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INTEGRATED MODEL FOR RANKING ONLINE BOOKING PLATFORMS USING MCDM METHODS: PIPRECIA–S AND NWA

Milan Brkljač
PhD, Associate Professor, Alfa BK University, Bulevar maršala Tolbuhina 8, 11070 Belgrade, Serbia;
email: milan.brkljac@alfa.edu.rs

Vladimir Kraguljac
PhD, Assistant Professor, University of Kragujevac, Faculty of Hotel Management and Tourism Vrnjačka Banja, Vojvodjanska bb, 36210 Vrnjačka Banja, Serbia; email: vladimir.kraguljac@kg.ac.rs

Biljana Viduka
PhD, Research Associate, Institute of Economic Sciences, Zmaj Jovina 12,
11000 Belgrade, Serbia; email: biljana.viduka@ien.bg.ac.rs

Aleksandra Perović
PhD, Associate Professor, Alfa BK University, Bulevar maršala Tolbuhina 8, 11070 Belgrade, Serbia;
email: aleksandra.perovic@alfa.edu.rs

Dejan Viduka
PhD, Full Professor, Alfa BK University, Bulevar maršala Tolbuhina 8, 11070 Belgrade, Serbia;
email: dejan.viduka@alfa.edu.rs

ABSTRACT

The purpose of this research is to rank online platforms for booking services in tourism in order to identify the most reliable option based on key criteria that affect the user experience. Special focus is put on trust and security, booking flexibility, reviews and recommendations, location and availability, as well as price transparency. The research methodology includes the application of an integrated approach of multi-criteria analysis, combining PIPRECIA-S and NWA methods. This combination allows for a reduction in ranking bias and a more accurate evaluation of the performance of online platforms such as Booking.com, Agoda.com, Hotels.com and Kayak.com. The results of the analysis show that Booking.com occupies the highest position in the ranking, which confirms its comprehensive reliability according to the defined criteria. The conclusions highlight the importance of using integrated multi-criteria methods in making informed decisions on the digital market. These findings provide guidelines for optimizing user experience and increasing transparency in online bookings, thus contributing to the improvement of service quality in the e-tourism sector.

Keywords: *online reservations, multi-criteria analysis, PIPRECIA-S, NWA, reservation platforms*

1. INTRODUCTION

The rapid advancement of technology has led to the transformation of various industries, with tourism being one of the areas that has experienced the most significant changes (Pencarelli, 2020). The digital revolution in this sector has introduced online booking platforms as key tools for travellers and service providers (Zeqiri, 2024). These platforms allow users to easily plan, compare and book accommodation, transportation and other services, virtually from anywhere in the world (Gössling *et al.*, 2015). With the increasing availability of global travel, online booking systems are experiencing exponential growth in popularity (Vanhove, 2005). Industry leaders such as Booking.com, Expedia and Airbnb dominate the market and set the standard in customer engagement and service delivery.

However, the increasing reliance on online booking platforms raises important questions about the qualitative differences between these systems (Buhalis *et al.*, 2002; Xiang *et al.*, 2017). For users, choosing the right platform often involves evaluating multiple factors, such as trust and security, booking flexibility, price transparency, and the reliability of user reviews. On the other hand, for service providers, competition among platforms imposes the need for a deeper understanding of the factors that influence user satisfaction and loyalty (Subramanian *et al.*, 2014).

Despite the widespread use of these systems, it is notable that there is a lack of academic literature that includes a comprehensive evaluation of these platforms based on criteria important to end users. Most researches focus on technological aspects or marketing strategies, while analyses that prioritize user needs are rare. Given the dynamic nature of the tourism industry, the application of multi-criteria decision-making (MCDM) methods is a key approach to provide a holistic analysis of these platforms.

This paper aims to fill the aforementioned gap by evaluating and ranking popular online booking platforms using the MCDM. Factors such as "Trust & Security", "Booking Flexibility", "Reviews & Recommendations", "Location & Availability" and "Price Transparency" are taken into account, aiming to provide valuable insights for users and stakeholders in the tourism sector. It is expected that the findings of this research will contribute to the development of platforms more oriented towards the needs of users and will serve as a basis for future research in this area.

Although previous studies have analysed technological, marketing or behavioural aspects of online booking systems, there is still a lack of research that simultaneously examines key user-centric criteria using an integrated MCDM framework.

This study contributes to the literature by:

1. introducing a two-stage hybrid model (PIPRECIA-S and NWA) that reduces expert bias,
2. analysing five criteria that directly reflect user experience and decision-making,
3. providing a comparative ranking of leading platforms that has not been presented in previous research.

The research fills the gap related to the absence of integrated methodological approaches and limited comparisons of booking platforms in tourism.

Based on the identified gaps, the following research questions are formulated:
Q_1 – Which criteria are the most influential in evaluating online booking platforms?
Q_2 – Which platform performs best when evaluated through an integrated MCDM model?
Q_3 – How robust are the rankings under changes in decision criteria weights?

The remainder of this paper is structured as follows. Section 2 describes the methodological framework, including the application of Simplified Pivot Pairwise Relative Criteria Importance Assessment (PIPRECIA-S) and Net Worth Analysis (NWA) methods. Section 3 presents the empirical results, while Section 4 provides a sensitivity analysis and discussion of potential methodological bias. Section 5 discusses the findings, and Section 6 concludes the paper by highlighting implications, limitations and directions for future research.

1.1 Online platforms for booking in tourism

Online booking platforms have become a key part of the modern tourism ecosystem (Alaimo *et al.*, 2020). These platforms allow users to quickly and efficiently find accommodation, transportation, and other travel services, while offering providers of those services access to a broad user base (Buhalis, 1998). Popular platforms not only offer different types of accommodation, but also provide additional functionalities such as customized recommendations, interactive maps and search filters to help users make informed decisions (Behki *et al.*, 2024).

In addition to numerous benefits, these platforms also bring challenges, such as price transparency and user trust (Veltri *et al.*, 2023). Many users rely on reviews and ratings from previous guests to judge the quality of the offering, while service providers make efforts to increase visibility and competitiveness on these platforms (Lappas *et al.*, 2016; Raguseo *et al.*, 2017; Tadelis, 2016). However, the differences in functionality and user experience between platforms indicate the need for objective evaluation to determine their strengths and weaknesses.

1.2 Trust and security in online bookings

Trust is one of the key factors influencing the success of online booking platforms (da Costa, 2017). Users expect their personal and financial information to be protected, as well as reservations to be made without errors and unforeseen problems. Platforms that invest in security protocols and transparent communication with users gain a significant advantage over the competition (Ismail *et al.*, 2016, Perović *et al.*, 2023).

Apart from the technical aspects of security, user trust often depends on the perception of the platform's reliability (Flavián *et al.*, 2006). Negative experiences, such as hidden costs, unclear cancellation policies or untrue descriptions of accommodations, can significantly erode

user confidence (Antonio *et al.*, 2019). Therefore, trust is directly related to the platform's reputation and long-term user loyalty (Mas-Machuca *et al.*, 2021).

1.3 User satisfaction and reviews

User satisfaction is a key indicator of the success of online booking platforms (Ahmad *et al.*, 2023). A satisfied user not only returns to the platform, but also tends to share positive reviews and recommendations, which further increases its reputation (Filieri, 2015). Reviews have a central role in the customer's decision-making process, as they provide valuable information about service quality from the perspective of previous guests (Lee *et al.*, 2017).

However, the real value of reviews depends on their credibility and transparency. Platforms that apply strict review validation criteria and provide users with the opportunity to provide detailed feedback achieve a higher level of credibility (Metzger, 2007). User satisfaction is also influenced by other factors, such as ease of use of the platform, clarity and availability of information and support for users in case of problems (Tarafdar *et al.*, 2010).

2. METHODOLOGY AND MATERIALS

2.1 A simplified method for evaluating the relative importance of criteria (PIPRECIA-S)

The original PIPRECIA method was already applied in the field of tourism (Janošik *et al.*, 2023; Popović *et al.*, 2021). The PIPRECIA-S method was chosen here in order to facilitate the determination of the weighting coefficients of the criteria, because in it, unlike the original, the importance of each criterion is compared with the importance of the first criterion. The main advantage of the PIPRECIA-S method is its simplicity and ease of application in group decision-making processes. However, unlike the extended PIPRECIA method (PIPRECIA-E) (Stanujkic *et al.*, 2016), and the AHP method (Saaty, 1987), PIPRECIA-S does not include a consistency check, which is its key flaw.

The procedure for determining weight coefficients of criteria using the PIPRECIA-S method consists of five steps, which are shown below (Stanujkic *et al.*, 2021).

Step 1. Selection of evaluation criteria . This step implies defining the criteria C_j, $j = 1, \ldots, n$ where n is the number of criteria taken into account when solving the problem. Criteria can be determined by using the literature and/or with the help of expert opinions.

Step 2. Determining the relative importance of criteria s_j. First, the criterion (C_1) is determined, which is used as a basis for comparison. Starting from the second criterion, each criterion C_j is assigned the relative importance of criterion s_j based on equation (1). Therefore, each criterion C_j is compared with the reference criterion C_1.

$$s_j = \begin{cases} > 1, C_j > C_1 \\ = 1, C_j = C_1 \\ < 1, C_j < C_1 \end{cases} \quad (1)$$

If criterion C_j is more important than criterion C_1, it is assigned a value s_j that is greater than 1. If criterion C_j is less important than criterion C_1, it is assigned a value less than 1. If criteria C_1 and C_j are equally important, then both criteria have an importance value of 1. Values s_j belong to the interval [0.6, 1.4]. The value s_1 represents the assessment of the importance of the reference criterion C_1 and is always 1.

Step 3. The value of the coefficient k_j is calculated based on equation (2).

$$k_j = \begin{cases} 1, j = 1 \\ 2 - s_j, j > 1 \end{cases} \tag{2}$$

Step 4. The value of the coefficient q_j is calculated based on equation (3).

$$q_j = \begin{cases} 1, j = 1 \\ \dfrac{1}{k_j}, j > 1 \end{cases} \tag{3}$$

Step 5. Calculation of the relative weight of w_j criteria. Based on equation (4), the relative weight of criteria w_j, is calculated, where $0 \leq w_j \leq 1$ and $\sum_{k=1}^{n} w_k = 1$.

$$w_j = \frac{q_j}{\sum_{k=1}^{n} q_k} \tag{4}$$

After this step, the process of determining the weight values of the criteria is completed.

The first criterion was chosen because it represents the most basic element of user trust (Kim *et al.*, 2008) in online reservations, which is in accordance with the recommendations of the authors of the method. PIPRECIA-S was chosen because it reduces the burden on the experts and enables a simpler group evaluation.

2.2 Net Worth Analysis (NWA)

MCDM is a decision-making process in which multiple criteria or factors are considered in order to select the best possible option among different alternatives (Bakir *et al.*, 2020; Karamaşa, 2021; Nikolić *et al.*, 2010; Özdağoğlu *et al.*, 2021). This method is particularly useful in situations where different aspects or objectives need to be considered, as often one option cannot adequately satisfy all requirements. MCDM is applied in a number of areas, including business decisions, resource management, product or service selection, project planning, as well as in education and public policy. The goal of MCDM is to identify and rank alternatives based on predefined criteria in order to make an informed decision that best meets the needs or goals of an organization or individual.

Multi-criteria decision-making often involves multiple, sometimes conflicting, criteria. Multi-attribute Utility Theory (MAUT) represents a specific part of this approach (Uzun *et al.*, 2021; Čupić *et al.*, 2003). In practice, decisions between different alternatives are often made based on experience and intuition.

NWA is a tool suitable for the systematic evaluation and classification of alternatives in order to identify the most suitable option (Zangemeister, 2014). The evaluation process through NWA is simple and transparent, and the method focuses on determining the best solution through predefined evaluation criteria. According to Zangemeister (2014), NWA involves the analysis of a set of complex alternatives with the aim of ranking them according to the overall values, which are determined on the basis of a multidimensional system of evaluation criteria.

According to this method, the total value of the alternative increases with the increase of individual values that are adjusted according to the importance factors. A formula for calculating the value in the context of significant factors is used as the basis for the assessment.

In this step, the evaluations of the second expert group are analysed, which should evaluate all the criteria for the given platforms independently of the first one. This is to get a second opinion in order to get the most reliable assessment of the platform.

$$N = \sum_{j=1}^{9} g_j \cdot n_{ij} \tag{5}$$

In formula (5), (g_j) represents the weighting factor of criterion (j), while (n_{ij}) denotes the score of alternative (i) according to criterion (j). The final value (N) is obtained by adding the product of weights and scores across all observed criteria.

2.3 Final merging of the two methods

The last stage in the measurement of the results is the merging of the final results of the two mentioned methods and the calculation of their average values for each of the mentioned platforms. The following formula is used to calculate the final results.

$$\mathrm{F} = \frac{q_w + N}{2} \tag{6}$$

At the end, the average score from the scores obtained from two groups of experts is calculated, which shows the final ranking of the platforms that were evaluated in this paper.

2.4 Expert groups and data collection

Two independent expert groups participated in the evaluation process. The first group (n = 7) was responsible for determining the relative importance of criteria using the PIPRECIA-S method, while the second group (n = 5) provided performance assessments for each platform using the NWA method. Experts were selected based on their professional experience in tourism management, digital platforms and online booking systems. The sample included 6 males and 6 females, with an average professional experience of 9 years. This procedure ensured that all evaluations were provided by experts with sufficient domain knowledge of the assessed platforms.

2.5 Evaluation criteria

For effective evaluation and ranking of online booking platforms in tourism, it is necessary to define key criteria that include the most important aspects of user experience and performance of the platforms themselves. In this research, five main criteria were identified that provide a comprehensive framework for the analysis:

1. **Trust and security** of users in transactions and protection of personal data is a basic factor for attracting and retaining users. Security mechanisms and privacy protection play a key role in increasing trust in platforms, which directly affects user decisions (Jones *et al.*, 2008).
2. **Reviews and recommendations** – high-quality, relevant and detailed reviews significantly influence the trust of users and their decisions when making reservations. Positive recommendations, especially those coming from trusted sources, can strengthen the perception of service quality on the platform (Singh *et al.*, 2017).
3. **Location and accessibility** – information about the proximity of attractions, access to public transport and other points of interest are key factors for users when choosing accommodation. Platforms that offer detailed and accurate location information have a significant advantage in user satisfaction (Celata *et al.*, 2020).
4. **Transparency of prices** – clear and transparent information about prices, additional costs and refund options influence users' trust and their decision to use the platform. Insufficiently clear information or hidden costs can negatively affect the user experience (Farmaki *et al.*, 2020).
5. **Flexibility of reservations** – the possibility of cancelling or changing a reservation without large penalties is one of the key factors in user satisfaction. Platforms that offer more flexibility in this regard are more likely to attract loyal users (Saha *et al.*, 2024).

These criteria provide a comprehensive approach to the analysis of online booking platforms, taking into account not only technical aspects, but also the needs and expectations of users. The criteria were selected through a combination of literature review and expert consultation. Additional criteria were considered but omitted to maintain a focused model.

2.6 Ranking scale

For each of the above-mentioned criteria, a ranking scale was used to enable an objective and consistent assessment of electronic marketing technologies. The PIPRECIA-S method uses a specific rating scale to determine the relative importance of criteria. According to the PIPRECIA-S method, the values usually range from 0.6 to 1.4, using the scale shown in Table 1.

Table 1. PIPRECIA-S values for evaluation

Criteria value	Description of the importance of the criteria
0.6	The criterion is significantly less important than the reference
0.8	The criterion is somewhat less important than the reference
1.0	The criterion has the same importance as the reference criterion (neutral value)
1.2	The criterion is slightly more important than the reference
1.4	The criterion is significantly more important than the reference

Source: Bašić *et al.* (2024)

Values below 1 signify that a given criterion is considered less important compared to the reference criterion, whereas values above 1 indicate greater importance. To facilitate the evaluation process for experts unfamiliar with the PIPRECIA-S method, the scale has been simplified (Šijan *et al.*, 2024). While the full range of values is typically employed in practical applications of this method, in this instance, the scale was limited to five distinct levels to ensure easier and more intuitive use by the evaluators (Bašić *et al.*, 2024).

2.7 Prioritization of criteria

The identification of key priority criteria is the responsibility of the project investor and is based on specific requirements, technical constraints and financial capabilities (Bašić *et al.*, 2024). The core objective is to enable the investor to systematically determine the relative importance of each criterion through a straightforward pairwise comparison process (Popović *et al.*, 2025). This approach supports an informed decision-making process in selecting the most suitable technology for implementing a marketing campaign (Šijan *et al.*, 2024). It ensures a balance between expectations, needs and available resources, with the goal of achieving optimal results under given circumstances.

Table 2 presents an illustrative example of how criteria can be ranked according to their importance in the process of selecting technology for a specific campaign. Although the presented priorities are tailored to the context of this particular study, it is important to emphasize that such rankings are not universally applicable. The prioritization of criteria should be adapted to the unique requirements, objectives and context of each individual project, reflecting the investor's specific goals and conditions (Popović *et al.*, 2025).

Table 2. Relative weighting of the criteria for choosing the appropriate platform

		s_j	k_j	q_j	w_j
C^1	Trust and security		1	1	**0.19**
C^2	Flexibility of reservations	1.20	0.80	1.25	**0.23**
C^3	Reviews and recommendations	1.00	1.00	1.00	**0.19**
C^4	Location and accessibility	0.80	1.20	0.83	**0.16**
C^5	Transparency of prices	1.20	0.80	1.25	**0.23**
				5.33	1.00

Source: Authors' research

2.8 Choice of online booking platforms

Online reservation platforms play a key role in modern tourism, providing users with the ability to quickly and easily search, compare and reserve accommodation and other services. The platforms were selected based on their global presence and recognition among users in Europe. All experts confirmed their familiarity with the analysed platforms, which reduces the risk of irrelevant ratings. In this research, focus is put on four leading platforms, which were selected for their popularity, global availability and functionality:

Booking.com - one of the most famous and used platforms for booking accommodation worldwide. It offers a wide selection of hotels, apartments and vacation homes, with a user interface adapted to different devices. Booking.com stands out for its price transparency and rich system of user reviews, enabling users to make informed decisions.

Agoda.com - a platform known for specializing in the Asian market, but with a growing global presence. Agoda.com offers competitive rates, a variety of booking options and a loyalty program, making it attractive to frequent travellers. Its app and website are optimized for quick search and booking.

Hotels.com - Focused on providing a variety of lodging options, Hotels.com offers flexible cancellation policies and a customer rewards program that provides free nights after a certain number of reservations. This platform provides detailed information about properties, including location and amenities, which is crucial for users.

Kayak.com - stands out as a meta-search engine, allowing users to search for deals from different platforms for accommodation, flights and car rentals. Its system of filters and price comparison tools helps users find the best deal for their needs. Kayak.com also offers tools to track prices and notify users of great deals.

These platforms have been carefully selected for their relevance in tourism and their ability to meet the different needs of users. Analysis of their characteristics allows a better understanding of the key factors that influence user satisfaction and trust.

3. RESEARCH RESULTS

The results shown in Table 3 show that Agoda.com has the highest importance in the category of trust and security, with a weight of 0.29. This result highlights its focus on user data security and user trust in the platform. Agoda.com stands out with a higher value of the factor s_j (1.2), which indicates the additional measures the platform takes to ensure the safety and satisfaction of its users.

On the other hand, the platforms Booking.com, Hotels.com, and Kayak.com have identical weighting values (0.24), which indicates a similar level of perceived security and trust among users. These results suggest that although they provide reliable services, these platforms do not put extra efforts in the security and trust segment, compared to Agoda.com.

These findings indicate that, in order to improve their ranking in this category, other platforms may consider introducing additional functionality or campaigns that emphasize the security and protection of user data. On the other hand, Agoda.com can further leverage its advantage in this area to attract users who value security highly.

Table 3. Relative importance of weighting criteria for trust and security (C1)

		s_j	k_j	q_j	w_j
A^1	Booking.com		1	1	**0.24**
A^2	Agoda.com	1.2	0.80	1.25	**0.29**
A^3	Hotels.com	1	1.00	1.00	**0.24**
A^4	Kayak.com	1	1.00	1.00	**0.24**
				4.25	1.00

Source: Authors' research

The analysis shown in Table 4 for the criterion Reservation flexibility shows that Agoda.com has the highest relative weight with a weight of 0.32, which indicates the superior ability of the platform to offer users flexible options when booking. This result suggests that Agoda.com provides a variety of options for customizing and modifying reservations, which is crucial for users who frequently change their travel plans.

The Booking.com platform has a weighted mean value of 0.26, which indicates a satisfactory level of flexibility, but not at the same level as Agoda.com. In contrast, Hotels.com and Kayak.com have the lowest weighting values (0.21), indicating more limited customization options and a lower level of flexibility compared to other platforms.

These results suggest that in order to improve their ranking in this category, Hotels.com and Kayak.com could introduce additional booking customization options, such as flexible cancellation policies or date changes at no additional cost. Agoda.com, for its part, can use its advantage in booking flexibility as a key competitive advantage in attracting users.

Table 4. Relative importance of weighting criteria for reservation flexibility (C2)

		s_j	k_j	q_j	w_j
A^1	Booking.com		1	1	**0.26**
A^2	Agoda.com	1.2	0.80	1.25	**0.32**
A^3	Hotels.com	0.8	1.20	0.83	**0.21**
A^4	Kayak.com	0.8	1.20	0.83	**0.21**
				3.92	1.00

Source: Authors' research

The results shown in Table 5 for the Reviews and recommendations criterion show that the platforms Booking.com, Agoda.com and Hotels.com have equal relative weight with a weight of 0.26. This suggests that these platforms are equally successful in providing reliable reviews and recommendations, which can be crucial for users when making booking decisions.

On the other hand, Kayak.com has a slightly lower weighting of 0.22, which indicates limitations in relation to the competition when it comes to the quality and usefulness of reviews and recommendations. This result may be due to fewer users leaving reviews or less detailed feedback provided by the platform.

These results suggest that, although Booking.com, Agoda.com, and Hotels.com are leaders in this criterion, Kayak.com has room for improvement, for example, by encouraging users to leave reviews or improving algorithms for personalized recommendations. Improvements in this area can contribute to greater user confidence and strengthen Kayak.com's competitive position in the market.

Table 5. Relative weighting of criteria for reviews and recommendations (C3)

		s_j	k_j	q_j	w_j
A^1	Booking.com		1	1	**0.26**
A^2	Agoda.com	1	1.00	1.00	**0.26**
A^3	Hotels.com	1	1.00	1.00	**0.26**
A^4	Kayak.com	0.8	1.20	0.83	**0.22**
				3.83	1.00

Source: Authors' research

The results shown in Table 6 for the Location and availability criterion show that the platforms Booking.com and Agoda.com have the highest weight of 0.28. This indicates that these platforms provide the best availability and location information, which is essential for users looking for accommodation in specific destinations. Their ability to offer detailed descriptions and easy search options contributes to their high value in this criterion.

Kayak.com has a slightly lower weight of 0.23, which indicates a solid but not a leading position when it comes to location and availability information. On the other hand, Hotels.com has the lowest weight of 0.20, which suggests that the platform could improve its functionalities, for example, by adding more detailed information about locations or improving the user interface for searching for accommodation.

These results suggest that while Booking.com and Agoda.com are dominant in this criterion, Kayak.com and Hotels.com have room for improvement to become more competitive. Improvements in navigation, search filters, and display of location information could contribute to a better user experience and greater value of these platforms.

Table 6. Relative importance of weighting criteria for location and accessibility (C4)

		s_j	k_j	q_j	w_j
A^1	Booking.com		1	1	**0.28**
A^2	Agoda.com	1	1.00	1.00	**0.28**
A^3	Hotels.com	0.6	1.40	0.71	**0.20**
A^4	Kayak.com	0.8	1.20	0.83	**0.23**
				3.55	1.00

Source: Authors' research

The results shown in table 7, which refer to the Price Transparency criterion, indicate that Agoda.com, Hotels.com and Kayak.com have the highest weight of 0.26. This suggests that these platforms provide the highest level of transparency in price display, allowing users to make easier booking decisions and better control costs. Booking.com has a lower weight of 0.21, which indicates a slightly lower degree of price transparency compared to other platforms.

These results highlight the importance of a clear and reliable display of prices for users, with Agoda.com, Hotels.com and Kayak.com being the leading platforms that provide high price transparency, while Booking.com lags behind in this criterion.

Table 7. Relative importance of weighting criteria for Price Transparency (C5)

		s_j	k_j	q_j	w_j
A^1	Booking.com		1	1	**0.21**
A^2	Agoda.com	1.2	0.80	1.25	**0.26**
A^3	Hotels.com	1.2	0.80	1.25	**0.26**
A^4	Kayak.com	1.2	0.80	1.25	**0.26**
				4.75	1.00

Source: Authors' research

The final ranking results shown in Table 8, obtained by applying the PIPRECIA-S model, indicate that Agoda.com is the platform with the highest total weight of 0.2846, which makes it the best rated in the analysis. This result suggests that Agoda.com best satisfies the defined criteria (C1 – C5), covering aspects such as transparency, accessibility, and user experience.

In second place is Booking.com with a total weight of 0.2463, while Hotels.com and Kayak.com are ranked lower with values of 0.2360 and 0.2331, respectively. These results highlight the competitive advantages of Agoda.com, while other platforms lag behind in certain criteria, which may indicate the need to improve specific aspects in order to increase their overall value in user perception.

Table 8. Final result using the PIPRECIA-S method

		c1	c2	c3	c4	c5	Score	Rank
A^1	Booking.com	0.04	0.06	0.05	0.04	0.05	0.2463	**2**
A^2	Agoda.com	0.06	0.07	0.05	0.04	0.06	0.2846	**1**
A^3	Hotels.com	0.04	0.05	0.05	0.03	0.06	0.2360	**3**
A^4	Kayak.com	0.04	0.05	0.04	0.04	0.06	0.2331	**4**

Source: Authors' research

The results shown in Table 9, obtained by applying the NWA method, allow the ranking of booking platforms according to key criteria. This method uses weighted scores for five criteria: trust and security, reservation flexibility, reviews and recommendations, location and availability, and price transparency.

According to the results, the best platform is Booking.com with a total score of 0.800, which is the highest score. This indicates a balanced performance in all analysed categories, with particularly high scores achieved for the criteria trust and security (0.938) and price transparency (0.938).

In second place is Agoda.com with a score of 0.731, while Hotels.com took third place with a score of 0.716. The lowest overall score is Kayak.com with a value of 0.553, which suggests that this platform has room for improvement, especially in criteria such as reservation flexibility and location and availability.

A detailed analysis shows that criteria such as price transparency and reservation flexibility are key factors that significantly influence the overall score, while reviews and recommendations scored lower for all platforms. These results provide useful guidelines for users and managers of these platforms to improve specific aspects of the service.

Table 9. Final result using the NWA method

Criteria	Importance factor	Booking.com		Agoda.com		Hotels.com		Kayak.com	
		Grade	Score	Grade	Score	Grade	Score	Grade	Score
C1	0.1875	5	0.938	4	0.750	4	0.750	3	0.563
C2	0.2344	4	0.938	4	0.938	3	0.703	2	0.469
C3	0.1875	3	0.563	3	0.563	3	0.563	3	0.563
C4	0.1563	4	0.625	3	0.469	4	0.625	3	0.469
C5	0.2344	4	0.938	4	0.938	4	0.938	3	0.703
Sum	**1.0000**	4	**0.800**	4	**0.731**	4	**0.716**	3	**0.553**
Rank		**1**		**2**		**3**		**4**	

Source: Authors' research

4. SENSITIVITY ANALYSIS

To assess the robustness of the proposed decision model, a sensitivity analysis was conducted to examine how variations in the weights of the five criteria affect the final rankings of the four evaluated online booking platforms: Booking.com, Agoda.com, Hotels.com and Kayak.com. For each criterion (Trust and Security, Reservation Flexibility, Reviews and Recommendations, Location and Availability, and Price Transparency), the weight was adjusted incrementally by ±10% and ±20% (Hamby, 1995), while the weights of the other criteria remained constant. The values±10% and ±20% were chosen because they represent common and widely applied levels of variation in sensitivity analyses (Veljić *et al.*, 2025), which allow checking the stability of the model under realistic changes in input parameters. The adjusted weights and their impact on the final grades and rankings are shown in Table 10.

Table 10. Sensitivity Analysis Results

	Original		−10%		+10%		−20%		+20%	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Booking.com	0.523	1	0.515	1	0.531	1	0.507	1	0.539	1
Agoda.com	0.508	2	0.500	2	0.516	2	0.492	2	0.524	2
Hotels.com	0.476	3	0.468	3	0.484	3	0.460	3	0.492	3
Kayak.com	0.393	4	0.386	4	0.400	4	0.378	4	0.408	4

Source: Authors' research

Key conclusions of the sensitivity analysis:

- Trust and security (C1): Increasing the weight of this criterion by 20% led to a slight improvement in ratings for Booking.com and Agoda.com, while ratings for Hotels.com and Kayak.com showed less variation. The overall order remained stable.
- Reservation flexibility (C2): Adjustments to this criterion showed a noticeable impact on the ratings of Agoda.com, which performed better with increased weight, while the other platforms showed minimal changes. However, the ranking order remained consistent.
- Reviews and recommendations (C3): Variations in this criterion had minimal impact on the final scores, indicating that this factor is less sensitive to weight changes compared to the others.
- Location and accessibility (C4): Changes in the weight of this criterion led to minor fluctuations in the Hotels.com and Kayak.com ratings, but did not result in a change in ranking.
- Price transparency (C5): Increasing the weight of this criterion by 20% slightly raised the scores of Agoda.com, Hotels.com and Kayak.com, while Booking.com remained stable.

A sensitivity analysis confirms that the proposed decision model is robust, as the rankings of the platforms remained consistent despite different weight settings. This emphasizes the

reliability and adaptability of the model, making it applicable in different decision-making contexts, where the priorities of the criteria may change. The analysis also identifies Trust and Security and Reservation Flexibility as the most influential criteria, which can serve as focal points for further optimization of the evaluated platforms.

4.1 Potential bias in platform selection

The choice of online booking platforms is a key aspect of this study, as it directly affects the validity and generalizability of the results. Although the study focuses on four major platforms: Booking.com, Agoda.com, Hotels.com and Kayak.com, there are several other widely used online booking services, including Expedia and Airbnb. Excluding these platforms may introduce selection bias, which should be acknowledged and considered.

The reasons for choosing the four analysed platforms are based on the following factors:

- Market share and popularity: The selected platforms represent key players in the online booking industry, with a significant global presence and a large number of users.
- Functional similarities: These platforms are primarily focused on hotel and accommodation reservations, which makes them comparable in the same evaluation framework.
- Data availability and consistency: Ensuring that evaluation criteria are consistently applicable across platforms.

However, the exclusion of Airbnb could affect the applicability of the study, especially for users who prefer alternative forms of accommodation, such as holiday apartments or private accommodation. Also, Expedia, as one of the largest travel platforms, could provide a broader comparative perspective.

To mitigate potential bias, future research could consider the following approaches:

1. Expanding the number of platforms involved to ensure a more comprehensive evaluation.
2. Grouping platforms into categories (e.g. hotel booking platforms vs. alternative accommodation platforms) to take into account the difference in their business.
3. Conducting surveys among users to check whether the selected platforms correspond to the actual preferences of consumers.

Although the current selection of platforms provides valuable insights into the dominant booking services, acknowledging and addressing potential bias adds to the robustness of this study's conclusions.

4.2 Comparative robustness evaluation

A comparative robustness evaluation was performed to assess the stability of the hybrid model relative to single method approaches. The results indicate that both PIPRECIA-S and NWA produce consistent ranking trends, while the combined model significantly reduces method

specific biases. Unlike standalone weighting models, the integrated approach compensates for potential inconsistencies by incorporating independent expert input, yielding more stable outcomes under varying weight configurations (±10%, ±20%). This confirms the robustness and reliability of the proposed framework.

5. DISCUSSION

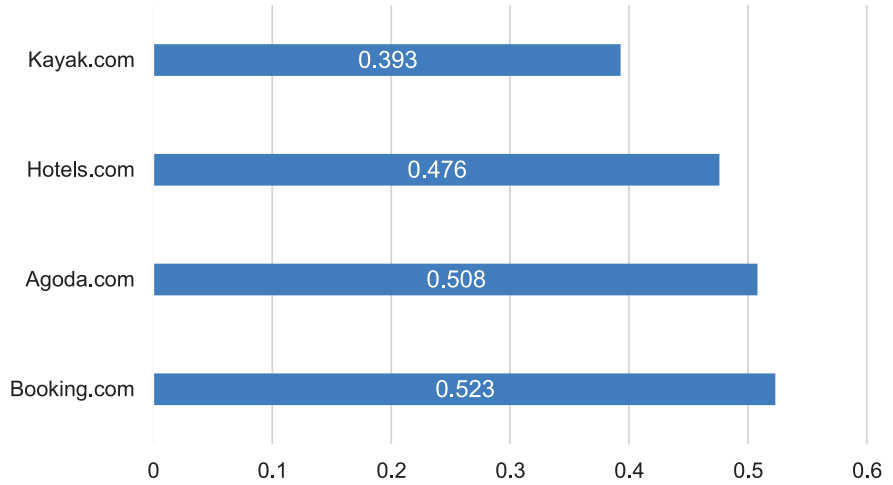
By combining the results of the PIPRECIA-S and NWA methods, final values were obtained that provide a deeper insight into the performance of online booking platforms (Figure 1). This approach allowed for a balanced evaluation, reducing bias by integrating the perspectives of different experts. A comparison of the individual methods shows that the combined approach yields more stable rankings and less variability in results compared to PIPRECIA-S and NWA individually.

The results show that Booking.com with a total score of 0.523 stands out as the most efficient platform according to the analysed criteria. Its high scores in factors such as trust and security, reservation flexibility and price transparency confirm its leading position.

Agoda.com with a score of 0.508 takes second place, showing solid performance, especially in the criteria of price transparency and reservation flexibility. The difference compared to Booking.com is minimal, which indicates its significant potential.

In third place is Hotels.com with a score of 0.476, indicating an average performance with room for improvement, especially in the aspects of trust and security. Kayak.com, with a score of 0.393, has the lowest scores, which suggests the need for significant improvements, especially in the reservation flexibility criterion.

Figure 1. Final result by crossing two methods



Source: Authors

The overall results indicate that the combination of methods yields a more accurate and balanced evaluation, providing a valid basis for making decisions about preferred online booking platforms. This integrated approach enabled the identification of key strengths and weaknesses of each platform, providing recommendations for future improvements.

5.1 Limitations of the study

This study has several limitations:

- Number of evaluated platforms was limited to four, excluding major competitors such as Airbnb or Expedia, which may influence generalizability.
- Expert evaluations inherently involve subjective judgment despite the use of two independent groups.
- Criteria were selected based on literature and expert opinion, meaning that additional factors could further refine the model.

Future studies should expand the set of platforms, incorporate larger expert samples and analyse additional decision criteria.

6. CONCLUSION

Based on the conducted analysis and combining the results of PIPRECIA-S and NWA methods, we can conclude that different online booking platforms have specific advantages that make them suitable for different aspects of user experience and operational efficiency. The combination of the two methods proved to be significant for minimizing subjectivity and achieving more precise results through different perspectives of experts. The findings provide several practical and managerial implications. For platform managers, the results highlight which criteria exert the strongest influence on user perception and therefore represent strategic priorities: trust and security, flexibility and transparency. Unlike previous studies that predominantly examine marketing features or user behaviour, this research integrates a dual MCDM approach providing quantifiable evidence on platform performance. Managers can apply these insights to optimize platform features, allocate resources and enhance competitiveness. The comparative ranking also informs tourism operators and travellers by providing an evidence, based overview of platform strengths and weaknesses.

Booking.com stands out as the leading platform with the highest final score of 0.523, thanks to its superiority in criteria such as trust and security, booking flexibility and price transparency. This platform has shown consistent performance in both methods, which confirms its dominant position in the market.

Agoda.com ranks second with an overall score of 0.508, highlighting its competitiveness in key criteria. Although it closely follows the leader, its slightly lower score indicates potential for further improvement in segments such as location and accessibility.

In third place is Hotels.com with a score of 0.476, which indicates average efficiency. This platform can improve its competitiveness by improving in categories such as reservation flexibility and price transparency. Kayak.com, with the lowest score of 0.393, stands out as a platform with significant room for improvement, especially in key criteria such as trust and security.

The integration of PIPRECIA-S results and NWA methods allows a more detailed overview of platform performance through a balanced approach. This combined model points to the importance of strategically using booking platforms depending on specific user needs and operational priorities. The results suggest that Booking.com and Agoda.com are the most suitable choices for users looking for reliability, flexibility and transparency, while Hotels.com and Kayak.com may be effective for specific niche requirements.

REFERENCES

Ahmad, K. and Sharma, B. K. (2023) "Online Satisfaction and Hotel Booking Intentions: An Information System Success Model Perspective", *Journal of Quality Assurance in Hospitality & Tourism*, pp. 1-33. https://doi.org/10.1080/1528008X.2023.2283502

Alaimo, C., Kallinikos, J. and Valderrama, E. (2020) "Platforms as service ecosystems: Lessons from social media", *Journal of information technology*, 35(1), pp. 25-48. https://doi.org/10.1177/0268396219881462

Antonio, N., De Almeida, A. and Nunes, L. (2019) "Big data in hotel revenue management: Exploring cancellation drivers to gain insights into booking cancellation behavior", *Cornell Hospitality Quarterly*, 60(4), pp. 298-319. https://doi.org/10.1177/1938965519851466

Bakir, M., Akan, Ş., Kiraci, K., Karabasevic, D., Stanujkic, D. and Popovic, G. (2020) "Multiple-criteria approach of the operational performance evaluation in the airline industry: Evidence from the emerging markets", *Romanian Journal of Economic Forecasting*, 23(2), pp. 149-172.

Bašić, A., Viduka, D., Kraguljac, V., Lavrnić, I., Jevremović, M., Balaban, P., Sajfert, D., Gligorijević, M., and Barzut, S. (2024) "Multi-Criteria Decision Analysis of Wireless Technologies in WPANs for IoT-Enabled Smart Buildings in Tourism", *Buildings*, 14(10), p. 3275. https://doi.org/10.3390/buildings14103275

Behki, P., Kumar, B., Ghanghas, A., Chaudhary, A., Kumar, B. and Arora, T. (2024) "User-Centric Online Rental Platform: Enhancing the Traveler Experience" In International Conference on Progressive Innovations in Intelligent Systems and Data Science ICPIDS, pp. 144-149.

Buhalis, D. (1998) "Strategic use of information technologies in the tourism industry", *Tourism management*, 19(5), pp. 409-421.

Buhalis, D. and Licata, M. C. (2002) "The future eTourism intermediaries", *Tourism management*, 23(3), pp. 207-220.

Celata, F., Capineri, C. and Romano, A. (2020) "A room with a (re)view. Short-term rentals, digital reputation and the uneven spatiality of platform-mediated tourism", *Geoforum*, 112, pp. 129-138. https://doi.org/10.1016/j.geoforum.2020.04.007

Čupić, M., Tummala, R. and Suknović, M. (2003) *Odlučivanje: formalni pristup*. Faculty of Organisational Sciences, Belgrade, Serbia.

da Costa, M. F. C. C. (2017) *The Factors Influencing Electronic Trust and Purchase Intentions in Online Booking Websites: A Study of the Portuguese Consumer*. Master's thesis, ISCTE-Instituto Universitario de Lisboa, Portugal.

Farmaki, A., Miguel, C., Drotarova, M. H., Aleksić, A., Časni, A. Č. and Efthymiadou, F. (2020) "Impacts of Covid-19 on peer-to-peer accommodation platforms: Host perceptions and responses", *International Journal of Hospitality Management*, 91, 102663. https://doi.org/10.1016/j.ijhm.2020.102663

Filieri, R., Alguezaui, S. and McLeay, F. (2015) "Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth", *Tourism management*, 51, pp. 174-185.

Flavián, C. and Guinalíu, M. (2006) "Consumer trust, perceived security and privacy policy: three basic elements of loyalty to a web site", *Industrial management & data Systems*, 106(5), pp. 601-620.

Gössling, S. and Lane, B. (2015) "Rural tourism and the development of Internet-based accommodation booking platforms: a study in the advantages, dangers and implications of innovation", *Journal of Sustainable Tourism*, 23(8-9), pp. 1386-1403.

Hamby, D. (1995) "A Comparison of Sensitivity Analysis Techniques." *Health Physics*, 68(2), pp. 195-204. https://doi.org/10.1097/00004032-199502000-00005

Ismail, U. M., Islam, S., Ouedraogo, M. and Weippl, E. (2016) "A framework for security transparency in cloud computing", *Future Internet*, 8(1), p. 5

Janošik, M., Popović, G. and Vukotić, S. (2023) "A multiple-criteria approach for the evaluation of comparative indicators of sustainable tourism", *Hotel and Tourism Management*, 11(1), pp. 113–125. https://doi.org/10.5937/menhottur2301113J

Jones, K. and Leonard, L. N. (2008) "Trust in consumer-to-consumer electronic commerce", *Information & management*, 45(2), pp. 88-95. https://doi.org/10.1016/j.im.2007.12.002

Karamaşa, Ç. (2021) "Ranking service quality using multi-criteria decision-making methods: example of Erzurum province", *Journal of process management and new technologies*, 9(3-4), pp. 1-12. DOI: 10.5937/jpmnt9-33449

Kim, D. J., Ferrin, D. L. and Raghav Rao, H. (2008) "A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents", *Decision Support Systems*, 44(2), pp. 544-564. https://doi.org/10.1016/j.dss.2007.07.001

Lappas, T., Sabnis, G. and Valkanas, G. (2016) "The impact of fake reviews on online visibility: A vulnerability assessment of the hotel industry", *Information Systems Research*, 27(4), pp. 940-961.

Lee, M., Jeong, M. and Lee, J. (2017) "Roles of negative emotions in customers' perceived helpfulness of hotel reviews on a user-generated review website: A text mining approach", *International Journal of Contemporary Hospitality Management*, 29(2), pp. 762-783.

Mas-Machuca, M., Marimon, F. and Jaca, C. (2021) "The unexplored potential of trust to boost customer loyalty for transport platforms", *Research in Transportation Business & Management*, 41, p. 100618.

Metzger, M. J. (2007) "Making sense of credibility on the Web: Models for evaluating online information and recommendations for future research", *Journal of the American society for information science and technology*, 58(13), pp. 2078-2091.

Nikolić, M., Radovanović, Lj., Desnica, E. and Pekez, J. (2010) "The application of method for selection of maintenance strategies", *Tehnička dijagnostika*, 4. UDC: 620.17:621.791.1/982.540

Özdağoğlu, A., Keleş, M. K., Altınata, A. and Ulutas, A. (2021) "Combining different MCDM methods with the Copeland method: an investigation on motorcycle selection", *Journal of process management and new technologies*, 9(3-4), pp. 13-27. https://doi.org/10.5937/jouproman2103013O

Pencarelli, T. (2020) "The digital revolution in the travel and tourism industry", *Information Technology & Tourism*, 22(3), pp. 455-476.

Perović, A. and Djukić, S. (2023) "Značaj komunikacije u sportu", *Scientific Journal Management in Sports*, 14(1), pp. 103-118.

Popović, G., Stanujkić, D., Mimović, P., Milovanović, G., Karabašević, D., Brzaković, P. and Brzaković, A. (2021) "An integrated SWOT-extended PIPRECIA model for identifying key determinants of tourism development: The case of Serbia", *Acta Geographica Slovenica*, 61(2), pp. 23–40. https://doi.org/10.3986/AGS.9271

Popović, S., Viduka, D., Bašić, A., Dimić, V., Djukic, D., Nikolić, V. and Stokić, A. (2025) "Optimization of Artificial Intelligence Algorithm Selection: PIPRECIA-S Model and Multi-Criteria Analysis", *Electronics*, 14, p. 562. https://doi.org/10.3390/electronics14030562

Raguseo, E., Neirotti, P. and Paolucci, E. (2017) "How small hotels can drive value their way in infomediation. The case of 'Italian hotels vs. OTAs and TripAdvisor'", *Information & Management*, 54(6), pp. 745-756.

Saaty, R. W. (1987) "The analytic hierarchy process - What it is and how it is used", *Math. Model.*, 9, pp. 161–176. https://doi.org/10.1016/0270-0255(87)90473-8

Saha, P. and Biswas, A. (2024) "Seal the deal: unleashing the magnitude of online reviews, website quality and trust for seamless hotel reservations", *International Journal of Productivity and Performance Management*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJPPM-04-2024-0272

Singh, J. P., Irani, S., Rana, N. P., Dwivedi, Y. K., Saumya, S. and Roy, P. K. (2017) "Predicting the "helpfulness" of online consumer reviews", *Journal of Business Research*, 70, pp. 346-355, https://doi.org/10.1016/j.jbusres.2016.08.008

Stanujkic, D., Zavadskas, E. K., Karabasevic, D., Smarandache, F. and Turskis, Z. (2016) "The use of the PIvot Pairwise RElative Criteria Importance Assessment method for determining the weights of criteria", *Rom. J. Econ. Forecast*, 20, pp. 116–133.

Stanujkic, D., Karabasevic, D., Popovic, G. and Sava, C. (2021) "Simplified Pivot Pairwise Relative Criteria Importance Assessment (Piprecia-S) Method", *Rom. J. Econ. Forecast*, 24, pp. 141–154.

Subramanian, N., Gunasekaran, A., Yu, J., Cheng, J. and Ning, K. (2014) "Customer satisfaction and competitiveness in the Chinese E-retailing: Structural equation modeling (SEM) approach to identify the role of quality factors", *Expert Systems with Applications*, 41(1), pp. 69-80.

Šijan, A., Viduka, D., Ilić, L., Predić, B., and Karabašević, D. (2024) "Modeling Cybersecurity Risk: The Integration of Decision Theory and Pivot Pairwise Relative Criteria Importance Assessment with Scale for Cybersecurity Threat Evaluation", Electronics, 13(21), p. 4209. https://doi.org/10.3390/electronics13214209

Tadelis, S. (2016) "Reputation and feedback systems in online platform markets", *Annual review of economics*, 8(1), pp. 321-340.

Tarafdar, M., Tu, Q. and Ragu-Nathan, A. T. (2010) "Impact of technostress on end-user satisfaction and performance", *Journal of management information systems*, 27(3), pp. 303-334.

Uzun, B., Bwiza, R. A. and Uzun Ozsahin, D. (2021) ELimination Et Choix Traduisant La REalité (ELECTRE). In: Uzun Ozsahin, D., Gökçekuş, H., Uzun, B., LaMoreaux, J. (eds) *Application of Multi-Criteria Decision Analysis in Environmental and Civil Engineering* (pp. 31-36). Professional Practice in Earth Sciences. Springer, Cham. https://doi.org/10.1007/978-3-030-64765-0_5

Vanhove, N. (2005) "Globalisation of tourism demand, global distribution systems and marketing". In *Tourism in the Age of Globalisation*, pp. 137-170. Routledge.

Veltri, G. A., Lupiáñez-Villanueva, F., Folkvord, F., Theben, A. and Gaskell, G. (2023) "The impact of online platform transparency of information on consumers' choices", *Behavioural Public Policy*, 7(1), pp. 55-82.

Veljić, A., Viduka, D., Ilić, L., Karabasevic, D., Sijan, A. and Papic, M. (2025) "Sustainable Decision-Making in Higher Education: An AHP-NWA Framework for Evaluating Learning Management Systems", *Sustainability*, 17, 10.3390/su172210130.

Xiang, Z., Du, Q., Ma, Y. and Fan, W. (2017) "A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism", *Tourism Management*, 58, pp. 51-65.

Zangemeister, C. (2014) *Nutzwertanalyse in der Systemtechnik: Eine Methodik zur multidimensionalen Bewertung und Auswahl von Projektalternativen*. Zangemeister & Partner, Winnemark.

Zeqiri, A. (2024) "From Traditional to Digital: The Evolution of Business Models in Hospitality Through Platforms", *Platforms*, 2(4), pp. 221-233.

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INTEGRIRANI MODEL ZA RANGIRANJE *ONLINE* PLATFORMI ZA REZERVACIJE KORIŠTENJEM MCDM METODA: PIPRECIA–S I NWA

Milan Brkljač
Dr. sc., izvanredni profesor, Alfa BK Univerzitet, Bulevar maršala Tolbuhina 8, 11 070 Beograd, Srbija;
e-mail: milan.brkljac@alfa.edu.rs

Vladimir Kraguljac
Dr. sc., docent, Univerzitet u Kragujevcu, Fakultet za hotelijerstvo i turizam u Vrnjačkoj Banji, Vojvodjanska bb, 36 210 Vrnjačka Banja, Srbija; *e-mail:* vladimir.kraguljac@kg.ac.rs

Biljana Viduka
Dr. sc., znanstvena suradnica, Institut ekonomskih nauka, Zmaj Jovina 12, 11 000 Beograd, Srbija;
e-mail: biljana.viduka@ien.bg.ac.rs

Aleksandra Perović
Dr. sc., izvanredna profesorica, Alfa BK Univerzitet, Bulevar maršala Tolbuhina 8, 11 070 Beograd, Srbija;
e-mail: aleksandra.perovic@alfa.edu.rs

Dejan Viduka
Dr. sc., redoviti profesor, Alfa BK Univerzitet, Bulevar maršala Tolbuhina 8, 11 070 Beograd, Srbija;
e-mail: dejan.viduka@alfa.edu.rs

SAŽETAK

Svrha ovog istraživanja je rangiranje online *platformi za rezervacije usluga u turizmu kako bi se identificirala najpouzdanija opcija na temelju ključnih kriterija koji utječu na korisničko iskustvo. Poseban naglasak stavljen je na povjerenje i sigurnost, fleksibilnost rezervacije, recenzije i preporuke, lokaciju i dostupnost, kao i transparentnost cijena. Metodologija istraživanja uključuje primjenu integriranog pristupa višekriterijske analize, kombinirajući PIPRECIA-S i NWA metode. Ova kombinacija omogućuje smanjenje pristranosti rangiranja i točniju procjenu uspješnosti* online *platformi kao što su Booking.com, Agoda.com, Hotels.com i Kayak.com. Rezultati analize pokazuju da Booking.com zauzima najvišu poziciju na ljestvici, što potvrđuje njegovu sveobuhvatnu pouzdanost prema definiranim kriterijima. Zaključci ističu važnost korištenja integriranih višekriterijskim metoda u donošenju informiranih odluka na digitalnom tržištu. Ovi nalazi pružaju smjernice za optimizaciju korisničkog iskustva i povećanje transparentnosti u online rezervacijama, čime se doprinosi poboljšanju kvalitete usluge u sektoru e-turizma.*

Ključne riječi: online *rezervacije, višekriterijska analiza, PIPRECIA-S, NWA, rezervacijske platforme*