

# Navigating Vietnamese Travelers' Intention to Book Automated Services in Hotel

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**Abstract** *The hospitality industry is undergoing significant digitalization and transformation. Despite profound changes in consumer behaviors, research seeking to understand their intention to accept new technologies has remained scant, especially in the context of developing markets. This study conducted a survey with 401 travelers in Vietnam to determine the factors that contribute to the intention to book automated services in hotels. We employ the theory of planned behavior (TPB) to develop the relationship among the proposed constructs. The findings show that the intention to use automated services drives the intention to book an automated services hotel, and that attitude, subjective norms, and perceived usefulness influence the intention to use automated services. Additionally, the study reveals that perceived risk does not significantly influence the travelers' intention to use automated services. The study addresses theoretical and managerial implications as well as asserts limitations for future directions. It is believed that the findings will assist hotel managers to sharpen their marketing strategies to keep up with digital transformation in industrial revolution 4.0.*

**Keywords:** *Automated Services, Travellers Attitude, Subjective Norms, Perceived Usefulness, Perceived Risk, Travellers' Intention*

## INTRODUCTION

Jayawardena et al. (2023) acknowledge digital transformation as a prominent process that reshapes all industries through the evolution of digital technologies. The hospitality industry is not an exception from the global pattern and has significantly transformed itself to become a smart one (Busulwa, Pickering & Mao, 2022). Since the essence of a 'truly smart' system is to significantly improve the quality of all stakeholders, the implementation of smart technologies necessitates the creation of values from both management and consumption (Mehraliyev et al., 2022). From a managerial perspective, practitioners aim for increased profits through both transactional and non-transactional activities (Busulwa, Pickering & Mao, 2022). From a consumptional perspective, guests want more benefits and better experiences (Mehraliyev et al., 2022). Therefore, research examining the impact of digital transformation in this industry necessitates a balanced effort from both perspectives.

Choi and colleagues (2020) have asserted that hospitality will remain reliant on human labor regardless of the breakthrough in digital technologies because they believe human interaction plays a key role in value creation in this sector. However, the outbreak of COVID-19 has forced the hospitality industry to redefine its operations as well as created unexpected opportunities to change customer behaviors toward implemented digital technologies (Jung et al., 2023). Apparently, the number of studies on digital transformation in hospitality and tourism has surged after the global pandemic (Peng et al., 2024). However, a literature review indicates that the dominance of research on digital transformation occurs at the organizational level (Peng et al., 2024). Busulwa, Pickering and Mao (2022) discuss management competencies, while Nadkarni and Haider (2022) examine the relationship between operational efficiency and sustainability. On the other hand, research conducted at the individual level is insufficient and limited, as the implementation of any new technology requires a significant investment from any organization

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before customers can try it out (Arici & Saydam, 2024). Furthermore, scholars argue that research at the individual level should consider contexts because different segments have different evaluations and preferences (Collin, 2023).

The market size of the hospitality industry in Vietnam is projected to be USD 5.16 billion in 2024 and is anticipated to grow to USD 9.91 billion by 2029 (Mordor Intelligence, 2024). This figure indicates a significant contribution to the national economy. The global phenomenon of digital transformation is also impacting the hospitality and tourism industry in Vietnam (Hong et al., 2023). Hotels, resorts, spas, and restaurants are implementing various smart technologies to explore new values and maintain competitiveness (Mai et al., 2022). Recent empirical studies have supported the promise and effectiveness of new technologies such as robots, smart apps, VR/AR, etc. Recent empirical studies (Huy et al., 2021; Mai et al., 2022; Do & Pereira, 2023) have demonstrated the potential and effectiveness of new technologies. Regardless of the benefits of smart technologies contributing to hospitality operations, studies explaining why an individual intends to accept new technology in selecting an option remain scant, especially in Vietnam (Dang & Nguyen, 2023). Do and Perira (2023) assert that understanding the determinants of intention to accept automated services in hotels will definitely help managers better plan their digital strategies. This study is designed to explore the following research questions:

RQ1: What factors influence the intention to use automated services?

RQ2: Which factors influence the intention to book automated services hotels?

To address the aforementioned questions, this study will utilize a quantitative research design and implement a survey targeting Vietnamese travelers. We will develop a research model that hypothesizes and identifies the antecedents of travelers' intentions towards automated services hotels. The anticipated findings aim to provide valuable insights for both scholars and practitioners within Vietnam's hospitality sector, offering guidance on how to enhance travelers' intentions to book automated services hotels.

## LITERATURE REVIEW

### Research Context

According to Parasuraman et al. (2005), automated services are web-based services that operate on the Internet, enabling customers to interact with the organization without the presence of staff. Ruyter and colleagues (2001) define automated service as interactive, content-

centric, internet-based customer service, propelled by the customer and integrated with associated organizational customer service, aimed at enhancing the customer-service provider relationship. Hollebeek, Sprott and Brady (2021) observe that the evolution of digital technologies will drive the development of automated services, which will then diversify across various sectors and industries. This study lists automated services implemented in hotels, including robots, web-based services, and smart booking apps, among others (Jabeen, Al Zaidi & Al Dhaheri, 2022).

## Theoretical Definitions

### Traveller Attitude

An attitude is a psychological tendency that has been learned by an individual to express a favor or disfavor toward a particular entity (Ajzen, 2015). According to Cote and Diana (2017), a traveler's attitude refers to their overall evaluation, which leads them to respond either positively or negatively to a particular subject. Thus, Jabeen, Al Zaidi and Al Dhaheri (2022) define traveler attitude toward automated services as an overall assessment that leads to a favor or disfavor toward automated services.

### Subjective Norms

Subjective norms are normative beliefs about the social expectations of significant people toward a person and will drive that individual to comply with those expectations (Cho & Lee, 2015). Subjective norms in this context are defined as a traveler's perception of other travelers social expectations toward automated services (Sun, Law & Schuckert, 2020; Sánchez-Cañizares et al., 2021). Subjective norms are social pressures about others' beliefs that are considered key determinants of predicting a certain intention (Kumar et al., 2020).

### Perceived Usefulness

Perceived usefulness refers to the customer's perception about how much usefulness they gain when using a system (Yang, 2017). This study defines perceived usefulness as the traveler's perception of the usefulness of automated services (Li & Zhu, 2023). Taufik and Hanafiah (2019) emphasize the significance of perceived usefulness in explaining passengers' adoption behaviors towards self-checking in kiosks.

### Perceived Risk

Perceived risk is defined as customers' awareness of the uncertainty associated with the potential severity of adverse outcomes stemming from their actions (Yang, 2017; Zhang et al., 2019). Uncertainty and unfamiliarity strongly influence

risk perception, which frequently manifests in the context of new technologies (Lee, Lin & Shih, 2018). In this study, perceived risk refers to a traveler's perception of potential risks when using automated services, and this perception may lead to a decrease in the use of new technologies if they pose potential risks (Lehto et al., 2023).

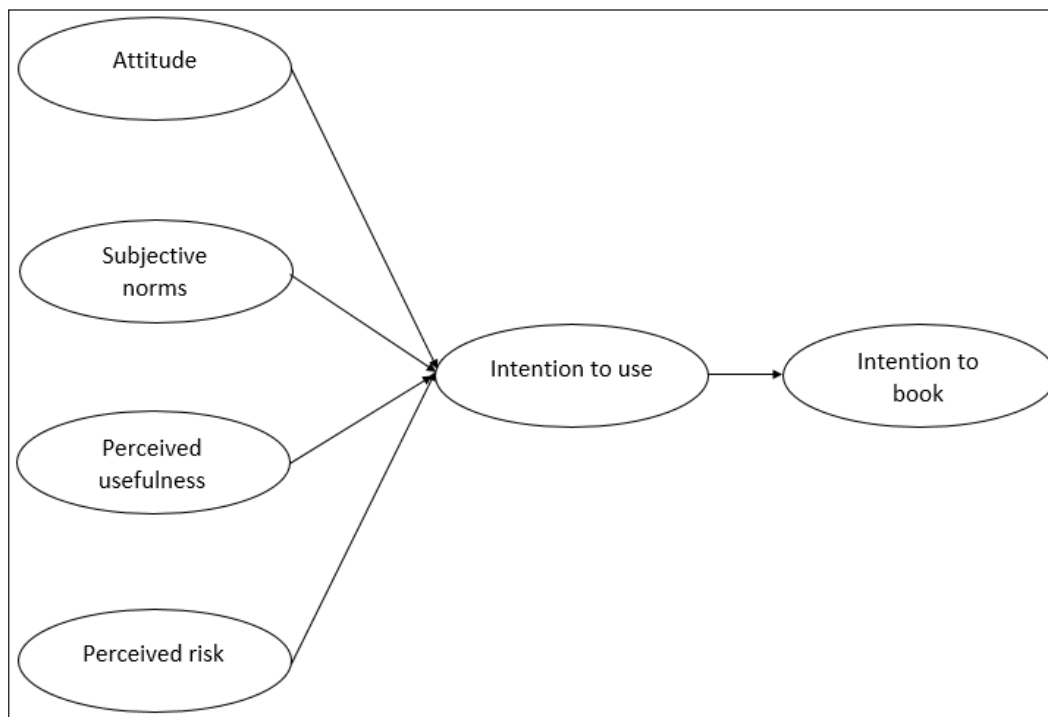
### Traveller Intention

Intention is stored in human memory as a willingness that will trigger action at the right moment (Ajzen, 2015). One can argue that intention serves as a motivation that subsequently drives behavior. Travelers' intentions refer to their willingness to perform a certain action toward an entity (Cha, 2020). D'Souza and colleagues (2021) define travelers' intention to accept automated services as their willingness to use these technologies, and their intention to book automated services at hotels as their willingness to select hotels that are implementing these services.

## Underlying Theory and Research Hypotheses

### Underlying Theory

To develop the framework among proposed constructs, the theory of planned behavior (TPB) proposed by Ajzen (1991, as cited in Ajzen, 2020) is employed. The TPB model aids in elucidating behaviors that are not entirely within an individual's volitional control, as an individual is more likely to engage in a particular action if they perceive it to yield a favorable outcome. The theory illustrates the process of evaluating the costs and benefits incurred when an individual engages in a particular behavior. In this study, we propose that traveler attitude, subjective norms, perceived usefulness, and perceived cost influence the intention of travelers to use automated services, which in turn influences their intention to book hotels using automated services. Fig. 1 shows the conceptual framework of the study.



**Fig. 1: The Conceptual Framework**

### Research Hypotheses

*The relationship between attitude and intention to use automated services.*

Studies conducted at the individual level have empirically supported the notion that attitude is a key determinant of behavior (Ajzen, 2015). Attitude is an overall assessment that a person holds toward an object, and it will drive one's intentions (Cote & Diana, 2017). Previous studies in

consumer preferences have found the positive relationship between favorable attitude and behavioral intention (Amaro & Duarte, 2016; Hanafiah & Hamdan, 2021; Jabeen, Al Zaidi & Al Dhaheri, 2022). Thus, this study proposes that:

*H1: A positive attitude toward automated services will increase the travelers' intention to use automated services.*

*The relationship between subjective norm and intention to use automated services.*

Subjective norms act like social pressure that will drive an individual to behave in a way that aligns with normative beliefs (Cho & Lee, 2015). Consumers, as social creatures, support subjective norms as key determinants in predicting their intentions (Kumar et al., 2020). Empirical studies in similar contexts have found the positive relationship between subjective norms and intention (Sun, Law & Schuckert, 2020; Xu et al., 2022). Thus, this study proposes that:

*H2: A positive subjective norm toward automated services will increase the travelers' intention to use automated services.*

*The relationship between perceived usefulness and intention to use automated services.*

Perceived usefulness refers to an individual's overall perception of the usefulness of a specific entity that can enhance their job performance (Yang, 2017). Perceived usefulness is considered a crucial driver in determining an individual's intention to accept a new technology (Yang, 2017). Various studies have supported the positive association between perceived usefulness of a new technology and intention to adopt that technology (Taufik & Hanafiah, 2019; Li & Zhu, 2023). Thus, this study proposes that:

*H3: A positive perceived usefulness toward automated services will increase the travelers' intention to use automated services.*

*The relationship between perceived risk and intention to use automated services.*

Perceived risk reflects the total risk and uncertainties that a person perceives toward a specific entity, and in turn, perceived risk will prevent one from employing it (Zhang et al., 2019). People view perceived risk as a barrier that hinders their intention to adopt new technology (Lee, Lin, & Shih, 2018). There is a great deal of research that found the negative relationship between perceived risk and intention to use automated services (Seo & Lee, 2021; Lehto et al., 2023). Thus, this study proposes that:

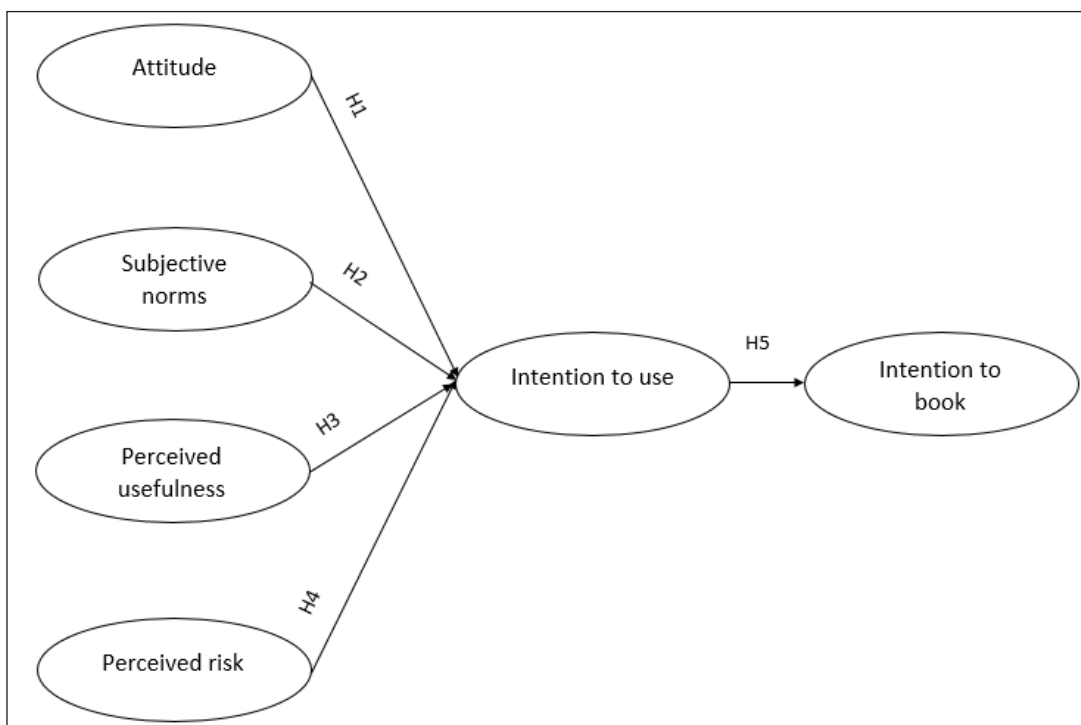
*H4: Higher perceived risk toward automated services will decrease the travelers' intention to use automated services.*

*The relationship between intention to use automated services and intention to book automated services hotels.*

Intention reflects the willingness to perform a certain action, and it is considered a crucial determinant to predict actual behaviors (Cha, 2020). We expect consumers who adopt new technology to extend their adoption to other options implemented for that technology. Kim and colleagues (2021) have provided empirical confirmation for a guest's hotel booking intention, which would influence his or her intention toward robot and robot-staffed hotels. Thus, it is proposed that:

*H5: The intention to use automated services will positively influence the intention to use automated services hotels.*

Fig. 2 shows the research model with its research hypotheses.



**Fig. 2: The Research Model**

## RESEARCH METHODOLOGY

### Research Design

The research aims to identify and examine factors contributing to travelers' intention to book automated services hotels through their intention to use automated services hotel. To achieve this, a quantitative research methodology has been utilized. Research hypotheses are formulated following a comprehensive literature review and the adaptation of the theory of planned behavior. Quantitative data is gathered and analyzed to evaluate these hypotheses. The discussions and implications will be derived from the quantitative results.

### Research Methods

#### Data Collection

A survey was administered to gather quantitative data from

travelers who have utilized smart applications for their searching, planning, and purchasing. Participants were provided with examples of automated services and automated services hotel for references. Recruitment of participants occurred via social media platforms (Facebook, Zalo & email) through the distribution of online questionnaires.

The questionnaire is structured with two main sections. The two main sections consist of: (1) evaluative items and (2) demographic information. The first section incorporates factors from the research model, adapted from established reflective measurement scales (Please refer to Table 1 for reference). Independent factors include: (1) attitude toward automated services, based on Ajzen (2015); (2) subjective norms, adapted from Sánchez-Cañizares et al. (2021); (3) perceived usefulness; and (4) perceived risk, adapted from Yang (2017). Dependent factors comprise: (1) intention to use automated services and (2) intention to book automated services hotel, based on Cha (2020). The second section gathers demographic data for descriptive statistics, including gender, age, marital status, income, and occupation.

**Table 1: Adapted Measurement Scales**

Measurement Scale	Authors
<b>Attitude Towards Automated Services</b>	Ajzen (2015)
I think that there is a significant difference between automated services and manual services.	
I have a positive attitude toward automated services compared with manual services.	
I prefer automated services compared to manual services.	Sánchez-Cañizares et al. (2021)
<b>Social Norms</b>	
Most people who are important to me think it is okay for me to engage in automated services.	
Most people who are important to me support that I engage in automated services.	
Most people who are important to me agree with me about engaging in automated services.	Yang (2017)
Most people who are important to me understand that I engage in automated services.	
<b>Perceived Usefulness</b>	
Using automated services increases my life/social performance.	
Automated services is useful for life/social performance.	
Using automated services enhances my effectiveness in life/social performance.	Cha (2020)
Using automated services provides me with information that would lead to better life/social performance.	
Using automated services rapidly retrieve of the information.	
<b>Perceived Risk</b>	Cha (2020)
I am concerned that automated services will collect too much personal information from me.	
I am concerned that automated services will use my personal information for other purposes without my authorization.	
I am concerned that automated services will share my personal information with other entities without my authorization.	Cha (2020)
<b>Travelers' Intention to Use Automated Services</b>	
Given the opportunity, I would use automated services.	
I am likely to use automated services.	Cha (2020)
I will use automated services.	
<b>Travelers' Intention to Book Automated Services Hotels</b>	
Given the opportunity, I would book automated services hotels	Cha (2020)
I am likely to book automated services hotels	
I will book automated services hotels.	

**Data Analysis**

Descriptive statistics will be employed to analyze the demographic data. Prior to validating the research hypotheses, the constructs will undergo testing for reliability and validity, and the model fit will be confirmed. Reliability will be assessed through composite reliability (greater than 0.7). Validity will be evaluated using convergent validity (Average Variance Extracted, AVE > 0.5) and discriminant validity (Maximum Shared Variance, MSV > Maximum

Squared Average, MSA), utilizing SPSS and AMOS software. Model fit will be confirmed according to the guidelines proposed by Hu and Bentler (1999). The research hypotheses will be considered supported if the p-value is below 0.001.

**DATA RESULTS**

After distributing 1,200 questionnaires, there were 401 valid cases. Table 2 presents the demographic data of the sample.

**Table 2: Profile of Participants in the Study**

N=401		N	%
Gender	Male	165	41.1
	Female	236	58.9
Age	Less than 35	237	59.1
	From 35 and above	164	40.9
Income	Less than 10 million VND pm	147	36.7
	From 10 million and above	254	63.3

From this study’s analysis.

The six constructs were initially assessed for internal consistency using Cronbach’s Alpha, with all exhibiting strong reliability (scores exceeding 0.85). An exploratory factor analysis (EFA) was conducted to evaluate the dimensionality of the constructs and to eliminate any items that did not meet the criteria. The results of the Kaiser-Meyer-Olkin (KMO) measure and Bartlett’s test (0.906) and the cumulative variance explained (81.9) met the acceptable thresholds. The pattern matrix aligned with the theoretical expectations regarding the constructs’ dimensionality. A confirmatory factor analysis (CFA) was performed to

evaluate reliability in terms of composite reliability, as well as validity through convergent and discriminant assessments. The model fit metrics met the established cut-off values: (1) Cmin/df = 2.033; (2) CFI = 0.979; (3) PCFI = 0.811; and (4) RMSEA = 0.051. Common method variance was not a concern, as the model fit for all indicators under a single factor did not achieve an acceptable fit (Fuller et al., 2016). Table 3 provides the construct measurements, confirming that all constructs met the standards for reliability and validity.

**Table 3: Constructs Measurements**

	CR	AVE	MSV	ASV	IHa	SNa	PUa	ATTa	PRa	ISa
IHa	0.933	0.822	0.421	0.212	0.907					
SNa	0.932	0.774	0.328	0.187	0.282	0.880				
PUa	0.962	0.834	0.421	0.197	0.649	0.338	0.913			
ATTa	0.932	0.821	0.292	0.191	0.540	0.420	0.446	0.906		
PRa	0.934	0.826	0.238	0.076	0.035	0.488	0.161	0.121	0.909	
ISa	0.925	0.805	0.328	0.238	0.514	0.573	0.475	0.523	0.316	0.897

All constructs within the research model demonstrated satisfactory psychometric properties, including consistent reliability, convergent, and discriminant validity. The model were analyzed using structural equation modeling (SEM), achieving a fit that aligns with the criteria established

by Hair et al. (2006). The SEM model fit metrics met the required thresholds: Cmin/df = 2.033; (2) CFI = 0.979; (3) PCFI = 0.811; and (4) RMSEA = 0.051. Table 4 presents the standardized path estimates and the results of hypothesis testing.

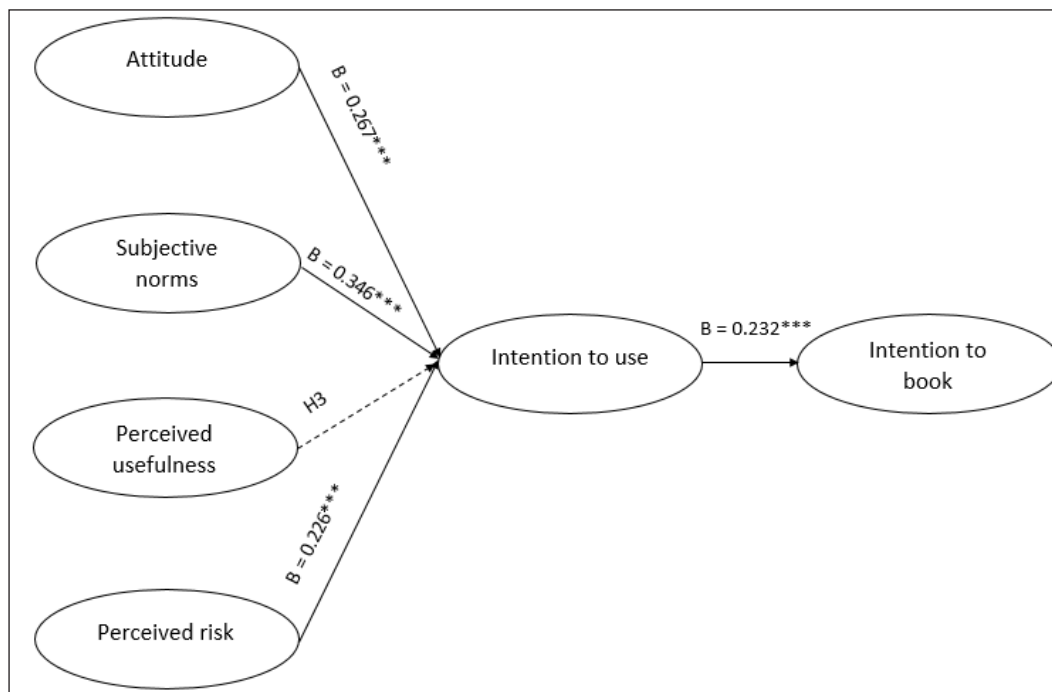
**Table 4: Standardized Path Estimates and Hypotheses Testing in the Study**

Structural Paths	Standardized Regression Weight	p-Value	Conclusion at $p < 0.001$
H1: A positive attitude toward automated services will increase the travelers' intention to use automated services.	0.267	***	Supported
H2: A positive subjective norms toward automated services will increase the travelers' intention to use automated services.	0.346	***	Supported
H3: A positive perceived usefulness toward automated services will increase the travelers' intention to use automated services.	0.226	***	Supported
H4: Higher perceived risks toward automated services will decrease the travelers' intention to use automated services.	0.079	0.102	Un-supported
H5: The intention to use automated services will positively influence the intention to use automated services hotels.	0.232	***	Supported

Note: \*\*\*: p-value < 0.001.

From this study's analysis.

The results have supported four out of five research hypotheses. Fig. 3 shows the final results of the research model.

**Fig. 3: The Research Results**

H1, which hypothesized that a positive attitude toward automated services would increase travelers' intention to use automated services, was supported at  $p < 0.001$ , and the standardized weight was at  $\beta = 0.267$ . The study supports the positive relationship between attitude toward automated services and intention to use them.

The study supports H2, which hypothesized that positive subjective norms toward automated services will increase

the travelers' intention to use these services, with a p-value of less than 0.001, and a standardized weight of less than 0.346. Subjective norms toward automated services positively correlate with the intention to use them.

The results support H3, which hypothesized that a positive perceived usefulness towards automated services will increase travelers' intention to use them, with a p-value of less than 0.001, and a standardized weight of less than 0.226.

A positive relationship between perceived usefulness toward automated services and intention to use automated services is supported.

For H4, which hypothesized that higher perceived risks toward automated services will decrease the travelers' intention to use automated services, has not been supported at  $p < 0.001$ . There is no statistically supported relationship between perceived risk toward automated services and intention to use them.

For H5, which hypothesized that intention to use automated services will positively drive intention toward automated services hotels, it has been supported at  $p < 0.001$ , and the standardized weight was at  $\beta = 0.232$ . We support a positive relationship between the intention to use automated services and the intention to book these services at hotels.

## CONCLUSION

This study addresses the digital transformation in the hospitality sector by exploring factors influencing travelers' intentions to use automated services and whether this intention subsequently affects their booking decisions. Utilizing the theory of planned behavior (TPB), the research identifies attitude, subjective norms, perceived usefulness, and perceived risk as key contributors to the intention to use automated services. Statistical analyses confirmed positive relationships between attitude, subjective norms, and perceived usefulness with the intention to use. Furthermore, the intention to use automated services was found to significantly predict the intention to book such services in hotels. The findings provide valuable theoretical and managerial insights, which will be discussed in the following sections.

## Implications

### Theoretical Implications

As other research, the study adds to the body of academic literature, which will be addressed in the following discussions.

First, the results demonstrate the empirical validity and generalizability of the Theory of Planned Behavior (TPB) model within the context of a developing market. While prior research has enhanced the application of TPB theory in the Vietnamese hospitality sector, the current findings align with recent empirical studies indicating that travelers' intentions are influenced by attitude, subjective norms, and perceived usefulness. Notable studies supporting these conclusions include those by Meng and Choi (2019), Akter and Hasan (2023), Huang (2023), and Leou and Wang (2023).

Among the three influential factors, subjective norms emerged as the strongest antecedent influencing travelers' intentions ( $\beta = 0.346$ ). This finding suggests that travelers are more inclined to utilize automated services when encouraged or recommended by others. This aligns with various studies, including (1) Jeon, Ali, and Lee (2019), which examined Korean consumers' intentions to use smartphone apps for flight ticket bookings; (2) Erul, Woosnam, and McIntosh (2020), focusing on intentions to support tourism development in Turkey; (3) Zhuang et al. (2021), investigating the use of augmented reality technology in tourism experiences among Chinese guests; and (4) Wasaya, Prentice, and Hsiao (2022), analyzing tourists' revisit and word-of-mouth intentions in the Pakistan market. The second influential factor is attitude, with a coefficient of  $\beta = 0.267$ , indicating that a favorable evaluation of automated services enhances travelers' intentions to use them. This finding corroborates existing research on consumer behavior that highlights the positive association between attitude and intention. It further contributes to the understanding of traveler intentions within the Vietnamese hospitality sector. The final significant determinant is perceived usefulness, with a coefficient of  $\beta = 0.226$ , suggesting that travelers are more likely to adopt automated services when they perceive these services as beneficial. Similar results have been documented in studies concerning new technologies, such as smartphones (Lee & Kim, 2021), information apps (Gupta et al., 2021), and smart healthcare technology (Gani et al., 2024). This underscores the importance of customer perceptions in shaping their behavioral intentions.

While attitude, subjective norms, and perceived usefulness have emerged as significant antecedents of travelers' intentions to use automated services, perceived risk was found to be a non-significant factor in this study. This suggests that the risks travelers associate with automated services do not significantly impact their intention to adopt these technologies. This finding contrasts with previous research, such as (1) Shuhaiber and Mashal (2019), who identified perceived risk as a determinant of the intention to use smart homes among Jordanian users; (2) Wang et al. (2021), who indicated that reducing perceived risk would enhance Chinese users' acceptance of smart transportation services; (3) Almaiah et al. (2023), who found a negative relationship between perceived risk and the intention to use smart mobile banking applications in Saudi Arabia; and (4) Wang et al. (2024), who supported the significant relationship between perceived risk and construction practitioners' intentions to adopt IoT in the Architecture, Engineering, and Construction (AEC) industry in China. However, this study's results align with empirical research conducted in other Asian countries. For instance, Meyliana and Fernando (2019) found no significant relationship between perceived

risk and the adoption of fintech services in Indonesia. Similarly, Zhuang (2021) reported that perceived risk did not influence intentions to use augmented reality technology in Chinese tourism experiences. Additionally, Perumal, Qing and Jaganathan (2022) concluded that perceived risk had no significant impact on Malaysian intentions regarding smart retail technology.

Second, this study utilizes the Theory of Planned Behavior (TPB) model and positions the intention to use automated services as a mediator between its antecedents and travelers' intention to book such services. The results support the role of travelers' intention to use automated services in predicting their intention to book hotels that implement these technologies. This finding aligns with Kim and colleagues (2021), who identified a positive association between the intention to choose robot hotels during and after the global pandemic. It suggests that travelers' intentions to use automated services can enhance their willingness to accept hotels that incorporate these technologies, providing valuable insights for practitioners to optimize user adoption in their digital strategies.

Finally, a quantitative research design was employed to test the research hypotheses within the context of the Vietnamese hospitality sector. The methodology used in this study is appropriate and robust for achieving its objectives. The statistical findings offer empirical support for the relationships among the constructs, as well as insights into the levels of influence, assisting both scholars and practitioners in predicting the significance of these correlations.

### **Managerial Implications**

The findings of this study provide valuable guidance for managers aiming to advance digital transformation in Vietnam's hospitality sector. Given that travelers' intentions to book hotels offering automated services are influenced by their intentions to use these services, understanding the factors that significantly facilitate this intention can help hotel managers develop effective strategies to promote acceptance of automated services.

First, the study highlights that subjective norms play a crucial role in increasing the intention to use automated services. Therefore, fostering more favorable subjective norms can lead to higher traveler intentions to adopt these services. Hotel managers can enhance subjective norms by engaging key opinion leaders and reference groups to introduce and endorse automated services. For instance, utilizing celebrities, travel bloggers, or tourism reviewers to promote these services can be effective, as these individuals are regarded as opinion leaders in the hospitality and tourism sectors. However, it is essential for managers to carefully select key opinion leaders from different groups, as the study's sample was not segmented, and reference groups can

vary significantly across different segments.

Second, travelers' intention to use automated services can be enhanced by cultivating a favorable attitude toward these technologies. This study emphasizes the importance of positively shaping travelers' attitudes to facilitate their intentions to adopt automated services. Consumer behavior research indicates that attitudes can be favorably influenced when both cognitive and affective components are positive. To strengthen the cognitive component of attitude, travelers need to acquire knowledge and develop beliefs about the benefits of automated services. Hotel managers can play a key role in this by educating travelers on how these services can assist them in searching, planning, and booking their accommodations. To improve the affective component of attitude, it is crucial for travelers to develop positive emotional associations with automated services. Managers could employ emotional advertising strategies when introducing or guiding travelers about these technologies, thereby fostering positive feelings and enhancing overall acceptance.

Thirdly, the study emphasizes the significance of perceived usefulness in enhancing travelers' intentions to use automated services. Service operators should focus on clearly demonstrating the usefulness of these services to travelers. When designing and implementing automated services in hotels, it is essential to articulate how these services will meet travelers' planning needs. For instance, the use of smart booking apps can save travelers time while providing detailed information about hotel options, and the introduction of robot check-in can streamline the process, helping travelers save time and mitigate health risks during a pandemic. It is crucial to remember that while the benefits from a managerial perspective are important, travelers' perceptions of these services hold greater significance. Ultimately, it is travelers who will determine which services are suitable and offer the greatest value.

### **Limitations and Future Directions**

Despite its contributions, this study has several limitations that should be addressed in future research. First, the research model does not account for travelers' perceptions regarding ease of use, enjoyment, or trust. Incorporating these additional aspects could yield more insightful results. While this study examines perceived risk, it overlooks the closely related construct of perceived trust. Additionally, although perceived usefulness is considered, perceived ease of use is hypothesized to influence both perceived usefulness and attitude. Future research should integrate these proposed constructs to develop a more comprehensive framework that enhances understanding of travelers' intentions to use specific services.

Second, the sample used in this study lacks segmentation. Digital marketing scholars highlight that travelers differ in their attitudes and perceptions, which can significantly impact results when the sample is heterogeneous. For instance, younger travelers and seniors may have distinct attitudes toward automated services. Future studies should account for significant differences among segments to conduct more nuanced analyses at the individual level.

Finally, this study does not consider any moderating variables, which could provide a more comprehensive understanding of the findings. For example, it would be valuable to explore whether income levels influence perceived risks associated with automated services or if age groups affect the impact of subjective norms on travelers' intentions to use these services. Addressing these questions could offer fruitful directions for future research in the Vietnamese hospitality industry.

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