



PERCEPTION OF THE SAFETY IN THE APPLICATION OF DIGITALIZATION IN TOURISM AND HOSPITALITY: THE EXAMPLE OF TOURISTS FROM SERBIA AND MONTENEGRO

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Abstract:

Modern technology has significantly transformed business operations in tourism and hospitality, particularly through the digitalization of service promotion, booking, and payment processes. Contemporary tourists, characterized by better access to information, digital literacy, and demands for personalization, increasingly use online platforms such as Booking.com, Airbnb, and Trip Advisor, which facilitate easier trip planning and transaction execution. However, the perception of security in online booking and payments remains a key factor influencing user trust and the success of digital platforms. The aim of this research is to examine the attitudes of users from Montenegro and Serbia regarding the security of online tourism services and to identify the factors shaping trust. Empirical research was conducted through an online survey of 118 respondents, covering demographic data, digital platform usage habits, subjective sense of security, and prior user experiences. **The results confirm that the subjective sense of security is directly related to usage frequency and prior experience, and reviews and platform reputation significantly influence decision-making.** It is concluded that the security of online bookings and payments depends on a combination of technical, psychological, and communication aspects, and the research findings can serve as a basis for improving digital security and user trust in the tourism sector.

Keywords:

digitalization, online platforms, security, Montenegro, Serbia.

INTRODUCTION

Modern technology has substantially changed business activities across a wide range of industries, including tourism and hospitality (Buhalis, *et al.*, 2024). The contemporary tourist, characterized by greater access to information, a demand for personalized services, higher purchasing power, a willingness to spend money and free time on travel, and digital literacy—combined with the fact that modern tourists are much more demanding than tourists of the past—necessitates monitoring current market trends (Wang, *et al.*, 2024; & Sousa, *et al.*, 2024). The application of technology (specifically the digitalization of business activities) in tourism and hospitality, is reflected in service and product promotion, booking processes, availability of alternatives, and similar areas, enabling contemporary tourists to make easier decisions and facilitating trip planning (Kandampully & Solnet, 2024).

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Online booking of travel packages, accommodation, and other services in hotels has become a standard in modern tourism. Platforms such as Booking.com, Airbnb, and TripAdvisor act as key intermediaries between tourism supply and demand (Kandampully & Solnet, 2024). Using these platforms not only increases visibility and attracts real and potential tourists but also influences a company's positioning in a competitive market. Reviews, which significantly affect tourists' perception of services and products, are one of the main advantages of online operations (Guo & Pesonen, 2022).

Despite numerous advantages, the issue of security in online booking and payments is a pressing concern for tourism service users. The risk of unauthorized use of personal and financial data creates barriers to fully embracing digitalization in tourism and hospitality (Ratna, *et al.*, 2024). Awareness of incomplete security is directly linked to tourists' distrust and their willingness to use online booking services, which directly affects the success of travel agencies and hotel systems. Failure to implement adequate security measures may lead not only to financial losses but also to reputational damage for companies operating in this sector (Ying, *et al.*, 2021).

Understanding tourists' perceptions of online transaction security is crucial for improving business operations in the tourism sector (Ratna, *et al.*, 2024). Observing and researching tourists' attitudes toward online security helps define key indicators that influence consumer trust and formulate recommendations for enhancing digital communication and data protection necessary for tourism businesses.

Two hypotheses were defined and later confirmed by the research results:

- Hypothesis 1 (H1): There is a positive relationship between the expansion of the digital business model in tourism and the growth of users' trust in the security of online tourism platforms.
- Hypothesis 2 (H2): Users' subjective sense of security increases with the frequency of using online services and previous experience with digital tourism platforms.

The aim of this study is to investigate perceptions of security in online bookings and payments among tourism service users and to identify the factors that critically influence their trust and willingness to use digital platforms. The research was conducted via an online survey in Montenegro and Serbia. The findings can serve as a basis for improving the practice of digital security and user trust in travel agencies and hotels.

However, certain limitations must be considered when interpreting the results:

- Geographical limitation: The study was conducted only in Montenegro and Serbia, which may limit the generalization of the findings to broader markets or different cultural and regulatory contexts.
- Temporal limitation: The survey was conducted from September to October 2025, reflecting perceptions and attitudes exclusively during this period, which may not represent long-term or seasonal changes in user behaviour.

THEORETICAL FRAMEWORK

Technological development and discoveries have directly influenced tourism business, especially in promotion, sales, and distribution of products and services. Modern distribution and sales channels have led to the emergence of e-tourism, which integrates digitalization across all aspects of trip planning, from research and booking to post-travel activities (Debeljak, 2022). Integration of modern digital processes has increased information availability, transparency of offerings, and personalization of tourism products (Medinac, 2024).

In addition to technical data protection, the modern concept of security in tourism includes the dimension of digital trust, which reflects tourists' attitudes toward digital services and their transparency. In tourism and hospitality, this involves users expecting that all necessary information about payment conditions, privacy protection, and cancellation options is readily available on platforms (Elshaer, 2024).

Even when platforms implement advanced security protocols, users' perceptions may differ. Subjective security is shaped by experience, recommendations from other users, and information about data protection, while objective security refers to the actual technical and organizational measures applied by platforms, such as SSL encryption, two-factor authentication, secure payment protocols, regular software updates, and compliance with



GDPR (Wiegel, 2021; Gadde, 2023). Understanding the difference between objective and subjective security is critical for travel agencies and hotels, as it allows identification of not only technical shortcomings but also communication and reputation elements affecting tourists' behaviour (Anichiti, 2021).

Online booking and payment for services contribute to more efficient business operations for travel agencies and hotels. Platforms like Booking.com and Expedia allow real and potential tourists to plan trips and make transactions, accelerating and simplifying the entire planning and travel process (Bartulović, 2024). Reviews and experiences of other users play a particularly important role in positioning companies in the minds of consumers; positive reviews increase trust and reduce perceived risk, while negative reviews have the opposite effect (Zajec, 2024).

Security in online transactions involves strict protection of personal and financial data, system reliability, and prevention of unauthorized access. Perception of digital transaction security also depends on measures taken by service providers (SSL certificates, two-factor authentication, etc.). Brand and corporate image strongly influence tourists' trust in online bookings and payments while peer recommendations significantly affect decision-making (Vuletić, 2024; & Yang, 2024).

Tourists increasingly focus on how companies manage their personal data. Data protection regulations, such as GDPR, set high standards of transparency and accountability for EU-based tourism businesses (Lučić, 2023). Technical security, privacy protection, transparency, and reputation collectively contribute to positive tourist perceptions of online booking and payment security (Majcen, 2024).

Digitalization of tourism services in Montenegro and Serbia is a key factor in enhancing destination competitiveness, increasing global visibility, and promoting local communities (Ratković & Vulević, 2025; & Spalević, 2024). Examples include the national portal Visit Montenegro (Visit-montenegro, 2025), which provides online bookings and secure payment options, and eBooking.rs in Serbia, which improves efficiency and transparency (Ebooking, 2025). Platforms like seoskiturizam.rs support rural tourism by showcasing authentic cultural and gastronomic values, enhancing the visibility of local traditions and fostering sustainable tourism development. (Seoskiturizam, 2025)

In summary, digitalization improves technical security, builds user trust, and contributes to the competitiveness and sustainability of destinations, aligning with global trends in digital tourism transformation.

METHODOLOGY

The aim of this research is to examine tourists' perceptions of security and trust regarding the digitalization of trip planning processes, with a focus on online service booking and payment safety. Respondents were also asked about their personal experiences with digital tourism services. A quantitative, descriptive approach was applied to present characteristics and attitudes numerically and statistically for clear and precise results.

The research instrument was an online survey via Google Forms. It was designed for clarity and ease of completion, with automatic data recording for statistical analysis. The survey was conducted from September to October 2025, distributed through digital channels (social media, student groups).

The target group included users of online tourism platforms from Montenegro and Serbia. A total of 118 respondents participated voluntarily and anonymously, with prior explanation of the research purpose and data usage for academic purposes only.

The survey comprised four main sections:

1. Demographic questions – age, gender, education, and country of residence.
2. Online booking habits – frequency, type of bookings, preferred devices.
3. Perception of security and trust – subjective sense of safety and trust in platforms and payments.
4. Experiences and recommendations – past experiences, positive/negative situations, and willingness to recommend.

Data were analysed using descriptive statistics, including frequency and percentage distributions. Results are presented in tables and visualized through charts for clarity, enabling identification of key patterns and trends in user behavior and attitudes.



RESEARCH RESULTS

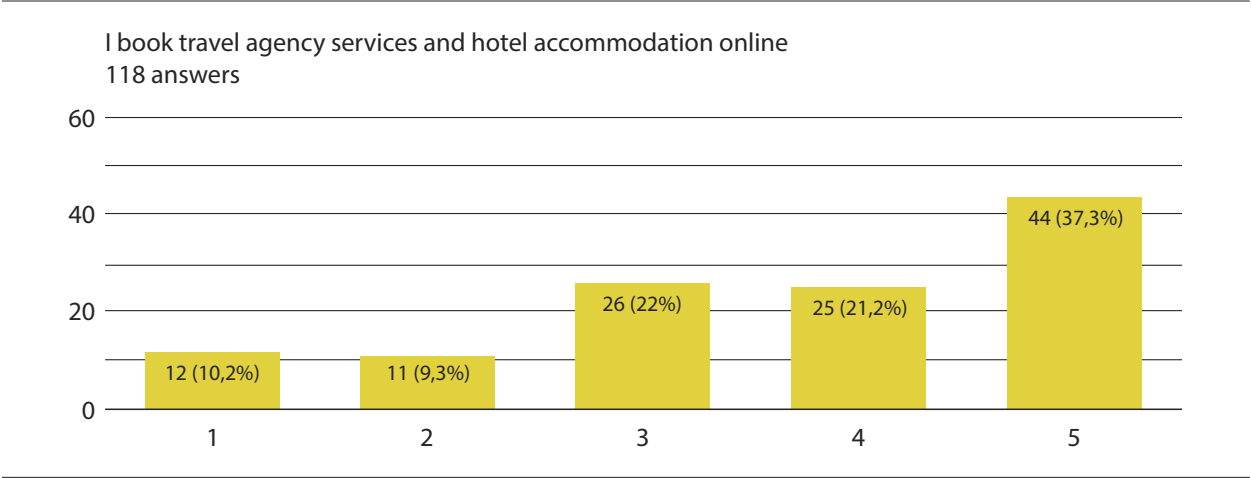
Based on the conducted research and the results obtained through the online survey, the subsequent sections of this paper present key data indicating users’ perception of security and trust in online tourism platforms, as well as define the indicators that influence their behavior and decision-making regarding service bookings and online payments.

The first part of the survey focused on the respondents’ demographic data, which enables the identification of the dominant market segment that engages in online booking and payment processes.

The second part of the questionnaire addressed respondents’ perception and attitudes toward the security of the digitalized travel planning process and financial transactions. These perceptions are influenced by prior experiences, the level of digital literacy, and the availability of clear and concise information on the platforms used or planned for use.

The following sections present the key results obtained, which provide insight into the perception of security regarding online bookings of travel agency and hotel services, as well as online payment transactions.

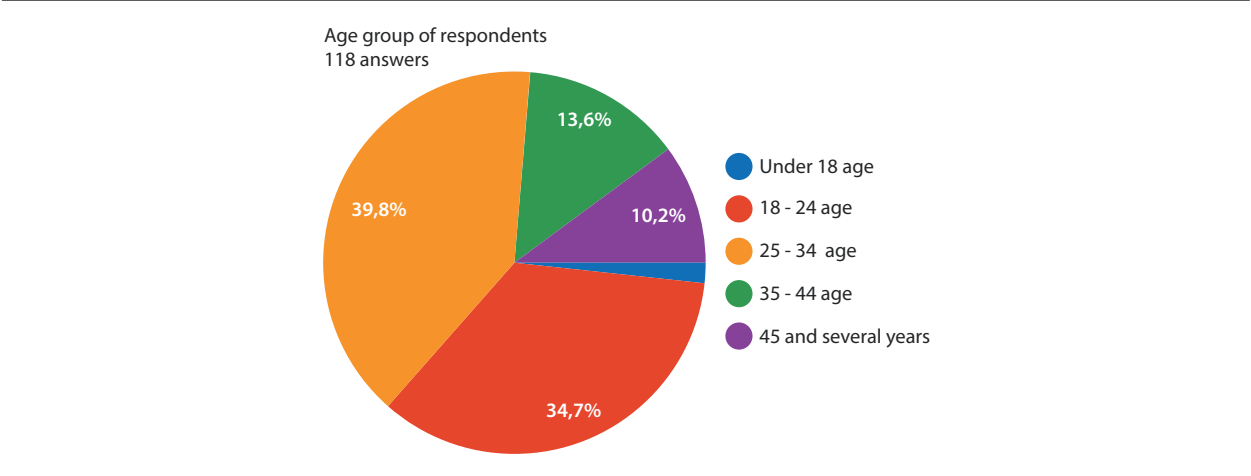
Figure 1. I book travel agency services and hotel accommodations online



Source: Author

Based on the results presented in Figure 1, it can be concluded that 37.3% of respondents book travel agency services and hotel accommodations online. This finding supports the thesis that online bookings are becoming the dominant form of distribution for tourism products, aligning with the e-tourism trends highlighted in the theoretical framework. Compared to traditional sales models, digital channels provide greater accessibility to offers, faster responses to user requests, and reduced transaction costs.

Figure 2. Age group of respondents

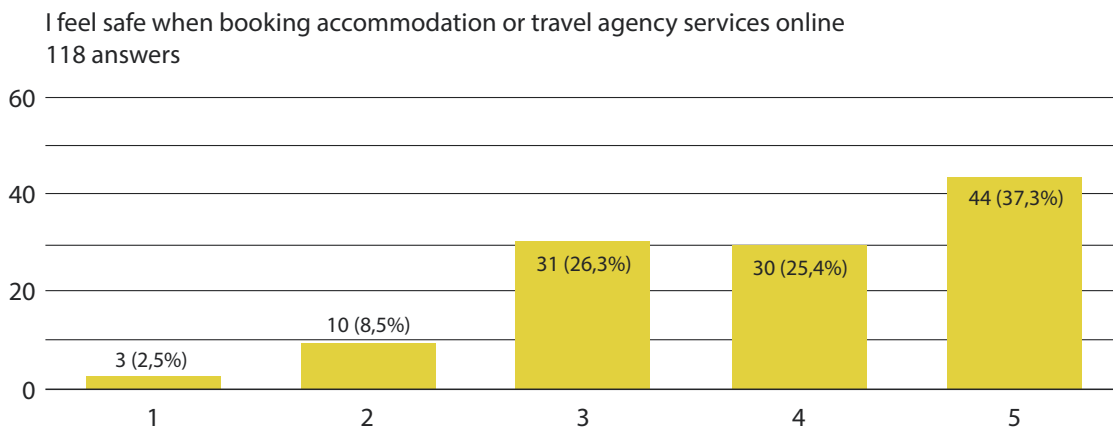


Source: Author



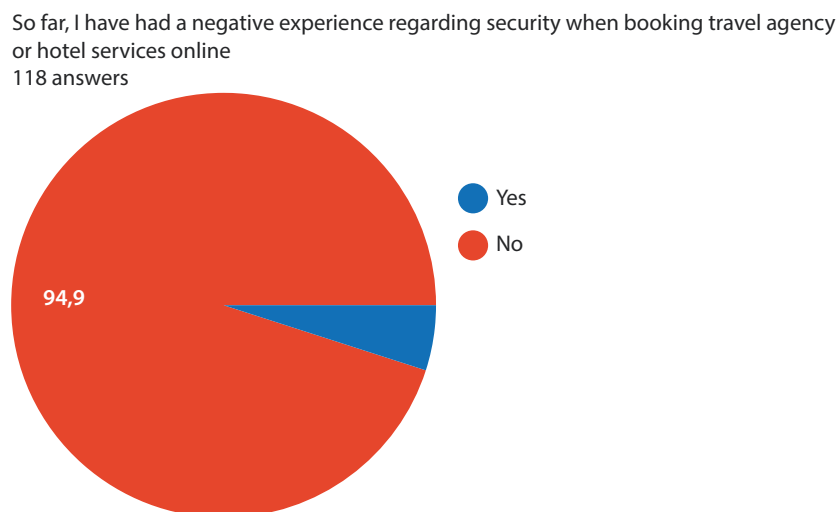
The results obtained (Figure 3) indicate that the majority of respondents feel safe when making online bookings and payments. This may be directly related to the results shown in Figure 4, where only 6 out of a total of 118 respondents have had a negative experience regarding the security of the digitalized process for booking travel agency services and hotel accommodations. Furthermore, the results presented in Figure 3 show that most respondents express a high level of perceived security when performing online bookings and payments. This perception is directly linked to the level of prior experience and familiarity with digital platforms, which confirms the study's hypothesis that the subjective feeling of security increases with the frequency of using online services.

Figure 3. I feel safe when booking hotel accommodations or travel agency services online



Source: Author

Figure 4. I have had a negative experience regarding security when booking travel agency or hotel services online

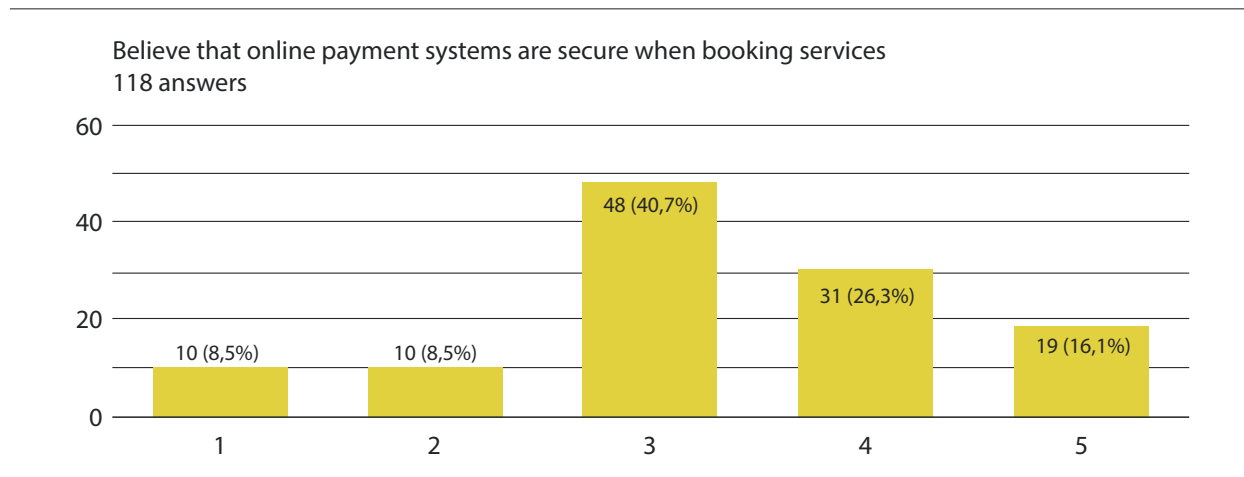


Source: Author

How much do reviews influence a tourist's perception of security, according to the online survey, 53 out of a total of 118 respondents make their decision to use a website for online bookings based on the previous experiences of other tourists and their reviews. This indicates that nearly half of the surveyed participants rely heavily on peer feedback when assessing the trustworthiness and safety of a digital platform. Reviews serve as a form of social proof which helps potential users evaluate the reliability of services and the overall security of the booking process, which highlights the importance of maintaining positive user experiences and transparent communication on online tourism platforms.



Figure 5. I believe that online payment systems are secure when booking services



Source: Author

In Figure 4, the respondents' answers to the question regarding the perception of security of online payment systems when booking services are presented. It can be concluded that the majority of respondents agree with the statement and trust the security of online payments, while only 10 out of 118 respondents disagree, indicating a lack of confidence in online transactions. These results can be linked to another question in the survey, which shows that, alongside non-existent or unclear reviews, doubts about the security of payment systems are a key factor when completing online bookings and transactions for tourism services or products.

Respondents highlighted that the main aspects of business that travel agencies and hotel companies should improve, in order to enhance the security of their digital platforms, include providing accurate, concise, and clear information and instructions for online payments and bookings, as well as implementing customer support within their platforms.

This finding confirms the trend of gradual transition from traditional to digital business models in tourism, alongside a simultaneous increase in user trust in the technical and organizational security of platforms. This supports Hypothesis 1 (H1), which asserts that the expansion of digital business models in tourism is proportionally accompanied by growing user confidence in the security of online tourism platforms. Such findings are fully consistent with the global process of digital transformation in the tourism sector.

CONCLUSION

Digitalization offers numerous advantages to the tourism market, providing faster access to information, greater transparency, and more efficient planning and booking of travel services. However, perceptions of security remain a fundamental factor in establishing trust between tourists and service providers. This study demonstrates that users in Montenegro and Serbia generally hold positive attitudes toward online booking and payment systems, although a minority still expresses a degree of skepticism or caution.

The research confirms that subjective perceptions of security are closely linked to prior experience and the frequency of using digital tourism platforms. Specifically, Hypothesis 1 (H1), which posits that the expansion of digital business models in tourism positively correlates with increased user trust in the security of online tourism platforms, was supported. Similarly, Hypothesis 2 (H2), which states that users' subjective sense of security grows with repeated use of online services and prior experience with digital platforms, was also confirmed. These findings indicate that trust in digital platforms is shaped not only by technical measures but also by psychological and experiential factors, including platform reputation, transparency, clarity of information, and the perceived quality of interactions with service providers.

User reviews and the experiences of other tourists emerge as crucial elements in shaping trust and perceived security. Positive feedback acts as a form of informal validation of platform reliability, encouraging further use, while negative reviews may strongly influence decisions regarding booking and online payments.



Consequently, travel agencies, hotels, and other businesses operating digitally should not only ensure technical security measures—such as SSL encryption, two-factor authentication, and secure payment protocols—but also actively cultivate a trustworthy and transparent digital presence. Clear guidance for users, responsive support, and the communication of security practices are essential for fostering confidence and long-term loyalty.

The results of this study provide a detailed understanding of how users perceive the security of online tourism services and the factors that influence their trust and decision-making. They offer valuable insights for tourism practitioners aiming to enhance digital safety and user confidence in online platforms. Furthermore, these findings lay the groundwork for future research by highlighting aspects that could be explored in broader geographical or temporal contexts, or in studies considering additional demographic, cultural, or technological variables. Researchers and practitioners planning to expand this area of inquiry can build upon these insights to further refine strategies for enhancing security, trust, and overall user satisfaction in digital tourism ecosystems.

In conclusion, trust in digital tourism platforms depends on a combination of technical security, user experience, reputation, and transparent communication. As the tourism sector continues to embrace digitalization, understanding and addressing these multifaceted components of security perception is critical for achieving sustainable growth, fostering customer loyalty, and maintaining a competitive advantage in an increasingly connected global marketplace.

REFERENCE

- Anichiti, A., Dragolea, L. L., Tacu Hârșan, G. D., Haller, A. P., & Butnaru, G. I. (2021). Aspects regarding safety and security in hotels: Romanian experience. *Information*, 12(1), 44. <https://doi.org/10.3390/info12010044>
- Bartulović, T. (2024). *Primjena digitalnih tehnologija u turizmu na primjeru elektroničkih rezervacija, društvenih medija i mobilnih aplikacija* [Doctoral dissertation, University of Split, Faculty of Economics Split].
- Buhalis, D., Efthymiou, L., Uzunboylu, N., & Thrassou, A. (2024). Charting the progress of technology adoption in tourism and hospitality in the era of industry 4.0. *EuroMed Journal of Business*, 19(1), 1–20. <https://doi.org/10.1108/EMJB-11-2023-0310>
- Debeljak, N. (2022). *Primjena E-marketinga u turizmu na primjeru aplikacije Airbnb* [Doctoral dissertation, Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek].
- Elshaer, I. A., Alyahya, M., Azazz, A. M., Ali, M. A. S., Fathy, E. A., Fouad, A. M., ... & Fayyad, S. (2024). Building digital trust and rapport in the tourism industry: A bibliometric analysis and detailed overview. *Information*, 15(10), 598. <https://doi.org/10.3390/info15100598>
- Gadde, S., Rao, G. S., Veeram, V. S., Yarlagaadda, M., & Patibandla, R. S. M. (2023). Secure data sharing in cloud computing: A comprehensive survey of two-factor authentication and cryptographic solutions. *Ingenierie des Systemes d'Information*, 28(6). <https://doi.org/10.18280/isi.280604>
- Guo, X., & Pesonen, J. A. (2022). The role of online travel reviews in evolving tourists' perceived destination image. *Scandinavian Journal of Hospitality and Tourism*, 22(4–5), 372–392. <https://doi.org/10.1080/15022250.2022.2112414>
- Kandampully, J., & Solnet, D. (2024). *Service management principles for hospitality & tourism in the age of digital technology*.
- Lučić, S. (2023). Protection of personal data in the tourism sector. *Менаџмент у хотелијерству и туризму*, 11(1), 193–206.
- Majcen, M. (2024). *Utjecaj društvenih mreža na strateški menadžment turističkih poduzeća* [Doctoral dissertation, University of Rijeka, Faculty of Tourism and Hospitality Management].
- Medinac, S. (2024). *Umjetna inteligencija i turizam* [Doctoral dissertation, University of Pula, Faculty of Economics and Tourism “Dr. Mijo Mirković”].
- Pavluković, V., Kovačić, S., Pavlović, D., Stankov, U., Cimbalević, M., Panić, A., ... & Pivac, T. (2024). Tourism destination competitiveness: An application model for Serbia. *Journal of Vacation Marketing*. Advance online publication. <https://doi.org/10.1177/13567667241261396>



- Ratković, R., & Vulević, M. (2025). Savremeni izazovi razvoja jezerskog turizma u Crnoj Gori. *Knowledge: International Journal*, 70(1).
- 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>
- Santarsiero, F., Carlucci, D., Lerro, A., & Schiuma, G. (2024). Navigating digital transformation and business model innovation in the tourism sector: Challenges, opportunities, and leadership styles. *Measuring Business Excellence*, 28(3–4), 426–438. <https://doi.org/10.1108/MBE-09-2023-0137>
- Sousa, A. E., Cardoso, P., & Dias, F. (2024). The use of artificial intelligence systems in tourism and hospitality: The tourists' perspective. *Administrative Sciences*, 14(8), 165. <https://doi.org/10.3390/admsci14080165>
- Spalević, Ž., Trifunović, I., & Marković, S. (2024). Progres veštačke inteligencije: Izazovi i mogućnosti u E-turizmu. *Limes-plus*, 20(2–3), 257–276.
- Vitić-Četković, A., Jovanović, S., & Krstić, B. (2012). Determinante unapređenja konkurentnosti turizma Crne Gore i Srbije u uslovima globalizacije. *Economic Themes*, 50(1).
- Vuletić, B. (2024). *Implementacija E-trgovine i sustava plaćanja u turizmu* [Doctoral dissertation, University of Rijeka, Faculty of Tourism and Hospitality Management].
- Wang, R., Wu, C., Wang, X., Xu, F., & Yuan, Q. (2024). E-tourism information literacy and its role in driving tourist satisfaction with online travel information: A qualitative comparative analysis. *Journal of Travel Research*, 63(4), 904–922. <https://doi.org/10.1177/00472875231177229>
- Wiegel, H., Warner, J., Boas, I., & Lamers, M. (2021). Safe from what? Understanding environmental non-migration in Chilean Patagonia through ontological security and risk perceptions. *Regional Environmental Change*, 21(2), 43.
- Yang, X., Zhang, L., & Feng, Z. (2024). Personalized tourism recommendations and the E-tourism user experience. *Journal of Travel Research*, 63(5), 1183–1200.
- Ying, T., Tan, X., Wei, W., Zheng, Y., Ye, S., & Wu, M. (2021). “I have to watch my back”: Exploring Chinese hotel guests' generalized distrust and coping behavior. *Tourism Management*, 86, 104355. <https://doi.org/10.1016/j.tourman.2021.104355>
- Zajec, M. (2024). *Uloga online recenzija i rezervacijskih sustava u odlučivanju potrošača u turističkom sektoru* [Doctoral dissertation, Josip Juraj Strossmayer University of Osijek, Faculty of Economics and Business in Osijek].
- Zeqiri, A., Ben Youssef, A., & Maherzi Zahar, T. (2025). The role of digital tourism platforms in advancing sustainable development goals in the Industry 4.0 era. *Sustainability*, 17(8), 3482. <https://doi.org/10.3390/su17083482>
- Ebooking.rs. (n.d.). Retrieved October 5, 2025, from <https://www.ebooking.rs/>
- Seoskiturizam.rs. (n.d.). Retrieved October 5, 2025, from <http://seoskiturizam.rs/>
- Visit Montenegro. (n.d.). Retrieved October 5, 2025, from <https://www.visit-montenegro.com/>