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Da li pametne hotelske sobe utiču na kvalitet hotelske ponude? Stavovi gostiju različitih hotela

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Apstrakt: Turizam je postao sinonim za uživanje, odmor i upoznavanje novih kultura, što je dovelo do porasta potražnje za kvalitetnim sadržajima tokom slobodnog vremena. Kako bi odgovorila na sve složenije zahteve savremenih turista, hotelska industrija se neprestano prilagođava i unapređuje i tako nastoji da poveća njihovo zadovoljstvo. Najnovija tehnološka rešenja, posebno uključivanje pametnih tehnologija u hotelske sobe, ima za cilj da kroz automatizaciju i personalizaciju transformiše iskustvo gostiju. Metodologija: Ova studija ispituje uticaj pametnih hotelskih soba na percepciju kvaliteta usluge kod gostiju poreklom iz različitih evropskih zemalja. Istraživanje je sprovedeno anketiranjem i intervjuisanjem ispitanika iz osam evropskih zemalja. Rezultati pokazuju različite nivoe prihvatanja i zabrinutosti u vezi sa tehnološkim inovacijama. Analiza hi-kvadrat testa korišćena je za ispitivanje odnosa između identifikovanih faktora (inovativnost, optimizam, nelagodnost, nesigurnost) i percepcije kvaliteta usluge, pri čemu su uočene statistički značajne razlike. Rezultati: Istraživanje pokazuje visok nivo entuzijazma kod nemačkih i holandskih gostiju, različite stavove kod gostiju iz Austrije, dok gosti sa Balkana ispoljavaju viši stepen zabrinutosti. Implikacije: Dobijeni rezultati mogu pomoći hotelijerima da unaprede tehnološku ponudu i povećaju zadovoljstvo gostiju, uzimajući u obzir kulturološke i geografske razlike.

Ključne reči: pametne hotelske sobe, kvalitet hotelske usluge, percepcije gosta

Do Smart Hotel Rooms Affect the Quality of The Hotel Supply? Multi-Hotel Guest Perspectives

Abstract: Tourism has become a way for people to enjoy, relax, and experience new cultures, increasing the demand for satisfying leisure activities. To meet these evolving demands, the hospitality industry is constantly adapting and improving guest satisfaction. Recent advancements in technology, particularly the integration of smart technologies in hotel rooms, aim to revolutionise guest experiences through automation and personalisation. Methodology: This study explores the impact of smart hotel rooms on service quality perceptions across diverse European guests. Surveys and interviews conducted in eight European countries reveal varying levels of acceptance and concerns regarding technological innovations. The chi-square analysis was utilised to examine the relationships between identified factors (innovativeness, optimism, discomfort, insecurity) and service quality, revealing statistically significant differences. Findings: The results show high enthusiasm among German and Dutch guests, mixed feelings among Austrians, and more concerns among guests from Balkan countries. Implications: These findings could help hoteliers improve their technological solutions and increase guest satisfaction by considering cultural and geographical differences.

Keywords: Smart Hotel Rooms, Hotel Service Quality, Guest Perceptions

1. Introduction

According to Chen et al. (2024), tourism has evolved significantly, becoming a symbol of enjoyment, relaxation, cultural enrichment, and unique experiences. The urge to travel has intensified among tourists, driving a strong desire to spend their leisure time in ways that meet or exceed their expectations (He et al., 2024). Certain scientists believe that the contemporary lifestyle has influenced changes in both the demand side (Yang & Smith, 2024) and the supply side (Ren, 2024).

Conversely, the need for continuous adaptation to the ever-changing demands of tourists and careful planning of business strategies has become crucial for the survival of tourism enterprises (Lim et al., 2024). For instance, in recent years, free Wi-Fi has become an essential feature in hotel services (Tajeddini et al., 2024). However, while necessary, it alone is insufficient to create a memorable experience (Reyes-Menendez et al., 2018). Tourists are likely to express significant dissatisfaction if this amenity is absent.

As the hospitality industry undergoes rapid technological advancements, the integration of smart technologies in hotel rooms has become a key aspect for enhancing guest experience (Han et al., 2024). According to Wu and Cheng (2018) the hospitality industry has continuously evolved, incorporating technological advancements to enhance guest experiences and operational efficiency. In recent years, the concept of —smart hotel rooms has emerged, integrating advanced technologies such as the Internet of Things (IoT), artificial intelligence (AI), and automation (Yang et al., 2021). These innovations promise to revolutionize the way guests interact with their accommodations, potentially elevating the overall quality of hotel services (Buhalis & Leung, 2018).

Smart hotel rooms are equipped with interconnected devices that allow guests to control various aspects of their environment, such as lighting, temperature, and entertainment systems, through voice commands or mobile applications. This level of customization and convenience is designed to meet the growing expectations of modern travelers who seek seamless and personalized experiences (Neuhofer et al., 2015). By providing such tailored experiences, hotels can significantly enhance guest satisfaction and loyalty, which are critical factors in the highly competitive hospitality market (Bilgihan, 2016). According to Xu et al. (2021) the increasing implementation of facial recognition technology further indicates the shift towards a more secure and personalized guest experience. By using facial recognition for check-ins and access control, hotels can streamline the check-in process, enhance security, and provide a touchless experience, which has become particularly important in the context of the COVID-19 pandemic (Han et al., 2021). This technology not only enhances guest convenience but also addresses contemporary health and safety concerns. Moreover, smart hotel rooms can contribute to operational efficiencies by enabling predictive maintenance, energy management, and real-time data analytics. These technologies not only improve the guest experience but also support sustainable practices and cost savings for hotel operators (Ivanov et al., 2017). As hotels seek to distinguish themselves in a competitive market and appeal to technologically inclined guests, the implementation of smart room technologies is becoming increasingly relevant.

The initial hypothesis of the work was the assumption that the quality of hotel services in modern business conditions directly depends on the ability to adopt innovations as a business concept. This paper investigates the impact of smart hotel rooms on the perceived quality of hotel offerings from the perspective of guests across multiple hotels. The study employs a multi-hotel approach to gather diverse perspectives, considering different hotels, hotel locations, and guest country of origin. The findings provide insights into the complex connections between features in smart hotel rooms and guests' views on the hotel's overall quality, offering practical implications for hoteliers seeking to optimize their technology-driven offerings. Furthermore, the multi-hotel perspective provides a comprehensive understanding of how diverse guest demographics and hotel contexts influence the reception and effectiveness of smart technologies in different settings.

2. Literature review

The concept of hotels that strive to create a unique experience for tourists through various technological solutions can be called —smart hotels. A smart hotel is defined by its incorporation of advanced technologies to provide customers with distinctive and technology-centric experiences (Kim & Han, 2020). Devices within these hotels that can send and receive data among themselves make them —smart. By managing these devices through their phones, tablets, or laptops, guests customize their hotel stay according to their wishes and needs. The essential difference that distinguishes smart systems from others is that smart systems react to the environment and learn during operation, leading to process improvement (Minić et al., 2014). These modern technologies aim for optimal efficiency by automating services, and the primary advantage of a smart hotel for hotel operators lies in financial benefits through improved productivity and reduced labor costs. Some advantages of smart hotels include improvements in the sustainability of hotel rooms through the automatic adjustment of lighting levels and room temperature, resulting in significant energy savings (Casais & Ferreira, 2023).

Additionally, smart hotels offer greater personalization of services, such as welcoming messages on the TV screen addressing the guest by name, and access to personal Spotify and Netflix accounts, as well as audio books and music (Ristova & Dimitrov, 2019). They also provide faster access to information, allowing guests to ask questions and receive answers from smart devices regarding hotel content, local tourist attractions, or even displays with suggestions for available restaurants, including ratings left by guests of those restaurants (Leung, 2019). Moreover, decision-making can be enhanced through the use of information, enabling hotels to discover a guest's most popular TV channels (Yang et al., 2021). Finally, smart hotels facilitate preventive maintenance and repairs, as hotel staff can monitor the performance of devices within the hotel (Minić et al., 2014).

According to Lukanova and Ilieva (2019), among the technological solutions that contribute to the intelligence of a hotel are automated room controls, which include the maintenance of temperature, lighting, and air conditioning from a single control point with the ability for automatic adjustments in response to changes in room conditions. Voice recognition technology plays a significant role by answering questions about the hotel, local attractions, traffic, weather forecasts, playing music, selecting TV channels, adjusting room lighting, and more (Buhalis, Moldavska, 2022). Furthermore, face recognition capabilities allow smart hotels to identify guests through passport photos submitted during mobile check-in, with some establishments offering a mobile app for swift self-check-in and activating a mobile key for room access (Han et al., 2021).

Additionally, connecting smart hub devices enables guests to select various services during their hotel stay, such as booking appointments for massages, pedicures, manicures, reserving a table in a restaurant, buying airline tickets, and ordering room service, all from their room using smartphones or hotel tablets (Minić et al., 2014). This increased connectivity leads to a higher level of personalization, allowing guests to fully customize their stay according to their wishes and needs (Gupta et al., 2022). Lastly, the remote monitoring of the operation of smart devices aids in detecting malfunctions before they lead to major issues, identifying problems, and enabling quick reactions to ensure smooth operation (Minić et al., 2014).

Smart rooms, as a constitutive element of smart hotels, provide an unforgettable experience for guests. Managing basic information about the usage of specific devices can be a viable solution for employees to learn about the guest's most listened-to radio stations or favorite TV channels. Furthermore, complimentary Wi-Fi services significantly impact guest satisfaction, with hotels offering this amenity receiving higher social media ratings compared to those without it (Bulchand- Gidumal et al., 2011). Moreover, the integration of self-service and robotic technologies in service automation not only reduces labor costs but also enhances operational efficiency, captivating guests with the novelty of innovation and fostering customer delight (Bilgihan et al., 2011). In addition to the functions mentioned above, smart hotel rooms may also feature smart hangers that provide feedback if laundry services are needed (Backendorff et al., 2019). Another popular technological solution that is growing in popularity in hotel business is hotel keyless entry system. Mobile key entry systems, integrated into hotel booking applications, not only streamline check-in processes for both guests and staff but also contribute to an improved guest experience by facilitating easy rebooking, seamless interaction with cloud-based hotel management, and ensuring enhanced security measures, as the downloaded room key is encrypted and tied to the registered mobile device for the specified booking period (Torres, 2018).

3. The research methodology

In their research, Zhong et al. (2022) concluded that innovation in hotels is the key to survival and a measure of quality. Our survey involved a varied group of 441 participants from eight European countries, six of which are in the EU (Germany, Austria, Italy, Croatia, Slovenia, Netherlands, BiH, and Serbia) and aimed to explore four main elements: innovativeness, optimism, discomfort, and insecurity, specifically in relation to their experiences with smart hotel rooms. The ratings, using a Likert scale, ranged from 1 to 5, where 1 indicated strongly agree and 5 indicated strongly disagree.

The research utilised surveys and interviews to gather data from various hotels: Arion Cityhotel Vienna und Apartments, a&t Holiday Vienna, Eventhotel Pyramide - Vösendorf Austria, Ananas - Vienna, Scope Hotel City Stay Frankfurt, Via Suites Netherlands, Garden Hotel Novi Sad, and Hotel Veliki Novi Sad. The data were collected throughout 2024, from January to December.

The aim was to understand the impact of these factors on guests' overall perception of service quality.

To analyze the relationships between the identified factors and service quality, we utilized the chi-square analysis. The work started from the assumption that there would be no difference in the answers about the gender of the respondents, and statistically significant differences are those with $p < 0.05$. The survey instrument included carefully crafted statements for each factor, aiming to capture sophisticated insights into participants' perceptions and attitudes. This methodology allowed us to gain a comprehensive understanding of how guests' characteristics and emotions in smart hotel environments contribute to the evaluation of service quality, revealing potential areas for improvement.

Factor: Innovativeness

- I can usually figure out new high-tech product and services in smart rooms without help from others.
- In general, I am among the first in my circle of friends to acquire new technology when it appears.

Factor: Optimism

- I like the idea doing business via computers and smart rooms because you are not limited to regular business hours.
- Technology and smart rooms gives people more control over their daily lives.

Factor: Discomfort

- New high-tech product and services in smart rooms are often too complicated to be useful
- When I get technical support from a provider of a hightech product or service, I sometimes feel as if I am being taken advantage of by someone who knows more than I do.

Factor: Insecurity

- I do not consider it safe giving out credit card information over a computer
- I do not feel confident doing business with a place that can only be reached on lin
- If you provide information to a machine or over the Internet, you can never be sure if it really gets to the right place.

4. Result and Discussion

Out of the total number of participants, 54.9% (242) were male, while 45.1% (199) were female. The research was carried out in 8 European countries, with respondents predominantly from the Netherlands (23.1%), Austria (22.4%), and Germany (18.4%). A more detailed overview is provided in the following Table (1).

Table 1: Country of origin

		Frequency	Percent
Valid	Germany	81	18,4
	Austria	99	22,4
	Italy	29	6,6
	Croatia	47	10,7
	Slovenia	28	6,3
	Serbia	21	4,8
	Netherlands	102	23,1
	BiH	34	7,7
	Total	441	100,0

Source: Authors' research

In Table 2 below, there is a summary of the frequency of visits to 8 different hotels located in 4 countries and 5 different cities. The highest number of guests stayed at Arion Cityhotel Vienna and Apartments (19.3%), Via Suites Netherlands (15.9%), and Eventhotel Pyramide (14.5%). A more detailed insight is available below.

Table 2: Hotels

		Frequency	Percent
Valid	Arion Cityhotel Vienna und Appartments	85	19,3
	a&t Holiday Vienna	61	13,8
	Eventhotel Pyramide - Vosendorf Austria	64	14,5
	Ananas - Viena	57	12,9
	Scope Hotel City Stay Frankfurt	49	11,1
	Via Suites Netherlands	70	15,9
	Garden hotel Novi Sad	29	6,6
	Hotel Veliki Novi Sad	26	5,9
	Total	441	100,0

Source: Authors' research

Netherlands, Austria and Germany are the most common countries of origin, contributing 102, 99 and 81 guests (Table 3). These three countries make up a significant portion of the total number of guests. The guest's native country vary between hotels. For example, Arion Cityhotel Vienna und Apartments gets a mix of people mainly from Austria, Germany, and the Netherlands. On the other hand, from the observed sample, two hotels in Novi Sad are primarily attracting the attention of domestic tourists and tourists from neighboring countries.

Table 3: Country of hotel guests' origin

		Germany	Austria	Italy	Croatia	Slovenia	Serbia	Netherlands	BiH	Total
Hotel	Arion Cityhotel Vienna und Appartments	12	6	13	10	11	2	22	9	85
	a&t Holiday Vienna	6	19	3	3	0	3	16	11	61
	Eventhotel Pyramide	8	22	2	2	0	0	27	3	64
	Ananas	8	24	0	5	1	1	15	3	57
	Scope Hotel City Stay Frankfurt	12	16	5	3	0	0	12	1	49
	Via Suites Netherlands	35	12	6	7	0	0	10	0	70
	Garden hotel Novi Sad	0	0	0	9	9	7	0	4	29
	Hotel Veliki Novi Sad	0	0	0	8	7	8	0	3	26
	Total	81	99	29	47	28	21	102	34	441

Source: Authors' research

Tables 4, 5, 6, 7, 8, and 9 show the respondents' attitudes regarding innovativeness factor.

The Table 4 assesses guests' confidence in understanding new high-tech products and services in smart rooms without assistance, categorized into three levels (The columns under —Strongly agree, —Partly agree, and —No change). Overall, while there are variations in the levels of agreement across countries, the majority of guests generally express confidence in their ability to figure out new high-tech products and services in smart rooms independently.

Table 4: Comprehension of emerging technologies

		I can usually figure out new high-tech product and services in smart rooms without help from others.			
		Strongly agree	Partly agree	No change	Total
Country of hotel guests' origin?	Germany	28	43	10	81
	Austria	35	58	6	99
	Italy	14	12	3	29
	Croatia	22	24	1	47
	Slovenia	8	16	4	28
	Serbia	3	13	5	21
	Netherlands	36	61	5	102
	BiH	24	6	4	34
Total		170	233	38	441

Source: Authors' research

Table 5 presents the results of the Pearson Chi-Square test, which was used to examine the statistical significance of the relationship between the analyzed variables.

Table 5: Pearson Chi-Square test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39,252 ^a	14	,000

Source: Authors' research

The results (Table 6) suggest significant differences in guests' tendencies to acquire new technology early based on their country of origin. The case is similar like with the previous results. The highest number of guests, regardless of their country of origin, agree that they are among the first to test new technological solutions when they appear. We can see that generally, with the increase in the level of development of the country, the number of guests who strongly agree with the statement also increases (Germany, Austria, Netherlands) likely due to higher technological advancement. On the other hand, tourists from Slovenia, Serbia, and Croatia have shown a slightly lower level of confidence possibly due to limited access to the latest technologies (Shin et al., 2022).

Table 6: Early adoption of new technologies

		In general, I am among the first in my circle of friends to acquire new technology when it appears.			
		Strongly agree	Partly agree	No change	Total
Country of hotel guests' origin?	Germany	41	34	6	81
	Austria	42	55	2	99
	Italy	10	16	3	29
	Croatia	13	30	4	47
	Slovenia	6	16	6	28
	Serbia	8	8	5	21
	Netherlands	58	38	6	102
	BiH	18	15	1	34
Total		196	212	33	441

Source: Authors' research

Table 7 shows the results of the Pearson Chi-Square test conducted to determine the statistical association between the variables under investigation.

Table 7: Pearson Chi-Square

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40,427 ^a	14	,000

Source: Authors' research

Since $p=0.000$, this indicates a statistically significant difference in respondents' answers based on their country of origin (Table 5 and Table 7). This can be explained by research conducted by Chung and Song (2024), according to some nationalities may exhibit lower levels of confidence or variability in their perceptions, which could be influenced by factors such as technological familiarity, cultural attitudes towards technology, and prior experiences (e.g. Serbian or Slovenian people). On the contrary, countries with higher levels of technological development and penetration (e.g., Germany, Austria, Netherlands) tend to have guests who are more confident with new technologies (Ali et al., 2024).

Table 8 presents the distribution of responses regarding hotel guests' opinions on finding smart rooms very useful and supporting their further development and progress across different countries. According to Aggarwal and Mittal (2024), Generally, people are quite open to adopting innovations. Smart rooms have demonstrated significant utility, especially in saving time, a feature highly valued by hotel guests. (Sun & Nasrullah, 2024).

Table 8: Perceived utility of smart rooms according to respondents

		I find smart rooms very useful and I support their further development and progress			Total
		Strongly agree	Partly agree	No change	
Country of hotel guests' origin?	Germany	36	42	3	81
	Austria	56	39	4	99
	Italy	14	15	0	29
	Croatia	21	23	3	47
	Slovenia	7	17	4	28
	Serbia	12	9	0	21
	Netherlands	44	43	15	102
	BiH	11	20	3	34
Total		201	208	32	441

Source: Authors' research

The chi-square test results, p -value of 0.013, suggest that there is no statistically significant association between these opinions and the country of hotel guests' origin (Table 9). This statement has proven very useful as it indicates that the concept of smart rooms is already becoming a standard in the hotel industry (de Lurdes Calisto & Sarkar, 2024).

Tables 10, 11, 12, 13, 14, and 15 display respondents' attitudes regarding optimism factor. The Table 10 presents a comprehensive overview of guests' preferences regarding the idea of conducting business via computers and smart rooms, with a particular focus on the flexibility offered outside regular business hours. Some scientists, such as Avgoustaki & Cañibano (2024), agree that flexible working hours are crucial for improving efficiency in business. Looking at the research results, it can be concluded that the majority of respondents strongly support the notion of flexible business hours through smart rooms. The Table 12 provides insights into guests' perceptions regarding the impact of technology and smart rooms on their daily lives. The findings from the study support specific conclusions reached by Escandon-Barbosa et al. (2024). They suggest that smart rooms and technology offer increased flexibility in work hours, leading to reduced stress and a heightened sense of control over daily responsibilities (Haber & Carmeli, 2023).

The Table 14 presents the distribution of responses with the statement regarding the impact of technology and smart rooms on their efficiency in their occupation. The results are connected with increased incorporation of technology in workplaces and enhanced digital skills in observed countries.

The majority of guests across all countries acknowledge the positive influence of technology and smart rooms on their work efficiency.

Tables 11, 13, and 15 show a statistically significant variation in respondents' responses based on their country of origin, evidenced by $p=0.000$. This aligns with the conclusions drawn by Escandon-Barbosa et al. (2024), who argue that the accessibility of new technologies directly influences their adoption and utilization in business. This suggests that developed countries are more advantaged in this regard compared to less developed ones. Tables 16 through 21 present respondents' opinions on discomfort factor. The Table 16. suggests variations in guests' perceptions of the complexity of new high-tech products and services in smart rooms based on their country of origin. The results could indicate that an individual's perception of the complexity of technologies in smart rooms depends on their experience with these technologies, as well as the type of technology applied and how it is implemented in hotel rooms, rather than their country of origin (Orbaiz & Arce-Urriza, 2024). The results seen in Table 17 confirm the statement, given that $p=0.300$.

The Table 18 reveals varying perceptions among guests from different countries regarding feeling taken advantage of during technical support. As with the previous analysis, these results suggest that guests' responses regarding the support they received and their feelings about it are primarily influenced by their prior experiences with these situations rather than solely by their country of origin. The statistically significant association, indicated by the $p=0.008$, suggests that country of origin does not play a role in shaping these perceptions.

The Table 20 delves into guests' sentiments regarding their interactions with smart room technology, specifically exploring whether they sometimes feel that the smart room works —against theml as users. Countries with higher technological adoption and familiarity might experience frustration due to higher expectations from smart technology. Guests might expect seamless functionality, and any deviation can be perceived as the technology working against them. According to Downen et al. (2024), there is a substantial number of guests that feel that smart rooms work against them sometimes. When it comes to the results of Table 21, it can be concluded that there is statistical significance in the responses ($p=0.000$). There is a significant difference in how guests from different countries perceive the functionality of smart rooms, with some countries showing higher agreement with the statement than others.

Tables 22, 23, 24, 25, 26, and 27 display respondents' attitudes regarding the **Factor Insecurity**. Table 22 examines guests' attitudes toward the safety of providing credit card information over a computer. According to Ortiz et al. (2024) there's a significant difference in perception regarding the safety of giving out credit card information over a computer among guests from different countries. This variation can stem from cultural differences, varying levels of exposure to online transactions, or different experiences with cybersecurity (Chaudhary, 2024). For businesses, especially in the hospitality industry, this insight emphasizes the importance of providing multiple payment options and ensuring that all customers feel secure in the transaction methods offered. Recognizing and adapting to these perceptions can improve customer satisfaction and trust, particularly among international guests with diverse viewpoints on online payment security.

The Table 24 examines guests' confidence levels in conducting business with a place that can only be reached online. The result shows that perceptions towards online-only businesses are significantly influenced by the respondents' cultural or national background. This finding is crucial for businesses that operate online, as it highlights the importance of cultural sensitivity and the need for strategies tailored to different international markets.

The Table 26 examines guests' attitudes toward providing information to a machine or over the Internet. According to Oghazi et al. (2020) cultural attitudes towards data security and privacy can significantly influence trust levels. In countries like Italy, where privacy concerns are high, guests could be more sceptical about online information provision. Also, Guests from Bosnia and Herzegovina (BiH) and Netherlands intensely express lower level of trust, due to cultural attitudes towards privacy and higher concerns about data security. Guests from Croatia, Slovenia, and Serbia present mixed opinions indicating that various factors are influencing like in previous table analysis.

Tables 23, 25, and 27 reveal a statistically significant variation in respondents' answers based on their country of origin, with $p=0.000$.

This highlights a personalized approach to sharing personal information online, indicating that education and personal experience are more influential than general attitudes.

These findings support the initial hypothesis H, suggesting that the quality of hotel services in contemporary business environments directly depends on the ability to adopt innovations as a business strategy, impacting both supply and demand sides.

5. Conclusion

This study focuses on how smart hotel room technologies are perceived by guests from different countries, and examines how they affect the quality of hotel offerings. The findings suggest that while there is a high level of engagement with these technologies among guests from Germany, Austria, the Netherlands, and Italy, there are significant differences in terms of confidence, skepticism, and overall acceptance.

Guests from Germany and the Netherlands are guests are generally very receptive to intelligent technologies and show strong preference for enhanced comfort and personalized experiences. Their high level of trust in online transactions indicates a comfort with digital interactions that hotel owners can take advantage of to improve guest experiences. Furthermore, they are clearly ready to adopt new technologies, and demonstrate considerable confidence in the use of features such as automated room controls and personalized service options in intelligent hotel environments.

Austrian guests have a mixed view, seeing the advantages of smart technologies but also being careful, especially when it comes to doing business online. This suggests they prefer a mix of traditional and tech-based services. Italian guests express concerns about the complexity and security of these technologies, particularly regarding online credit card transactions and privacy.

In contrast, guests from the Balkan countries, including Serbia, Croatia, Slovenia, and Bosnia and Herzegovina, exhibit more varied and generally lower levels of confidence in smart technologies. Their careful attitude shows how cultural and geographical factors affect the acceptance of new technologies, emphasizing the importance for hoteliers to use more customized strategies that respond to the specific concerns and expectations of these guests.

The study underscores the critical role of cultural sensitivity and the need for adaptive strategies in the hospitality industry. It highlights that the successful integration of smart technologies in hotels not only depends on the technological solutions themselves but also on how these technologies align with the diverse expectations and cultural backgrounds of hotel guests.

This analysis offers valuable insights for hoteliers aiming to enhance service quality through technology, and it helps deepen our understanding of the complex relationship between guest traits and their views on smart hotel rooms. By offering empirical data on how smart technologies affect hotel service quality when considered through the prisms of cultural diversity and technological acceptability, it also adds to the body of academic literature. This research will contribute to the development of more responsive, inclusive, and technologically advanced hotel experiences that appeal to a modern tourists as the hospitality sector develops.

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