizational performance.

A large number of studies directly link individual variables to organizational performance. Ogbonnaya and Valizade (2016) and Khalid (2020) investigate the impact of management support for employee innovative behavior on organizational performance. Leach et al. (2005) associate work autonomy with employee performance. Moreover, there are numerous studies that connect innovative organizational climate with company performance (Atta et al., 2019). Savović et al. (2022) examine the influence of organizational culture, through innovations, communication by top management with employees, autonomy, and the reward system on post-acquisition performance. The relationship between these variables is also examined in the context of organizational climate.

The basis for selecting determinants is the Corporate Entrepreneurial Climate Instrument (CECI) initially developed by Hornsby et al. (2002) and later improved (Hornsby et al., 2009). Statements related to business performance, the dependent variable in the model, were adapted from studies conducted by Vij and Bedi (2016) and Payal et al. (2019).

Figure 1: Research model



Source: Authors' research

The extent to which employees engage in experimentation, demonstrate individual initiative, and utilize resources not formally allocated to them is influenced by their perception of working conditions, as indicated by Morris et al. (2010). Hence, the literature has recognized entrepreneurial organizational factors as crucial precursors influencing strategic and entrepreneurial practices, which is especially noticeable in bigger enterprises (Casales, 2022). The CECI scale is increasingly utilized for the measurement of corporate entrepreneurship, as evidenced by studies conducted by Hornsby et al. (2009) and Kuratko et al. (2011). Notably, the CECI serves the crucial function of assessing managerial support for corporate entrepreneurship, as emphasized by Hornsby et al. (2009). The scale is also used in the service sector, mostly in the financial (Casales, 2022) and the public sector (Kontić & Vidicki, 2016), but also in service (Ravjee & Mamabolo, 2019) and organizational innovation (Ahmetoglu et al., 2018).

However, there is a limited number of studies that examine the impact of the CECI model variables on organizational performance in the service sector, which is also the gap that this research aims to address. Figure 1 shows the research model.

3. Research methodology and sample structure

The research was conducted in the Central Serbia region from September 2nd to September 15th, 2023. The sample consists of 105 participants, segmented based on the following characteristics: gender, age, years of work experience, educational background, position in the organization, and type of organization. Table 1 displays the sample structure, from which it can be concluded that the sample consists mainly of female participants (53.7%), aged between 30 and 50 years (48.8%), with 5 to 10 years of work experience (47.5%), and have a high level of education (50%). A significant portion of the participants did not hold managerial positions (72.5%). The participants were mainly surveyed in banks (55.2%), specifically in branches in Kraljevo, Kragujevac, and Belgrade (AIK Bank, NLB Komercijalna Banka, Eurobank Direktna, and Raiffeisen Bank), as well as in IT sector companies (44.8%) in Kragujevac (Comtrade, Endava, LionEight, AAA Freight, and Qubitsoft), which have undergone specific organizational changes in recent years.

Table 1: Sample structure

Demographic characteristics	Number of participants	Percentage of participants
Gender		
Male	47	55.%
Female	58	44.8%
Age		
Up to 30 years	39	37.1%
From 30 to 50 years	47	44.8%
Over 50 years	19	18.1%
Years of work experience		
Up to 5 years	37	35.2%
From 5 to 10 years	46	43.8%
Over 10 years	22	21%
Education		
High school	26	26%
College/University	40	50%
Master’s studies	14	17.5%
Position		
Managerial	22	27.5%
Non-managerial	58	72.5%

Source: Authors’ research

The research was conducted using an online survey carried out over the internet. Each of these CECI dimensions and organizational performance was measured through a set of measurement items, which utilized a Likert scale with five ordinal choices (1 – strongly disagree; 5 – strongly agree). The questionnaire consists of 49 statements grouped into 7 factors.

4. Results

The statements were grouped into factors, and a reliability analysis was conducted, as shown in Table 2. From the Cronbach's alpha coefficient values, it can be concluded that all factors are reliable, as the coefficient value for each factor exceeds the threshold of 0.7 (Nunnally, 1978). The highest degree of internal consistency of statements occurs in the case of factor "Managerial support" (highest Cronbach's alpha coefficient value - 0.955), while the lowest degree of internal consistency of statements is observed in the case of factor "Organizational Barriers" (lowest Cronbach's alpha coefficient value - 0.722).

Table 2: Results of the factor analysis

Factors	**Mean**	**St. dev.**	**Cronbach' alpha**
Managerial support	3.595	0.929	0.955
Work autonomy	3.825	0.719	0.894
Rewards/Reinforcements	3.809	0.686	0.794
Time availability	3.627	0.645	0.765
Organizational boundaries	3.799	0.671	0.722
Specific parameters of organizational climate	3.5733	0.724	0.761
Organizational performance	3.7583	0.751	0.913

Source: Authors' research

The next analysis applied in the study was a correlation analysis (Table 3). The aim was to determine the degree of quantitative agreement of variations in the formed variables. Based on the obtained results, it can be concluded that the highest degree of correlation occurs between factors "managerial support" and "organizational performance" due to the highest Pearson correlation coefficient value of 0.846. It can be said that there is a high correlation between this pair of variables. The lowest value of the Pearson coefficient, which is 0.274, is observed in the relationship between the "organizational barriers" and "perceived performance" factors, indicating the lowest degree of correlation between these two factors, or a weak correlation.

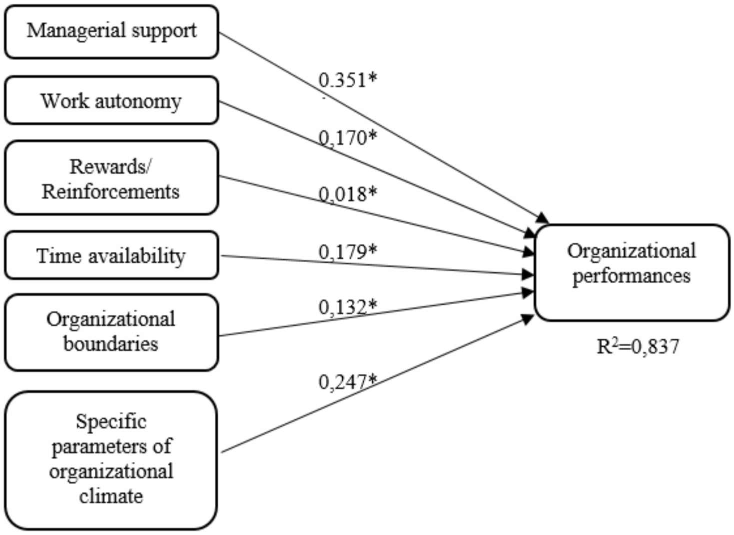
Table 3: Correlation matrix

Var.	**MS**	**WA**	**R/R**	**TA**	**OB**	**OK**	**OP**
MS	1	0.731**	0.756**	0.686**	0.489**	0.622**	0.846**
RA	0.731**	1	0.643**	0.485**	0.274**	0.524**	0.705**
R/R	0.756**	0.643**	1	0.597**	0.437**	0.682**	0.744**
T/A	0.686**	0.485**	0.597 **	1	0.515**	0.450**	0.704
OB	0.489**	0.274**	0.437**	0.515**	1	0.511**	0.590**
OK	0.622**	0.524**	0.682**	0.450**	0.511**	1	0.742**
OP	0.846**	0.705**	0.744**	0.704**	0.590*	0.742**	1

** The correlation coefficient is significant at the 0.01 level
Source: Authors' research

Table 4 shows the results of the multiple regression analysis, measuring the intensity of the impact of the observed variables on the intention of future usage. Considering the value of the coefficient of determination ($R^2 = 0.837$), it can be concluded that 83.7% of the variance in organizational performance is explained by the given model. Since the VIF values are less than 5 (Field, 2000) for all factors, it can be inferred that there is no multicollinearity issue, and the data are suitable for conducting the regression analysis.

Figure 2: Research results



Source: Authors' research

The multiple regression analysis revealed that managerial support has a statistically significant positive impact on organizational performance (β = 0.351; $p < 0.05$), confirming the first hypothesis. Work autonomy also has a statistically significant positive impact on organizational performance (β = 0.170; $p < 0.05$), confirming the second hypothesis. The results indicate that rewards and reinforcements do not have a statistically significant impact on organizational performance ($p > 0.05$), leading to the rejection of the third hypothesis. Time availability has a positive impact on organizational performance (β = 0.179; $p < 0.05$), confirming the fourth hypothesis. Similarly, this is the case with the factors of organizational barriers (β = 0.132; $p < 0.05$) and specific parameters of organizational climate (β = 0.274; $p < 0.05$), confirming both the fourth and fifth hypotheses. Multiple regression analysis results are presented as a Figure 2.

Table 4: Regression analysis

Variables	**β**	**T**	**Sig.**	**VIF**
Managerial support	0.351	4.340	0.000	3.932
Work autonomy	0.170	2.737	0.007	2.329
Rewards/Reinforcements	0.018	0.259	0.796	2.984
Time availability	0.179	3.006	0.003	2.122
Organizational boundaries	0.132	2.536	0.013	1.632
Specific parameters of organizational climate	0.274	4.542	0.000	2.186

Source: Authors' research

Finally, in order to determine if there are statistically significant differences in respondents' attitudes regarding the given variables, an independent samples T-test was conducted for two independent samples (Table 5). The criterion by which respondents' attitudes were grouped is their position in the organization, more precisely, whether the position is managerial or not. Based on the results of the analysis shown in Table 5, it can be said that there is a statistically significant difference in respondents' attitudes when it comes to two factors, rewards/reinforcements ($p = 0.059 < 0.1$) and time availability ($p = 0.021 < 0.1$), where in both cases (considering the mean value), the attitudes of employees in managerial positions are more favorable.

Table 5: T-test for two independent samples

Variables	Sig.	Mean	St. deviation	Position
Rewards/ Reinforcements	0.059	3.619	0.680	managerial
		3.893	0.677	non-managerial
Time availability	0.021	3.437	0.464	managerial
		3.709	0.703	non-managerial

Source: Authors' research

5. Discussion

The research results demonstrate that support from managers for innovative ideas is the most significant predictor of organizational performance, thus confirming the first hypothesis. Numerous prior studies demonstrate the importance of managerial support for improving both organizational (Khalid, 2020; Ogbonnaya & Valizade, 2016) and financial performance (Cainelli et al., 2004). Providing support to employees is especially critical given their daily interactions with products and services. The obtained results strongly suggest that management plays a pivotal role in fostering innovation within a company (Barham et al., 2020). Consequently, it can be concluded that managerial support is one of the most crucial predictors of employee innovative behavior, an observation echoed by numerous researchers (Barham et al., 2020; Jankelova et al., 2021). Demonstrating initiative on the part of managers, offering support and encouragement to employees, as well as providing financial support, will lead to more innovative employee behaviors, which will positively impact organizational performance.

According to the results, work autonomy is a significant factor that positively influences employee organizational performance, confirming the second hypothesis. The level of freedom and the degree of employees' abilities and responsibilities in their roles will lead to an enhancement of their innovation and organizational performance. These findings align with the results of numerous prior studies that investigated the link between work autonomy, innovation, and organizational performance (Akhter et al., 2022; De Spiegelaere et al., 2014; Hammond et al., 2011). The results of these studies emphasize the importance of work autonomy in stimulating creativity and innovation among employees. Other authors (Leach et al., 2005; Muecke & Iseke, 2019) highlight the positive impact of work autonomy on enhancing organizational performance. The consistency of these findings with the obtained results underscores the pivotal role of work autonomy in shaping more efficient and innovative organizations. In summary, these conclusions underline the importance of providing employees with a greater degree of freedom in performing their tasks, as a means of enhancing their innovativeness and, consequently, their performance in dynamic market conditions.

Based on the obtained results, it can be concluded that rewards and reinforcements do not have a statistically significant impact on organizational performance, leading to the rejection of the third hypothesis. These results are contradictory to numerous study results in which are rewards prioritized as essential motivators for employees that lead to improvements in their performance (Lomyati & Tridayant, 2023; Varma, 2017). Thus, there is a need for a deeper understanding of this discrepancy. One possible explanation for the disparity in results is that the current reward system may not be adequate or sufficiently tailored to employees' needs, consistent with the findings of a study by Manzoor et al. (2021).

Furthermore, there may be a misalignment between financial and non-financial incentives, further complicating the role of rewards and reinforcements in employee motivation. Understanding different types of rewards in the specific organizational context and how they can be better adapted to employees' needs, may be crucial for future efforts of enhancing organizational performance through reward systems.

Regression analysis results demonstrate that there is a positive influence of available time on organizational performance, confirming the fourth hypothesis. The results obtained align with those of a study by Agrawal et al. (2018), which highlights the positive impact of leisure time on the development of innovative projects in the field of education. In contrast to the obtained results (Alpkan et al., 2010; Galván Vela et al., 2021), they refute the association between available time and innovation, indicating that there is no positive correlation regarding the innovative performance of entrepreneurial endeavors. Therefore, the results emphasize the importance of structuring work tasks to provide employees with not only the means to perform their tasks efficiently but also to express their innovation and consider the broader context of organizational changes. This highlights the need for a flexible approach to work organization and time management to create conditions for innovative and creative problem-solving and ultimately improve organizational performance.

Based on the results, it is evident that there is a positive relationship between organizational barriers and organizational performance, thus confirming the fifth hypothesis. It can be concluded that organizational boundaries influence employees. It is crucial that a clear relationship exists between employees' work performance and the standards by which it is evaluated, along with open communication from management regarding results achieved and clearly defined rules, standards, and procedures for their evaluation. Setting clear expectations for employees leads to an enhancement of their performance and, consequently, the organization's overall performance. The research results demonstrate that a positive relationship exists between specific parameters of organizational climate and organizational performance, thus confirming the sixth hypothesis. A favorable organizational climate, especially one that fosters innovation (Atta et al., 2019) and nurtures a culture of trial and error, offers employees an opportunity to express their innovative abilities, even in the context of organizational changes (Savović et al., 2022). In an ever-changing environment, organizations that encourage an innovative organizational climate and cultivate a culture of trial and error enable faster and easier adaptation to new conditions. This approach can enhance organizational performance because it encourages continuous learning and adaptation. High flexibility in job tasks and job definition offers employees freedom in performing their daily tasks, allowing for more innovative behaviors. If management nurtures a climate that promotes innovation, there is greater openness to new ideas, risk acceptance, experimentation, continuous learning, and adaptation, creating an opportunity for further enhancing organizational performance.

6. Conclusion

Contemporary market trends and increased competitiveness emphasize the growing importance of employees and their innovativeness in achieving adequate business results. To ensure innovative behavior among employees, it is important to create a stimulating work environment, provide the necessary resources, receive support from all levels of management, and create a favorable organizational climate. With appropriate treatment of employees, it is possible to minimize the negative effects of organizational changes and encourage their innovativeness.

The conducted research has both theoretical and practical implications. Primarily, the research allows for the expansion of existing knowledge about determinants of innovative behavior among employees. The goal is to determine whether the mentioned variables have an impact on the organizational performance of employees in the service sector. Additionally, the aim is to examine whether there is a difference in employee perceptions depending on their position in the organization. The major contribution of the study lies in testing the effects of all variables on organizational performance, particularly in the context of companies that have undergone organizational changes.

The practical implications of the research are as follows. Since the results show the greatest impact of management support on organizational performance, it is suggested to organize meetings where management will outline how innovations will be evaluated. The company's management needs to define clear goals regarding innovative employee behavior and illustrate how innovations align with broader strategic objectives of the organization.

It is advisable for the employee reward system to be directed towards innovative behavior to have effects on employee performance. Connected with standards and procedures, it is proposed that management clearly defines the link between the reward system and innovations. For instance, a certain monetary bonus could be awarded to an employee if their initiative is accepted, with an additional amount if the initiative is successfully implemented. This approach nurtures the "trial and error" system and generates innovative ideas with a realistic possibility of implementation. Additionally, the organization can create an "innovation fund" or budget that provides employees with access to resources for implementing their innovative ideas.

To stimulate innovative behavior, it is necessary to provide employees with a higher degree of freedom and allow them to independently carry out tasks. This can be achieved over time through an adequate mentoring system, enabling both employees and managers to demonstrate innovative initiatives.

For the development of innovative ideas, besides a stimulating environment, there needs to be sufficient time. The suggestion to management is to "shorten" one working day at the end of the workweek for informal brainstorming meetings where employees can encourage each other to think innovatively. Time availability may include dedicated time for working on innovation projects or flexible working hours. The company can allow employees to spend a certain percentage of their working time on innovative problem-solving projects without affecting their regular tasks.

The conducted research has several limitations. The primary limitation is the size and structure of the sample, which is not sufficiently representative, considering that the research was conducted only in Central Serbia and encompasses a relatively small number of respondents employed exclusively in the service sector. Additionally, the effects of independent variables were measured on one dependent variable — organizational performance. Therefore, future research could include respondents from neighboring countries to compare with this study. It is also possible to include employees from other sectors and compare between types of activities. Furthermore, it is possible to analyze these variables on employee satisfaction or other performance categories, representing the dependent variable of the model. Additionally, segmenting respondents based on gender or age structure could reveal differences in attitudes and intentions among employees belonging to different groups.

Conflict of interest

The authors declare no conflict of interest.

References

1. Agrawal, A., Catalini, C., Goldfarb, A., & Luo, H. (2018). Slack time and innovation. *Organization Science*, *29*(6), 1056–1073. https://doi.org/10.1287/orsc.2018.1215
2. Ahmetoglu, G., Akhtar, R., Tsivrikos, D., & Chamorro-Premuzic, T. (2018). The entrepreneurial organization: The effects of organizational culture on innovation output. *Consulting Psychology Journal: Practice and Research*, *70*(4), 318–338. https://doi.org/10.1037/cpb0000121
3. Akhter, N., Bandhu, A., Birwal, N., & Kumar, S. (2022). Examine the effect of employee engagement and work autonomy on inovative work behaviours in organizations. *Neuroquantoloqy*, *20*(16), 168–181. https://doi.org/10.14704/NQ.2022.20.16.NQ88020
4. Alpkan, L., Bulut, C., Gunday, G., Ulusoy, G., & Kilic, K. (2010). Organizational support for intrapreneurship and its interaction with human capital to enhance innovative performance. *Management Decision*, *48*(5), 732–755.
5. Anthony, W. P., Perrewe, L. P., & Kacmar, M. K. (2007). *Human resource management a strategic approach*. Thomsons Learning, Beverly Hills.
6. Appelbaum, S., St-Pierre, N., & Glavas, W. (1998). Strategic organizational change: The role of leadership, learning, motivation and productivity. *Management Decision*, *36*, 289–301. https://doi.org/301. 10.1108/00251749810220496
7. Atta, H., Lashari R., Rana, A., Atta, S., & Nazir, S. (2019). The role of organizational climate on employee performance: An empirical study of government hospitals of Lahore, Pakistan. *European Online Journal of Natural and Social Sciences*, *8*(4), 56–63.
8. Barham, H., Dabic, M., Daim, T., & Shifrer, D. (2020). The role of management support for the implementation of open innovation practices in firms. *Technology in Society*, *63*, 1–8. https://doi.org/10.1016/j.techsoc.2020.101282
9. Cainelli, G., Evangelista, R., & Savona, M. (2004). The impact of innovation on economic performance in services. *Service Industries Journal*, *24*, 116–130. https://doi.org/10.1080/0264206041233l301162
10. Casales, M. B. (2022) Strategic corporate entrepreneurship practices in financial services firms: The role of organizational factors. *SN Business & Economics*, *2*(9). https://doi.org/10.1007/s43546-022-00306-2
11. Chen, F., Ge, Y., & Liu, H. (2021). Overseas M&A integration and industrial innovation: A study based on internal and external knowledge network reconfiguration. *Technology Analysis and Strategic Management*, *35*(6), 1–13. https://doi.org/10.1080/09537325.2021.1979211
12. Correia, M. F., Cunha, R. C., & Scholten, M. (2013). Impact of M&A's on organizational performance: The moderating role of HRM centrality. *European Management Journal*, *31*(4), 323–332. https://doi.org/10.1016/j.emj.2013.01.004
13. De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behavior. *European Journal of Innovation Management*, *10*(1), 41–64. https://doi.org/10.1108/14601060710720546
14. De Spiegelaere, S., Van Gyes, G., De Witte, H., Niesen, W., & Van Hootegem, G. (2014). On the relation of job insecurity, job autonomy, innovative work behaviour and the mediating effect of work engagement. *Creativity and Innovation Management*, *23*(3), 318–330. https://doi.org/10.1111/caim.12079
15. Erić Nielsen, J. Stojanović – Aleksić, V., & Zlatanović, D. (2019). Driving forces of employees' entrepreneurial organization, *Ekonomika*, *65*(2), 87–98. https://doi.org/10.7595/10.7595/management.fon.2019.0020
16. Field, A. (2000). *Discovering statistics using SPSS for Windows*. Thousand Oaks: Sage Publication.

17. Galván Vela, E., Mercader, V., Arango, E., & Corrales, M. (2021). Empowerment and support of senior management in promoting happiness at work. *Corporate Governance an International Review*, *22*(3), 536–545. https://doi.org/1-10. 10.1108/CG-05-2021-0200
18. Gede, R., & Wayan Pradnyantha W. (2016). The effect of compensation on organisational commitment and employee performance with the labor union as the moderating variable. *Scientific Journal of PPI-UKM*, *3*(2), 83–88. https://doi.org/10.21752/sjppi-ukm/ses/a29082016
19. Griffin R. W., & Moorhead G. (2014). *Organizational behavior: Managing people and organizations*. Eleventh Edition: South-Western Cengage Learning.
20. Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, *5*, 90–105. https://doi.org/10.1037/a0018556
21. Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2002). Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale. *Journal of Business Venturing*, *17*, 253–273. https://doi.org/10.1016/S0883-9026(00)00059-8
22. Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., & Bott, J. P. (2009). Managers' corporate entrepreneurial actions: Assessing a measurement scale. *Journal of Business Venturing*, *24*(3), 236–247. https://doi.org/10.1016/j.jbusvent.2008.03.002
23. Jakubiv, M., Prnić, M., & Ćirić, M. (2022). The effects of organizational factors on work outcomes – The role of employee resilience in hospitality kitchens. *Hotel and Tourism Management*, *10*(2), 71–89. https://doi.org/10.5937/menhottur2202071J
24. Jankelova, N., Joniaková, Z., Blštáková, J., Skorková, Z., & Procházková, K. (2021). Leading employees through the crises: Key competences of crises management in healthcare facilities in coronavirus pandemic. *Risk Management and Healthcare Policy*, *145*, 561–573. https://doi.org/10.2147/RMHP.S288171
25. Khalid, K. (2020). The impact of managerial support on the association between pay satisfaction, continuance and affective commitment, and employee task performance. *SAGE Open*, *10*(1), 1–13. https://doi.org/10.1177/2158244020914591
26. King, D., Dalton, D., Daily, C., & Covin, J. (2004). Meta-analyses of post-acquisition performance: Indications of unidentified moderators. *Strategic Management Journal*, *25*(2), 187–200. https://doi.org/10.1002/smj.371
27. Kontić, Lj., & Vidicki, D. (2016). Corporate entrepreneurship in Serbian public sector. *Conference*: *Entrepreneurship – Types, current trends and future perspectives* (pp. 14–26). Faculty of Business Economics and Entrepreneurship (BEE), Belgrade.
28. Kuratko, D. F., Ireland, R. D., Covin, J. G., & Hornsby, J. S. (2005). A model of middlelevel managers' entrepreneurial behavior. *Entrepreneurship Theory and Practice*, *29*(6), 699–716. https://doi.org/10.1111/j.1540-6520.2005.00104.x
29. Kuratko, D. F., Morris, M. H., & Covin, J. G. (2011). *Corporate innovation & entrepreneurship* (3rd ed.). South Western Cengage Leairning.
30. Leach, D. J., Wall, T. D., Rogelberg, S. G., & Jackson, P. R. (2005). Team autonomy, performance, and member job strain: Uncovering the teamwork KSA link. *International Association Applied Psychology*, *54*(1), 1–24. https://doi.org/10.1111/j.1464-0597.2005.00193.x
31. Lin, B. Y. J., Lin, Y. K., Lin, C. C., & Lin, T. T. (2011). Job autonomy, its predispositions and its relation to work outcomes in community health centres in Taiwan. *Health Promotion International*, *28*(2), 166–177. https://doi.org/10.1093/heapro/dar091
32. Lomyati, S., & Tridayant, G. (2023). Analysis of the effect of compensation and motivation on organizational performance through employee performance, *International*

Journal of Entrepreneurship and Business Development, *6*(4), 636–649. https://doi.org/10.29138/ijebd.v6i4.2257

33. Manzoor, F., & Wei, L., & Asif, M. (2021). Intrinsic rewards and employee's performance with the mediating mechanism of employee's motivation. *Frontiers in Psychology*, *12*, 1–13. https://doi.org/10.3389/fpsyg.2021.563070
34. Morris, M. H., Kuratko, D. F., & Covin, J. G. (2010). *Corporate entrepreneurship & innovation.* Cengage Learning.
35. Muecke, S., & Iseke, A. (2019). How does job autonomy influence job performance? A meta-analytic test of theoretical mechanisms. *Academy of Management Proceedings*, *1*, 14632. https://doi.org/10.5465/AMBPP.2019.145
36. Mytelka, L. K., & Smith, K. (2002). Policy learning and innovation theory: An interactive and co-evolving process. *Research Policy*, *31*(8), 1467–1479. https://doi.org/10.1016/S0048-7333(02)00076-8
37. Nunnally, J. C. (1978). *Introduction to psychological measurement*. New York: McGraw-Hill.
38. Ogbonnaya, C., & Valizade, D. (2016). High performance work practices, employee outcomes and organizational performance: A 2-1-2 multilevel mediation analysis. *The International Journal of Human Resource Management*, *27*, 1–2. https://doi.org/10.1080/09585192.2016.1146320
39. Payal, R., Ahmed, S., & Debnath, R.M. (2019). Impact of knowledge management on organizational performance: An application of structural equation modeling. *Journal of Information and Knowledge Management Systems*, 49(4), 510–530. https://doi.org/10.1108/VJIKMS-07-2018-0063
40. Payne, R. L., Pheysey, D. C., & Pugh, D. S. (1971). Organization structure, organizational climate, and group structure: An exploratory study of their relationships in two British manufacturing companies. *Occupational Psychology*, *45*(1), 45–55.
41. Porras, J., & Silver, R. (1991). Organization development and transformation. *Annual Review of Psychology*, *42*, 51–78.
42. Peterson, W., Govert, G., & Michèle W. (2003). *An organizational performance assessment system for agricultural research organizations: Concepts, methods, and procedures*. Hague: International Service for National Agricultural Research (ISNAR).
43. Ravjee, B., & Mamabolo, M. A. (2019). The impact of corporate entrepreneurship on service innovation: A case of a South African banking institution. *The Southern African Journal of Entrepreneurship and Small Business Management*, *11*(1). https://doi.org/10.4102/sajesbm.v11i1.155
44. Savović, S., Nikolić, J., & Zlatanović, D. (2022). Acquisitions, organizational culture and performance: Empirical evidence from acquired company in Serbia. *Journal of Sustainable Business and Management Solutions in Emerging Economies*, *27*(3), 23–34 https://doi.org/10.7595/management.fon.2021.0007
45. Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual in the workplace. *Academy of Management Journal*, *37*(3), 580–670. https://doi.org/10.2307/256701
46. Shanker, R., Bhanugopan, R., van der Heijden, B. I. J. M., & Farrell, M. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of Vocational Behavior*, *100*, 67–77. https://doi.org/10.1016/j.jvb.2017.02.004
47. Smith, W. K., & Tushman, M. L. (2005). Managing strategic contradictions: A top management model for managing innovation streams. *Organization Science*, *16*(5), 522–536. https://doi.org/10.1287/orsc.1050.0134
48. United Nations Economic Commission for Europe (2011). *Promoting innovation in the services sector: Review of experiences and policies*. United Nations, New York.

49. Varma, C. (2017). Importance of employee motivation & job satisfaction for organizational performance. *International Journal of Social Science & Interdisciplinary Research*, *6*(2), 10–20.
50. Vij, S., & Bedi, H. S. (2016). Are subjective business performance measures justified. *International Journal of Productivity and Performance Management*, *65*(5), 603–621. https://doi.org/10.1108/IJPPM-12-2014-0196
51. Vincenzi, T. B. D., & da Cunha, J. C. (2021). Open innovation and performance in the service sector. *Innovation & Management Review*, *18*(4), 382–399. https://doi.org/10.1108/INMR-01-2020-0004
52. Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy Management Review*, *18*(2), 293–321. https://doi.org/10.2307/258761
53. Zhou, C., Hong, J., Wu, Y., & Marinova, D. (2019). Outward foreign direct investment and domestic innovation performance: Evidence from China. *Technology Analysis & Strategic Management*, *31*(1), 81–95. https://doi.org/10.1080/09537325.2018.1485890

Original Scientific Paper

UDC: 331.101.3
005.96
005:338.46
DOI: 10.5937/menhottur2400008N

Received: 21 March 2024
Revised: 25 April 2024
Accepted: 25 May 2024
Published online: 29 May 2024

Navigating employment transformations: Insights into changes within service organizations

Ana Nešić Tomašević[1*], Leposava Grubić-Nešić[1], Aleksandra Perić[1]

[1] University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia

Abstract

Purpose – In today's dynamic business landscape, service organizations are compelled to navigate constant transformations to adapt to market needs, anticipate shifts, and innovate to meet evolving customer demands. This study delves into the relationship between employees in service organizations and changes, aiming to ascertain organizational readiness for change, focusing on dimensions such as commitment to change implementation and the efficiency of implemented changes. **Methodology** – Employing the standardized Organizational Readiness for Implementing Change (ORIC) questionnaire, the research surveyed 319 employees in service organizations. **Findings** – Results highlight challenges in the subjective perception of potential organizational changes, affirming individual differences in attitudes toward change and a notably modest and inconsistent approach in fostering a positive attitude toward change. Variances in attitudes toward change are recognized not only in general demographic characteristics but also in organizational traits. Significantly, organizations often delegate the responsibility for managing change attitudes to individuals, consequently slowing down the change processes. **Implications** – This research endeavors to offer practical suggestions to organizations, directing them on algorithmic initiatives aimed at fostering favorable employee attitudes towards change.

Keywords: changes, organizations, service industry, employees
JEL classification: C1, L2

Transformacija među zaposlenima: Analiza stavova prema promenama u uslužnim organizacijama

Sažetak

Svrha – Savremeni uslovi poslovanja uslužnih organizacija stvorili su imperativ stalnih promena kojima bi se organizacije prilagodile potrebama tržišta, ali i anticipirale i stvarale nove potrebe kod korisnika usluga. U radu se analizira odnos zaposlenih u uslužnim organizacijama prema promenama, sa ciljem ustanovljavanja organizacione spremnosti na promene, sa dimenzijama posvećenost sprovođenju promena i efikasnost sprovedenih promena. **Metodologija** – Istraživanje je vršeno standardizovanim upitnikom *Organizational Readiness for Implementing Change (ORIC)*, na uzorku od 319 ispitanika

* Corresponding author: ana.nesic@uns.ac.rs

zaposlenih u uslužnim organizacijama. **Rezultati** – Rezultati ukazuju na probleme u subjektivnoj percepciji mogućih promena u organizacijama, potvrđujući individualnost u odnosu prema promenama i veoma skroman i nedosledan način u razvoju pozitivnog odnosa prema promenama. Razlike u odnosu prema promenama se prepoznaju ne samo u opštedemografskim karakteristikama, već i u karakteristikama samih organizacija. Organizacije u velikoj meri prepuštaju odnos prema promenama pojedincima, zbog čega se i usporavaju procesi promena. **Implikacije** – Istraživanje je usmereno na pružanje praktičnih smernica organizacijama, kako bi podržale razvoj pozitivnih stavova prema promenama među zaposlenima putem preporučenih aktivnosti.

Ključne reči: promene, organizacije, uslužna delatnost, zaposleni
JEL klasifikacija: C1, L2

1. Introduction

Changes encompass a multitude of pivotal elements integral to the potential success of an organization. These elements extend beyond the mere establishment of new business processes, methods of operation, and technological advancements. They delve into the fundamental openness of employees towards embracing transformations across all sectors within the service industry. In this dynamic realm of services, where adaptability and responsiveness are paramount, we have witnessed the emergence of profound business transformations driven by several key factors. Foremost among these catalysts is the expansion of the market landscape, which has undergone substantial growth and diversification, presenting both opportunities and challenges for service providers. Concurrently, there has been a notable shift towards service personalization and customization, reflecting a heightened emphasis on catering to the unique needs and preferences of individual customers. Moreover, the escalating demands of users in this ever-evolving landscape have exerted significant pressure on service organizations to innovate and evolve rapidly. This relentless pursuit of enhanced user experiences and outcomes has necessitated fundamental changes in how services are conceptualized, delivered, and evaluated. Consequently, service providers are compelled to adopt agile and flexible business models that can swiftly adapt to evolving market dynamics and customer expectations.

In essence, the confluence of market expansion, service personalization, customization, and the escalating demands of users has fundamentally reshaped the service sector, ushering in an era of unprecedented change and opportunity. Navigating these transformations requires a strategic vision, proactive adaptation, and a keen understanding of the evolving needs and preferences of customers. Embracing innovation and agility will be imperative for service organizations seeking to thrive in this dynamic landscape, where the ability to anticipate and respond to change effectively will be the cornerstone of sustainable success. Organizational changes epitomize the process of modifying or transforming the existing landscape within organizations to bolster efficiency and effectiveness (Rafferty et al., 2012). This entails a comprehensive spectrum of activities including analysis, planning, and embracement of novel ideas, approaches, forms, and behaviors both among employees and the organization itself. At the heart of orchestrated organizational evolution lies a relentless pursuit of innovative or optimized methodologies aimed at harnessing resources and capacities. This concerted effort amplifies the organization’s prowess in value creation endeavors, ushering in a new era of enhanced competitiveness and adaptability. Through strategic modifications in structure, technology, and culture, organizations can significantly augment their intrinsic value proposition (Weiner, 2009).

Indeed, changes serve as catalysts for the emergence of novel process outcomes, job roles, operational activities, organizational forms, and structural frameworks. They not only facilitate the realization of economic objectives but also elevate levels of organizational performance to unprecedented heights. Transitioning from conventional mass production paradigms to more personalized, individualized production frameworks grounded in autonomous team collaboration holds the key to unlocking heightened quality standards and productivity levels within organizations (Helfat & Martin, 2015).

The successful navigation of change within a company is intricately tied to its strategies for motivation, communication, and implementation. The efficiency of these strategies is pivotal in determining the organization's overall level of success.

Incentivizing change initiatives often entails a nuanced interplay of socio-economic factors, including fiscal policies, governmental regulations, technological advancements, management methodologies, and organizational development frameworks. However, it is the individual dimension that often serves as the linchpin in the change process. At the individual level, factors such as levels of knowledge, qualifications, and organizational behavior significantly influence the reception and adoption of change. Employees' attitudes, skills, and willingness to adapt play a crucial role in shaping the organization's capacity to embrace and effectively execute transformative initiatives. Therefore, a comprehensive understanding of both the broader social context and the individual dynamics within the organization is imperative for fostering a climate conducive to successful change implementation. There is scant research on attitudes toward changes in organizations in Serbia that acknowledges the challenges of conducting business in highly variable conditions. Investigating changes among employees in service organizations holds paramount importance for organizational development, as these entities often struggle to identify emerging issues and respond appropriately. Previous research endeavors in Serbia have encountered limitations primarily stemming from modest research designs, which have hindered the exploration of attitudes toward change (Gavrilov-Jerković, 2004; Grubić-Nešić, 2004). These constraints have resulted in studies that narrowly focus on specific individual segments, thereby overlooking the broader spectrum of factors influencing attitudes toward change within organizational contexts. By constraining their scope, these studies may have inadvertently overlooked critical nuances and interactions that could provide deeper insights into the complexities of organizational change dynamics. Consequently, there exists a compelling need for future research efforts to adopt more comprehensive and inclusive methodologies, capable of capturing the multifaceted nature of attitudes toward change and its implications for organizational effectiveness and resilience.

2. Background

The planned organizational changes are aimed at increasing effectiveness on four levels: increasing the effectiveness of human resources, functional resources, technological capacities and organizational capabilities. The ability to constantly create new products and services and modify the existing ones in such a way that they continue to attract consumers is one of the core competencies of the company (Oreg et al., 2011). Organizational structural and cultural shifts manifest across all echelons, encompassing alterations in habitual behavioral patterns, recalibration of intergroup dynamics, fostering enhanced collaboration amidst divisions, and instigating transformative shifts in corporate ethos via restructuring the upper management cadre (Wanberg & Banas, 2000). Hersey and Blanchard (1977) identified four levels of change, namely: knowledge change, attitude change, group-level change, and broad-based organizational change. The four listed changes in the organization are connected in such a way that a change in one necessarily affects the change in the other.

The research findings regarding employees' readiness for change, assessed through various influential factors including organizational readiness, individual readiness, project management maturity, and change management maturity, underscore the significance of individual or human factors in driving change (Errida & Lotfi, 2020). Interesting studies, which explore the correlation between cultural tourism and the economic system, emphasize the pivotal role of leadership in executing organizational changes (Ford et al., 2021; Zhang & Guo, 2022). The resistance exhibited by individuals to change initiatives within organizations has been identified as a significant contributing factor to the failure of numerous change programs (Bovey & Hede, 2001). Consequently, there is ample justification for examining the cognitive processes of individuals as integral components of organizational change endeavors. Research in this domain often implicitly or explicitly draws upon the cognitive consistency model, positing that individuals strive to reconcile disparities between their behaviors and attitudes (Bacharach et al., 1996). Moreover, individuals inherently seek equilibrium in their interactions with their surroundings and display a certain aversion to ambiguity (Gupta & Govindajaran, 1984). Given that change entails transitioning from familiar to unfamiliar territory, individuals with a lower tolerance for ambiguity tend to gravitate towards maintaining the status quo.

In order for the change to succeed, it must be accepted by the employees, physically, intellectually and emotionally. The symptoms of passive resistance include verbal agreement without support, feigning ignorance, and withholding information. Low tolerance for change is defined as the fear that a person will fail to develop the new abilities and behaviors required in a new work environment and circumstances. If an employee has little tolerance for change, the increased ambiguity that results from doing their job in a different way is likely to cause resistance to the new way of doing things (Raferty & Minbashian, 2019). Employees sometimes understand that change is needed, but emotionally they cannot reconcile and resist for reasons they may not even subconsciously understand (Kirrane et al., 2016).

Readiness for change represents systems of individual response to the challenges of change, which is formed in accordance with knowledge, experiences, desires, emotions, and affiliations in given conditions (Grubić-Nešić, 2014). The basic problem when introducing changes in the organization is the potential lack of readiness of employees for a new kind/type of organizational behavior (Jones & Van de Ven, 2016). Directing employees to change their business habits or approaches to work in the direction of reaching the desired goal, often involves facing a series of problems (Albrecht et al., 2020; Marinova et al., 2015). Organizational change capital is not just a simple sum of readiness of individuals for change, it implies a much greater activity of the organizations themselves. The research results highlighted several crucial catalysts for change within service organizations, particularly focusing on empowering employees, fostering cooperation and communication during change implementation, nurturing a service-oriented culture, and enhancing management development (Chaudhry, 2020). Furthermore, the societal shifts have reverberated in tourist organizations, necessitating swift adaptation and innovation to meet evolving demands and create novel services tailored to diverse needs. In our research, the examination of organizational readiness for change is founded on the theory of organizational change, which has been formulated as a practical theory built upon the premises of earlier theories by Kotter, Bridges and other authors (Adelson et al., 2021).

3. Materials and methods

The research aims to develop a concrete model that will help organizations manage changes more efficiently and adapt to new circumstances more quickly from an individual's perspective. The research was conducted on a total sample of 319 respondents. The respondents were employees of different socio-demographic characteristics who work in organizations with different characteristics. Research data were meticulously collected within the organizational setting during standard working hours, following the explicit consent obtained from the general manager.

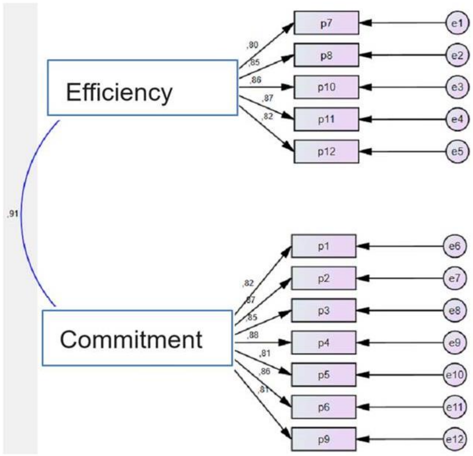
Data were collected in the period from September till December 2023, in service organizations in the Republic of Serbia. The research was conducted at the workplace, and the data was collected in personal contact and electronically. The research had the approval of the sector or departmental manager.

The selection of participants for the research was conducted using a semi-structured approach, with deliberate efforts made to encompass a diverse array of individuals characterized by varying educational backgrounds, age groups, and genders. Moreover, the organizations enlisted from the service sector were deliberately categorized into two distinct sectors: the private sector and the public sector. This categorization was instrumental in ensuring a balanced representation of participants across both sectors, thereby enriching the breadth and depth of insights gleaned from the study. By adopting such an inclusive approach to participant selection and organizational categorization, the research sought to capture a comprehensive snapshot of attitudes and perceptions towards change readiness within the service sector, while also facilitating nuanced comparisons between different organizational contexts and demographic profiles.

The structure of the sample according to gender is defined in two groups - male and female. The research included a sample of 170 male employees and 149 female employees. The education of respondents is defined through 2 groups - respondents who have finished high school and respondents who have finished college or university. Through frequency analysis, it was determined that 41% of respondents have finished high school, while 59% of them have finished college or university. According to the type of work they perform in the company where they are employed, expert, administrative and managerial jobs are distinguished. According to the frequency analysis, it was determined that 50.3% of respondents perform expert tasks, 27.9% of respondents perform administrative tasks, while 21.8% of them perform managerial tasks.

For the research, metrically verified questionnaires were used to measure attitudes towards change: Organizational Readiness for Implementing Change Questionnaire (ORIC) (Shea et al., 2014), in its original form, the questionnaire was defined through 12 items on a five-point Likert scale. Ordered category scale, on a continuum of responses from 1 = do not agree at all to 5 = completely agree. In the original setting of the model behind the instrument, two factors were defined - Commitment in implementing organizational changes and Change efficiency. In the original version of the questionnaire, commitment to implementing organizational changes was defined through items p6, p7, p8, p9, p10, p11, and p12, while the second factor, the efficiency of implemented changes, was defined through items p1, p2, p3, p4, and p5. The used questionnaire is provided in Appendix 1 at the end of the paper. Figure 1 shows that all items satisfactorily saturate their assumed object of measurement (>.50).

Figure 1: The proposed questionnaire model of the organization's readiness to implement changes



Source: Authors' research

Table 1 provides the overview of the applied confirmatory factor analysis, on the basis of which relations were obtained between the theoretical model set in the original version by Shea et al. (2014) and the empirical data obtained by the undertaken survey. These relationships were evaluated based on CMIN/df (Minimum Discrepancy Function by Degrees of Freedom divided), NFI - The Normed Fit Index, CFI - The Comparative Fit Index, and RMSEA - The Root Mean Square Error of Approximation.

The criteria for adequate fitting of the data according to the indicated suitability indices are: CMIN/df is <3, i.e. <5. NFI should be > .90 or > .95 (Schumacker & Lomax, 2004), CFI should be > .90, RMSEA values should be closer to 0, criterion is < .08 or < .05. The results of the confirmatory factor analysis shown in the Table below the text indicate that the collected data adequately fit the assumed model of the Shea et al. questionnaire (CMIN/df = 3.031; NFI=.939; CFI=.947; RMSEA=.077).

Table 1: Suitability indices for the Organizational readiness for implementing change (ORIC) questionnaire

Model	CMIN/DF	NFI	CFI	RMSEA
Default Model	3.31	.939	.947	.077

Source: Authors' research

The reliability of the questionnaire was tested using the internal consistency method, and the displayed values refer to the Cronbach's alpha coefficient. This coefficient indicates the high reliability of the instrument if the values are higher than .60, that is, .80 according to the stricter reliability criterion.

Based on the reliability analysis, it is determined that the Organizational Readiness for Change Implementation (ORIC) instrument is a highly reliable questionnaire, when it comes to both measurement aspects of Commitment to implementing organizational changes (α=.944) and Efficiency of implemented changes (α=.922). Measures of central tendency are shown - minimum and maximum in the format of reduced scores from 1 to 5 for each variable, as well as a measure of variability shown through the arithmetic mean (M) and standard deviation (SD). Organizational readiness to implement change as a general score is moderately to highly expressed (M=3.20; SD=.993), with approximately equal expressions when it comes to its two dimensions - Commitment to implementing changes (M=3.19; SD= 1.031) and Efficiency of implemented changes (M=3.21; SD=1.024).

The data underwent analysis using descriptive statistics to compute, present, and elucidate the features of statistical series. In the examination and elucidation of data garnered from empirical research, a confluence of statistical data processing methods was employed. These included confirmatory factor analysis of the questionnaire, descriptive statistical techniques, correlation analysis, and regression analysis.

4. Results and discussion

4.1. Differences in the expression of variables in relation to the characteristics of employees and the organization in which they work

The influence of gender is given through the presentation of arithmetic means and standard deviations for each numerical variable Organizational Readiness for Change, Commitment to Implementation of Change and Efficiency of Implemented Change, in relation to male and female sub-samples.

Table 2: Descriptive statistics of the variables in relation to the male and female sub-sample

	Gender	Number	M	SD
Organizational Readiness for Change	M	170	3.19	1.017
	F	149	3.21	.978
Commitment to Implementation of Change	M	170	3.18	1.051
	F	149	3.20	1.017
Efficiency of Implemented Change	M	170	3.19	1.055
	F	149	3.22	1.001

Source: Authors' research

Based on the arithmetic means, it is determined that the female subsample has more pronounced scores on the following variables: Organizational readiness for change, Commitment to change implementation, and Efficiency of implemented changes.

Table 3 shows the results of the homogeneity of variances test, due to uneven age categories defined on the entire sample. Based on the results of Levene's test of equality of variances, it is determined that the variances for each variable included in the research are homogeneous according to age groups (p>.05).

Table 3: Levene's test of homogeneity of variances

	Levene's test	df1	df2	P
Organizational readiness for change	.915	3	319	.434
Commitment to change implementation	.568	3	319	.637
Efficiency of Implemented Change	1.737	3	319	.143

Source: Authors' research

Based on the results of the applied one-factor analysis of variance ANOVA, it is concluded that there are statistically significant differences among respondents of different age categories when it comes to the variable Efficiency of implemented changes (F=2.798; p=.040).

Table 4: Results of one-factor ANOVA in relation to the variable of age of the subject

		df	Middle square	F	p
Organizational readiness for change	Between groups	3	2.464	2.516	.058
	Within groups	319	.979		
	Total	319			
Commitment to change implementation	Between groups	3	2.174	2.058	.105
	Within groups	319	1.056		
	Total	319			
Efficiency of implemented changes	Between groups	3	2.906	2.798	.040
	Within groups	319	1.038		
	Total	319			

Source: Authors' research

Presentation of the results according to the analysis of multiple group comparison (LSD), differences were manifested during the analysis of multiple comparison, despite the fact that the results of testing statistical differences in relation to the age of the respondents in the general models were not determined. The following statistically significant results were determined:

- Willingness to implement changes is statistically significantly more pronounced among the respondents in the age categories of 36-45 years and those of up to 35 years of age compared to the respondents of over 55 years of age;
- Commitment to implementing changes is more pronounced among the respondents aged 36 to 45 compared to those of over 55;
- The efficiency of the implemented changes is more pronounced among the respondents aged 36 to 45 and those of up to 35 years of age compared to the respondents of over 55 years of age.

4.2. Differences in the level of education

On the basis of the obtained arithmetic means, it is determined that the part of respondents who have finished high school has higher scores on the following variables: Organizational readiness for changes, Commitment to implementing changes, and Efficiency of implemented changes.

Table 5 shows the result of Levene's test of equality of variances, due to uneven categories of the sample according to the educational categories of the respondents. Based on the results of Levene's test of equality of variances, it is established that the variances for each variable according to education groups are equal (p>.05).

Table 5: Results of Levene's test of equality of variances

		Levene's test	
		F	p
Organizational readiness for changes	Assumption of equal variances Equality of variances was not assumed	1.571	.211
Commitment to change implementation	Assumption of equal variances Equality of variances was not assumed	1.017	.314
Efficiency of implemented changes	Assumption of equal variances Equality of variances was not assumed	.218	.641

Source: Authors' research

Based on the testing of differences in arithmetic means using the t-test on independent samples, it is determined that there are statistically significant differences among respondents of different levels of education when it comes to the following variables: Organizational readiness for change (t=3.505; df=319; p=.000), Commitment to implementing changes (t=3.659; df=319; p=.000), and Efficiency of implemented changes (t=3.002; df=319; p=.003). Statistical significance was performed at the .05 level. The results of the independent samples t-test are shown in Table 6.

Table 6: Independent samples t-test results

Variables	The outcome of Levene's test	t	df	p
Organizational readiness for change	Assumption of equal variances	3.505	319	.000
Commitment to implementing changes	Assumption of equal variances	3.659	319	.000
Efficiency of implemented changes	Assumption of equal variances	3.002	319	.003

Source: Authors' research

4.3. Differences in the type of work that employees perform

Table 7 shows the results of the test of homogeneity of variances, due to uneven categories according to the type of work performed by employees (expert administrative or managerial) defined on the entire sample. Based on the results of Levene's test of equality of variances, it is determined that the variances for each variable included in the research according to the type of work are homogeneous (p>.05).

Table 7: Levene's test of homogeneity of variances

	Levene's statistic	df1	df2	p
Organizational readiness for change	.027	2	319	.973
Commitment to implementing changes	.075	2	319	.927
Efficiency of implemented changes	.152	2	319	.859

Source: Authors' research

Based on the results of the one-factor analysis of variance (ANOVA), it is evident that statistically significant differences exist among respondents from different types of work regarding the variables shown in Table 8.

Table 8: Results of the one-factor ANOVA in relation to the variable job type

		Sum of squares	df	Middle square	F	p
Organizational readiness for change	Between groups	3.898	2	1.949	1.980	.139
	Within groups	307.861	319	.984		
	Total	311.759	318			
Commitment to implementing changes	Between groups	4.048	2	2.024	1.911	.149
	Within groups	346.569	319	1.059		
	Total	350.617	318			
Efficiency of implemented changes	Between groups	3.811	2	1.905	1.822	.163
	Within groups	339.712	319	1.046		
	Total	343.523	318			

Source: Authors' research

4.4. Differences in the type of ownership of the organization

Table 9 shows the results of the test of homogeneity of variances, due to uneven categories according to the type of ownership of the organization where the employees work (state, private and mixed ownership) defined on the entire sample. Based on the results of Levene's test of equality of variances, it is determined that the variances for each variable included in the research according to the groups of ownership type of the organization are homogeneous (p>.05).

Table 9: Levene's homogeneity of variances test

	Levin statistic	df1	df2	p
Organizational readiness for change	1.622	2	319	.199
Commitment to implementing changes	1.574	2	319	.208
Efficiency of implemented changes	1.338	2	319	.263

Source: Authors' research

Based on the results of the applied one-factor analysis of variance ANOVA, it is concluded that there are statistically significant differences among respondents of different categories of ownership type of the organization when it comes to the following variables: Organizational readiness for changes (F=13.489; p=.000), Commitment to the implementation of changes (F=11.60; p=.000), and Efficiency of implemented changes (F=15.161; p=.000).

Table 10: The results of the one-factor ANOVA in relation to the variable type of ownership of the organization

		Sum of squares	df	Middle square	F	p
Organizational readiness for change	Between groups	25.427	2	12.714	13.489	.000
	Within groups	286.332	316	.943		
	Total	311.759	319			
Commitment to the implementation of changes	Between groups	22.634	2	11.317	11.060	.000
	Within groups	227.983	316	1.023		
	Total	350.617	319			
Efficiency of implemented changes	Between groups	30.166	2	15.083	15.161	.000
	Within groups	313.357	316	.995		
	Total	343.523	319			

Source: Authors' research

The presentation of the results according to the analysis of multiple group comparisons (LSD) showed that the following statistically significant results were determined according to the individual variables:

- Commitment to implementing changes is more pronounced among employees who work in a privately owned organization compared to those who work in a state-owned organization.
- The efficiency of implemented changes is more pronounced among employees who work in a privately owned organization compared to those who work in a state-owned organization. On the other hand, this variable is more pronounced among respondents who work in an organization with mixed ownership compared to a state-owned one.

Based on the results of descriptive statistics, it is determined that organizations where employees work are capable of recognizing the need for changes, adapting their processes and structure to it, then providing the necessary resources and infrastructure conditions, as well as supporting employees in the process of adapting to changes through their effective management (Adelson et al., 2021; Shea et al., 2014). Based on the findings derived from the study, it is evident that the observed organizations possess clearly articulated change objectives that are harmonized with their overarching strategic direction. This characteristic makes them capable of identifying and managing the risks that arise during the change process, as well as the ability to provide sufficient financial and human resources to support the changes and to establish appropriate mechanisms for measuring and evaluating the effects of changes while permanently encouraging open and transparent communication within the organization in the process of change (Shea et al., 2014; Weiner et al., 2008).

This capability can prove invaluable during the periods of organizational transition, as it facilitates smoother acceptance and adaptation to new requirements and work processes by employees. Conversely, organizational readiness for change denotes the organization's capacity to adeptly respond to novel challenges and environmental shifts. The outcome suggests the organization's adeptness in recognizing and evaluating the necessity for change, strategizing and executing change initiatives, and consistently refining its processes and strategies in alignment with environmental shifts. Consequently, readiness for change spans both individual and organizational levels, thereby enabling effective adaptation to changes within both internal and external landscapes.

Furthermore, based on the results of the applied one-factor analysis of variance ANOVA, it is concluded that there are statistically significant differences among respondents of different age categories when it comes to the efficiency of implemented changes ($F=2.798$; $p=.040$).

Willingness to implement changes is more pronounced among younger respondents compared to older ones. There are various factors that influence the perception of the organization's readiness to implement changes among different groups of employees. Older employees have more work experience and may have already gone through some changes in the organization, which may lead to less perception (habituation) of the organization's readiness for change. Younger employees, on the other hand, may be less experienced and less familiar with previous changes in the organization, which may lead to a greater perception of the organization's readiness for change. Younger employees are often more technologically literate than older ones, which can make them more ready and sensitive to changes involving the implementation of new technologies or software. Furthermore, organizations that are inherently more innovative and change-oriented may have higher perceptions of readiness for change among all employee groups, including older employees. Furthermore, there are differences in attitudes and values between generations, which can affect the perception of the organization's readiness for change. Younger generations are often more open to change and innovation, while older generations may be more traditional and less ready for change.

Namely, more educated respondents estimate that their organizations are more ready for change compared to employees with lower education. More educated employees often have a greater awareness of changes in the environment, both in business and in society in general. They are usually familiar with new trends, technologies, laws and other factors that may affect the organization's operations (Iverson, 2006). More educated employees usually have developed analytical and critical thinking skills, which enable them to understand complex problems and assess the impact of changes on the organization. These skills can contribute to a greater perceived organizational readiness for change. More educated employees are often more open to change and innovation, because they are used to constant learning and adapting to new situations. They are more willing to accept new ideas, take risks and experiment with new approaches to business.

Further results indicated that the type of ownership has an impact on the following variables: Organizational readiness for change, Commitment to change implementation and Efficiency of implemented changes. The implementation of change is more pronounced in the private sector than in the public sector for several reasons - the private sector is often more competitive, which means that companies have to be more innovative and adapt to change faster than would be the case in the public sector. Private enterprises often have more flexible and less complex structures than the public sector, which makes it easier to implement change. In the government sector, bureaucratic processes and complex hierarchies can slow down the implementation of change. Private companies usually have clearly defined goals for profitability and growth, which encourages them to make changes to achieve those goals. In the public sector, objectives are often less clearly defined and may change as the political climate changes. Private companies have an organizational culture that encourages innovation and change, while in the state sector there is a tendency to preserve existing processes and structures.

Indeed, when an organization exhibits a high level of organizational readiness for change, it signifies its capacity to not only adapt to shifts effectively but also to proficiently execute alterations within its processes and practices (Adelson et al., 2021), which can be key to achieving business success and maintaining competitiveness on the market.

5. Conclusion

Changes in service organizations occurred as a result of globalization, greater mobility, as well as the possibility of attaining certain knowledge and competences, which significantly increased the competitiveness of the employee. New approaches in looking at individuals in the work process are reflected in an engaged holistic approach, which is based on a multidisciplinary approach that implies much more than, until now, the most applied, behavioral approach that separates the employee's behavior from his most important personal characteristics. In addition to the holistic approach, a contingency approach must take an important place, which allows for the possibility of the action of various factors and circumstances that largely determine organizational behavior (By, 2005). Research on readiness for change primarily relies on the established models, which may not adequately capture the complexities of modern conditions and the dynamic nature of today's workforce (Stouten et al., 2018).

Work on accepting new concepts and organizational learning in general is the basis of a sustainable competitive advantage, therefore a dynamic perspective is directed towards continuous development, monitoring the process and dynamics of comparative development that would contribute to the creation of new capabilities (Albrecht et al., 2020). The strategic perspective emphasizes the importance of coordinating the company's policy and strategic observation of the development of more efficient and effective work outcomes (Sitkin et al., 2010). Establishing alignment between managers and their employees regarding attitudes towards changes is paramount for organizational success (Walk & Handy, 2018). This necessitates fostering a collaborative environment where both parties engage in open dialogue and mutual understanding. By cultivating such a culture of shared perspective, managers can effectively harness the collective wisdom and insights of their employees, fostering a sense of ownership and commitment to the change initiatives. This collaborative approach not only enhances employee morale and engagement but also facilitates smoother transitions and implementation of change strategies. Consequently, organizations are better positioned to navigate challenges and capitalize on opportunities arising from the ever-evolving business landscape.

The way in whish a company chooses to motivate, communicate and implement change will determine its level of success. Incentives for change often depend on the social environment such as fiscal policy, government policy, technology, management methods, organizational development, and mostly on the individual level of change related to the areas of individual knowledge, qualifications and organizational behavior. The research indicates that negative reactions to change exhibit a negative correlation with both the time invested by employees and the efforts exerted at work (McLarty et al., 2021). This underscores the significance of considering employee time allocation and level of engagement in understanding their responses to organizational changes. By recognizing these dynamics, organizations can tailor their change management strategies to mitigate resistance and enhance employee buy-in, ultimately fostering a more conducive environment for successful change implementation.

The essential benefit of the research is reflected in the recognition and design of recommendations for organizations that would direct the algorithms of activities that would facilitate the attitude towards changes of employees in organizations. The conducted research has several methodological and general research shortcomings and limitations. The first organization refers to research instruments that have not been used so far in socio-demographic conditions in our country. At the onset of our research, we encountered a methodological quandary regarding whether employees' readiness for change could serve as a reliable predictor of change implementation within their organizations. This posed a significant challenge despite the clear establishment of the predictive validity of the test. Resolving this question was crucial for ensuring the robustness and efficiency of our research methodology. By addressing this methodological hurdle, we aimed to contribute nuanced insights into the interplay between employee readiness for change and its impact on organizational change initiatives.

Furthermore, the questions and statements that are part of the survey questionnaire are aimed at self-assessment of behavior, emotions, motivation, as well as the subjective aspect of attitudes, which does not always contribute to a clear picture in the organization.

Acknowledgement

This research has been supported by the Ministry of Science, Technological Development and Innovation (Contract No. 451-03-65/2024-03/200156) and the Faculty of Technical Sciences, University of Novi Sad through project "Scientific and Artistic Research Work of Researchers in Teaching and Associate Positions at the Faculty of Technical Sciences, University of Novi Sad" (No. 01-3394/1).

Conflict of interest

The authors declare no conflict of interest.

References

1. Adelson, P., Yates, R., Fleet, J., & McKellar, L. (2021). Measuring organizational readiness for implementing change (ORIC) in a new midwifery model of care in rural South Australia. *BMC Health Services Research*, *21*(1), 321–368. https://doi.org/10.1186/s12913-021-06373-9
2. Albrecht, S. L., Connaughton, S., Foster, K., Furlong, S., & Yeow, C. J. L. (2020). Change engagement, change resources, and change demands: A model for positive

employee orientations to organizational change. *Frontiers in Psychology*, *11*, 531944. https://doi.org/10.3389/fpsyg.2020.531944
3. Bacharach, S., Bamberger, P., & Sonnenstuhl, W. (1996). The organizational transformation process: The micropolitics of dissonance reduction and the alignment of logics of action. *Administrative Science Quarterly*, *41*(3), 477–506. https://doi.org/10.2307/2393939
4. Bove, W., & Heede, A. (2001). Resistance to organisational change: The role of defence mechanisms. *Journal of Managerial Psychology*, *16*(7), 534–548. https://doi.org/10.1108/EUM0000000006166
5. By, R. T. (2005). Organisational change management: A critical review. *Journal of Change Management*, *5*, 369–380. http://dx.doi.org/10.1080/14697010500359250
6. Chaudhry, S. (2020). Understanding change enablers in service organizations: A contingency theory perspective. *South Asian Journal of Marketing & Management Research*, *27*(2), 5–83.
7. Errida, A., & Lotfi, B. (2020). Measuring change readiness for implementing a project management methodology: An action research study. *Academy of Strategic Management Journal*, *19*(1), 1–17.
8. Ford, J., Ford, L., & Polin, B. (2021). Leadership in the implementation of change: Functions, sources, and requisite variety. *Journal of Change Management*, *21*(1), 87–]119. https://doi.org/10.1080/14697017.2021.1861697
9. Gavrilov-Jerković, V. (2004). Profil spremnosti klijenta za promenu i preferencija tipičnih procesa promena [The profile of client readiness for change and preferences for typical change processes]. *Psihologija*, *37*(1), 89–108. http://dx.doi.org/10.2298/PSI0401089G
10. Grubić-Nešic, L. (2014). *Razvoj ljudskih resursa [Human resources development]*. Novi Sad: Fakultet tehničkih nauka.
11. Grubić-Nešić, L. (2004). Humani aspekti strategijske kontrole – spremnost zaposlenih za promene [Human aspects of strategic control – The readiness of employees for a change]. *Strategijski menadžment*, *9*(4), 13–16.
12. Gupta, A., & Govindarajan, V. (1984). Business unit strategy, managerial characteristics and business unit effectiveness at strategy implementation. *Academy of Management Journal*, *27*, 25–41. https://doi.org/10.2307/255955
13. Helfat, C. E., & Martin, J. A. (2015). Dynamic managerial capability: Review and assesment of managerial impact on strategic change. *Journal of Management*, *41*(5), 1281–1312. https://doi.org/10.1177/0149206314561301
14. Hersey, P., & Blanchard, P. (1977). *Management of organizational behaviour: Utilizing human resources* (3rd ed.). Englewood Cliffs, N.J.: Prentice-Hall.
15. Iverson, R. D. (2006). Employee acceptance of organizational change: The role of organizational commitment. *The International Journal of Human Resource Management*, *7*(1), 122–149. https://doi.org/10.1080/09585199600000121
16. Jones, S. L., & Van de Ven, A. H. (2016). The changing nature of change resistance: An examination of the moderating impact of time. *Journal of Applied Behavioral Science*, *52*(4), 482–506. https://doi.org/10.1177/0021886316671409
17. Judge W., & Douglas T. (2009). Organizational change capacity: The systematic development of a scale. *Journal of Organizational Change Management*, *22*(6), 635–649. https://doi.org/10.1108/09534810910997041
18. Kirrane, M., Lennon, M., O'Connor, C., & Fu, N. (2016). Linking perceived management support with employees' readiness for change: The mediating role of psychological capital. *Journal of Change Management*, *17*(1), 1–20. https://doi.org/10.1080/14697017.2016.1214615

19. Marinova, S. V., Peng, C., Lorinkova, N., Van Dyne, L., & Chiaburu, D. (2015). Change-oriented behavior: A meta-analysis of individual, and job design predictors. *Journal of Vocational Behavior*, *88*, 104–120. https://doi.org/10.1016/j.jvb.2015.02.006
20. McLarty, B. D., Muldoon, J., Quade, M., & King, R. A. (2021). Your boss is the problem and solution: How supervisor-induced hindrance stressors and LMX influence employee job neglect and subsequent performance. *Journal of Business Research*, *130*, 308–317. https://doi.org/10.1016/j.jbusres.2021.03.032
21. Oreg, S., Vakola, M., & Armenakis, A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *Journal of Applied Behavior Science*, *47*, 461–524. https://doi.org/10.1177/0021886310396550
22. Rafferty, A. E., & Minbashian, A. (2019). Cognitive beliefs and positive emotions about change: Relationships with employee change readiness and change-supportive behaviors. *Human Relations*, *72*, 1623–1650. https://doi.org/10.1177/0018726718809154
23. Rafferty, A. E., Jimmieson, N. L., & Armenakis, A. A. (2012). Change readiness: A multilevel review. *Journal of Management*, *39*(1), 110–135. http://dx.doi.org/10.1177/0149206312457417
24. Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling* (2nd ed.). Lawrence Erlbaum Associates Publishers. https://doi.org/10.4324/9781410610904
25. Shea, C., Jacobs, S., Esserman, D., Bruce, K., & Weiner, B. (2014). Organizational readiness for implementing change: A psychometric assessment of a new measure. *Implementation Science*, *9*(7). https://doi.org/10.1186/1748-5908-9-7
26. Sitkin, S., See, K., Miller, C., Lawless, M., & Carton, A. (2010). The paradox of stretch goals: Organizations in pursuit of the seemingly impossible. *Academy of Management Review*, *36*. https://doi.org/10.5465/AMR.2011.61031811
27. Stouten, J., Rousseau, D., & Cremer, D. (2018). Successful organizational change: Integrating the management practice and scholarly literatures. *Academy of Management Annals*, *12*(2), 752–788. https://doi.org/10.5465/annals.2016.0095
28. Walk, M., & Handy, F. (2018). Job crafting as reaction to organizational change. *The Journal of Applied Behavioral Science*, *54*(3), 349–370. https://doi.org/10.1177/0021886318777227
29. Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied* Psychology, *85*(1), 132–142. https://doi.org/10.1037/0021-9010.85.1.132
30. Weiner, B. J., Amick, H., & Lee, S. Y. (2008). Review: Conceptualization and measurement of organizational readiness for change: A review of the literature in health services research and other fields. *Medical Care Research and Review*, *65*(4), 379–436. https://doi.org/10.1177/1077558708317802
31. Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science*, *4*(67). https://doi.org/10.1186/1748-5908-4-67
32. Zhang, Z., & Guo, M. (2022). Change of tourism organizations: Implications from a review of cultural tourism research. *Frontiers in Psychology*, *13*, 1000117. https://doi.org/10.3389/fpsyg.2022.1000117

Appendix 1

Organizational Readiness for Implementing Change – ORIC (Shea et al., 2014)

p1. The individuals employed here are dedicated to putting organizational changes into action.	1	2	3	4	5
p2. The people who work here are determined to implement change.	1	2	3	4	5
p3. The people who work here are motivated to implement change.	1	2	3	4	5
p4. The people who work here will do everything to make changes happen.	1	2	3	4	5
p5. The people who work here have a desire to make a difference.	1	2	3	4	5
p6. People who work here feel that they can retain the energy needed to implement organizational change.	1	2	3	4	5
p7. The people who work here feel confident that they can manage the policy of implementing change.	1	2	3	4	5
p8. People who work here feel confident that the organization can support people as they adapt to change.	1	2	3	4	5
p9. People who work here feel confident that the organization can support people during the implementation of changes.	1	2	3	4	5
p10. The people who work here feel confident that they can coordinate tasks so that the change process goes smoothly.	1	2	3	4	5
p11. People who work here feel confident that they can monitor progress in implementing change.	1	2	3	4	5
p12. People who work here feel confident that they can handle the challenges that might change in the implementation of the organization.	1	2	3	4	5

Original Scientific Paper

UDC: 338.48-6:615.83(497.11)
DOI: 10.5937/menhottur2400004Z

Received: 4 December 2023
Revised: 11 February 2024
Accepted: 3 May 2024
Published online: 14 May 2024

Rejuvenating mind, body, and spirit: Exploring the role of physical activity in health and rehabilitation institutions' offerings in Serbia

Ivan Živković[1*], Ivana Brdar[1], Miroslav Knežević[1]

[1] Singidunum University, Belgrade, Serbia

Abstract

Purpose – This paper focuses on physical activity and body care as indicators of wellness offerings in health-rehabilitation institutions in Serbia. The goal is to determine if these institutions can become leaders in the tourism market by providing wellness services. **Methodology** – A measuring instrument was developed for research purposes. This tool aimed to gather data regarding services associated with physical activity and body care, serving as a crucial indicator of the wellness offerings. Its purpose was to enable the comprehensive evaluation of each center based on the investigated indicator. **Findings** – After analyzing 20 institutions, Banja Junaković, Ivanjica, and Čigota achieved the highest average score of 0.83, reflecting their comprehensive services and resulting in a final score of 5. Two institutions scored 0.79, coming close to an overall rating of five. All institutions provide programs for assessing the current state of the body. **Implications** – The study enhances understanding of physical activity and bodily well-being's significance in advancing health and rehabilitation facilities, aligning with current wellness tourism trends. Results can aid hotel and wellness center managers in the health and wellness tourism industry in refining their business strategies.

Keywords: health tourism, wellness, health, physical activity, recovery
JEL classification: I11, I12, L83, Z31, Z32

Podmlađivanje uma, tela i duha: Istraživanje uloge fizičke aktivnosti u ponudi zdravstvenih i rehabilitacionih ustanova u Srbiji

Sažetak

Svrha – Rad se fokusira na fizičku aktivnost i negu tela kao indikatore velnes ponude u zdravstveno-rehabilitacionim ustanovama u Republici Srbiji. Cilj je utvrditi da li ove institucije mogu postati lideri na turističkom tržištu pružanjem velnes usluga. **Metodologija** – Za potrebe istraživanja kreiran je merni instrument na osnovu odgovarajućeg velnes modela u skladu sa specifičnostima zdravstveno-rehabilitacionih ustanova. Na ovaj način bi se prikupile informacije o uslugama koje se odnose na telesnu aktivnost i negu tela kao

* Corresponding author: ivan_zivkovic@outlook.com

važnog indikatora velnes ponude. Namera je da se svaki centar adekvatno oceni prema ispitivanom indikatoru. **Rezultati** – Nakon analize 20 ustanova, Banja Junaković, Ivanjica i Čigota su ostvarile najvišu prosečnu ocenu od 0,83, što odražava njihove sveobuhvatne usluge i rezultiralo je konačnom ocenom 5. Dve institucije su dobile ocenu 0,79, što je blizu ukupnoj oceni od pet. Sve institucije obezbeđuju programe za procenu trenutnog stanja tela za prilagođene programe aktivnosti. **Implikacije** – Sprovedeno istraživanje produbljuje razumevanje značaja telesne aktivnosti i nege tela u smislu razvoja ponude zdravstveno-rehabilitacionih ustanova u skladu sa savremenim trendovima u velnes turizmu. Rad može biti podrška menadžmentu hotela i velnes centara u oblasti zdravstvenog i velnes turizma u redefinisanju strategije razvoja poslovanja.

Ključne reči: zdravstveni turizam, velnes, zdravlje, fizička aktivnost, oporavak
JEL klasifikacija: I11, I12, L83, Z31, Z32

1. Introduction

Recognizing the importance of health, many individuals are adopting lifestyle changes to preserve and enhance their well-being and quality of life, better equipping them to tackle modern living challenges. The Global Wellness Institute (2015) attributes this shift to the development of the wellness industry, encompassing various aspects such as alternative medicine, medical treatments, nutrition, fitness programs, spa activities, and wellness tourism. When selecting a tourist destination, the appeal of landmarks is diminishing, with tourists increasingly prioritizing elements that improve their quality of life, allowing them to relax, rejuvenate, and experience greater happiness. This shift has led to changes in destination-level marketing communications (Huber et al., 2013).

Smith and Puczkó (2009) define health tourism as a form of wellness and medical tourism that encompasses related activities, intertwining and connecting them to a certain extent. Wellness tourism targets individuals in good health seeking treatments to maintain physical, mental, and spiritual well-being (Smith & Puczkó, 2009). Wellness centers, including medical wellness centers, focus on delivering services under proficient medical supervision (Joppe, 2010; Mueller & Kaufmann, 2001). This product emphasizes non-invasive treatment and rehabilitation, overseen by professional medical staff, integrating health and wellness services using thermal and mineral waters in Serbia. Health-rehabilitation institutions in Serbia have significant potential for advancing health tourism, given their resources, skilled personnel, and modern equipment. Adapting services to meet contemporary market trends is crucial, serving both health-conscious tourists and those seeking wellness maintenance under medical supervision.

In terms of tourists' overnight stays, spa and mountain destinations in Serbia are particularly popular among domestic tourists (Gavrilović, 2022). These destinations house health and rehabilitation facilities offering effective medical and wellness services, addressing various health issues and improving overall health conditions. The rapid growth of wellness tourism, expanding at twice the rate of tourism as a whole with an annual growth rate of 6.5% (The Global Wellness Institute, 2018), presents an opportunity to enhance business operations and modernize the offerings of these institutions. Developing specific wellness content can attract a larger number of individuals seeking to improve health and prevent unwanted conditions. Consequently, health-rehabilitation institutions can cater to a broader range of users beyond patients with diagnosed medical conditions (Giannake et al., 2023). Leveraging their resources, strategic potential, modernization efforts, and creation of contemporary wellness content, health and rehabilitation institutions have the potential to become leaders in providing wellness services and driving wellness tourism in Serbia, both nationally and internationally.

The wellness model presented by Mueller and Kaufmann (2001) embodies the harmony of body, mind, and spirit, and encompasses several dimensions: self-responsibility, physical fitness and body care, balanced nutrition, mental activities and education, rest and meditation, social engagement, and environmental awareness. Wellness is a dynamic concept, and at different phases of an individual's life, certain dimensions may hold greater prominence in order to achieve a better balance across all dimensions by adopting healthy habits and improving overall quality of life and health status (Bushman, 2017).

In this paper, physical activity and body care as a significant dimension within the wellness model will be explored. Their importance will be examined, and the indicators that define them will be identified. The objective is to assess whether there is a potential for health and rehabilitation centers in Serbia to incorporate this type of service and integrate specific wellness content, thereby providing high-quality and innovative wellness offerings.

The purpose of this paper is to determine the presence of physical activity and body care programs offered by health and rehabilitation institutions based on the determined indicators. Based on the above, the following research questions were stated:

1. Do the health-rehabilitation centers offer wellness services and do they have the potential to develop the wellness offer by applying appropriate wellness programs?

2. Do the health-rehabilitation centers enable the implementation of wellness programs by applying appropriate content that includes physical activity and body care, and to what extent are the services represented in accordance with the importance they have on the health of users?

Additionally, the paper looks into the opportunities for improving the institution's offerings in line with the significance of physical activity and physical care in wellness program implementation.

2. Wellness concept in health and rehabilitation institutions

Wellness tourism is recognized as a subset of health tourism, and it can be defined as the combination of all the relationships and phenomena resulting from people's travels and visits to tourist destinations with the primary objective of preserving and improving their health status (Majeed & Gon Kim, 2023; Mueller & Kaufmann, 2001; Živković & Brdar, 2018). The growth of health and wellness tourism has been influenced by changes in demographic structures and lifestyles, as well as the need to reduce stress among the working population (Krstić & Živanović, 2020; Vidanović et al., 2021). Consequently, tourists are increasingly focusing on prevention by opting for adapted forms of travel (Đurađević, 2017; Gan et al., 2023; Laesser, 2011). Wellness tourists frequently opt for specialized tourist accommodations offering professional services and personalized care. These facilities offer a comprehensive range of services, including physical activity, body care, tailored nutrition programs, relaxation, meditation, mental activities, and educational offerings. Visitors to spa destinations may seek recovery from diagnosed health issues, prevention of unwanted conditions, or simply relaxation through desired wellness services (Lee & Kim, 2023; Nićiforović & Stajić, 2021). In their predictions for the development of health and wellness tourism and the wellness industry, Smith and Puczko (2009) introduced the term "wellpitals", which represents a fusion of hospitals and wellness centers. Wellpitals would integrate specially designed medical services with suitable wellness facilities, aiming to create a unique experience that diminishes the hospital-like environment. This approach can be realized through business enhancement and the transformation of health-rehabilitation centers and spa resorts. By adopting this model, institutions can gain a competitive edge in the wellness tourism market, as demonstrated by examples like Special Hospital Čigota in Zlatibor and Special Hospital Merkur in Vrnjačka Banja, which have embraced a similar concept.

Health-rehabilitation centers, due to their structure and organization as health institutions (Official Gazette of RS, 2013), are well-positioned to address modern trends and challenges where wellness is considered essential for preserving and enhancing individuals' quality of life. Leveraging their internal resources, these institutions have the capacity to offer an enhanced wellness experience to users during their stay at selected tourist destinations (Smith & Puczko, 2009). Health-rehabilitation centers utilize their multidisciplinary staff comprising professionals from various fields such as medicine, physiotherapy, physical education, nutrition, and psychology to innovate the user experience by integrating physical and sports medicine, fitness programs, and utilizing diagnostic procedures and facilities.

2.1. Exploring the synergy of physical activity and body care in wellness offerings

Research has consistently shown the detrimental effects of a sedentary lifestyle on health (Bauman et al., 2013). However, engaging in properly programmed physical activity in various forms has been proven to reduce the risk of several diseases, including cardiovascular diseases, high blood pressure, stroke, type 2 diabetes, colon cancer, thyroid gland problems, and others (Lee et al., 2012). Implementing appropriately tailored fitness and wellness programs can lead to improvements in body composition, particularly in cases of obesity, and have positive effects on insulin sensitivity, blood pressure reduction, endothelial function improvement, and cognitive function enhancement (Lee et al., 2012; Paffenbarger et al., 1991; Warburton et al., 2006).

By customizing the exercise program and incorporating appropriate additional activities, the individual's adaptation to the selected procedures is optimized, leading to the achievement of desired outcomes (Zaciorski & Kremer, 2009). It is important to acknowledge that individuals vary in their psychophysical states, and as a result, the same program can have different effects on different individuals, potentially producing positive outcomes for some and negative outcomes for others.

2.1.1. Determining the current state of an individual's organism

Through the utilization of modern equipment and specific tests, it is possible to assess the user's current state, functional abilities, and skills in relation to the required parameters. Additionally, the effectiveness of various medical rehabilitation treatments, which include a physical activity program following a specific medical intervention, can be evaluated (Ilić, 2006).

The advancement of diagnostic centers facilitates the implementation of measurement procedures in both laboratory and real-life conditions, including training or sports competitions. These centers utilize procedures from multiple disciplines such as medicine, anthropology, physiology, biochemistry, endocrinology, biomechanics, psychology, and nutrition to collect pertinent information (Karalejić & Jakovljević, 2009). Consequently, it is essential for health and rehabilitation centers to have appropriate diagnostic procedures and equipment to gather essential data on service users' current condition and monitor their progress throughout the prescribed program.

2.1.2. Programs for physical activity within the realm of wellness

The implemented programs may vary depending on the desired goals and the specific center responsible for implementing wellness programs. Common program models include fitness programs, body composition correction programs (such as weight reduction and tissue restructuring), improvement of functional abilities, recreational exercises, sports programs, group programs, indoor and outdoor sports games, walking, nature-based activities, rehabilitation-therapeutic programs, programs suitable for home conditions, as well as recovery methods and relaxation techniques (Hoffman & Knudson, 2018).

Fitness programs

- Excessive body weight has become a prevalent issue affecting a significant portion of the population, primarily characterized by an increase in fat tissue and fluid retention. This not only poses aesthetic concerns but also impacts the overall health (Bianco, 2010; Stojiljković, 2005). Implementing a body weight reduction program, following a comprehensive diagnosis of the individual's current condition, can effectively address this problem by promoting weight loss and fat tissue reduction, consequently enhancing the individual's quality of life (Said et al., 2017).

- By employing a tissue restructuring program, complemented by an appropriate dietary regimen devised by qualified professionals, individuals can achieve desired changes in body composition, including reduced fat deposits and increased muscle mass, tailored to their specific needs (Stojiljković, 2005).

- Improving functional status through aerobics, strength, and endurance programs enables individuals to optimize their overall physical condition (Stojiljković, 2005).

- Sports programs for active athletes aim to provide tailored activities suitable for their specific needs and stage within the competitive cycle (Zaciorski & Kremer, 2009). These activities, overseen by qualified experts, focus on achieving desired outcomes. A proposed fitness program for health-rehabilitation facilities aims for a holistic approach to physical activity and conditioning, with a focus on enhancing athletes' physical condition, performance, and injury prevention. It includes customized training methods for various sports, incorporating elements such as nutrition, mental health support, and injury prevention strategies (Mohammadian et al., 2021; Muller et al., 2000).

- The sports recreation fitness program provides a valuable opportunity for people of all ages and abilities to participate in physical activity and improve their overall fitness (Stojiljković, 2005). It offers a variety of sports activities tailored to diverse interests and fitness levels. Engaging in sports recreation motivates individuals to surpass their limitations by honing skills specific to their chosen sports discipline.

Rehabilitation-therapeutic program

- Health-rehabilitation centers diagnose physical issues and create tailored rehabilitation-therapeutic programs for recovery (Means et al., 2005). Before resuming activity, it is crucial to restore tissue to a specific load level to prevent reinjury (Petty & Moore, 2011).

Activities in the facility

- Depending on the infrastructure of the institution, various aerobic group programs, team sports, and recreational games can be implemented using different indoor activities, which can have a positive impact on individuals' health and user satisfaction.

Outdoor activities

- For individuals leading a sedentary lifestyle or older people with certain health issues, the primary recommended activity by the center is organized walks with the supervision and guidance of experts (Powers & Howley, 2018). Organized walks along nature paths in tourist destinations can be appealing to many people, allowing them to appreciate the beauty of the places they visit while engaging in physical activity.

Activities outside the institution

- To support users in maintaining their activities independently and mitigate negative impacts, health-rehabilitation centers can offer specially designed home-based programs administered by qualified experts. Utilizing modern technologies like cameras, computers, smartwatches, and mobile devices enables the remote monitoring of users' progress and ongoing communication. Advanced smartwatches provide various functionalities such as connecting with the institution, following prescribed exercise routines, and continuously tracking activities for later analysis (Jat & Grønli, 2022). This approach enhances service delivery, fosters better communication, and fosters long-term relationships with users, thereby encouraging repeat visits and positive recommendations, ultimately promoting the tourist destination.

2.1.3. Wellness recovery and medical recovery

The wellness recovery and medical recovery programs will form an integral part of the fitness program in health-rehabilitation institutions. These programs aim to enhance individuals' physical and mental well-being through targeted exercises, rehabilitation techniques, and specialized treatments (Narziev & Latibov, 2021). As a variety of physical activities and exercises may induce fatigue, prioritizing physical well-being and recuperation becomes crucial to fostering optimal health conditions. This entails stress reduction, fatigue alleviation, muscle tension relief, and joint discomfort mitigation through appropriate exercises and treatments (Ilić, 2006). Achieving this objective requires the utilization of suitable recovery programs and medical treatments, such as therapeutic mud and medicinal water, readily available in health-rehabilitation facilities. Therefore, seeking guidance and advice from healthcare professionals is highly advisable to effectively accomplish these objectives. Various modalities can be utilized for recovery, including:

- Sauna: Research conducted by Mero et al. (2015) highlights the benefits of sauna therapy in promoting recovery.
- Massage: Studies such as Davis et al. (2020) emphasize the positive effects of massage therapy on recovery.
- Cryotherapy: Lombardi et al. (2017) investigate the use of cryotherapy as a recovery modality.
- Cold and hot baths: Bieuzen et al. (2013) discuss the benefits of using cold and hot baths in the recovery process.
- Stretching: Nelson et al. (2001) explore the role of stretching exercises in promoting recovery.
- Breathing exercises: Srivastava et al. (2005) emphasize the potential benefits of incorporating breathing exercises into the recovery routine.
- Healing mud: Antúnez et al. (2013) and Liu et al. (2013) investigate the use of healing mud in the recovery process.

By incorporating these modalities into the body care routine, individuals can enhance their physical health, promote overall well-being, and minimize the potential negative effects of exercise.

3. Materials and methods

For the purposes of this research, a suitable measurement instrument was developed based on the relevant wellness model (Mueller & Kaufmann, 2001). This instrument was designed to align with the specific requirements and demands of health-rehabilitation institutions. The aim was to gather information pertaining to the wellness offerings of health and rehabilitation institutions situated in tourist destinations within the Republic of Serbia. These offerings specifically pertain to physical activity and body care, which serve as significant indicators of the wellness provisions. In the preceding chapter (2.1), the wellness offerings were examined in relation to the indicator of physical activity and body care, considering each program individually. The primary source of data consisted of an analysis of the information available on the official websites and social media platforms of 20 institutions. Through this analysis, a total of 24 relevant wellness programs and activities were identified and evaluated. These programs and activities were categorized into three distinct units:

- The first part involves the diagnostic assessment of the user's current condition through four programs: analysis of body structure and anthropometric measurements; physiological measurements; analysis of motor skills and movement skills; interview and psychological assessment.

- The second part focuses on different physical activity programs offered by the institutions, including:

- Fitness programs, which encompass: reduction of body weight; restructuring of tissues; improvement of functional status; sports recreation; sports program.
- Rehabilitation-therapeutic program, which involves: correction of deformities and stimulation of proper growth and development of children; recovery after medical intervention; stretching and relaxation programs with exercises.
- Hall activities, which include: group programs and team sports.
- Outdoor activities, such as: walks with expert supervision; activities in nature; sports and recreational activities.
- Activities outside the facility, which entail programs of activities in home conditions after staying in the institution.

- The third part focuses on recovery and medical recovery and identifies six recovery modalities: sauna; massage; cryotherapy; cold and warm baths; stretching and breathing exercises; mud therapy.

An investigation was conducted into the presence and quantity of services offered by each program in the wellness offerings of health and rehabilitation institutions, with the intention of assessing the success of these centers in relation to the number of wellness programs available and the expansion of their offerings. To evaluate institutions regarding the presence and quantity of programs accessible to users, serving as indicators for wellness offerings related to physical activity and body care, the available programs were organized based on the examined indicator using Sturges' rule ($k = 1 + 3.3 \log N$) (Mutavdžić & Nikolić, 2018). This method facilitated the assignment of appropriate scores to each center based on their performance, thus enabling a comparison between centers with high ratings and those with low ratings.

Considering the importance of initiative effectiveness and building lasting connections with participants, our investigation aims to determine if there is a significant difference in the overall provision of wellness programs (total number of programs – TP) between institutions offering external physical activity programs and those that do not. To address this inquiry, the independent t-test will be utilized, a statistical method employed to assess whether two sets of data share identical mean values. Before conducting this test, the Shapiro-Wilk test was performed to determine if the data follows a normal distribution.

The collected information was analyzed using statistical software IBM SPSS Statistics 27 and presented in tabular form within the paper.

4. Results and discussion

The collected data, presented in Table 1, focuses on the availability of the physical activity program and diagnostics of the current condition as indicators of the wellness offer related to physical activity and body care.

Table 1: Descriptive statistics for the indicator physical activity and body care of health and rehabilitation centers (Diagnostics and physical activities)

Dimensions of individual PA and body care	**Variables (Programs)**	**The number of institutions containing a programme**	**The number of institutions not containing a programme**	**% Yes**	**% No**	**MEAN (N=20)**	**SD (N=20)**
Diagnostics of the current state	Body structure, Physiological measurements, Abilities and skills, Interview and psychological assessment (4 programs)	20	0	100	0	1	0
Physical activity		20	0	100	0	1	0
	Fitness programs	18	2	90	10	0.90	0.31
	Body weight reduction	6	14	30	70	0.30	0.47
	Tissue restructuring	7	13	35	65	0.35	0.49
	Improvement of functional status	12	8	60	40	0.60	0.50
	Sports recreation	14	6	70	30	0.70	0.47
	Sports program	5	15	25	75	0.25	0.44
	Hall activities	18	2	90	10	0.90	0.31
	Group programs	17	3	85	15	0.85	0.37
	Team sports	5	15	25	75	0.25	0.44
	Outdoor activities	17	3	85	15	0.85	0.37
	Walks with expert supervision	12	8	60	40	0.60	0.50
	Activities in nature	8	12	40	60	0.40	0.50
	Sports and recreational activities	9	11	45	55	0.45	0.51
	Activities outside the facility - in home conditions	7	13	35	65	0.35	0.49
	Rehabilitation and therapeutic program (3pr.): Correction of deformities and stimulation of growth and development of children, Recovery after medical intervention, Stretching and relaxation program	20	0	100	0	1	0

Source: Authors' research

Due to the specificity of health-rehabilitation institutions and the primary services they provide, Table 1 provides an overview of the presence of diagnostics of the current state and physical activity programs in these institutions for the indicator of physical activity and body care. All 20 examined institutions offer diagnostics of the current state of users, utilizing four specific programs: body structure analysis and anthropometric measurements, physiological measurements program, analysis of the ability to perform movement skills, and interview and psychological assessment of the individual. These findings indicate that the institutions possess the necessary resources to assess the current state of individuals and prescribe appropriate activity programs to help them achieve their desired goals.

Examining the presence of physical activity programs, Table 1 reveals that all institutions implement various forms of physical activity. Among the examined institutions, 90% (18 institutions) offer fitness programs, while 10% (2 institutions) do not provide such programs. The most prevalent fitness program is sports recreation, offered by 14 institutions (70%), followed by the sports program, available in 5 institutions (25%). Six institutions (30%) offer the body weight reduction program, while 14 institutions (70%) do not. The tissue restructuring program is offered by 7 institutions (35%), while 13 institutions (65%) do not include it in their programs. The improvement of functional status program is present in 12 institutions (60%). Additionally, 90% of the institutions (18) offer activities in the hall, with 17 institutions (85%) providing group programs and 5 institutions (25%) offering team sports programs. Outdoor activities are available in 85% of the centers, with 12 institutions (60%) offering supervised walks, 8 institutions (40%) providing activities in nature, and 9 institutions (45%) offering sports and recreational activities. Furthermore, 35% of the institutions (7) have programs that allow users to engage in activities at home.

All 20 institutions (100%) include a rehabilitation-therapeutic program of physical activity as a part of their services, which is their primary focus. These programs encompass the correction of deformities and stimulation of proper growth and development in children, recovery after medical intervention, as well as stretching and relaxation programs with exercises.

Overall, the findings from Table 1 highlight the comprehensive approach of health-rehabilitation institutions in providing diagnostics, physical activity programs, and rehabilitation-therapeutic services to address the wellness needs of their users.
Table 2 presents data regarding the availability of the recovery and medical recovery program in health and rehabilitation centers for the indicator of physical activity and body care.

Table 2: Descriptive statistics for the indicator physical activity and body care of health and rehabilitation centers (Recovery and medical recovery)

Dimensions of individual PA and body care	**Variables (Programs)**	**The number of institutions containing a programme**	**The number of institutions not containing a programme**	**% Yes**	**% No**	**MEAN (N=20)**	**SD (N=20)**
Recovery and medical recovery		20	0	100	0	1	0
	Sauna	14	6	70	30	0.70	0.47
	Massage	20	0	100	0	1	0
	Cryotherapy	4	16	20	80	0.20	0.41
	Cold and hot bath	19	1	95	5	0.95	0.22
	Stretching and breathing exercises	14	6	70	30	0.70	0.47
	Mud	12	8	60	40	0.60	0.50

Source: Authors' research

The recovery and medical recovery program is available in all institutions, totaling 20 (100%), as shown in Table 2. Among the special services within the program, massages are provided by 100% of the institutions, while cold and hot baths are available in 95% of them, with a total of 19 institutions. Cryotherapy is the least represented, being offered in only 4 institutions, accounting for 20% of the total sample. Stretching and breathing exercises are available in 14 institutions (70%), while the mud program is offered by 12 institutions (40%).

To assign scores to institutions based on the number of available programs in the physical activity and body care indicator, Sturges' rule was applied, which determines the number of intervals (k) using the formula k = 1 + 3.3 logN, where N represents the sample size. In our case, since 20 health-rehabilitation institutions were examined, N is 20, resulting in k being approximately 5.29, thus leading to 5 intervals. The width of each interval (i) is calculated using the formula $i = (x_{max} - x_{min})/k$, where x_{max} and x_{min} represent the largest and smallest values in the sample, respectively (Mutavdžić & Nikolić, 2018).

Given that the minimum number of available services for the physical activity and body care indicator is 1, and the maximum is 24, i is determined to be 4.6. Based on this information, the range was divided into intervals: 1-4, 5-9, 10-14, 15-19, and 20-24. In the first interval, the institution with the fewest services receives a score of 1, while the institution with the highest number of services falls into the last interval and receives a score of 5. It is worth noting that establishments without any available services were assigned a score of 0. The scores assigned to the institutions in relation to the number of available programs in the physical activity and body care indicator are presented in Table 3, which reflects the collected information.

Table 3: Evaluation of health and rehabilitation centers in relation to the indicator of wellness offer – Physical activity and body care

Health and rehabilitation center	**Destination**	**No of programs (24)**	**M**	**SD**	**Mark 1-5**
SB Čigota	Zlatibor	20	0.83	0.38	5
SB Merkur	Vrnjačka Banja	19	0.79	0.41	4
SB Rusanda, Melenci	Banja Rusanda	15	0.63	0.49	4
SB Banja Kanjiža	Banja Kanjiža	16	0.67	0.48	4
SB Junaković	Apatin	20	0.83	0.38	5
SB "Dr Borivoje Gnjatic"	Stari Slankamen	16	0.67	0.48	4
SB Termal	Banja Vrdnik	18	0.75	0.44	4
SB Banja Koviljača	Banja Koviljača	17	0.71	0.46	4
SB Bukovička banja	Aranđelovac	13	0.54	0.51	3
SB Sokobanja	Sokobanja	18	0.75	0.44	4
SB Gamzigrad	Gamzigradska Banja	15	0.63	0.49	4
SB Ivanjica	Ivanjica	20	0.83	0.38	5
SB Agens	Mataruška Banja	11	0.46	0.51	3
SB Ribarska Banja	Ribarska Banja	15	0.63	0.49	4
Institut Niška Banja	Niš	19	0.79	0.41	4
SB Gejzer Sijarinska Banja	Leskovac	14	0.58	0.50	3
SB Bujanovac	Bujanovac	13	0.54	0.51	3
SB Selters Banja	Mladenovac	17	0.71	0.46	4
SB Prolom Banja	Prolom Banja	15	0.63	0.49	4
SB Atomska Banja	Gornja Trepča	14	0.58	0.50	3

Source: Authors' research

In Table 3, it can be observed that among the health and rehabilitation institutions, 12 of them received a rating of 4 based on the total number of services related to the indicator of wellness offer, physical activity, and body care. Five institutions received a rating of 3, while three institutions achieved a rating of 5. None of the institutions received ratings of 1 or 2. SB Banja Junaković, SB Ivanjica, and SB Čigota were awarded the highest average rating of 0.83, indicating their diverse range of services in the physical activity and body care domain, leading to an overall grade of 5. SB Merkur and the Institute Niška Banja, both offering 19 services, obtained an average rating of 0.79, placing them close to an overall grade of 5. The data showing that a total of 15 institutions received ratings of 4 and 5 with high average scores indicates that health and rehabilitation institutions are responsive to market trends and employ available resources to deliver quality wellness services to their users.

Table 4 provides a comparison of institutions with the two highest average ratings and institutions with the two lowest ratings, along with the distribution of implemented services relative to the total number of programs related to the indicator of physical activity and body care. SB Banja Junaković, SB Ivanjica, and SB Čigota, each with 20 services and an average rating of 0.83, were analyzed to determine the distinguishing parameters contributing to their success in the wellness offer field. Additionally, SB Merkur and Institut Niška Banja, with 19 services and an average rating of 0.79, were added to the analysis. The institutions with the lowest ratings are Agens with a score of 0.46 and Bukovička Banja and Bujanovac with a score of 0.54. The distribution of programs is categorized under the following services: diagnostics of the current state (DCT - 4 programs), fitness programs (FP - 5 programs), rehabilitation and therapeutic program (RTP - 3 programs), physical activities program in the hall (PAPH - 2 programs), outdoor physical activities (OPA - 3 programs), physical activity in home conditions program (PAHC - 1 program), and recovery and medical recovery program (RMR - 6 programs).

Table 4: Comparative presentation and distribution of services of the best rated health and rehabilitation institutions (A) and institutions with the lowest average rating (B)

Institution	**Rating**	**DCT (4) (%)**	**FP (5) (%)**	**RTP (3) (%)**	**PAPH (2) (%)**	**OPA (3) (%)**	**PAHC (1) (%)**	**RMR (6) (%)**
Čigota	A	4 (100)	5 (100)	3 (100)	1 (50)	3 (100)	1 (100)	3 (50)
Banja Junaković	A	4 (100)	3 (60)	3 (100)	1 (50)	3 (100)	1 (100)	5 (83.3)
Ivanjica	A	4 (100)	3 (60)	3 (100)	2 (100)	3 (100)	1 (100)	4 (66.7)
Merkur	A	4 (100)	4 (80)	3 (100)	1 (50)	1 (33.3)	1 (100)	5 (83.3)
Niška Banja	A	4 (100)	4 (80)	3 (100)	2 (100)	2 (66.7)	1 (100)	3 (50)
Bukovička Banja	B	4 (100)	0 (0)	3 (100)	1 (50)	0 (0)	0 (0)	5 (83.3)
Bujanovac	B	4 (100)	1 (20)	3 (100)	1 (50)	0 (0)	0 (0)	4 (66.7)
Agens	B	4 (100)	1 (20)	3 (100)	0 (0)	1 (33.3)	0 (0)	2 (33.3)

Source: Authors' research

Based on the data presented in Table 4, it is evident that fitness programs (FP) demonstrate a significant presence in institutions that have attained high ratings (A). SB Čigota offers all five programs, while SB Merkur and the Institute Niška Banja provide 4 out of 5 fitness programs, accounting for 80%. SB Ivanjica offers 3 fitness programs, equivalent to 60%. The current state diagnostics (DCT) is available in all institutions and includes all four specific programs. The program of physical activity in the hall (PAPH) is maximally implemented by SB Ivanjica and the Institute Niška Banja, accounting for 2 out of the total 2 programs. The program of outdoor physical activities (OPA) is fully implemented by the top-rated institutions, SB Čigota, Ivanjica, and Banja Junaković, with 3 out of a total of 3 programs. All top-rated institutions offer the program of physical activities in home conditions (PAHC), achieving a 100% implementation rate. However, none of the top-rated institutions offers the maximum number of recovery and medical recovery programs (RMR). SB Banja Junaković and SB Merkur provide 5 out of 6 programs, corresponding to 83.3%, Ivanjica offers 4 programs (66.7%), and SB Čigota and the Institute Niška Banja offer 3 programs (50%) out of the total of 6. It should be noted that all institutions provide the maximum number of rehabilitation and therapeutic programs (RTP). From Table 4, it is evident that the lowest-rated institutions (B) lack a program for physical activities in home conditions (PAHC). Additionally, the program for physical activities outdoors (OPA) is only available at SB Agens, accounting for 1 out of 3 programs, representing 33.3%. SB Bukovička Banja and Bujanovac offer a program for physical activities in the hall (PAPH), with one out of 2 programs. SB Bukovička Banja does not provide any fitness programs (FP), while SB Agens and Bujanovac offer one out of 5 programs, which corresponds to only 20%. In terms of the recovery and medical recovery program (RMR), SB Bukovička Banja has the highest number of programs, offering 5 out of a total of 6, representing 83.3%. SB Bujanovac provides 4 programs, equivalent to 66.7%, while SB Agens offers 2 programs, accounting for 33.3% of the total number.

In their study, du Toit et al. (2013) found that individuals with low physical activity levels exhibit poorer performance and are at higher risk of various health problems compared to active individuals, confirming the positive impact of appropriately dosed physical activity on overall well-being. The examination of health and rehabilitation institutions revealed that all institutions offer some form of physical activity, with the difference lying in the presence of specific programs that distinguish them from competitors. Fitness programs are present in 90% of institutions, with the most prevalent programs being sports recreation and improving physical condition, available in 70%, i.e. 60% of institutions, respectively. Some institutions have recognized the significant issues faced by individuals with excess weight, which is often associated with various diseases resulting from modern lifestyles. Consequently, they have developed weight reduction programs, which are offered by 30% of institutions. This information emphasizes the need for more health and rehabilitation institutions to develop appropriate programs that enable overweight individuals to improve their physical status or take preventive measures against potential health problems.

Indoor and outdoor activities are offered by 90%, i.e. 85% of institutions, respectively. Among the indoor activities, group programs are more prevalent, representing 85% of institutions, while team sports programs are available in 25% of institutions. Institutions have the capacity to implement group programs, which allow them to positively influence the health status of users through creative and appropriately tailored approaches, fostering overall well-being. Regarding outdoor activities, the most common program is walking under the supervision of experts, offered by 60% of institutions. Activities in nature are available in 40% of institutions, and sports and recreational activities are offered by 45% of institutions. Walking, with its relatively low motor skill requirements and the guidance provided by experts, can be an attractive form of physical activity. It allows individuals to explore the beauty of their chosen tourist destination while improving their physical health. It is essential for a greater number of institutions to design programs that incorporate walking and other activities in nature, offering tourists a creative and meaningful way to spend their vacation while experiencing the natural environment.

All institutions offer rehabilitation-therapeutic programs, providing users with the opportunity to address the negative impacts of modern lifestyles in a timely manner or prevent the worsening of existing issues through institution-led activities.

Dosed physical activity holds multifaceted importance for individual health and improves quality of life (Gianuzzi et al., 2003; Leon et al., 2005). According to Spence and Lee

(2003), there exists a biologically determined threshold beyond which individuals can engage in physical activity. Therefore, diagnostic procedures are necessary to assess the current state of individuals and their functional capabilities, enabling the implementation of specific physical activity programs that yield appropriate results while avoiding adverse health effects. All examined health-rehabilitation institutions (100%) offer appropriate diagnostic procedures, indicating that the essential prerequisite has been met. This allows the professional staff to prescribe suitable wellness programs to the users.

Limited timeframes for visits to health-rehabilitation institutions can hinder long-term commitment to lifestyle changes and ongoing health maintenance post-program completion. This may lead to regression to previous activity levels due to lack of motivation, knowledge, and skills. To address this, physical activity programs for continued engagement at home are essential. Regular feedback and support from institution experts, along with occasional check-ins, ensure correct activity performance. Utilizing modern technology like smartphones and health-oriented applications enhances program implementation, fostering constant communication and long-term relationships between the institution and users, potentially leading to repeat visits and recommendations. As a smaller number of health-rehabilitation institutions have adopted such programs (35% of them), there is an opportunity for institutions to focus on improving the wellness offer in this significant aspect. This will provide a comprehensive service and establish lasting relationships with users, further enhancing the effectiveness of prescribed activities.

Given the significance of the efficacy of implemented initiatives and the establishment of enduring connections with participants, our investigation seeks to ascertain the presence of a substantial variance in the aggregate provision of the wellness program **(**the total number of programs – **TP)** between institutions that provide a physical activity program conducted externally (Group 1) and those that do not (Group 2). To address this inquiry, the independent t-test will be employed, a statistical method used to evaluate the null hypothesis regarding whether two sets of data have identical mean values, namely $\boldsymbol{H_0}(\boldsymbol{\mu_1} = \boldsymbol{\mu_2})$. In the present example, equivalence in the mean number of programs offered by institutions providing physical activities outside their premises is sought to be ascertained, in comparison to those that do not extend such programs. In formulating the alternate hypothesis, the premise of non-equality has been adopted (i.e., $\boldsymbol{H_1}(\boldsymbol{\mu_1} \neq \boldsymbol{\mu_2})$), as there is no a priori basis for presupposing that the mean number of programs in one group is unilaterally greater or lesser than the other. It is requisite for the data to exhibit independence, denoting lack of interrelation. This presumption remains valid, as the service offerings of one institution are seen to bear no influence on those of another. To confirm the hypothesis of normal distribution, the Shapiro-Wilk test will be used (Table 5).

Table 5: Shapiro-Wilk test

Tests of Normality				
	Group	**Shapiro-Wilk**		
		Statistic	df	Sig.
TP	Group 1	0.813	7	0.055
	Group 2	0.946	13	0.537
*. This is a lower bound of the true significance.				
a. Lilliefors Significance Correction				

Source: Authors' research

From Table 5, it is observed that for both groups (Group 1 and Group 2), the p-value of the test or the power of the test exceeds 0.05, the standard threshold of significance for statistical tests. Therefore, the null hypothesis regarding the normality of our data is confirmed. Consequently, the analysis will proceed utilizing the independent t-test (Table 6).

Table 6: Levene's Test for Equality of Variances

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
TP	Group 1	7	18.71	1.604	0.606
	Group 2	13	14.62	2.022	0.561

Independent Samples Test										
		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TP	Equal variances assumed	0.408	0.531	4.619	18	< .001	4.099	0.887	2.234	5.963
	Equal variances not assumed			4.964	15.129	< .001	4.099	0.826	2.340	5.858

Source: Authors' research

The analysis reveals that the p-value of Levene's Test for Equality of Variance (Table 6) exceeds the significance threshold of 0.05. Consequently, the null hypothesis is rejected in favor of the alternative, indicating a statistically significant variance in the mean value of the program offer between centers with a physical activity program outside the institution and those without such a program. This finding suggests that institutions without an external physical activity program should enrich their offerings with high-quality programs that align with contemporary trends. By doing so, institutions can enhance their competitiveness in the wellness tourism market and provide customers with comprehensive wellness experiences, fostering lasting relationships. From the user's perspective, particularly regarding the range of services offered and the likelihood of sustaining activities post-visit, this outcome highlights the preference for institutions offering a broader selection of suitable programs, including external activities.

All institutions offer recovery and medical recovery programs, with massages being the dominant service at 100% availability, followed by cold and warm baths at 75%. By offering a diverse range of recovery modalities, institutions enhance their competitiveness in the wellness market. However, it is crucial to coordinate these modalities with the selected physical activity program to maximize their effectiveness.

5. Conclusion

Konu and Laukkanen (2010) research aimed to explore tourists' motivations as indicators of their interest in health and wellness tourism compared to those uninterested in this type of tourism. Findings revealed that individuals with prior well-being holiday experiences, considering factors like the physical environment, natural attractions, rejuvenation, and contemporary destinations, were significantly more inclined towards well-being holidays. Studies on tourist destinations' wellness offerings have highlighted growing demand for wellness services, particularly among affluent and active age groups in North America, Scandinavia, and Western Europe (Csirmaz & Pető, 2015). This demand stems from the pursuit of a higher quality of life and the need for relaxation and rejuvenation. Rejuvenation significantly influences the motivational aspects of most wellness tourists (Koh et al., 2010).

Extensive research has identified social interaction, thrills, and relaxation as fundamental motivations for wellness tourists (Koh et al., 2010; Mak et al., 2009). Koncul (2012) extensively examines various facets of wellness tourism, noting that hotels are rapidly embracing contemporary trends by offering diverse wellness services like spa therapies, cosmetic treatments, physical activities, and rehabilitation programs.

At the level of the Republic of Serbia, wellness tourism is primarily provided by spa destinations housing health and rehabilitation facilities, offering both medical and wellness services as core offerings. Denda and Stojanović (2017) analyzed factors contributing to wellness tourism development in Sokobanja, finding spa tourism to be prominent, with seasonal tourist traffic mainly from the domestic market. While resources are deemed sufficient, modernizing infrastructure and integrating technological advancements are crucial to align offerings with market trends. Additionally, Dini and Pencarelli (2022) highlight the diverse components within the wellness concept, including hot springs, spas, medical tourism, holistic care, sports, nature, culture, spirituality, and events. These dimensions can function as individualized tourist offerings targeting specific market segments or integrated components within a comprehensive tourist concept.

Contemporary trends in health tourism require tourist destinations to continuously innovate and adapt to environmental changes, creating new business opportunities. This paper emphasizes the importance of adjusting marketing strategies to enhance business performance and gain a competitive edge. Introducing novel wellness packages and innovative solutions for tourists aimed at comprehensive well-being presents new prospects for health and rehabilitation institutions in Serbia. This enables them to effectively respond to environmental shifts and secure a successful market position. The paper focuses on analyzing the specific characteristics of health-rehabilitation institutions' offerings to develop tailored wellness packages. It provides recommendations for future wellness package development in alignment with current health and wellness tourism trends, aiming to establish a competitive advantage internationally and attract more foreign tourists.

Health and rehabilitation centers excel in providing top-notch comprehensive wellness experiences, catering to individual health needs with modern services and effective solutions. Their holistic approach, assessing and tailoring programs to each person's condition, consolidates wellness services in one convenient location. Hosting these centers presents opportunities for tourist destinations to distinguish themselves in the wellness tourism market by offering professional services. These centers prioritize physical activity and body care, crucial elements in the wellness model, with capacity and programs to implement comprehensive wellness initiatives. Tailoring unique programs encompassing various physical activities is essential for desired outcomes. Promoting these initiatives can elevate destinations as providers of high-quality wellness services globally.

Limitations in the research stem from incomplete data on programs, lacking clear definitions on official websites or social media platforms. Some institutions may offer activities within programs or create specialized activities after diagnostic examinations, highlighting the need for improved marketing to define services clearly. Future research should explore other wellness dimensions and opportunities for expanding offerings in health and rehabilitation institutions, crucial for their role in Serbian wellness tourism. Effective marketing is essential to promote wellness, benefiting public health and mitigating disease prevalence. Popularizing wellness in tourist destinations fosters economic stability and local development, creating job opportunities. Health-rehabilitation centers can establish a new business model, enhancing financial independence and directing income towards further development and modernization.

Conflict of interest

The authors declare no conflict of interest.

References

1. Antúnez, L. E., Puértolas, B. C., Burgos B. I., Porto Payán, J. M., & Torres Piles, S. T. (2013). Effects of mud therapy on perceived pain and quality of life related to health in patients with knee osteoarthritis, *Reumatología Clínica (English Edition)*, *9* (3), 156–160. https://doi.org/10.1016/j.reumae.2013.03.001
2. Bauman, A. E., Chau, J. Y., Ding, D., & Bennie, J. (2013). Too much sitting and cardio-metabolic risk: An update of epidemiological evidence. *Current Cardiovascular Risk Reports*, *7*(4), 293–298. https://doi.org/10.1007/s12170-013-0316-y
3. Bianco, A., Bellafiore, M., Battaglia, G., Paoli, A., Caramazza, G., Farina, F., & Palma, A. (2010). The effects of indoor cycling training in sedentary overweight women. *The Journal of Sports Medicine and Physical Fitness*, *50*(2), 159–165.
4. Bieuzen, F., Bleakley, C. M., & Costello, J. T. (2013). Contrast water therapy and exercise induced muscle damage: A systematic review and meta-analysis. *PLoS One*, *8*(4), e62356. https://doi.org/10.1371/journal.pone.0062356
5. Bushman, B. A. (Ed.) (2017) *Complete guide to fitness & health*. (Second Edition). IL: Human Kinetics.
6. Csirmaz, E., & Károly Pető, K. (2015). International trends in recreational and wellness tourism. *Procedia Economics and Finance*, *32*, 755–762. https://doi.org/10.1016/S2212-5671(15)01458-6
7. Davis, H. L., Alabed, S., & Chico, T. J. A. (2020). Effect of sports massage on performance and recovery: A systematic review and meta-analysis. *BMJ Open Sport & Exercise Medicine*, *6*(1), e000614. http://dx.doi.org/10.1136/bmjsem-2019-000614
8. Denda, S., & Stojanović, J. (2017). Pozicioniranost Sokobanje na turističkom tržištu Srbije [Positioning of Sokobanja on the Serbian tourist market]. *Poslovna ekonomija*, *11*(1), 253–271. https://doi.org/10.5937/poseko11-13733
9. Dini, M., & Pencarelli, T. (2022). Wellness tourism and the components of its offer system: A holistic perspective. *Tourism Review*, *77*(2), 394–412. http://dx.doi.org/10.1108/TR-08-2020-0373
10. Du Toit, P., Naicker, L. A., Nortje, E., Kleynhans, M., Ferreira, R., & Gericke, G. (2013). Determining a physical wellness indicator. *Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie*, *32*(1), 770. https://doi.org/10.4102/satnt.v32i1.770
11. Đurađević, M. (2017). Characteristics of wellness tourism users in "Merkur" Specialised Hospital. *Hotel and Tourism Management*, *5*(1), 75–84.
12. Gan, T, Zheng, J, Li, W., Li, J., & Shen, J. (2023). Health and wellness tourists' motivation and behavior intention: The role of perceived value. *International Journal of Environmental Research and Public Health*, *20*(5), 4339. https://doi.org/10.3390/ijerph20054339
13. Gavrilović, D. (Ed.) (2022). *Statistički godišnjak* [*Statistical Yearbook*]. Beograd: Republički zavod za statistiku Republike Srbije.
14. Giannake, G., Economou, A., Metaxas, T., & Geitona, M. (2023). Medical tourism in the Region of Thessaly, Greece: Opinions and perspectives from healthcare providers. *Sustainability*, *15*(10), 7864. http://dx.doi.org/10.3390/su15107864
15. Gianuzzi, P., Mezzani, A., Saner, H., Mendes, M., Cohen-Solal, A., Dugmore, L., ... & Veress, G. (2003). Physical activity for primary and secondary prevention. Position paper of the Working Group on Cardiac Rehabilitation and Exercise Physiology of the

European Society of Cardiology. *European Journal of Cardiovascular Prevention and Rehabilitation*, *10*(5), 319–327. https://doi.org/10.1097/01.hjr.0000086303.28200.50

16. Global Wellness Institute. (2015). *The Global Wellness Tourism Economy Report 2013 & 2014*. Retrieved September 18, 2022 from https://globalwellnessinstitute.org/wp-content/uploads/2018/06/GWI_2013_and_2014_Global_Wellness_Tourism_Economy_Report_Final.pdf
17. GWI. (2018). *Global Wellness Economy Monitor.* Retrieved September 20, 2022 from https://globalwellnessinstitute.org/industry-research/2018-global-wellness-economy-monitor/
18. Hoffman, S. J., & Knudson, D., V. (2018). *Introduction of kinesiology: Studying physical activity* (5th ed.). USA: Human Kinetics.
19. Huber, T., Steinle, A., Steinle, F., & Armellini, D. (2013). *Die zukunft des konsums – Wie meta-services die wirtschaft umkrempeln [The future of consumption – How meta-services are transforming the economy]*. Frankfurt: Zukunftsinstitut GmbH.
20. Ilić, N. (2006). Fiziologija sporta. [Physiology of sports]. *Beograd: SZGR "Joksimović"*.
21. Jat, A., & Grønli, T. (2022). Smart watch for smart health monitoring: A literature review. *Bioinformatics and Biomedical Engineering: 9th International Work-Conference, IWBBIO 2022, Maspalomas, Gran Canaria, Spain*, *Proceedings, Part I*, 256–268. http://dx.doi.org/10.1007/978-3-031-07704-3_21
22. Joppe, M. (2010) One country's transformation to spa destination: The case of Canada, *Journal of Hospitality and Tourism Management*, *17*(1), 117–126. https://doi.org/10.1375/jhtm.17.1.117
23. Karalejić, M., & Jakovljević, S. (2009). *Dijagnostika u košarci [Diagnostics in basketball]*. Beograd: Visoka sportska i zdravstvena škola.
24. Koh, S., Yoo, J. J.-E., & Boger, C.A., Jr. (2010). Importance-performance analysis with benefit segmentation of spa goers. *International Journal of Contemporary Hospitality Management*, *22*(5), 718–735. http://dx.doi.org/10.1108/09596111011053828
25. Koncul, N. (2012). Wellness: A new mode of tourism. *Economic research – Ekonomska istraživanja*, *25*(2), 503–534. http://dx.doi.org/10.1080/1331677X.2012.11517521
26. Konu, H., & Laukkanen, T. (2010). Predictors of tourists' wellbeing holiday intentions in Finland [Special section]. *Journal of Hospitality and Tourism Management*, *17*, 144–149. https://doi.org/10.1375/jhtm.17.1.144
27. Krstić, V., & Živanović, S. (2020). Ethical principles of complementary medicine application in health tourism. *Hotel and Tourism Management*, *8*(1), 111–122. https://doi.org/10.5937/menhottur2001111K
28. Laesser, C. (2011). Health travel motivation and activities: Insights from a mature market – Switzerland. *Tourism Review*, *66*(1/2), 83–89. http://dx.doi.org/10.1108/16605371111127251
29. Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of disease and life expectancy. *The Lancet*, *380*(9838), 219–229. https://doi.org/10.1016/S0140-6736(12)61031-9
30. Lee, J., & Kim, J-J. (2023). A study on market segmentation according to wellness tourism motivation and differences in behavior between the groups — Focusing on satisfaction, behavioral intention, and flow. *International Journal of Environmental Research and Public Health*, *20*(2), 1063. https://doi.org/10.3390/ijerph20021063
31. Leon, A. S., Franklin, B. A., & Costa, F. (2005). Cardiac rehabilitation and secondary prevention of coronary heart disease. *Circulation*, *111*(3), 369–376. https://doi.org/10.1161/01.cir.0000151788.08740.5c
32. Liu, H., Zeng, C., Gao, S. G., Yang, T., Luo, W., Li, Y-S., ... & Lei, G-H. (2013). The effect of mud therapy on pain relief in patients with knee osteoarthritis: A meta-analysis

of randomized controlled trials. *Journal of International Medical Research*, *41*(5), 1418–1425. https://doi.org/10.1177/0300060513488509

33. Lombardi, G., Ziemann, E., & Banfi, G. (2017). Whole-body cryotherapy in athletes: From therapy to stimulation. An Updated Review of the Literature. *Frontiers in Physiology*, *8*, 258. https://doi.org/10.3389/fphys.2017.00258
34. Majeed, S., & Gon Kim, W. (2023). Emerging trends in wellness tourism: A scoping review, *Journal of Hospitality and Tourism Insights*, *6*(2), 853–873. http://dx.doi.org/10.1108/JHTI-02-2022-0046
35. Mak, A. H. N., Wong, K. K. F., & Chang, R. C. Y. (2009). Health or self-indulgence? The motivations and characteristics of spa-goers. *International Journal of Tourism Research*, *11*, 185–199. http://dx.doi.org/10.1002/jtr.703
36. Means, K. M., Rodell, D. E., & O'Sullivan, P. S. (2005). Balance, mobility, and falls among community-dwelling elderly persons. *American Journal of Physical Medicine & Rehabilitation*, *84*(4), 238–250. http://dx.doi.org/10.1097/01.PHM.0000151944.22116.5A
37. Mero, A., Tornberg, J., Mäntykoski, M., & Puurtinen, R. (2015). Effects of far-infrared sauna bathing on recovery from strength and endurance training sessions in men. *Springerplus*, *4*(1), 321 https://doi.org/10.1186/s40064-015-1093-5
38. Mohammadian, M., Khazaei, A., Khodabandeh, J., Bahadori, M., & Babaei, M. (2021). The designing model of sport for all in the employees of Iranian universities. *The Annals of Applied Sport Science*, *9*(3), e909. http://dx.doi.org/10.52547/aassjournal.909
39. Mueller, H., & Kaufmann, E. L. (2001). Wellness tourism: Market analysis of a special health tourism segment and implications for the hotel industry. *Journal of Vacation Marketing*, *7*(1), 5–17. https://doi.org/10.1177/135676670100700101
40. Muller, E., Benko, U., Raschner, C., & Schwameder, H. (2000). Specific fitness training and testing in competitive sports. *Medicine & Science in Sports & Exercise*, *32*(1), 216–220. https://doi.org/10.1097/00005768-200001000-00032
41. Mutavdžić, B., & Nikolić, Đ. E. (2018). *Statistika [Statistics]*. Novi Sad: Poljoprivredni fakultet Novi Sad.
42. Narziev, S., & Latibov, S. (2021). Methods of ensuring occupational safety and health in sports. *The American Journal of Engineering and Technology*, *3*(4), 89–94. https://doi.org/10.37547/tajet/Volume03Issue04-14
43. Nelson, A., Kokkonen, J., Eldredge, C., Cornwell, A., & Glickman-Weisset, E. (2001). Chronic stretching and running economy. *Scandinavian Journal of Medicine & Science in Sports*, *11*(5), 260–265. https://doi.org/10.1034/j.1600-0838.2001.110502.x
44. Nićiforović, J., & Stajić, D. (2021). Recreational swimming as a physical aspect of wellness and its impact on health tourism. *Hotel and Tourism Management*, *9*(1), 135–144. http://dx.doi.org/10.5937/menhottur2101135N
45. Paffenbarger R. S., Jung L. D., Leung R. W., & Hyde, R. T. (1991). Physical activity and hypertension: An epidemiological view. *Annals of Medicine*, *23*(3), 319–327. https://doi.org/10.3109/07853899109148067
46. Petty, N. J., & Moore, A. P. (Eds.) (2011). *Principles of exercise rehabilitation. Physical examination. Neuromusculoskeletal examination and assessment: A handbook for therapists* (4th ed.). Elsevier Health Sciences.
47. Powers, S. K., & Howley, E. T. (2018). *Exercise physiology. Theory and Application to Fitness and Performance* (10th ed.). New York: McGraw-Hill Education.
48. Said, M., Lamya, N., Olfa, N., & Hamda, M. (2017). Effects of high-impact aerobics vs. low-impact aerobics and strength training in overweight and obese women. *The Journal of Sports Medicine and Physical Fitness*, *257*(3), 278–288. https://doi.org/10.23736/s0022-4707.16.05857-x

49. Sl. glasnik RS [Official Gazette of RS], br. 47/2008, 69/2008, 81/2010, 103/2010, 15/2011, 48/2012, 55/2012 - ispr., 64/2013 i 68/2013 - ispr.) (2013). *Pravilnik o medicinskoj rehabilitaciji u SZU specijalizovanim za rehabilitaciju [Rulebook on medical rehabilitation in SZU specialized in rehabilitation]*. Retrieved Jun, 2022 from http://demo.paragraf.rs/demo/combined/Old/t/t2013_07/t07_0342.htm
50. Smith, M., & Puczkó, L. (2009). *Health and wellness tourism*. Butterworth-Heinemann. Hungary.
51. Spence, J. C., & Lee, R. E. (2003). Toward a comprehensive model of physical activity. *Psychology of Sport and Exercise*, *4*(1), 7–24. https://doi.org/10.1016/S1469-0292(02)00014-6
52. Srivastava, R. D, Jain, N., & Singhal A. (2005). Influence of alternate nostril breathing on cardiorespiratory and autonomic functions in healthy young adults. *Indian Journal of Physiology and Pharmacology*, *49*(4), 475–483.
53. Stojiljković, S. (2005*). Fitness*. Beograd: FSFV.
54. Vidanović, N., Brdar, I., & Ranković, K. (2021). The attitudes of young people towards visiting spa & wellness hotels during the Covid-19 pandemic. *Sitcon 2021 Spa & Wellness Tourism – Development, Perspectives, and Experiences*, 88–94. https://doi.org/10.15308/Sitcon-2021-88-94
55. Warburton, E. R., Whitney-Nichol, C., & Bredin, S. D. (2006). Health benefits of physical activity: The evidence. *Canadian Medical Association Journal*, *174*(6), 801–809. https://doi.org/10.1503/cmaj.051351
56. Zaciorski, V., & Kremer, W. (2009). *Nauka i praksa u treningu snage. [Science and practice in strength training]*. Beograd: DATA STATUS.
57. Živković, R., & Brdar, I. (2018). *Ponašanje i zaštita potrošača u turizmu [Consumer behavior and protection in tourism]*. Beograd: Univerzitet Singidunum.

Review Article

UDC: 338.48
005.336.4:338.48
DOI: 10.5937/menhottur2400005S

Received: 11 February 2024
Revised: 20 March 2024
Accepted: 8 May 2024
Published online: 15 May 2024

PLS-SEM: A hidden gem in tourism research methodology

Marijana Seočanac[1*]

[1] University of Kragujevac, Faculty of Hotel Management and Tourism in Vrnjačka Banja, Serbia

Abstract

Purpose – The main objective of this paper is to provide a well-organized guide for the application of partial least squares structural equation modeling (PLS-SEM) in tourism research. In this way, the paper strives to encourage future tourism studies to use PLS-SEM and contribute to methodological advances in the field. **Methodology** – This paper systematically examines the application of PLS-SEM with a particular focus on the application of hierarchical constructs in tourism research and carefully analyzes and classifies the existing literature on PLS-SEM. **Results** – Specific steps for evaluating and interpreting the hierarchical latent variables of the PLS model are presented and explained. **Implications** – This paper contributes to advancing the application of PLS-SEM in tourism research by providing researchers with a valuable tool to improve both the rigor of empirical investigation and theoretical development in the field. The insights gained from this paper can guide subsequent research to investigate specific tourism-related scenarios, potentially leading to new transformative discoveries and paradigm shifts in our understanding of tourism dynamics.

Keywords: partial least squares structural equation modeling, higher-order structural model, hierarchical component model, multidimensional construct, PLS predict, tourism
JEL classification: C38, L83

PLS-SEM: Skriveni dragulj u metodologiji naučnog istraživanja turizma

Sažetak

Svrha – Glavni cilj ovog rada je da pruži dobro organizovan vodič za primenu modeliranja strukturnim jednačinama metodom parcijalnih najmanjih kvadrata (PLS-SEM) u istraživanju turizma. Na ovaj način, rad nastoji da podstakne buduće studije iz oblasti turizma da primene PLS-SEM u svojoj metodologiji i doprinesu metodološkom napretku u ovoj oblasti. **Metodologija** – Ovaj rad sistematski istražuje primenu PLS-SEM sa posebnim fokusom na primenu hijerarhijskih latentnih varijabli u istraživanju turizma i pažljivo analizira i klasifikuje postojeću literaturu o PLS-SEM. **Rezultati** – Predstavljeni su i detaljno objašnjeni specifični koraci neophodni za evaluaciju i tumačenje hijerarhijskih latentnih varijabli PLS modela. **Implikacije** – Rad doprinosi unapređenju primene PLS-SEM u

* marijana.seocanac@kg.ac.rs

istraživanjima turizma tako što istraživačima pruža vredan alat za poboljšanje kako strogosti empirijskog istraživanja, tako i teorijskog razvoja u ovoj oblasti. Uvidi stečeni iz ovog rada mogu da usmere naredna istraživanja ka istraživanju specifičnih scenarija u oblasti turizma koja potencijalno mogu da dovedu do novih transformativnih otkrića i promena paradigme u našem razumevanju dinamike turizma.

Ključne reči: modeliranje strukturnim jednačinama metodom parcijalnih najmanjih kvadrata, strukturni model višeg reda, model hijerarhijskih latentnih varijabli, multidimenzionalni konstrukt, PLS predict, turizam
JEL klasifikacija: C38, L83

1. Introduction

Structural equation modeling (SEM), referred to as a "second-generation technique", offers researchers the ability to "simultaneously model and estimate complex relationships among multiple dependent and independent variables" (Hair et al., 2022, p. 4). SEM methods can be broadly categorized into two main types: covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). According to Hair et al. (2019a), CB-SEM has been used in the past to analyze complex relationships between indicators and latent variables. However, the use of the CB-SEM entails the difficulty that several strict assumptions must be met (Hair et al., 2011). In response to these challenges, Wold (1982) introduced PLS-SEM as a more flexible alternative. In contrast to CB-SEM, which relies on shared variance and "models constructs as common factors that explain covariation between associated indicators" (Rigdon et al., 2017, p. 7), PLS-SEM uses total variance (Hair et al., 2017a) and focuses on "causal-predictive relations because it maximizes the amount of explained variance of dependent variables founded in well-developed explanations" (Hair et al., 2020, p. 103). This approach combines principal component analysis and regression-based path analysis to estimate the "unknown parameters of a system of simultaneous equations" (Mateos-Aparicio, 2011, p. 2311).

PLS-SEM has gained increasing attention in the academic community, especially among researchers in the social sciences. Research by Richter et al. (2016a), Hair et al. (2022) and Sarstedt et al. (2022a) has shown that PLS-SEM is widely used in various fields, including psychology, medicine, information systems, business and marketing. Despite its widespread use, PLS-SEM has been the subject of ongoing academic discourse for several years (Rigdon et al., 2017). Criticism of its use and claims by some authors that PLS-SEM "is of no use" (Antonakis et al., 2010, p. 1103) have led to methodological advances and an increase in scholarly efforts aimed at producing comprehensive guidelines for its use (Henseler et al., 2016). The efforts of numerous authors (e.g., Hair et al., 2011; Hair et al., 2017b; Hair et al., 2019a; Hair et al., 2019b; Hair et al., 2022; Richter et al., 2016b; Sarstedt et al., 2022b) to continuously improve methods and provide clear guidelines for researchers have led to the recent recognition of the value of PLS as an SEM technique by several prominent researchers (Petter, 2018).

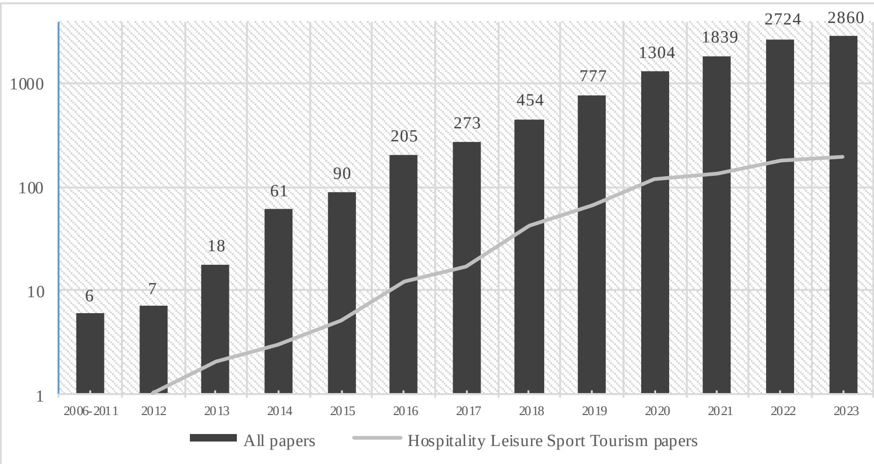
However, a search of papers indexed in the Web of Science scientific database revealed that of the total number of papers that have used PLS-SEM in their methodology (10,618) published by the end of 2023, only a modest 7.3% or 775 articles belong to the Hospitality Leisure Sport Tourism category. The low prevalence of PLS-SEM applications in the methodology of tourism-related articles highlights the significant untapped potential for novel applications of PLS-SEM in tourism. Therefore, the main goal of this paper is to provide a well-organized guide for the application of PLS-SEM by thoroughly analyzing and classifying the body of existing literature on this topic. The author seeks to illustrate the usefulness of PLS-SEM through a comprehensive literature review to provide a solid foundation for tourism researchers to build upon when incorporating this statistical modeling technique into their research. In this way, the study aims to improve the methodological rigor and empirical breadth of tourism-related research.

2. PLS-SEM in tourism studies

PLS-SEM has been used in studies on various aspects of the travel and tourism industry. For example, it has been used to understand the factors that influence destination management (e.g., Molinillo et al., 2018) and marketing effectiveness (e.g., Assaker, 2014). Researchers have investigated the relationships between different variables such as destination image, tourist satisfaction and loyalty. It has also been used to investigate the relationship between tourism activities and individual well-being (e.g., Sie et al., 2021; Tan et al., 2020) and to develop a scale to measure the transformation process through travel experiences (e.g., Tasci & Godovykh, 2021). Researchers have used PLS-SEM to investigate the adoption of technological innovations by tourists and tourism businesses. This includes examining factors that influence the adoption of online booking systems (e.g., Hateftabar, 2022), mobile applications (e.g., Nathan et al., 2020), and other technological advances (e.g., Pillai & Sivathanu, 2020). PLS-SEM has also been used to model and analyze the complex decision-making processes of tourists. This includes examining the factors that influence travel decisions (e.g., Alhemimah, 2022) and information-seeking behavior (e.g., Chopra et al., 2022). The relationships between job satisfaction, organizational support and employee engagement (e.g., Sun & Yoon, 2022) and the impact of work-life balance and social support on employee well-being (e.g., Medina-Garrido et al., 2023) have also been examined using this statistical modeling technique.

Although PLS-SEM is present in academic discourse on various topics in the field of tourism, its dissemination remains relatively limited. A detailed analysis of research articles found in the Web of Science database shows a significant increase in the use of PLS-SEM in tourism studies since Assaker et al. first included it in 2012. However, the peak recorded in 2023 represents only a small proportion of the total corpus of studies that have used PLS-SEM in their methodology (Figure 1).

Figure 1: Number of papers that applied PLS-SEM



Source: Author, based on the results of the Web of Science database

When reviewing the abstracts of the identified papers, it also became clear that there is a lack of papers in the field of tourism that deal with advanced modeling or modeling at a higher level of abstraction. To investigate this apparent gap, the following specific query was created: TS=(PLS-SEM) AND TS=(higher-order OR hierarchical), and only 20 articles were found (Table 1). This indicates that hierarchical variables were only included in the methodology in 2.58% of the studies in the Hospitality Leisure Sport Tourism category that used the PLS-SEM method. Therefore, this paper aims to address this noticeable gap in the existing literature regarding the specific application of hierarchical constructs within PLS-SEM in the field of tourism. The following sections of this paper have been written with the aim of contributing to the knowledge base and advancement of research methods in tourism by providing a comprehensive understanding of how hierarchical constructs can be easily established and estimated within PLS-SEM.

Table 1: Papers that applied hierarchical latent variable models in PLS-SEM

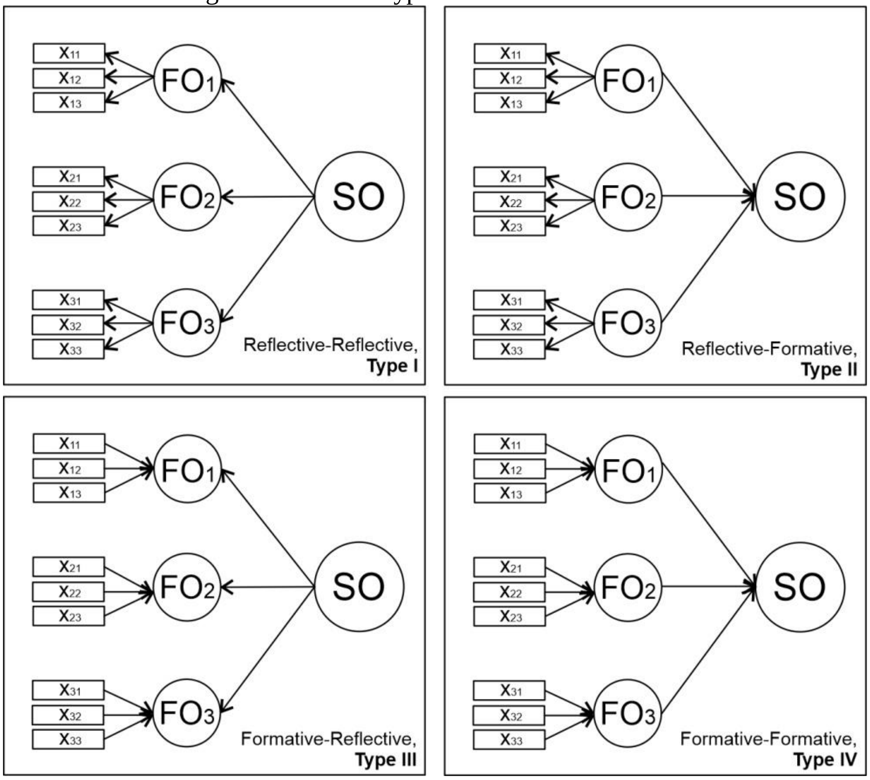
Context	**Author/s**
Destination image and authenticity	Assaker & Hallak (2016); Nguyen (2020)
Service quality	Assaker (2020); Hallak et al. (2017); Howat & Assaker (2013); Muskat et al. (2019); Priporas et al. (2017)
Tourist behavior and experience	Ansari et al. (2022); Aybek & Özdemır (2022); Badu-Baiden et al. (2022); Dayour (2023); Deng et al. (2020); Leung & Jiang (2018); Luo et al. (2021); Perez-Vega et al. (2018); Ritchie et al. (2019); Sie et al. (2021)
Hospitality management	Lee et al. (2016)
General tourism	Assaker et al. (2012); Becker et al. (2022)

Source: Author, based on the results of the Web of Science database

3. Estimation and interpretation of hierarchical latent variable models in PLS-SEM

The construction of latent variables on a more abstract level is considered an advanced modeling technique (Hair et al., 2017c). Variables that span more than one dimension are referred to as higher-order or hierarchical variables (Wetzels et al., 2009). The advantage of using higher-order variables is that they simplify the path model by reducing the number of relationships between latent variables, thus improving the interpretability of the model (AlNuaimi et al., 2021; Hair et al., 2022). According to the relationships between first-order latent variables and their indicators and the relationships between second-order latent variables and first-order latent variables, Becker et al. (2012) divided hierarchical models into four categories, which are shown in Figure 2. Therefore, it is crucial to define the measurement model for lower-order latent variables and specify the relationship between the higher-order latent variable and the associated lower-order latent variables when implementing hierarchical latent variables (Sarstedt et al., 2019).

Figure 2: The four types of hierarchical models



Source: Author, based on Becker et al. (2012), p. 363

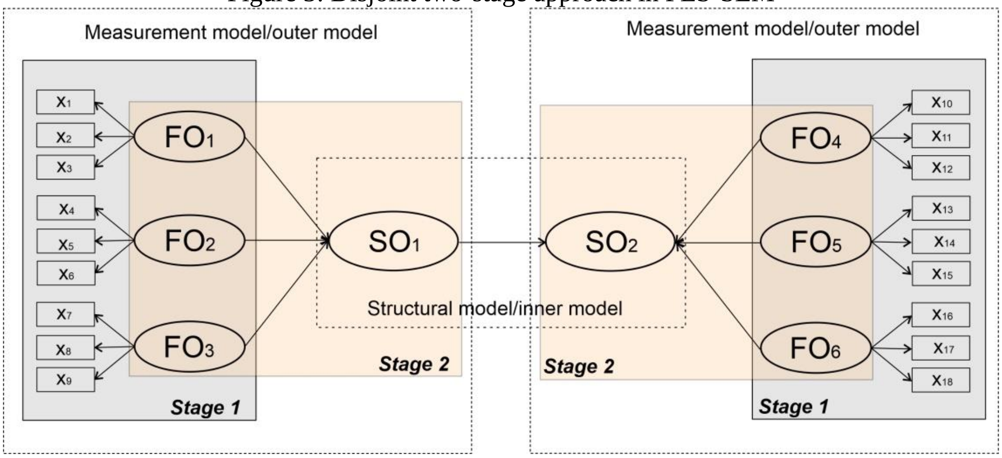
The typical evaluation and interpretation of PLS models consists of two steps: 1. the evaluation of the validity and reliability of the measurement model (outer model) and 2. the evaluation of the structural model (inner model) (Henseler et al., 2016). Latent variables and their conceptually or theoretically defined relationships form a structural model (Richter et al., 2016a), while the measurement model examines the relationships between the variables and their associated indicators (Hair et al., 2022). When it comes to the validation and estimation of higher-order variables, different approaches are used in the literature, with two methods standing out in particular: the (extended) repeated indicator approach and the two-stage approach (Becker et al., 2012). According to the studies of these authors, there is generally less bias in the estimation of the higher-order measurement model when the repeated indicators approach is used. On the other hand, the two-stage approach performs better in estimating the path parameters “from exogenous construct to the higher-order construct and from the higher-order construct to an endogenous construct” (Sarstedt et al., 2019, p. 198). Sarstedt et al. (2019) point out that both the repeated indicators approach and the two-stage approach provide quite similar results. They advise choosing the approach that best suits the aim of the study. In other words, when choosing between the two-stage approach and the repeated indicators approach for estimating and testing higher-order variables, researchers should consider their specific research objectives and context.

This paper uses the two-stage approach, in particular the disjoint two-stage approach (Becker et al., 2012; Sarstedt et al., 2019), and explains how it can be used to validate and estimate the reflective-formative (Type II) model. This choice is based on the fact that it offers the possibility to explain the model estimation procedure in a stepwise and comprehensive manner, covering both reflective and formative measurement models. Reflective measurement models “represent composite latent constructs whose indicators (measured variables) are assumed to be influenced, affected, or caused by the underlying latent variable” (Hair et al., 2020, p. 104). In reflective models, the indicators that measure a latent variable “reflect the meaning and concept of same attribute, are highly correlated and interchangeable” (Rasoolimanesh & Ali, 2018, p. 239). This interchangeability means that any indicator can be removed without changing the meaning of the latent variable (Hair et al., 2022). On the other hand, formative measurement models are defined as “linear combinations of a set of indicators that form the construct” (Hair et al., 2020, p. 105). The indicators in formative models are seen as causes of the underlying latent variable and not as its effects (Stadler et al., 2021). The definition of the latent concept could change if one or more indicators were added or removed (Hair et al., 2022). In contrast to reflective indicators, formative indicators provide precise suggestions for improving a particular target construct, which makes them useful for drawing practical conclusions (Sarstedt et al., 2022a).

3.1. Measurement model assessment

For models containing higher-order variables, the measurement model must be estimated for both the lower-order variables and the higher-order variables. The disjoint two-stage approach involves two different stages of the model estimation process (Sarstedt et al., 2019). As shown in Figure 3, stage I involves the estimation of the measurement model of the lower-order variables, while stage II involves the estimation of the measurement model of the higher-order variables.

Figure 3: Disjoint two-stage approach in PLS-SEM



Abbreviations: FO: first-order (lower-order variables); SO: second-order (higher-order variables)
Source: Author

Confirmatory composite analysis (CCA) is a new approach developed as an alternative to Confirmatory factor analysis (CFA) to assess the validity and reliability of PLS measurement models. Both analyses are used to develop, adjust and validate measurement scales, but compared to CFA, CCA offers certain advantages that are directly related to the characteristics of the chosen SEM method. First, PLS-SEM produces higher variable loadings because it accounts for total variance. This increases content coverage and variable validity because more items are retained to measure the variables than with CFA. The scores of the latent variables are then available and it is possible to apply CCA to formative measurement models (Hair et al., 2020).

CCA involves a series of steps that differ depending on whether it is applied to reflective or formative measurement models. The steps are illustrated in Figure 4, and each step is explained in detail in the following section.

Stage 1

The CCA must first be carried out for the measurement model presented in the first stage. Since all variables in the first stage are reflective, the criteria for reflective measurement models must be checked. First, the reliability of the indicator must be assessed by checking the loadings of the indicators (outer loadings). For an indicator to be considered reliable, its standardized loadings must have a minimum value of 0.708, which means that "the variable explains more than half of its indicators' variance" (Hair et al., 2011, p. 146). According to Hair et al. (2017b), 0.70 is generally considered sufficiently close to 0.708 to be considered acceptable. Hair et al. (2011) state that values above 0.4 may also be acceptable if the internal consistency of the measurement model is between the acceptable limit and the model meets the requirements for convergent validity. The reliability coefficient *(rho_A – ρA), the composite reliability (ρC) and Cronbach's alpha (α)* must be tested in the second step to ensure internal consistency. Cronbach's alpha and the composite reliability values must be less than 0.95 (the recommended upper limit is 0.9) and greater than 0.7. If the value is 0.95 or higher, this indicates that the indicators measure the same concept, which does not provide the necessary diversity that is a prerequisite for a multi-item variable and reduces the validity of the variable (Diamantopoulos et al., 2012; Hair et al., 2019a). As Cronbach's alpha often underestimates the actual reliability of the variables, Sijtsma (2009) suggests that it should rather be regarded as a lower limit. Hair et al. (2019a) claim that *ρC* is a more reliable measure than Cronbach's alpha because it takes into account the individual loadings of the indicators. However, Sarstedt et al. (2022a) are of the opinion that the composite reliability is too liberal, and that the true reliability of the variable lies within these two extreme values. They advise the use of *ρA*, a measure whose value is normally between Cronbach's alpha and the composite reliability. According to Benitez et al. (2020), a lower limit of 0.707 is recommended for *ρA*.

In the third step, it is important to assess the convergent validity based on the average variance extracted (*AVE*). Based on this metric, the average variance shared between the variable and its individual indicators is measured. According to Hair et al. (2019a) and Sarstedt et al. (2022b), the *AVE* must be at least 0.5, which means that 50% or more of the variation in the indicators is explained by the variable and that no other variable is more significant. The fourth step in evaluating a measurement model is discriminant validity, which indicates how unique a variable is compared to other variables in the model (Sarstedt et al., 2022b). If the variance shared within a variable (*AVE*) is greater than the variance that it shares with other variables in the model, then it is possible to establish discriminant validity. The Fornell-Larcker criterion, which states that the correlation value between latent variables in the reflective model must not be greater than the square root of the *AVE* in each latent variable, and cross-loadings, which state that the loading indicator in the associated variables must be higher than in the other variables in the model, are the most commonly used methods for determining discriminant validity (Hair et al., 2017b). However, various studies have come to the conclusion that these two criteria are not suitable for assessing discriminant validity in PLS-SEM (Franke & Sarstedt, 2019; Sarstedt et al., 2022a), which is why the use of heterotrait-monotrait (*HTMT*) criteria is recommended. Hair et al. (2019a) explain *HTMT* as "the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct" (p. 9). A problem with discriminant validity is considered to exist if the *HTMT* values are high, i.e., above 0.85 for conceptually dissimilar variables or 0.90 for conceptually similar variables (Henseler et al., 2015). Henseler et al. (2015) also recommend determining the confidence interval using the bootstrapping method to "test whether the *HTMT* statistic is significantly different from 1" (Hair et al., 2017b, p. 141).

Hair et al. (2020) suggest measuring the nomological validity of the variables as the final step of CCA for a reflective measurement model, bearing in mind that PLS-SEM is based on causal-predictive relationships. When measuring nomological validity, the correlation of variables in a nomological network is examined. According to Cronbach and Meehl (1955), the nomological network represents concepts or constructs, their indicators and mutual relationships. In this way, it is determined whether the latent variables are related to each other in accordance "with the theoretical direction as well as the size and significance of the correlations" (Hair et al., 2020, p. 105). This analysis must be performed using the bootstrapping method. It is recommended to use the bias-corrected bootstrapping method (without sign change) with 10,000 repeated samples (Sarsted et al., 2022a).

Stage 2

Considering that the model contains formative variables in the second stage, CCA must be performed for the formative measurement model. One of the most common problems here is multicollinearity, which results from high correlations between the variables. Therefore, it is necessary to first determine the collinearity for all formatively specified items by examining the *VIF*. If the *VIF* is 3 or less, it is assumed that multicollinearity between the formative variables is not a problem (Hair et al., 2020). This step is followed by the determination of the relative contribution of the formative indicator to the formation of the variable (Hair et al., 2021). The contribution is measured using the outer weights corresponding to the beta coefficient, with a higher weight indicating a higher contribution. The weight value must also be statistically significant at the ≤ 0.05 level (Hair et al., 2020). As PLS-SEM is a non-parametric method, statistical significance is determined using the bootstrapping method (Hair et al., 2019a). The final step in evaluating the formative measurement model is to assess the absolute contribution of the formative indicator (outer loadings). According to Hair et al. (2020), it can be explained as "the amount of information contributed by the indicator in forming the construct, if no other indicators are considered in the calculation" (p. 106). Furthermore, it is considered absolutely important for the formation of the formative latent variable if it is ≥ 0.50 and statistically significant. If the outer weight of the formative indicator is not significant and the outer loading is less than 0.50, consideration should be given to removing the formative indicator from the model (Hair et al., 2019a).

The CCA for formative measurement models usually includes a further step – the redundancy analysis or the determination of convergent validity. This analysis involves determining the path coefficient between a formatively measured variable and a reflectively measured indicator that reflects the essence of the same concept (Sarstedt et al., 2022b). In this example, it was not possible to assess the convergent validity of the formative variables because, as Ringle (2017) explains, the analysis is not applicable to second-order variables, as these are usually multidimensional, i.e., consisting of lower-order variables.

3.2. Structural model assesment

Once the measurement model has been found suitable, the structural model must be estimated. In the disjoint two-stage approach, the results of the second stage serve as the basis for the evaluation of the structural model (Sarstedt et al., 2019). Checking the multicollinearity between the variables is the first step of the evaluation procedure. High multicollinearity between the variables in the structural model can subsequently lead to a change in sign or to a reduction/increase in the weights (beta coefficients) (Hair et al., 2020). In the structural model, multicollinearity is considered less problematic if the VIF value is below 3 (Hair et al., 2021). In the second step, the path coefficient, i.e. its size and significance, is examined using a bias-corrected bootstrapping method (without changing the sign to avoid type I errors) with 10,000 resamples, as recommended by Sarstedt et al. (2022a). The path coefficient represents standardized values that can range from +1 (indicating that a strong positive relationship exists) to –1 (indicating that a strong negative relationship exists) (Sarstedt et al., 2022b). On the other hand, values closer to 0 indicate that the independent variables are weaker in predicting dependent variables, while values closer to 1 indicate that the independent variables are stronger in predicting dependent variables. In complex models with multiple independent variables, path coefficient values rarely approach +1 or –1. In addition to interpreting the direct effect between variables, this analysis also provides insights into the indirect effect that a particular variable has on the endogenous (dependent) target variable via one or more (mediating) variables (Hair et al., 2019a; Hair et al., 2020).

After this step, the effect size (f^2) and the coefficient of determination (R^2) of the endogenous variables must be used to evaluate the predictive power of the structural model. The f^2 value indicates the predictive power of each independent variable in the model, while the R^2 value indicates the percentage by which the exogenous (independent) variables explain the endogenous variable. According to Hair et al. (2011), "R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model can, as a rule of thumb, be described as substantial, moderate, or weak, respectively" (p. 147). The effect size indicates whether the independent variable is a reliable predictor of the dependent variable (Hair et al., 2017b). According to Cohen (1988), f^2 values between 0.02 and 0.15 indicate a small effect, 0.15 to 0.35 indicate a medium effect and values above 0.35 indicate that the exogenous variable has a large effect on the endogenous variable.

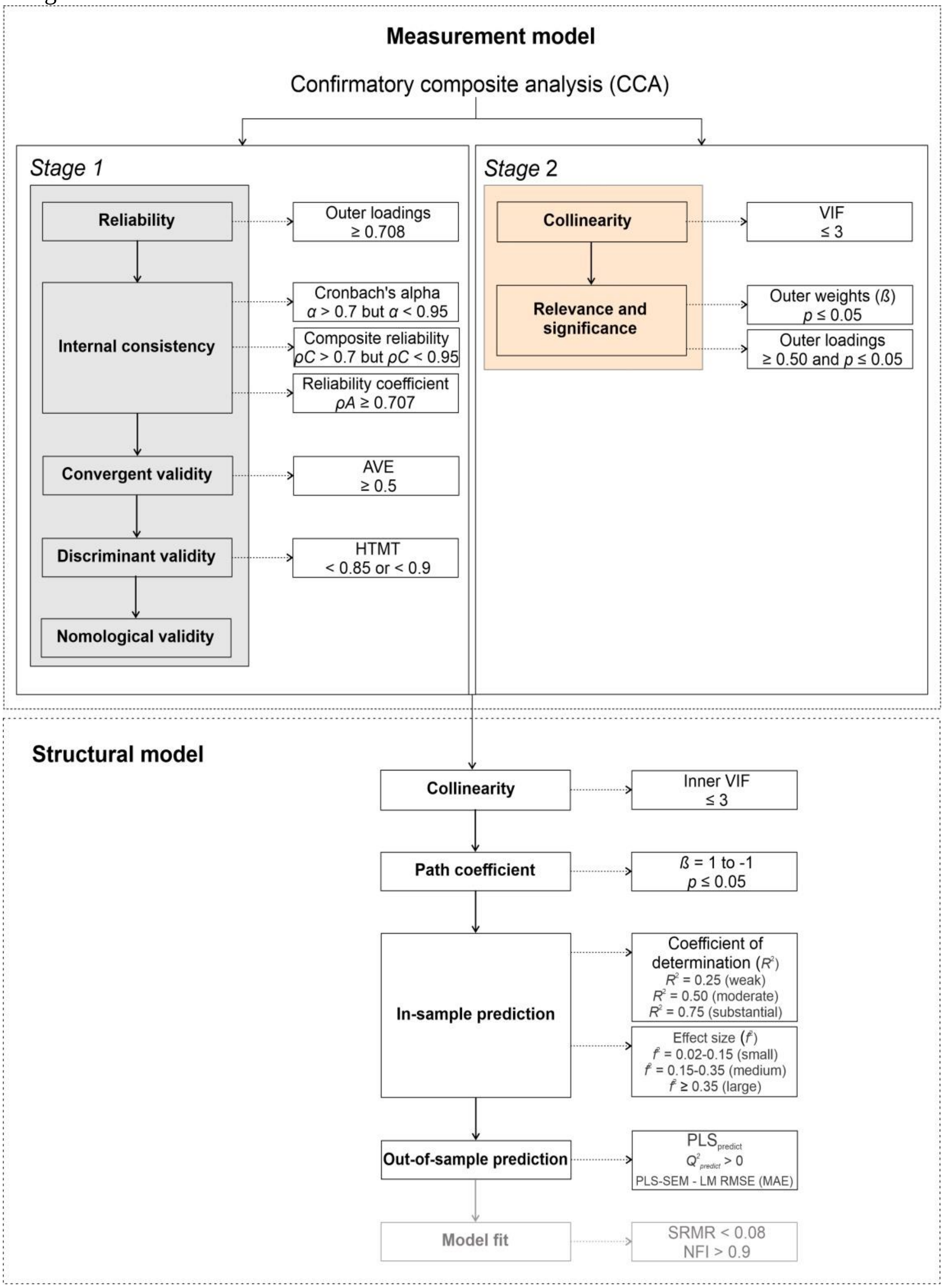
The coefficient of determination and effect size are considered in-sample prediction metrics, i.e., metrics that use the same sample to evaluate the model and predict the response, which according to Hair et al. (2020) suggests that "the model may have limited value in predicting observations not in the original sample" (p. 107). Shmueli et al. (2016) therefore proposed PLSpredict as a new approach for out-of-sample prediction, i.e., for determining "the model's accuracy when predicting the outcome value of new cases" (Shmueli et al., 2019, p. 2324). According to Richter et al. (2016a), this approach "sees the exogenous or independent latent variables' indicators as the data input layer and the endogenous or dependent latent variables' indicators as the data output layer" (p. 589). The input and output layers link a theoretically/conceptually well-founded structural model. Depending on context, time, customers, industry and the like, the input and output data change, but the structural model linking these two types of data remains unchanged. Therefore, this analysis attempts to predict the output layer based on the structural model and the input layer data.

In this approach, a part of the total data set, the so-called analysis sample or training sample, is used to predict the data performance of the part of the total data set that was not included in the training sample (Sarstedt et al., 2022a). The model is thus evaluated on the basis of the training sample and the predictive ability is checked using the holdout sample (Hair et al., 2021). Shmueli et al. (2019) explain that "small divergence between the actual and predicted out-of-sample case values suggests that the model has a high predictive power", while large differences indicate low predictive power (p. 2325). The authors also point out that the prerequisite for conducting this analysis is that both the reflective and formative models meet the necessary quality criteria analyzed in the previous steps (reliability, convergent and discriminant validity for reflective, i.e., collinearity, significance and relevance of indicator weights for formative measurement models). Before performing the analysis, it is necessary to select the key endogenous variable for which the prediction needs to be made. Next, it is necessary to define the parameters for the *k*-fold cross-validation. In this procedure, the total sample is divided into a certain number of equal subgroups (*k*), with one subgroup becoming the holdout sample, while the remaining subgroups are used to predict this sample. The process is repeated until each group passes through the prediction process as a holdout sample. The total sample should be large enough to allow the formation of a holdout sample with at least 30 observations (Hair et al., 2020). The following step is to determine the number of repetitions of the algorithm. It is advisable to choose a larger number of repetitions, as in this case the prediction is made by averaging the values obtained in each repetition, thus providing more stable estimates of the predictive ability of the PLS model (Hair et al., 2019a).

Shmueli et al. (2019) point out that the first step in interpreting the predictive ability of a model is to check the $Q^2_{predict}$ statistic. If the value of this parameter is greater than 0, the next step is to interpret the predictive statistics. Several predictive statistics are used for this, of which the authors recommend using the mean absolute error (MAE) or the root mean squared error (RMSE). The MAE "measures the average magnitude of the errors in a set of predictions without considering their direction", while the RMSE can be explained as "the square root of the average of the squared differences between the predictions and the actual observations". The RMSE is recommended as the standard prediction statistic, except in a situation where the distribution of the prediction error is highly asymmetric. Smaller values of these statistics indicate higher predictive power. By comparing the values of these statistics obtained for the PLS-SEM model, which considers the entire structure of the model, i.e., both the measurement and structural models, with the "naïve value obtained by a linear regression model (LM) that generates predictions for the measured variables (indicators)" without considering the defined structure of the model, information about the predictive ability of the proposed model is obtained (Hair et al., 2020, p. 107). Comparing the RMSE or MAE statistics of PLS-SEM and LM models can lead to one of four results. First, if PLS-SEM does not have smaller prediction errors in terms of RMSE (or MAE) statistics for any of the indicators compared to LM, it means that the model has no predictive power. Second, if it has smaller prediction errors for a minority of the indicators, this means that the model has low power of prediction. Third, if PLS-SEM has smaller prediction errors than LM for most or the same number of indicators, it means that the model has moderate predictive power. Fourth, if all indicators have smaller prediction errors, the model can be said to have strong prediction power (Shmueli et al., 2019). Various authors (e.g. Hair et al., 2019a; Rasoolimanesh & Ali, 2018; Shmueli et al., 2019) point out that PLSpredict should be routinely used in PLS-SEM studies. Shmueli et al. (2019) add that this analysis is an extremely important part of the validation process of the newly developed scale.

To assess model fit, the authors use criteria such as the standardized root mean square residual (SRMR) and the normed fit index (NFI) (Sarstedt et al., 2022b). Henseler et al. (2016) recommend that the SRMR value should be below 0.08, as this value "typically indicate that the degree of misfit is not substantial" (Henseler, 2017, p. 185). Byrne (2008) considers an NFI value of more than 0.90 to be acceptable. While some authors recommend the use of criteria to assess model fit (e.g., Schuberth et al., 2018; Schuberth et al., 2023), Hair et al. (2019b) criticize their use. These authors point out that Henseler et al. (2016) and Henseler (2017) do not support their claim regarding the SRMR threshold and that many uncertainties remain to be resolved (e.g. whether values should be reported for the estimated or the saturated model), so they advise the authors not to reject or validate the model based on these metrics. Sarstedt et al. (2022a) support the view of these authors and state that the models in PLS-SEM often do not fulfill the necessary requirements for reliable misfit detection by checking the SRMR values. As an example, they give a model with only three variables and state that in the observed example, 500 observations are the minimum number required to reliably detect a model misfit.

Figure 4: Procedure for the estimation of hierarchical latent variable models in PLS-SEM



Source: Author

4. Discussion and conclusion

Examination of the articles referenced in the Web of Science database revealed that PLS-SEM as a statistical technique is not particularly well represented in papers from the field of tourism. Given the proven usefulness of PLS-SEM both for confirming, developing and extending theories and for developing and validating scales (Hair et al., 2017b; Hair et al., 2020), the contribution it can make to tourism studies is evident. With this in mind, this paper was written with the aim of serving as an incentive for future tourism studies to take advantage of PLS-SEM. First, the literature review conducted in this paper identified the areas where PLS-SEM has been applied so far to prove that it is suitable for different contexts and relationships in the field of tourism. Second, the weakest application of PLS-SEM in tourism was identified to provide a concrete and currently needed contribution for researchers. The analysis of the papers indexed in the Web of Science database has shown that there is a gap in the application of this technique in tourism studies for modeling hierarchical latent variables, which is also one of the most valuable assets of this statistical technique. Based on this discovery, further work aimed to present concrete steps for the assessment and interpretation of the model's hierarchical latent variables. Researchers are provided with a concrete guide, based on representative references, which they can use for further improvements in the application of this method that go beyond the scope of this paper.

Tourism researchers thus have a great tool at their disposal both to increase the rigor of empirical investigation and to make significant contributions to theoretical development. This study challenges researchers to address the complex dynamics of the tourism industry and to increase the rigor of empirical investigation through the use of PLS-SEM with hierarchical constructs. Subsequent research can use the insights gained here to examine relationships in specific tourism-related situations or phenomena. This in turn promises new transformative discoveries and paradigm shifts in our understanding of tourism dynamics, as well as significantly enriching and enhancing the application of PLS-SEM in tourism research.

Acknowledgement

This paper represents an excerpt from the author’s PhD thesis.

Conflict of interest

The author declares no conflict of interest.

References

1. Alhemimah, A. (2022). Understanding tourists’ attitude toward online travel health information during and post-COVID-19: A health belief model application. *Tourism and Hospitality Research*, 146735842211193. https://doi.org/10.1177/14673584221119379
2. AlNuaimi, B. K., Khan, M., & Ajmal, M. M. (2021). The role of big data analytics capabilities in greening e-procurement: A higher order PLS-SEM analysis. *Technological Forecasting and Social Change*, *169*, 120808. https://doi.org/10.1016/j.techfore.2021.120808
3. Ansari, Z. A., Bashir, M., & Pradhan, S. (2022). Impact of corona virus outbreak on travellers’ behaviour: Scale development and validation. *International Journal of Tourism Cities*, *8*(3), 658–674. https://doi.org/10.1108/ijtc-06-2021-0123

4. Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, *21*(6), 1086–1120. https://doi.org/10.1016/j.leaqua.2010.10.010
5. Assaker, G. (2014). Examining a hierarchical model of Australia's destination image. *Journal of Vacation Marketing*, *20*(3), 195–210. https://doi.org/10.1177/1356766714527104
6. Assaker, G. (2020). The effects of hotel green business practices on consumers' loyalty intentions: An expanded multidimensional service model in the upscale segment. *International Journal of Contemporary Hospitality Management*, *32*(12), 3787–3807. https://doi.org/10.1108/ijchm-05-2020-0461
7. Assaker, G., & Hallak, R. (2016). Detecting latent classes in tourism data through response-based unit segmentation (REBUS) in PLS-SEM. *Tourism Analysis*, *21*(6), 661–668. https://doi.org/10.3727/108354216x14713487283282
8. Assaker, G., Huang, S., & Hallak, R. (2012). Applications of partial least squares structural equation modeling in tourism research: A methodological review. *Tourism Analysis*, *17*(5), 679–686. https://doi.org/10.3727/108354212x13485873914128
9. Aybek, G., & Özdemır, B. (2022). Effects of ethnic restaurant experience on prospective tourist intentions: Mediating role of food image. *Tourism Management Perspectives*, *44*, 101034. https://doi.org/10.1016/j.tmp.2022.101034
10. Badu-Baiden, F., Kim, S., Ahn, S. W., Wong, A. K. F., & Agrusa, J. (2022). Analysis of vegan restaurant diners' hierarchical experience structure by examining a vegan food attribute–benefit–value–intention linkage. *International Journal of Hospitality & Tourism Administration*, 1–28. https://doi.org/10.1080/15256480.2022.2129544
11. Becker, J. M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: Guidelines for using reflective-formative type models. *Long Range Planning*, *45*(5–6), 359–394. https://doi.org/10.1016/j.lrp.2012.10.001
12. Becker, J., Cheah, J., Gholamzade, R., Ringle, C. M., & Sarstedt, M. (2022). PLS-SEM's most wanted guidance. *International Journal of Contemporary Hospitality Management*, *35*(1), 321–346. https://doi.org/10.1108/ijchm-04-2022-0474
13. Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. *Information & Management*, *57*(2), 103168. https://doi.org/10.1016/j.im.2019.05.003
14. Byrne, B. M. (2008). *Structural equation modeling with EQS: Basic concepts, applications, and programming*. Psychology Press.
15. Chopra, I. P., Lim, W. M., & Jain, T. (2022). Electronic word of mouth on social networking sites: What inspires travelers to engage in opinion seeking, opinion passing, and opinion giving? *Tourism Recreation Research*, 1–14. https://doi.org/10.1080/02508281.2022.2088007
16. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates.
17. Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, *52*(4), 281–302. https://doi.org/10.1037/h0040957
18. Dayour, F. (2023). Modeling perceived information technology (IT) risk as a third-order latent construct and its effect on satisfaction. *Journal of Quality Assurance in Hospitality & Tourism*, 1–23. https://doi.org/10.1080/1528008x.2022.2163045
19. Deng, W., Lu, C., Lin, Y., & Wan, C. (2020). A study on the effect of tourists value co-creation on the perceived value of souvenirs: Mediating role of psychological ownership and authenticity. *Asia Pacific Journal of Tourism Research*, *26*(2), 200–214. https://doi.org/10.1080/10941665.2020.1763411

20. Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, *40*(3), 434–449. https://doi.org/10.1007/s11747-011-0300-3
21. Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. *Internet Research*, *29*(3), 430–447. https://doi.org/10.1108/intr-12-2017-0515
22. Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101–110. https://doi.org/10.1016/j.jbusres.2019.11.069
23. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications.
24. Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017a). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, *45*(5), 616–632. https://doi.org/10.1007/s11747-017-0517-x
25. Hair, J. F., Hult, T. G. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook (Classroom companion: Business)*. Springer.
26. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, *19*(2), 139–152. https://doi.org/10.2753/mtp1069-6679190202
27. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019a). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/ebr-11-2018-0203
28. Hair, J. F., Sarstedt, M., & Ringle, C. M. (2019b). Rethinking some of the rethinking of partial least squares. *European Journal of Marketing*, *53*(4), 566–584. https://doi.org/10.1108/ejm-10-2018-0665
29. Hair, J., Hult, T. G. M., Ringle, C. M., & Sarstedt, M. (2017b). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications.
30. Hair, J., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017c). *Advanced issues in partial least squares structural equation modeling*. SAGE Publications.
31. Hallak, R., Assaker, G., & El-Haddad, R. (2017). Re-examining the relationships among perceived quality, value, satisfaction, and destination loyalty. *Journal of Vacation Marketing*, *24*(2), 118–135. https://doi.org/10.1177/1356766717690572
32. Hateftabar, F. (2022). Analyzing the adoption of online tourism purchases: Effects of perceived tourism value and personal innovativeness. *Current Issues in Tourism*, *26*(11), 1861–1877. https://doi.org/10.1080/13683500.2022.2071682
33. Henseler, J. (2017). Bridging design and behavioral research with variance-based structural equation modeling. *Journal of Advertising*, *46*(1), 178–192. https://doi.org/10.1080/00913367.2017.1281780
34. Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, *116*(1), 2–20. https://doi.org/10.1108/imds-09-2015-0382
35. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8
36. Howat, G., & Assaker, G. (2013). The hierarchical effects of perceived quality on perceived value, satisfaction, and loyalty: Empirical results from public, outdoor aquatic

centres in Australia. *Sport Management Review*, *16*(3), 268–284. https://doi.org/10.1016/j.smr.2012.10.001

37. Lee, C., Hallak, R., & Sardeshmukh, S. (2016). Innovation, entrepreneurship, and restaurant performance: A higher-order structural model. *Tourism Management*, *53*, 215–228. https://doi.org/10.1016/j.tourman.2015.09.017
38. Leung, X. Y., & Jiang, L. (2018). How do destination Facebook pages work? An extended TPB model of fans' visit intention. *Journal of Hospitality and Tourism Technology*, *9*(3), 397–416. https://doi.org/10.1108/jhtt-09-2017-0088
39. Luo, L., Qian, T. Y., Rich, G., & Zhang, J. J. (2021). Impact of market demand on recurring hallmark sporting event spectators: an empirical study of the Shanghai Masters. *International Journal of Sports Marketing & Sponsorship*, *23*(2), 311–325. https://doi.org/10.1108/ijsms-12-2020-0218
40. Mateos-Aparicio, G. (2011). Partial least squares (PLS) methods: Origins, evolution, and application to social sciences. *Communications in Statistics – Theory and Methods*, *40*(13), 2305–2317. https://doi.org/10.1080/03610921003778225
41. Medina-Garrido, J. A., Biedma-Ferrer, J. M., & Bogren, M. (2023). Organizational support for work-family life balance as an antecedent to the well-being of tourism employees in Spain. *Journal of Hospitality and Tourism Management*, *57*, 117–129. https://doi.org/10.1016/j.jhtm.2023.08.018
42. Molinillo, S., Liébana-Cabanillas, F., Anaya-Sánchez, R., & Buhalis, D. (2018). DMO online platforms: Image and intention to visit. *Tourism Management*, *65*, 116–130. https://doi.org/10.1016/j.tourman.2017.09.021
43. Muskat, B., Hörtnagl, T., Prayag, G., & Wagner, S. (2019). Perceived quality, authenticity, and price in tourists' dining experiences: Testing competing models of satisfaction and behavioral intentions. *Journal of Vacation Marketing*, *25*(4), 480–498. https://doi.org/10.1177/1356766718822675
44. Nathan, R. J., Victor, V., Tan, M., & Fekete-Farkas, M. (2020). Tourists' use of Airbnb app for visiting a historical city. *Information Technology & Tourism*, *22*(2), 217–242. https://doi.org/10.1007/s40558-020-00176-0
45. Nguyen, T. H. H. (2020). A reflective–formative hierarchical component model of perceived authenticity. *Journal of Hospitality & Tourism Research*, *44*(8), 1211–1234. https://doi.org/10.1177/1096348020944460
46. Perez-Vega, R., Taheri, B., Farrington, T., & O'Gorman, K. D. (2018). On being attractive, social and visually appealing in social media: The effects of anthropomorphic tourism brands on Facebook fan pages. *Tourism Management*, *66*, 339–347. https://doi.org/10.1016/j.tourman.2017.11.013
47. Petter, S. (2018). "Haters gonna hate": PLS and information systems research. *ACM SIGMIS Database: The Database for Advances in Information Systems*, *49*(2), 10–13. https://doi.org/10.1145/3229335.3229337
48. Pillai, R., & Sivathanu, B. (2020). Adoption of AI-based chatbots for hospitality and tourism. *International Journal of Contemporary Hospitality Management*, *32*(10), 3199–3226. https://doi.org/10.1108/ijchm-04-2020-0259
49. Priporas, C., Stylos, N., Rahimi, R., & Vedanthachari, L. N. (2017). Unraveling the diverse nature of service quality in a sharing economy. *International Journal of Contemporary Hospitality Management*, *29*(9), 2279–2301. https://doi.org/10.1108/ijchm-08-2016-0420
50. Rasoolimanesh, S. M., & Ali, F. (2018). Guest editorial: Partial least squares – structural equation modeling in hospitality and tourism. *Journal of Hospitality and Tourism Technology*, *9*(3), 238–248. https://doi.org/10.1108/jhtt-10-2018-142
51. Richter, N. F., Cepeda, G., Roldán, J. L., & Ringle, C. M. (2016a). European management research using partial least squares structural equation modeling (PLS-

SEM). *European Management Journal*, *34*(6), 589–597. https://doi.org/10.1016/j.emj.2016.08.001
52. Richter, N. F., Sinkovics, R. R., Ringle, C. M., & Schlägel, C. (2016b). A critical look at the use of SEM in international business research. *International Marketing Review*, *33*(3), 376–404. https://doi.org/10.1108/imr-04-2014-0148
53. Rigdon, E. E., Sarstedt, M., & Ringle, C. M. (2017). On comparing results from CB-SEM and PLS-SEM: Five perspectives and five recommendations. *Marketing ZFP*, *39*(3), 4–16. https://doi.org/10.15358/0344-1369-2017-3-4
54. Ringle, C. M. (2017, March 1). *Redundancy analysis for second order formative construct* [Online forum post]. https://forum.smartpls.com/viewtopic.php?t=15579
55. Ritchie, B. W., Sie, L., Gößling, S., & Dwyer, L. (2019). Effects of climate change policies on aviation carbon offsetting: A three-year panel study. *Journal of Sustainable Tourism*, *28*(2), 337–360. https://doi.org/10.1080/09669582.2019.1624762
56. Sarstedt, M., Hair, J. F., Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, *27*(3), 197–211. https://doi.org/10.1016/j.ausmj.2019.05.003
57. Sarstedt, M., Hair, J. F., Pick, M., Liengaard, B. D., Radomir, L., & Ringle, C. M. (2022a). Progress in partial least squares structural equation modeling use in marketing research in the last decade. *Psychology & Marketing*, *39*(5), 1035–1064. https://doi.org/10.1002/mar.21640
58. Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022b). Partial least squares structural equation modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of market research* (pp. 587–632). Springer.
59. Schuberth, F., Henseler, J., & Dijkstra, T. K. (2018). Confirmatory composite analysis. *Frontiers in Psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.02541
60. Schuberth, F., Rademaker, M. E., & Henseler, J. (2023). Assessing the overall fit of composite models estimated by partial least squares path modeling. *European Journal of Marketing*, *57*(6), 1678–1702. https://doi.org/10.1108/ejm-08-2020-0586
61. Shmueli, G., Ray, S., Velasquez Estrada, J. M., & Chatla, S. B. (2016). The elephant in the room: Predictive performance of PLS models. *Journal of Business Research*, *69*(10), 4552–4564. https://doi.org/10.1016/j.jbusres.2016.03.049
62. Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J. H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, *53*(11), 2322–2347. https://doi.org/10.1108/ejm-02-2019-0189
63. Sie, L., Pegg, S., & Phelan, K. V. (2021). Senior tourists' self-determined motivations, tour preferences, memorable experiences and subjective well-being: An integrative hierarchical model. *Journal of Hospitality and Tourism Management*, *47*, 237–251. https://doi.org/10.1016/j.jhtm.2021.03.006
64. Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika*, *74*(1), 107–120. https://doi.org/10.1007/s11336-008-9101-0
65. Stadler, M., Sailer, M., & Fischer, F. (2021). Knowledge as a formative construct: A good alpha is not always better. *New Ideas in Psychology*, *60*, 100832. https://doi.org/10.1016/j.newideapsych.2020.100832
66. Sun, H. J., & Yoon, H. H. (2022). Linking organizational virtuousness, engagement, and organizational citizenship behavior: The moderating role of individual and organizational factors. *Journal of Hospitality & Tourism Research*, *46*(5), 879–904. https://doi.org/10.1177/1096348020963701
67. Tan, K., Sim, A. K., Chai, D., & Beck, L. (2020). Participant well-being and local festivals: The case of the Miri country music festival, Malaysia. *International Journal of*

Event and Festival Management, *11*(4), 433–451. https://doi.org/10.1108/ijefm-02-2020-0007

68. Tasci, A. D., & Godovykh, M. (2021). An empirical modeling of transformation process through trip experiences. *Tourism Management*, *86*, 104332. https://doi.org/10.1016/j.tourman.2021.104332
69. Wetzels, M., Odekerken-Schröder, G., & van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, *33*(1), 177. https://doi.org/10.2307/20650284
70. Wold, H. O. A. (1982). Soft modeling: The basic design and some extensions. In K. G. Jöreskog & H. O. A. Wold (Eds.), *Systems under indirect observations* (pp. 1–54). North-Holland.

Review Article

UDC: 338.48-6:005
338.484:502.131.1
DOI: 10.5937/menhottur2400010B

Received: 31 December 2023
Revised: 12 March 2024
Accepted: 3 June 2024
Published online: 7 June 2024

The impact of sustainability, digital technologies, and employee knowledge on the competitiveness of personalized tourist offer

Cariša Bešić[1], Srđan Bogetić[2*], Mihalj Bakator[3], Ivana Petrevska[4]

[1] University of Kragujevac, Faculty of Technical Sciences in Čačak, Čačak, Serbia
[2] Belgrade Business and Arts Academy of Applied Studies, Belgrade, Serbia
[3] University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia
[4] Preschool Teacher Training and Business Informatics College of Applied Studies – Sirmium, Sremska Mitrovica, Serbia

Abstract

Purpose – The travel and hotel industry is undergoing significant shifts influenced by the digital revolution, evolving sustainable development practices, and changing tourist demographics. The primary aim of this study is to develop a theoretical framework that explores the interplay between digital technologies, sustainable development, and the customization of travel offers to meet the varied needs of different tourist generations (X, Y, Z). **Methodology** – The methodological approach of this paper involves a comprehensive literature review and theoretical analysis focusing on the impacts of digital technology adoption and sustainable development practices within the travel and hotel industry. **Findings** – The theoretical analysis revealed a significant potential for digital technologies and sustainability initiatives to improve the competitiveness of travel and hotel industry organizations. The findings suggest that a strategic emphasis on digital innovation and environmental responsibility, coupled with a focus on workforce development, can lead to more appealing and customized travel offers for tourists of various age groups. **Implications** – The travel and hotel industry must embrace digital technologies and sustainable development to remain competitive. The proposed theoretical framework lays the foundation for future research aimed at empirically testing these concepts and further understanding of customized travel offers in a digital and sustainable era.

Keywords: sustainable development, digital technologies, knowledge, tourism organizations, hotel industry organizations
JEL classification: D83, L83, Q01

Uticaj održivosti, digitalnih tehnologija i znanja zaposlenih na konkurentnost personalizovane turističke ponude

Sažetak

Svrha – Industrija putovanja i hotelijerstva prolazi kroz značajne promene pod uticajem digitalne revolucije, razvoja prakse održivog razvoja i promene turističke demografije. Primarni cilj ovog rada je da se razvije teorijski okvir koji istražuje međusobnu interakciju

* Corresponding author: sbogetic@yahoo.com

između digitalnih tehnologija, održivog razvoja i prilagođavanja ponude putovanja kako bi se zadovoljile različite potrebe različitih turističkih generacija (X, Y, Z). **Metodologija** – Metodološki pristup ovog rada obuhvata sveobuhvatan pregled literature i teorijsku analizu sa fokusom na uticaje usvajanja digitalne tehnologije i prakse održivog razvoja u industriji putovanja i hotelijerstva. **Rezultati** – Teorijska analiza je otkrila značajan potencijal za digitalne tehnologije i inicijative za održivost za unapređenje konkurentnosti organizacija putovanja i hotelijerstva. Rezultati indikuju da strateški fokus na digitalnim inovacijama i ekološkoj odgovornosti, zajedno sa fokusom na razvoj radne snage, može dovesti do privlačnije i prilagođenije ponude putovanja za turiste različitih starosnih grupa. **Implikacije** – Industrija putovanja i hotelijerstva mora da prihvati digitalne tehnologije i održivi razvoj kako bi ostala konkurentna. Predloženi teorijski okvir postavlja osnovu za buduća istraživanja koja imaju za cilj empirijsko testiranje ovih koncepata i dalje razumevanje prilagođenih ponuda putovanja u digitalnoj i održivoj eri.

Ključne reči: održivi razvoj, digitalne tehnologije, znanje, turističke organizacije, organizacije hotelijerstva
JEL klasifikacija: D83, L83, Q01

1. Introduction

Business is constantly changing due to technological advances and global market integration. Long-term changes necessitate business organizations to develop behavioral models to adapt and to expect these changes (Đorđević et al., 2016, p. 120). The global epidemic, the global crisis of the economy, challenging political changes, and natural disasters have hurt the global tourism economy in the early 21st century. The global economic crisis had the greatest negative impact on tourism development until 2020 (Peričić et al., 2021).

It will be difficult to rethink a major economic sector. However, it is well underway. The crisis has sparked creativity, while the pandemic has accelerated work transformation, creating challenges and huge opportunities to help more people benefit from tourism's restart. Progress is also being made in making tourism a key driver of the green, blue, and digital economy, ensuring growth without harming people or the planet (UNWTO, 2022a). The tourism industry faced serious challenges with unprecedented job losses. Tourism was one of the first sectors to be significantly affected by the pandemic. Measures across counties to prevent the spread of the virus nearly halted tourism worldwide (OECD, 2020a, p. 3). Sustainability is a top priority across all industries in the new global economy. As a global industry, tourism is important to promoting sustainability and holding unsustainable practices accountable (Sulyok et al., 2022).

The digital revolution is the most significant business trend of our time, challenging traditional work and communication methods. ICT is widely used in the hospitality industry, with solutions for sales, marketing, communication, forecasting, planning, procurement, and inventory control (Milovanović et al., 2022). The advent of digital platforms enabling travelers to organize, reserve, and exchange tips has introduced fresh obstacles for those in charge of destination management and promotion. Today, travelers who possess data, along with the platforms themselves, wield significant influence. At any stage–pre-trip, during, or post-trip–travelers have the capability to broadcast their experiences to an international community, thereby impacting the decisions of prospective travelers. Similarly, the entities that manage these platforms gain improved authority through this modern means of communication (World Bank Group, 2018a, p. 7).

This paper presents a theoretical model of how sustainable development, digital technologies, and employee knowledge affect personalized tourism offerings. The theoretical section will examine the model's elements influencing personalized tourism offers: tourism and digital technologies, sustainable tourism development, new tourism employee knowledge, and hotel and tourism user experience personalization.

These are the research questions:

- How aware are tourism and hotel organizations of sustainable development?
- Do tourism and hotel organizations understand the key impact of digital technology implementation?
- In the tourism and hotel industry, how quickly do organizations adopt new knowledge and encourage employees to use it?
- How much do tourism and hotel organizations value personalized customer experience?

2. Literature review background

The pandemic has sharply reduced tourism, revealing flaws in tourism development models and the broader economy. Key recovery focuses include rebuilding consumer trust, reinstating business operations, ensuring safe travel, and securing financial support. Addressing workforce shortages and sector investment is crucial (OECD, 2022, p. 37). The sector must adapt to new consumer behaviors, such as demands for health measures, booking flexibility, and preferences for domestic and nature-based tourism (Dias et al., 2023). Innovation and digital transformation are vital. Tourism businesses should adopt digital tools to enhance customer experiences, improve efficiency, and provide timely information. This includes AI for personalized services, VR for pre-travel experiences, and data analytics for demand forecasting (Ratna et al., 2024). Public-private collaboration is essential for a resilient, sustainable tourism industry. Governments should provide strategic guidance and infrastructure investment, while private enterprises must innovate and adapt to be more flexible and customer-centric (Musleh et al., 2023). The UNWTO emphasizes that short-term recovery should not compromise long-term goals for a fairer sector, promoting ethical tourism during travel bans (UNWTO, 2022b, p. 19). The tourism industry, heavily impacted by COVID-19, affects economies, livelihoods, public services, and global opportunities. Revitalizing tourism is a chance to improve communities and businesses through innovation, digitalization, sustainability, and collaboration (UN, 2020, p. 2). The pandemic highlighted tourism's role in generating wealth through consumption, exports, and jobs (UNWTO, 2021, p. 21).

The sector suffered $4.5 trillion in GDP losses and 62 million job losses in 2020. Governments and businesses took precautions, but consumer travel habits have changed, with concerns about costs and hygiene protocols (WTTC et al., 2021, p. 2). National lockdowns and travel limitations have positioned tourism as a highly affected industry (UNWTO, 2020, p. 4). Leveraging technology and digitalization can enhance tourism experiences, from contactless payments and digital health passports to virtual tours and personalized itineraries. Improved public transportation, like electric buses and bike-sharing, can offer green travel alternatives (Shafiee et al., 2024). Workforce development must integrate digital skills training, familiarizing staff with digital tools and platforms and offering ongoing professional development. Public-private partnerships can pool resources and expertise for innovative solutions and large-scale projects, creating digital platforms and supporting sustainable practices (Rajkamal et al., 2023).

Big data and analytics can provide insights into tourist behaviors for targeted marketing and personalized services. AR can enhance visitor experiences with interactive guides, and VR can offer virtual tours. AI can improve customer service with chatbots and virtual assistants, while machine learning predicts travel trends for optimized pricing. Blockchain can enhance transaction security and transparency (Samaddar et al., 2024). Sustainability initiatives should include energy-efficient systems, waste reduction, water conservation, and supporting local economies (UNWTO, 2021, p. 21).

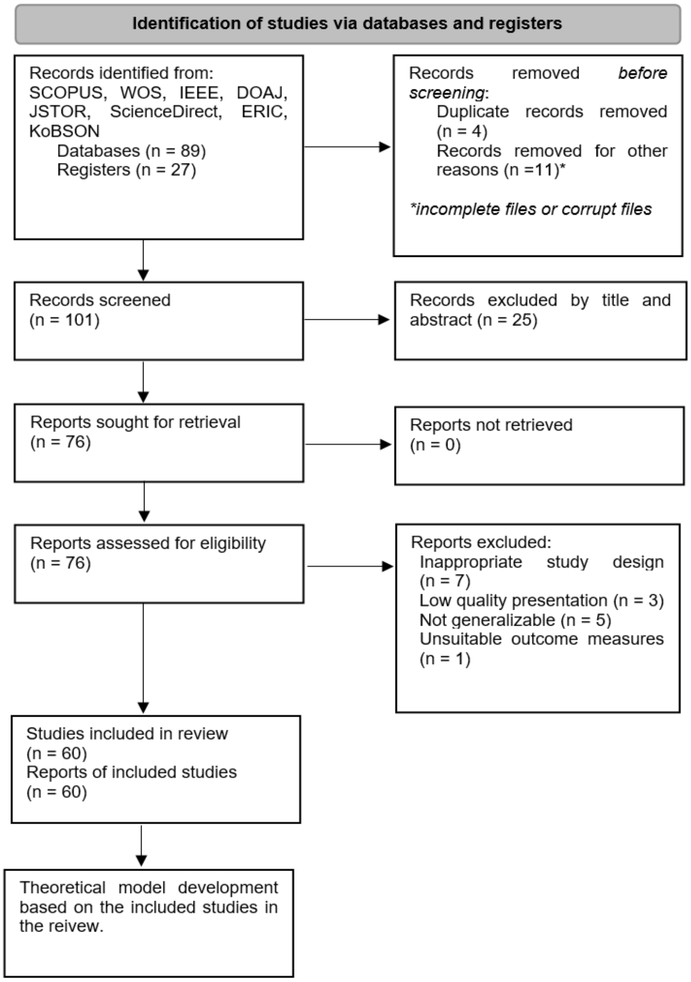
In 2023, high inflation and oil prices raised transportation and accommodation costs, hindering international tourism recovery (UNWTO, 2023, p. 4). Tourists are expected to seek value and travel closer to home due to rising prices and economic uncertainty. By 2022, many countries had long-term tourism strategies aiming for milestones in 2027 or 2030. For example, the US National Travel and Tourism Strategy 2022 emphasizes diversity, economic growth, job creation, conservation, and sustainability. Other nations like Australia, France, and Greece also introduced long-term tourism frameworks focusing on adaptability. The UK's post-pandemic goal was to return to 2019 tourism levels and improve regional distribution, business events, resilience, accessibility, and sustainability. Hungary updated its Tourism 2.0 Strategy in 2021 to respond to COVID-19, setting the stage for the National Tourism Development Strategy 2030. This global shift highlights a strategic pivot towards recovery, sustainability, and resilience in the tourism sector (OECD, 2022, p. 34). To address COVID-19's impact, the UNWTO identified priorities: ensure liquidity and jobs, restore safety and security confidence, public-private cooperation for quick reopening, responsible open borders, synchronized protocols, improved jobs with new tech, and focus on innovation and sustainability (UNWTO, 2020, p. 3). Economic, health, and geopolitical shocks may hinder tourism recovery in 2023. High inflation, interest rates, oil and food prices, and fears of a global recession are significant risks. The tourism and aviation sectors faced significant workforce reductions, disrupting air traffic (UNWTO, 2023, p. 2).

The current crisis underscores tourism's vulnerability without ongoing government assistance, presenting a pivotal opportunity for reevaluation. Governments should embrace digital advancements, transition to a low-carbon economy, and foster structural changes for a more robust, sustainable, and resilient tourism sector (OECD, 2020b, p. 5). The OECD's "Tourism Trends and Policies 2022" advocates for a shift towards a competitive, sustainable, digitally advanced, inclusive, and resilient tourism model. This approach emphasizes digital transformation, diversification, environmental sustainability, and data-driven policymaking (OECD, 2022, pp. 45–49). As society becomes more interconnected, customers' travel habits are changing, with a focus on family time, flexible travel, and safety. Last-minute bookings due to changing restrictions challenge demand planning. Building a workforce with digital and interpersonal skills and adopting technology can improve customer experiences and address staff shortages (Masiga, 2022). New trends identified by McKinsey & Company include personalized guest experiences, sustainability, and digital technologies and AI in business (McKinsey & Company, 2023, pp. 1, 5, 6). Hotels must focus on data to create unique guest experiences, sustainability, and improve employee working conditions. Initiatives may include alternative energy sources and encouraging sustainable travel through eco-certifications (Green Globe, Green Key). Digital technologies enable hotels to personalize services and improve customer experience, with generative AI enhancing booking and cancellation processes (Shin et al., 2023, p. 279). Adopting the latest innovations, like blockchain for transactions and AI for customer service, is crucial for the tourism sector's future (Rane et al., 2023). Sustainability remains a cornerstone, with renewable energy systems, smart waste management, and water-saving devices minimizing the environmental footprint. Data analytics plays a critical role in transforming the industry, enabling deeper insights into customer behaviors, optimizing pricing, and improving resource allocation (Kumar & Vohra, 2023).

3. Methodology

The review process included a qualitative analysis of literature in the domain of tourism and digital technologies, sustainable development in tourism, new knowledge of employees in tourism, customer experience personalization in travel, and hospitality. Credible journals were addressed through databases such as JSTOR, WOS, DOAJ, Xplore and KoBSON. The review process provided qualitative results. These results were used to develop a theoretical model for improving the Serbian tourism sector. The qualitative results are from credible journals. The review process protocol is presented on Figure 1.

Figure 1: Review process protocol



Source: Developed by authors

The review process began with identifying multiple eligible sources to ensure a comprehensive foundation. A detailed keyword search was conducted using terms like sustainable tourism, tourism development, ICT in tourism, digital tourism, and travel personalization. Relevant literature was saved for in-depth analysis, ensuring the research was based on a robust selection of scholarly works. An eligibility analysis determined which articles to include, considering source, date, study type, methodology, location, and publisher. This rigorous evaluation ensured only pertinent and reliable studies were considered. Next, the relevancy and credibility of the studies were evaluated, excluding those lacking necessary criteria to maintain review integrity. Eligible studies were documented for further analysis. A qualitative analysis followed, where included papers were thoroughly examined, and results were recorded and organized into coherent paragraphs. The review process culminated in developing a theoretical model, encapsulating the relationships and dynamics identified in the literature, providing a framework to advance understanding in the field.

4. Results of the qualitative literature analysis

4.1. Tourism and digital technologies

The results are in the form of concise paragraphs that highlight the main finding or significant information from the study or in some cases multiple studies which are complementary when it comes to the findings. Each finding is labeled (TOU-01, TOU-02 etc.) so they can be presented on the theoretical model which will be developed. Qualitative results obtained in the domain of tourism and digital technologies are presented below:

- The evolution of technology has consistently been a companion to changes within the tourism sector. Numerous research studies indicate that the progression of Information and Communication Technology (ICT) can improve the appeal of destinations and cultural sites (Cuomo et al., 2021, p. 2). **Label: TOU-01**
- Current global tourism trends are inextricably linked to information technology and tourism sector digitization and transformation. Every global tourism market activity focuses on developing digital tourism services and products (Zvaigzne et al., 2023, p. 1). **Label: TOU-02**
- Digital and various other technologies are being widely adopted by a range of entities in the tourism industry, including destinations, travel agencies, tour operators, hospitality businesses, theme parks, museums, event planners, and other related organizations. These technologies are primarily employed to refine operational efficiency, improve engagement in the marketplace, boost competitiveness, and increase revenue streams. (Hadjielias et al., 2022, p. 4). **Label: TOU-03**
- The landscape of competition within the tourism industry has been significantly altered by the advent and evolution of Information and Communication Technologies (ICT). One of the most notable impacts of the Internet has been the direct marketing capabilities it provides to destinations, hotels, airlines, and other stakeholders (Buhalis et al., 2023a, p. 1). **Label: TOU-04**
- The “sharing economy” has increased homestays and accommodation options. Although homestays have existed since people began traveling, technological advances allow people to offer rooms to a global market. This innovation has shaken up the tourism and hospitality industry and added complexity to an already complex sector (World Bank Group, 2018a, p. 7). **Label: TOU-05**
- Digital media has streamlined access to information, thereby improving travel mobility. With just a few taps on a smartphone or clicks on a computer, global travel arrangements can be made effortlessly through online travel agencies (OTAs) such as Booking.com and Trivago, or through peer-to-peer booking platforms like Airbnb. These digital services allow travelers to effortlessly discover package deals, reserve flights, trains, and ferries, explore local attractions, monitor weather forecasts, and stay updated with local news (van Nuenen et al., 2021, pp. 120–121). **Label: TOU-06**

- The digital evolution in the tourism sector has given rise to new forms such as e-tourism, digital tourism, smart tourism, and virtual tourism, all of which are fundamentally rooted in the application of Information and Communication Technologies (ICT) in the realm of tourism (Verma et al., 2022, p. 2). **Label: TOU-07**
- Digital technology promotes tourism industry integration. It expands the tourism industry chain and it adds value to tourism services (Ye et al., 2022, p. 3). **Label: TOU-08**
- Most hotels have integrated their local and digital offerings thanks to technology. WiFi, preferably broadband, has become the norm in hotels, allowing guests to connect through multiple devices and apps for personalized room and hotel experiences. Tourist experiences are becoming more personalized, accessible, and omnipresent, replacing hotel-based ones (Gomes et al., 2023, p. 2). **Label: TOU-09**
- Technological advancement changes consumer behavior and how tourism and hospitality organizations (THOs) communicate with travelers. Technology is fueling business disruption as tourism and hospitality companies can use innovative solutions to reach potential customers and improve service and convenience (Yallop et al., 2023, p. 1). **Label: TOU-10**
- Recent discussions surrounding the digital transformation in tourism have highlighted significant shifts that have captivated the sector. These include evolving dynamics between demand and supply as well as innovative approaches to co-creating value (Massari et al., 2022, p. 1). **Label: TOU-11**
- The European Union's tourism transition pathway calls for digitization, AI, and data-driven decision-making (Litavniece et al., 2023, p. 1). **Label: TOU-12**
- Nine digital technologies that have disrupted hospitality and tourism business processes in the past and future can help meet new needs and are expected to remain influential (Cheng et al., 2023, p. 1947): collaborative robots, AI solutions, Big Data Analytics, Cloud-based solutions, Blockchain integration, VR/AR, IoT, Wireless communication with short range technologies. **Label: TOU-13**
- Robots can clean, disinfect, and assist workers. Hotels can improve customer service and stay competitive with AI and robotics (Cheng et al., 2023, p. 1947). **Label: TOU-14**
- However, alongside technological advancements, a key part in the adoption of social robots in tourism is how customers perceive them (Callarisa-Fiol et al., 2023, p. 3). **Label: TOU-15**
- Big data analytics improves hospitality business analysis and decision support by increasing data availability. Hotel operations, revenue, costs, and competitiveness can be optimized with big data analytics. Data-driven digital technologies include AI, cloud computing, IoT, and others (Cheng et al., 2023, p. 1947). **Label: TOU-1**
- Web search data, or "Big Data", provides time-series consumer and business data. This has enabled precise decision-making by registering the relative frequency of a search term, specifying geographic settings, and improving data granularity (Guedes et al., 2022, p. 4). **Label: TOU-17**
- Big data is transforming tourism organisations by providing insights into consumer behaviour, transparency, corporate value, and a competitive edge (Yang et al., 2023, p. 2). **Label: TOU-18**
- No time or boundary limits apply to hotel cloud-based big data. It collects hotel and tourism statistics and activity context. Cloud computing allows hotel big data analysis due to unique data integration compliance standards (Cheng et al., 2023, p. 1947). **Label: TOU-19**

- Blockchain technology lets travelers book tickets without paying intermediaries. Peer-to-peer transfers eliminate the need for a central server and give customers all the information they need for their trip (Kathuria et al., 2023, pp. 1–2). **Label: TOU-20**
- During the COVID-19 pandemic, the application of blockchain technology in tracking the food supply chain played an important role in improving the transparency of food safety (Cheng et al., 2023, p. 1947). **Label: TOU-21**
- There has been a noticeable uptick in the use of Virtual Reality (VR) within the tourism and hospitality sectors, aimed at presenting destinations in an immersive way and enriching the overall experience for tourists (Bogićevic et al., 2021, p. 1). **Label: TOU-22**
- Virtual Reality (VR) is transforming the tourism industry. The immersive and realistic environments created by VR enable travelers to preview and compare destinations before visiting, aiding in more informed decision-making and reducing hesitation towards unfamiliar attractions (Liu et al., 2023, p. 153). **Label: TOU-23**
- Some apps are tailored to offer an initial overview of a destination, while others focus on detailing attractions or improving the overall user experience. The most popular among these are apps that deliver real-time information about on-site amenities such as accommodation, transport, dining options, and recreational activities (Palos-Sanchez et al., 2021, p. 2). **Label: TOU-24**
- The hotel industry can improve customer loyalty and cut costs with IoT. Due to IoT and Internet 2.0 advancements, more people can express their opinions and give feedback about anything online, especially companies and administration (Rajesh et al., 2022, p. 2). **Label: TOU-25**
- Software-defined radio technology can provide ubiquitous connections and real-time synchronization for non-contact payment services via radio frequency identification (RFID) and NFC (Cheng et al., 2023, p. 1948). **Label: TOU-26**
- Technology and collaborative systems can improve the hospitality industry’s internal and remote collaboration through mobile communication, online group chats, and video or text-based e-meetings, aiding in contactless operations and it can also improve hotel management efficiency (Cheng et al., 2023, p. 1948). **Label: TOU-27**

The enhancement of destinations and cultural sites through ICT (TOU-01) is part of the broader tourism digitization trend (TOU-02), moving towards an interconnected digital global market. This shift is supported by the adoption of various technologies to improve operational efficiency and customer experiences (TOU-03). Historically, ICT’s impact began with Global Distribution Systems in the 1980s, evolving with the internet and mobile technologies (TOU-04). The sharing economy’s impact on accommodations (TOU-05) shows technology diversifying the tourism market, while digital platforms now ease travel planning and booking (TOU-06). New tourism forms like e-tourism and smart tourism (TOU-07), along with tech-driven hotel experiences (TOU-09), illustrate a data-driven, personalized sector. Technological advancements influence consumer behavior (TOU-10), leading to innovative solutions that disrupt traditional models (TOU-11). The EU’s push for digitization and data-driven decision-making (TOU-12) emphasizes a tech-centric industry. Digital technologies like AI, Big Data, and IoT (TOU-13 to TOU-16) have significantly impacted operational models and strategic directions, as seen in the food supply chain during COVID-19 (TOU-21). VR and AR (TOU-22, TOU-23) transform destination marketing and experiences, while mobile apps (TOU-24) and IoT (TOU-25) enhance customer service and loyalty programs. Technology also enables contactless transactions (TOU-26) and improves internal and remote collaboration (TOU-27), reflecting a trend towards operational efficiency and digital engagement.

4.2. Sustainability in tourism

Next, the qualitative results from the studies in the domain of sustainability in tourism are presented:

- Tourism, one of the world's largest industries, can reduce poverty, unemployment, and provide local businesses with sales opportunities (Vrontis et al., 2021, pp. 846–847). **Label: TOU-28**
- Sustainable tourism manages negative impacts on a destination's economic, environmental, and social elements to achieve sustainable development goals. Sustainable tourism development focuses on balancing the economic, social, and environmental impacts in both the present and future, while catering to the needs of visitors, the industry, the environment, and local communities (Nguyen et al., 2023, pp. 1, 3; WTO, 2022). **Label: TOU-29**
- Table 1 presents transformation of the term "sustainable tourism" into "sustainable tourism development". Regardless of the terminology used, all these interpretations equally emphasize the importance of demonstrating economic, social, and environmental balance in various areas over an unrestricted period of time.
- Sustainable development and tourism are linked. Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Alternative tourism aims to reduce mass tourism and make it more sustainable (Alamineh et al., 2023, p. 2). **Label: TOU-30**
- Since tourism is one of the biggest resource consumers, this rapid adoption of sustainability measures may be the industry's response to global concerns about the trade-offs between tourism's positive and negative impacts on destinations (Tiago et al., 2021, p. 28). **Label: TOU-31**
- Sustainable tourism involves activities, management, and development practices that uphold the integrity of the natural environment, economy, and social structures. It aims for community welfare, economic progress, and public health. It benefits both locals and tourists, striving to improve residents' quality of life and protect their cultural heritage from both economic and socio-cultural standpoints (Li et al., 2023, p. 3). **Label: TOU-32**
- The capacity of the travel and tourism industry to draw foreign currency and generate employment opportunities has sometimes resulted in over-tourism. This excessive influx of tourists can detrimentally affect the local community, natural environment, and traditional cultures due to the unsustainable usage of resources (Mahendru et al., 2023, p. 3). **Label: TOU-33**
- The ongoing issues of global warming and climate change pose significant threats to our planet, impacting weather patterns and leading to extreme conditions like heatwaves, floods, tsunamis, and hurricanes. As a result, the tourism industry faces challenges such as reduced visitor numbers, increased instability, and potential business failures (Senbeto et al., 2023, p. 1). **Label: TOU-34**
- Tourism contributes to and is vulnerable to climate change. It's essential to speed up climate-responsive measures in the tourism sector to improve its resilience. To improve competitiveness and resilience, the tourism sector must go green for the planet and tourism (UNWTO, 2022b, p. 48). **Label: TOU-35**
- The UNWTO introduced the Glasgow Declaration on Climate Action in Tourism during COP26, representing the tourism industry's stance. This Declaration urges the tourism industry to reduce its emissions by 50% in the upcoming ten years and achieve net-zero emissions by 2050. Titled "The Glasgow Declaration: A Commitment to a Decade of Climate Action in Tourism", it presents a unified and clear strategy for

addressing climate change within the tourism industry over the next ten years, in line with scientific recommendations and the pressing need for immediate action (UNWTO, 2022b, p. 49). **Label: TOU-36**

- The One Planet Vision for the Responsible Revival of the Tourism Sector is founded on the UNWTO Global Guidelines for Restarting Tourism, which were published by the Global Tourism Crisis Committee on May 28, 2020, as a response to the COVID-19 pandemic. This vision outlines six key action areas to bolster the UNWTO Guidelines for Restarting Tourism, aiming to steer the tourism sector towards a recovery that benefits people, the planet, and prosperity alike. These areas are: 1. Public health, 2. Social inclusion, 3. Conservation of biodiversity, 4. Climate action, 5. Circular economy, and 6. Governance and finance. (One Planet Sustainable Tourism Programme, 2020, p. 6). **Label: TOU-37**
- One Planet Sustainable Tourism Programme accelerates sustainable consumption and production (SCP) in tourism policies and practices to combat pollution, biodiversity loss, and climate change. Three main intervention areas form the One Planet Sustainable Tourism Programme strategy: 1) Circularizing tourism plastics; 2) Integrating SCP into food value chains; 3) Accelerating climate action in tourism (Sustainable Tourism Programme). **Label: TOU-38**
- Many hotels have adopted sustainability initiatives, but some may have done so to gain a competitive edge. Due to tourist demand for environmentally responsible hospitality, hotels are trying to improve their reputations and customer loyalty (Singh, 2023, p. 4). **Label: TOU-39**

Tourism has significant economic impacts, including reducing poverty and unemployment (TOU-28). Sustainable tourism balances economic growth with environmental and social well-being (TOU-29). The shift from 'sustainable tourism' to 'sustainable tourism development' (TOU-30) addresses economic, social, and environmental needs. The industry's adoption of sustainability measures (TOU-31) aims to mitigate tourism's negative impacts on local destinations (TOU-32). Over-tourism (TOU-33) depletes resources and erodes cultures, highlighting the need for sustainable practices. Climate change (TOU-34) challenges the tourism industry, which must adopt climate-responsive measures (TOU-35). The Glasgow Declaration on Climate Action in Tourism (TOU-36) sets goals for emissions reduction and net-zero targets, emphasizing the industry's role in global climate initiatives. The One Planet Vision and Sustainable Tourism Programme (TOU-37, TOU-38) supports sustainable development goals, linking sustainable tourism to community, economic, and ecosystem health. Hotels adopting sustainability initiatives (TOU-39) respond to consumer demand for environmentally responsible practices.

4.3. New employee knowledge in tourism

In order to understand the connection between knowledge and tourism, studies in this domain were analyzed and the qualitative results are presented below:

- Knowledge is a key asset for tourism and hospitality companies, helping them gain a competitive edge and expand internationally (Abdollahi et al., 2023, p. 13). Authors (Ul Hameed et al., 2022, pp. 746–747; Chaudhuri et al., 2023, p. 283; Huang et al., 2021, p. 4230) point out a lack of knowledge in the field of ICT and digital technologies among employees, which enables the hospitality industry to more easily adapt to new customer demands. Also, Huang et al. (2021, p. 4230) identifies a lack of soft skills that are vital for hospitality organizations. By improving the knowledge of employees in the field of digital technologies, the hospitality industry is enabled to accelerate digital transformation and improve service quality. **Label: TOU-40**

- Employees in the hospitality sector encounter numerous obstacles and can err in managing customers and situations. Even with improved training programs, the hotel industry continues to experience a shortage of skilled workers. (Lan et al., 2023, p. 426). **Label: TOU-41**
- Staff shortages are a major issue for travel and tourism. Businesses and governments must implement and maintain labor mobility policies to prevent long-term shortages. Make work decent and offer competitive benefits. Develop and retain skilled workers. Promote sector opportunities. Improve cross-level cooperation. Use technology and digital solutions (WTTC., 2022, p. 10). **Label: TOU-42**
- Workers in the hospitality and tourism industry encounter substantial hurdles in career advancement. Professionals within the sector must develop more business-centric skills and competencies (Huang et al., 2021, p. 368). **Label: TOU-43**
- Analyzing and managing the workforce in the tourism sector emphasizes the importance of foundational skills and competencies at the entry level, important for understanding labor market dynamics and effective personnel management (Derco, 2023, p. 1). **Label: TOU-44**
- In today's digital era, it's essential for both organizations and their employees to possess a diverse set of knowledge and skills (Bubanja et al., 2022, p. 37). Bubanja et al. (2023, p. 49) argue that in the face of rapid changes and challenges, the competencies of staff are vital for companies aiming for agility and adaptability. **Label: TOU-45**
- As technology increasingly integrates into various job aspects, technological fluency becomes indispensable. Employees are expected to continually update their technical skills to keep pace with new digital tools and innovations (Hunag et al., 2021, p. 4216). **Label: TOU-46**
- Digital literacy, defined as the capacity for digital innovation, including proactive upskilling and reactive reskilling, is important for adapting to digital transformations. Improving employees' digital competencies is key to optimizing their use of digital technologies (Chaudhuri et al., 2023, p. 280). **Label: TOU-47**
- The pandemic-induced rapid virtualization of jobs has widened the digital skills gap, highlighting the necessity for internal digital training and pre-employment digital skill improvement (Carlisle et al., 2021, p. 1). **Label: TOU-48**
- The hotel sector's evolution towards incorporating advanced technology and smart services, like facial recognition and AI-driven solutions, signifies a shift towards labor-saving and improved management practices, revolutionizing traditional roles and cost structures (Tian, 2023, pp. 1–2). **Label: TOU-49**

The qualitative results pertaining to the knowledge domain in tourism form a narrative around the central theme of the importance of Information and Communication Technology (ICT) knowledge within the industry. This narrative is built upon the premise that knowledge acts as an important asset for tourism and hospitality companies, enabling them to compete on an international scale and adapt to customer demands (TOU-40).

The results show a correlation between ICT proficiency and the industry's capacity for innovation and service quality improvement. However, a notable gap in employees' ICT knowledge and soft skills has been identified, suggesting that these deficiencies could hinder the ability of hospitality organizations to keep pace with rapid market changes (TOU-40). This is compounded by the broader issue of staff shortages and the challenge of attracting and retaining skilled workers (TOU-41). There is a clear causal relationship between staff knowledge and the potential for growth within the tourism sector. The ability of employees to use digital tools effectively is directly linked to the operational efficiency and service quality of hospitality businesses (TOU-40). Furthermore, staff shortages (TOU-41) and the need for more business-centric skills (TOU-43) suggest that professional development is not only a response to market demands but a strategic necessity for industry sustainability.

Professional advancement within the sector appears to be hampered by a lack of foundational skills and competencies among workers (TOU-44), indicating a disconnect between current employee skillsets and the evolving demands of the tourism labor market. The results also point to the need for agility and adaptability among staff, suggesting that the rapid changes and challenges faced by the industry require a workforce that is equipped with a broad spectrum of competencies (TOU-45). Technological fluency is highlighted as a critical skill in the digital era (TOU-46), and digital literacy is emphasized as essential for both current job performance and career progression (TOU-47). The COVID-19 pandemic has accelerated the transition towards digital operations and emphasized the digital skills gap, underlining the importance of digital training programs for employee development (TOU-48). The integration of advanced technology in the hotel sector, such as AI and smart services, is transforming traditional roles and necessitating new labor-saving and management-improving practices (TOU-49). This transformation indicates a causality wherein technological integration necessitates a workforce that is proficient in digital skills, thereby impacting traditional employment and management practices.

4.4. Customer experience personalization in travel and hospitality

Finally, customer experience and personalization in travel and hospitality was addressed. Several studies were analyzed and the qualitative findings are presented below:

- In the travel and hospitality domain, customizing customer experiences to align with individual preferences for transport, activities, and attractions at minimal costs is paramount. This necessitates a cohesive Tourism Supply Chain (TSC) that integrates service providers effectively (Piya et al., 2023, p. 2). **Label: TOU-50**
- Leveraging big data allows tourism and hotel businesses to tailor services, improving convenience and securing a competitive edge (Yallop et al., 2023, p. 4). **Label: TOU-51**
- Technology plays an important role in improving customer experiences, with hotels and hospitality businesses using social media and AI to personalize services based on detailed customer insights (Buhalis et al., 2023b, p. 702). **Label: TOU-52**
- A strategic approach to personalization involves engaging content, data collection, data unification, and detailed user analysis for segmentation, emphasizing the importance of feedback loops **Label: TOU-53**
- Digital advancements streamline customer interactions across sectors, eliminating inefficiencies in traditional service models, such as car rentals and hotel check-ins (Binggeli et al., 2023). **Label: TOU-54**
- Sharing information across digital platforms before, during, and after visits enriches the customer experience and facilitates user-generated content (UGC) and electronic word-of-mouth (eWOM) (Buhalis et al., 2023b, p. 708). **Label: TOU-55**
- UGC has become an invaluable travel research and brand marketing tool due to many factors and trends. The most influential are: Increased smartphone use; Increase in social media; Consumers distrust brand content; Content creation and publishing are simpler; UGC is led by millennials. Visual content growth and presentation. Increased UGC quality. Data in real time (World Bank Group, 2018b, pp. 18–19). **Label: TOU-56**

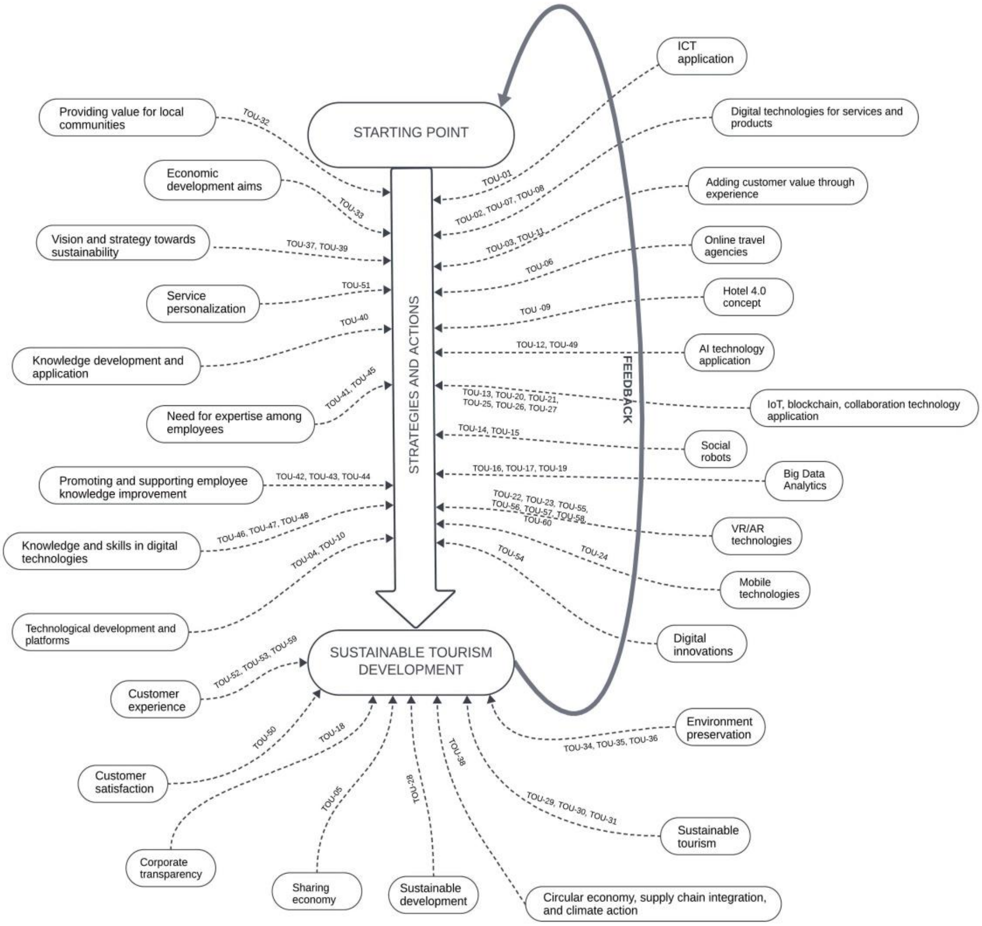
- The metaverse introduces a new dimension of value co-creation in virtual spaces, improving physical experiences through ambient intelligence (Buhalis, p. 2022, 16). **Label: TOU-57**
- Metaverses are new online environments where people can communicate differently and engage more deeply with digital content than before (Çolakoglu, 2023, p. 2). **Label: TOU-58**
- Gursoy expects Metaverse consumers to behave differently because they can access more virtual resources. The Metaverse is designed to improve travelers' experiences by providing immersive pre-trip experiences and augmented content during travel (Buhalis et al., 2023a, p. 2). **Label: TOU-59**
- Marriott Hotels' exploration of "teleportation" via virtual reality in 2014 exemplifies innovative approaches to destination marketing and customer engagement, offering virtual experiences that closely mimic physical ones (Buhalis et al., 2023b, p. 710). **Label: TOU-60**

The findings highlight a trend towards leveraging technology to create personalized, seamless service experiences in travel and hospitality. Traditional service models are being replaced by data-driven approaches. A cohesive Tourism Supply Chain (TOU-50) is essential for integrating service providers to deliver customized travel solutions efficiently. The use of big data to tailor services and enhance customer convenience (TOU-51) shows a direct link between data analytics and competitive advantage through personalization. Technology plays a crucial role in enhancing customer experience (TOU-52), especially through social media and AI, which provide detailed customer insights for service personalization. A strategic approach involving data collection, unification, and user analysis for effective segmentation is vital (TOU-53). Digital technology streamlines customer interactions and eliminates inefficiencies (TOU-54). Sharing information across digital platforms enriches the customer journey and promotes user-generated content (UGC) and electronic word-of-mouth, critical for tourism marketing (TOU-55). UGC is becoming mainstream (TOU-56) due to smartphones, social media, consumer skepticism towards branded content, and ease of content creation. Millennials drive this trend, marked by the rise of visual content and high-quality UGC. The metaverse introduces new value co-creation in virtual spaces, enhancing physical experiences (TOU-57) and facilitating unique communication and engagement (TOU-58). The metaverse is expected to alter consumer behavior by offering abundant virtual resources and enhancing travel experiences (TOU-59).

5. Theoretical model

Based on the results of the qualitative analysis, a theoretical model for improving the tourism sector and tourism sustainable development was developed. The model is generic in nature, and depending on specific goals and touristic location, it can be modified accordingly. The model is presented on Figure 2.

Figure 2: Theoretical model for improving sustainable tourism and development



Source: Authors' research

The developed model presented in Figure 2 depicts a starting point and strategies and actions that were noted in the qualitative analysis. The labels (TOU-1, TOU-2…) correspond to the appropriate qualitative result. As sustainability is a continuous concept, the model includes a feedback loop, which is used for evaluation and optimization of actions and strategies. This way, continuous improvement cycles are ensured.

6. Discussion

Major hotel chains, travel agencies, and airports leverage the benefits of digital technologies to provide their guests with unique user experiences and to create tailored travel packages. According to (WEF, 2023), over 40% of processes in the accommodation, food service, and leisure industry are predisposed to automation and AR. While some jobs in the tourism industry continue to operate in a traditional manner (e.g., dishwashing, cooking, diesel engine specialists for buses and trucks, etc.), there are segments, such as travel agents, receptionists, and information officers, as well as front-line supervisors for food preparation and service, that have the potential for automation and expansion. Tourism and hotel companies fully embrace sustainable development. These organizations support environmental protection, biodiversity conservation, climate change, and circular economy issues, as shown by the SDGs, Glasgow Declaration, and Paris Agreement. Mahendru et al. (2023, pp. 2–3) argue that the significant environmental footprint of the tourism sector has fueled the perception that its rapid expansion contributes to environmental degradation. This concern has catalyzed the push for sustainable tourism practices and the pursuit of Sustainable Development Goals (SDGs). In response, some governments have implemented regulations to curb the adverse socioeconomic and environmental effects of tourism development, whereas others have pursued strategies to further boost tourism and its economic contributions.

Global market trends, particularly highlighted during the COVID-19 pandemic, have demonstrated that only organizations with a well-trained and high-caliber workforce are capable of swiftly adapting to market shifts triggered by crises (Bubanja et al., 2023, p. 48). Tourism and hotel organizations faced two challenges. First, Covid-19 caused a shortage of employees across the industry. Second, employees must learn new skills. Tourism and hotel workers must be digitally literate due to rapid technological advancement. Training, requalification, and upskilling programs that teach new and improved skills for the travel and tourism sector, such as digital literacy, will help solve the talent shortage. Training must be ongoing and address current and future needs (WTTC, 2022, p. 8).

7. Conclusion

The tourism industry has encountered significant challenges in recent years that profoundly affected its operations. In tandem with shifts in the global market, such as the COVID-19 pandemic and the rapid development of digital technologies, new trends in tourism and evolving consumer relationships with the offerings of tourism and hospitality organizations have surfaced. Consumers have grown more demanding, with these expectations frequently tied to generational affiliations (X, Y, Z).

The tourism sector is committed to sustainable development, which serves as a fundamental component of its worldwide progress. Consequently, businesses within this industry are focused on fulfilling the Sustainable Development Goals (SDGs) by the year 2030. The authors in the paper offer recommendations for additional research in the studied area, which domestic tourism and hotel organizations need to adopt for a more efficient and competitive personalized tourism offer:

- How extensively do domestic tourism and hotel organizations apply digital technologies in their operations?
- Which are the most common skills related to the use of digital technologies that are necessary to apply in business operations?
- What is the level of digital literacy among employees? How is it evolving? To what extent do domestic tourism and hotel organizations prioritize professional development for their employees in this regard?
- To what extent do domestic tourism and hotel organizations consider and prioritize sustainable development? Are they guided by the principles of SDG 2030?

Conflict of interest

The authors declare no conflict of interest.

References

1. Abdollahi, A., Ghaderi, Z., Béal, L., & Cooper, C. (2023). The intersection between knowledge management and organizational learning in tourism and hospitality: A

bibliometric analysis. *Journal of Hospitality and Tourism Management*, *55*, 11–28. https://doi.org/10.1016/j.jhtm.2023.02.014

2. Alamineh, A. G., Hussein, J. W., Endaweke, Y., & Taddesse, B. (2023). The local communities' perceptions on the social impact of tourism and its implication for sustainable development in Amhara regional state. *Heliyon*, *9*(6), e17088. https://doi.org/10.1016/j.heliyon.2023.e17088
3. Aliyah, L., Lukita, C., Pangilinan, G., Chakim, M., & Saputra, D. (2023). Examining the impact of artificial intelligence and internet of things on smart tourism destinations: A comprehensive study. *Aptisi Transactions on Technopreneurship*, *5*, 135–145. http://dx.doi.org/10.34306/att.v5i2sp.332
4. Altexsoft. (2023). *Customer experience personalization in travel and hospitality using behavioral analytics and machine learning*. Retrieved December 6, 2023, from https://www.altexsoft.com/blog/datascience/customer-experience-personalization-in-travel-and-hospitality-using-behavioral-analytics-and-machine-learning/
5. Binggeli, U., Chen, Z., Köpke, S., & Yu, J. (2023). *Future of tourism: Bridging the labor gap; improving customer experience*. McKinsey & Company. Retrieved December 5, 2023, from https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/future-of-tourism-bridging-the-labor-gap-improving-customer-experience
6. Bogicevic, V., Liu, S. Q., Seo, S., Kandampully, J., & Rudd, N. A. (2021). Virtual reality is so cool! How technology innovativeness shapes consumer responses to service preview modes. *International Journal of Hospitality Management*, *93*, 102806. https://doi.org/10.1016/j.ijhm.2020.102806
7. Bubanja, V., Bogetić, S., Bešić, C., Kalinić, Z., & Bubanja, I. (2022). New knowledge and skills for the digital age. In D. Ćoćkalo (Ed.), *XII International Symposium Engineering Management and Competitiveness (EMC)* (pp. 31–38). Zrenjanin, Serbia: Technical Faculty Mihajlo Pupin.
8. Bubanja, V., Bogetić, S., Bešić, C., Kalinić, Z., & Bubanja, I. (2023). Managing the reskilling revolution for the digital age: Case study-western Balkan countries. *Journal of Engineering Management and Competitiveness (JEMC)*, *13*(1), 37–52. http://dx.doi.org/10.5937/JEMC2301037V
9. Buhalis, D., & Karatay, N. (2022). Mixed reality (MR) for generation Z in cultural heritage tourism towards Metaverse. *Information and Communication Technologies in Tourism* (pp. 16–27). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-94751-4_2
10. Buhalis, D., Leung, D., & Lin, M. (2023a). Metaverse as a disruptive technology revolutionising tourism management and marketing. *Tourism Management*, *97*, 104724. https://doi.org/10.1016/j.tourman.2023.104724
11. Buhalis, D., Lin, M. S., & Leung, D. (2023b). Metaverse as a driver for customer experience and value co-creation: Implications for hospitality and tourism management and marketing. *International Journal of Contemporary Hospitality Management*, *35*(2), 701–716. https://doi.org/10.1108/IJCHM-05-2022-0631
12. Callarisa-Fiol, L. J., Moliner-Tena, M. Á., Rodríguez-Artola, R., & Sanchez-Garcia, J. (2023). Entrepreneurship innovation using social robots in tourism: A social listening study. *Review of Managerial Science*, *17*, 2945–2971. https://doi.org/10.1007/s11846-023-00646-9
13. Carlisle, S., Ivanov, S., & Dijkmans, C. (2021). The digital skills divide: Evidence from the European tourism industry. *Journal of Tourism Futures*, *9*(2), 240–266. https://doi.org/10.1108/JTF-07-2020-0114
14. Chaudhuri, R., Chatterjee, S., Vrontis, D., Galati, A., & Siachou, E. (2023). Examining the issue of employee intentions to learn and adopt digital technology. *Worldwide*

Hospitality and Tourism Themes, *15*(3), 279–294. https://doi.org/10.1108/WHATT-02-2023-0020
15. Cheng, X., Xue, T., Yang, B., & Ma, B. (2023). A digital transformation approach in hospitality and tourism research. *International Journal of Contemporary Hospitality Management*, *35*(8), 2944–2967. https://doi.org/10.1108/IJCHM-06-2022-0679
16. Çolakoğlu, Ü., Anış, E., Esen, Ö., & Tuncay, C. S. (2023). The evaluation of tourists' virtual reality experiences in the transition process to Metaverse. *Journal of Hospitality and Tourism Insights*. https://doi.org/10.1108/JHTI-09-2022-0426
17. Cuomo, M. T., Tortora, D., Foroudi, P., Giordano, A., Festa, G., & Metallo, G. (2021). Digital transformation and tourist experience co-design: Big social data for planning cultural tourism. *Technological Forecasting and Social Change*, *162*. https://doi.org/10.1016/j.techfore.2020.120345
18. Derco, J., & Tometzová, D. (2023). Entry-level professional competencies and skills in tourism – The case of Slovakia. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *32*, 100437. https://doi.org/10.1016/j.jhlste.2023.100437
19. Dias, A., Sousa, B., Santos, V., Ramos, P., & Madeira, A. (2023). Wine tourism and sustainability awareness: A consumer behavior perspective. *Sustainability*, *15*(6), 5182. https://doi.org/10.3390/su15065182
20. Đorđević, D., Ćoćkalo, D., & Bogetić, S. (2016). The analysis of marketing concept implementation in domestic enterprises. *Journal of Engineering Management and Competitiveness (JEMC)*, *6*(2), 120–128. http://dx.doi.org/10.5937/jemc1602120D
21. Gomes, S., Lopes, J. M., & Ferreira, L. (2023). Looking at the tourism industry through the lenses of industry 4.0: A bibliometric review of concerns and challenges. *Journal of Hospitality and Tourism Insights*. https://doi.org/10.1108/JHTI-10-2022-0479
22. Guedes, A., Faria, S., Gouveia, S., & Rebelo, J. (2023). The effect of virtual proximity and digital adoption on international tourism flows to Southern Europe. *Tourism Economics*, *29*(6), 1643–1661. https://doi.org/10.1177/13548166221116704
23. Hadjielias, E., Christofi, M., Christou, P., & Drotarova, M. H. (2022). Digitalization, agility, and customer value in tourism. *Technological Forecasting and Social Change*, *175*. https://doi.org/10.1016/j.techfore.2021.121334
24. Huang, A. Y., Fisher, T., Ding, H., & Guo, Z. (2021). A network analysis of cross-occupational skill transferability for the hospitality industry. *International Journal of Contemporary Hospitality Management*, *33*(12), 4215–4236. https://doi.org/10.1108/IJCHM-01-2021-0073
25. Huang, A., & Baker, M. (2021). Exploring skill-based career transitions for entry-level hospitality and tourism workers. *Journal of Hospitality and Tourism Management*, *48*, 368–373. https://doi.org/10.1016/j.jhtm.2021.07.007
26. Kathuria, S., & Tandon, U. (2023). Conceptualizing blockchain in tourism consumer experience: Implications for tourism marketing. *Global Knowledge, Memory and Communication*. https://doi.org/10.1108/GKMC-01-2023-0012
27. Kumar, A., & Vohra, R. (2023). Impact of deep learning models for technology sustainability in tourism using big data analytics. *Deep learning technologies for the sustainable development goals: Issues and solutions in the post-COVID era* (pp. 83–96). Singapore: Springer Nature Singapore. http://doi.org/10.1007/978-981-19-5723-9_6
28. Lan, J., Wong, I. K. A., Fong, V. H. I., & Guo, J. W. (2023). Duality of conscientiousness and service knowledge growth: The role of self-efficacy and self-deception. *Journal of Hospitality and Tourism Management*, *54*, 426–436. https://doi.org/10.1016/j.jhtm.2023.02.004

29. Li, Y., & Terason, S. (2023). Configuring the pattern of sustainable tourism development as affected by the construction of a high-speed railway system. *SAGE Open*, *13*(3). https://doi.org/10.1177/21582440231181368
30. Litavniece, L., Kodors, S., Adamoniene, R., & Kijasko, J. (2023). Digital twin: An approach to improving tourism competitiveness. *Worldwide Hospitality and Tourism Themes*. https://doi.org/10.1108/WHATT-06-2023-0074
31. Liu, C., & Huang, X. (2023). Does the selection of virtual reality video matter? A laboratory experimental study of the influences of arousal. *Journal of Hospitality and Tourism Management*, *54*, 152–165. https://doi.org/10.1016/j.jhtm.2022.12.002
32. Mahendru, M., Arora, V., Chatterjee, R., Sharma, G. D., & Shahzadi, I. (2023). From over-tourism to under-tourism via COVID-19: Lessons for sustainable tourism management. *Evaluation Review*. https://doi.org/10.1177/0193841X231189805
33. Masiga, J. (2022). *What next for travel and tourism? Here's what the experts say. World Economic Forum*. Retrieved December 5, 2023, from https://www.weforum.org/agenda/2022/06/what-next-for-travel-and-tourism-industry-experts-explain/
34. Massari, F. S., Del Vecchio, P., & Degl'Innocenti, E. (2022). Past for future – museums as a digitalized "interaction platform" for value co-creation in tourism destinations. *European Journal of Innovation Management*. https://doi.org/10.1108/EJIM-09-2022-0521
35. McKinsey & Company. (2023). *The future of hotels: Customized experiences, sustainable practices*. McKinsey Global Publishing.
36. Milovanović, V., Chong, K. L. D., & Paunović, M. (2022). Benefits from adopting technologies for the hotel's supply chain management. *Hotel and Tourism Management*, *10*(2), 91–103. https://doi.org/10.5937/menhottur2202091M
37. Musleh, M., Subianto, A., Tamrin, M. H., & Bustami, M. R. (2023). The role of institutional design and enabling environmental: Collaborative governance of a pilgrimage tourism, Indonesia. *Journal of Local Government Issues (LOGOS)*, *6*(1), 75–90. https://doi.org/10.22219/logos.v6i1.22218
38. Nguyen, D. T., Kuo, K.-C., Lu, W.-M., & Nhan, D. T. (2023). How sustainable are tourist destinations worldwide? An environmental, economic, and social analysis. *Journal of Hospitality & Tourism Research*. https://doi.org/10.1177/10963480231168286
39. OECD. (2020a). *Rebuilding tourism for the future: COVID-19 policy responses and recovery*. Paris: OECD Publishing. https://doi.org/10.1787/5b0fd8cd-en
40. OECD. (2020b). *Mitigating the impact of COVID-19 on tourism and supporting recovery*. OECD Tourism Papers, 2020(3). Paris: OECD Publishing. https://doi.org/10.1787/47045bae-en
41. OECD. (2022). *OECD tourism trends and policies 2022*. Paris: OECD Publishing. https://doi.org/10.1787/a8dd3019-en
42. One Planet network. (2023). *Sustainable tourism programme*. Retrieved December 4, 2023 from https://www.oneplanetnetwork.org/programmes/sustainable-tourism
43. One Planet Sustainable Tourism Programme. (2020 & 2021). *Glasgow declaration: A commitment to a decade of climate action*. Glasgow, Scotland.
44. Palos-Sanchez, P., Saura, J. R., Velicia-Martin, F., & Cepeda-Carrion, G. (2021). A business model adoption based on tourism innovation: Applying a gratification theory to mobile applications. *European Research on Management and Business Economics*, *27*(2), 100149. https://doi.org/10.1016/j.iedeen.2021.100149
45. Perčić, K., & Spasić, N. (2021). How Millennials and Generation Z organise travel during the COVID-19 pandemic. *Hotel and Tourism Management*, *9*(2), 79–94. https://doi.org/10.5937/menhottur2102079P

46. Piya, S., Triki, C., Al Maimani, A., & Mokhtarzadeh, M. (2023). Optimization model for designing personalized tourism packages. *Computers & Industrial Engineering*, *175*, 108839. https://doi.org/10.1016/j.cie.2022.108839.
47. Rajesh, S., Abd Algani, Y. M., Al Ansari, M. S., Balachander, B., Ray, R., Muda, I. … & Balaji, S. (2022). Detection of features from the internet of things customer attitudes in the hotel industry using a deep neural network model. *Measurement: Sensors*, *22*, 100384. https://doi.org/10.1016/j.measen.2022.100384
48. Rajkamal, R., Gond, H. K., Pandey, P. K., Borlikar, R. R., & Singh, A. P. (2023). A study of the MICE tourism industry's workforce and the variables influencing customer relationship management. *Atna Journal of Tourism Studies*, *18*(1), 89–102. https://doi.org/10.12727/ajts.29.4
49. Rane, N., Choudhary, S., & Rane, J. (2023). Sustainable tourism development using leading-edge Artificial Intelligence (AI), Blockchain, Internet of Things (IoT), Augmented Reality (AR) and Virtual Reality (VR) technologies. http://dx.doi.org/10.2139/ssrn.4642605
50. Ratna, S., Saide, S., Putri, A. M., Indrajit, R. E., & Muwardi, D. (2024). Digital transformation in tourism and hospitality industry: A literature review of blockchain, financial technology, and knowledge management. *EuroMed Journal of Business*, *19*(1), 84–112. https://doi.org/10.1108/EMJB-04-2023-0118
51. Samaddar, K., & Mondal, S. (2024). AR and VR-based travel: A responsible practice towards sustainable tourism. *International Journal of Tourism Cities*, *10*(1), 105–128. https://doi.org/10.1108/IJTC-05-2022-0135
52. Senbeto, D. L. (2023). The greener, the better? Probing green innovation in pilgrimage tourism destinations. *Journal of Hospitality & Tourism Research*. https://doi.org/10.1177/10963480231151674
53. Shafiee, S., Jahanyan, S., Ghatari, A. R., & Hasanzadeh, A. (2023). Developing sustainable tourism destinations through smart technologies: A system dynamics approach. *Journal of Simulation*, *17*(4), 477–498. https://doi.org/10.1080/17477778.2022.2030656
54. Shin, H., & Baek, S. (2023). Unequal diffusion of innovation: Focusing on the digital divide in using smartphones for travel. *Journal of Hospitality and Tourism Management*, *55*, 277–281. https://doi.org/10.1016/j.jhtm.2023.04.012
55. Singh, S., & Dutt, C. S. (2023). The adoption of the UN sustainable development goals in hotels in Dubai. *Tourism and Hospitality Research*. https://doi.org/10.1177/14673584231164941
56. Sulyok, J., Lőrincz, K., & Veres, Z. (2022). Whose responsibility is it? Evaluation of sustainable tourism development at Lake Balaton. *Hotel and Tourism Management*, *10*(2), 9–23. https://doi.org/10.5937/menhottur2202009S
57. Tiago, F., Gil, A., Stemberger, S., & Borges-Tiago, T. (2021). Digital sustainability communication in tourism. *Journal of Innovation & Knowledge*, *6*(1), 27–34. https://doi.org/10.1016/j.jik.2019.12.002
58. Tian, J. (2023). Does technological innovation have an impact on employment in the hospitality industry? *International Journal of Contemporary Hospitality Management*. https://doi.org/10.1108/IJCHM-03-2022-0370
59. Ul Hameed, W., Nawaz, M., Nisar, Q. A., Basheer, M. F., Imtiaz, S., & Zafar, M. B. (2022). Open innovation solution: New model in the hospitality industry. *Journal of Hospitality and Tourism Technology*, *13*(4), 742–762. https://doi.org/10.1108/JHTT-11-2021-0325
60. United Nations. (2020). *Policy Brief: COVID-19 and Transforming Tourism*. United Nations.

61. UNWTO. (2020). *Priorities for Tourism Recovery*. Madrid, Spain: World Tourism Organization.
62. UNWTO. (2020). *UNWTO Briefing Note – Tourism and COVID-19,* Issue 1 – How are countries supporting tourism recovery? Madrid, Spain: World Tourism Organization. https://doi.org/10.18111/9789284421893
63. UNWTO. (2021). *The Economic Contribution of Tourism and the Impact of COVID-19*. Madrid, Spain: World Tourism Organization. https://doi.org/10.18111/9789284423200
64. UNWTO. (2022a). *World Tourism Day 2022: Rethinking Tourism*. Retrieved December 4, 2023 from http://www.unwto.org/world-tourism-day-2022/official-messages
65. UNWTO. (2022b). *Rethinking Tourism – From Crisis to Transformation*. World Tourism Day 2022 Report. World Tourism Organization.
66. UNWTO. (2023). *World Tourism Barometer, 21*(1&2), 1–5. World Tourism Organization.
67. Van Nuenen, T., & Scarles, C. (2021). Advancements in technology and digital media in tourism. *Tourist Studies*, *21*(1), 119–132. https://doi.org/10.1177/1468797621990410
68. Verma, S., Warrier, L., Bolia, B., & Mehta, S. (2022). Past, present, and future of virtual tourism – A literature review. *International Journal of Information Management Data Insights*, *2*(2), 100085. https://doi.org/10.1016/j.jjimei.2022.100085
69. Vrontis, D., Christofi, M., Giacosa, E., & Serravalle, F. (2022). Sustainable development in tourism: A stakeholder analysis of the Langhe region. *Journal of Hospitality & Tourism Research*, *46*(5), 846–878. https://doi.org/10.1177/1096348020982353
70. World Bank Group. (2018a). *Tourism and the Sharing Economy: Policy & Potential of Sustainable Peer-to-Peer Accommodation*. Washington, D.C: World Bank Group.
71. World Bank Group. (2018b). *The Voice of Travelers*. Washington, D.C: World Bank Group.
72. World Economic Forum. (2023). *Jobs of Tomorrow: Large Language Models and Jobs*. Switzerland: World Economic Forum,
73. World Travel & Tourism Council (WTTC). (2022). *Staff shortages*.
74. World Travel & Tourism Council and Trip.com Group. (2021). *Trending in Travel 2021*.
75. Yallop, A. C., Gică, O. A., Moisescu, O. I., Coroș, M. M., & Séraphin, H. (2023). The digital traveller: Implications for data ethics and data governance in tourism and hospitality. *Journal of Consumer Marketing*, *40*(2), 155–170. https://doi.org/10.1108/JCM-12-2020-4278
76. Yang, X., Zhang, L., & Feng, Z. (2023). Personalized tourism recommendations and the E-tourism user experience. *Journal of Travel Research*. https://doi.org/10.1177/00472875231187332
77. Ye, X., Wang, J., & Sun, R. (2022). The coupling and coordination relationship of the digital economy and tourism industry from the perspective of industrial integration. *European Journal of Innovation Management*. https://doi.org/10.1108/EJIM-08-2022-0440
78. Zvaigzne, A., Mietule, I., Kotane, I., Sprudzane, S., & Bartkute-Norkuniene, V. (2023). Digital innovations in tourism: The perceptions of stakeholders. *Worldwide Hospitality and Tourism Themes*. https://doi.org/10.1108/WHATT-06-2023-0080

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.

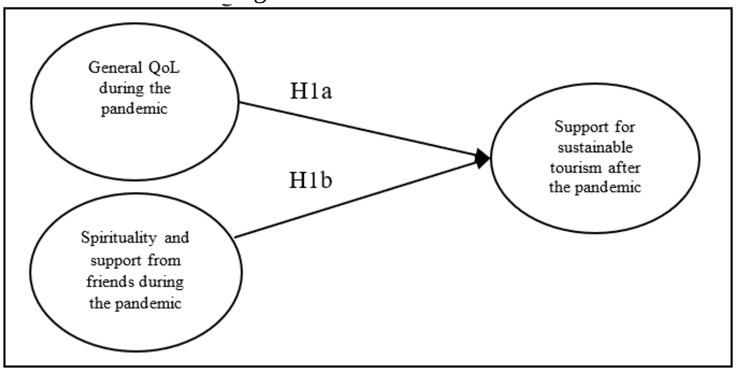
4. Results and discussion

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)**.

When giving references, APA system of referencing should be used. For more information see *Publication Manual of the American Psychological Association* (6th ed.).

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).

All **references** should be given at the end of the text in an alphabetical order. Authors should note that all references must be provided in the original language, while the title of the references that have not been published in the English language **should be translated** and provided after the original title, in square brackets. **Indicate the titles of publications in lowercase style**. Use of the **DOI** is highly recommended for articles.

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.).

One-author book
E.g.: Hrabovski Tomić, E. (2009). *Destinacije zdravstvenog turizma [Medical tourism destinations]*. Novi Sad, Srbija: Prometej.

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
E.g.: Feret, K. (2011). Serbia and Poland on map of the global air cargo shipment. In V. Babić (Ed.), *Contemporary Issues in Economics, Business and Management - EBM 2010* (pp. 3-16). Kragujevac, Serbia: Faculty of Economics University of Kragujevac.

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/

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

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