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The Moderating Role of Trust Believe in Consumer Adoption of New Technologies

Abdullah M. Alomran
Department of Tourism and Archeology, College of Art, University of Hail

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The goal of the study is to help expand an existing model by incorporating two important constructs, 'Trust Belief' and Perceived Risk' as new constructs in the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). Accordingly, this research will utilize data collected from cross-sectional surveys. The study comprised a total of 398 participants, whose responses were analyzed using Partial Least Squares Structural Equation Modeling. This research hypothesizes that Trust Belief (TR) plays a mediating role in the association between Perceived Risk (PR) and Behavioral Intention (BI). The findings of this study show that trust belief facilitates the negative association between a consumer's degree of perceived risk and their intention to embrace new technologies (behavioral intention).

KEYWORDS
Trust Believe, Perceived Risk, Intention Behavior, UTAUT2, PLS-SEM

الدور التعديلي لمعتقد الثقة في تبني المستهلك للتقنيات الجديدة

عبدالله محمد العمران

قسم السياحة والآثار- كلية الآداب والفنون - جامعة حائل

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الملخص

هدف هذه الدراسة هو توسيع نموذج قائم من خلال دمج متغيرين مهمين، وهما "معتقد الثقة" و"المخاطر المدركة"، كمتغيرين جديدين ضمن نظرية التقبل الموحد واستخدام التكنولوجيا 2 .(UTAUT2)وبناءً عليه، ستعتمد هذه الدراسة على بيانات تم جمعها من خلال استبيانات مقطعية. شملت الدراسة ما مجموعه 398 مشاركًا، وتم تحليل إجاباتهم باستخدام نمذجة المعادلات الهيكلية بطريقة المربعات الصغرى الجزئية.(PLS-SEM)

تفترض هذه الدراسة أن معتقد الثقة (TR) يلعب دورًا وسيطًا في العلاقة بين المخاطر المدركة (PR) والنية السلوكية .(BI) وتُظهر نتائج الدراسة أن معتقد الثقة يُسهم في تسهيل العلاقة السلبية بين درجة المخاطر التي يدركها المستهلك ونيته في تبني التقنيات الجديدة (النية السلوكية).

الكلمات الدالة : معتقد الثقة، المخاطر المدركة، النية السلوكية، نظرية التقبل الموحد واستخدام التكنولوجيا UTAUT2، التحليل باستخدام (PLS-SEM).

Introduction

The tourism sector has witnessed a steep rise in technological advances. This has sparked great interest in information technology research among scholars worldwide. Recognizing the tremendous potential that these innovative technologies offer to the hospitality sector, it is essential to gain a more comprehensive understanding of their intended applications within the industry. This study calls attention to the concepts of consumers' perceived risk and their trust belief as critical constructs that influence their intention to use online booking services, in a bid to generate insight that delivers this 'more grounded' understanding. Granted, there is no shortage of existing literature investigating how trust and risk influence each other. However, it is imperative to appreciate that most of this literature and empirical data focus on industrial relationships. As such, there is a gap in research on the association between risk and trust in business-to-customer electronic commerce relationships. This study's findings could, thus, potentially impact the hospitality industry's strategies significantly, as well as reshape the industry's approach to consumer trust and perceived risk (Helmy et al., 2024). For instance, as Zhang et al. (2019)aptly state, investigating the features of online bookers and various antecedents for e-booking's adoption within the hotel industry could significantly improve the industry's competitiveness and positively impact consumer satisfaction more practically. This study acknowledges and highlights the fears and other factors that deter internet users from adopting online booking services in the Saudi Arabian Kingdom. A more grounded comprehension of the incentives that positively motivate consumers' intention to shop online is thus crucial in developing strategies that can reduce perceived risk and enhance consumer trust. This would encourage consumers to adopt new technologies in the hospitality sector and possibly reshape the industry's future. There is also great potential in how these insights can ultimately improve customer satisfaction and improve industry competitiveness more practically and actionably.

Taheri et al. (2024) and Al-Emran & Griffy-Brown (2023) reiterate that the current literature is not exhaustive enough. The authors also explain that the present literature on the impacts of new technologies on consumers' online booking behavior is not irrefutable. Consequently, there is no consensus on how new technologies could influence online booking in the future in the current research (Akhtar et al., 2019). For instance, some scholars suggest that online shopping is just an over-hyped and fleeting fad (Holloway & Beatty, 2003). Conversely, others like Hoffman et al. (1995) and Rowley (1996) argue instead that the Internet potentially offers significant prospects for the hospitality industry and can profoundly impact are selling because it plays a complementary role in promoting market activities.

Considering the above, this study examines how trust belief, and perceived risk influence consumers' adoption of new technologies. This research also aims to investigate why there is such low adoption of new technology among online bookers of hotel services in Saudi Arabia.

Literature Review

Trust: Khamitov et al. (2024) explain that current literature offers varied definitions of trust across different disciplines. For instance, studies on social psychology define trust differently from studies on organizations, institutions, or individuals. Consequently, there is no unifying definition of trust within existing literature (Kimbrough, 2016). However, most researchers consider and cite trust as a critical factor within the online purchasing context (Corbitt et al., 2003). Yousafzai et al., (2003) posits that trust motivates a customer to purchase a good or service via online platforms in the short term. The authors also highlight trust as a vital precursor in the long term.

Mayer et al. (1995) offer perhaps the most direct definition of trust. The authors define trust as a consumer's expectation that a given need will be met, and a willingness to take any loss that may occur in the process, whether this loss is within their control. Other researchers develop the concept of trust further into perceived trustworthiness. For instance, Mcknight and Chervany, (2001) describe perceived trustworthiness as the consumer's trusting attitudes or beliefs. This study will mainly focus on how Mayer et al. (1995) define trust. Therefore, this research will define trust as the mental state that enhances a customer's willingness to participate in a transaction over an online platform and expect that the platform will fulfill its obligations, regardless of whether they can control or monitor what happens on the payment platform.

Perceived Risk: It is difficult to measure or capture perceived risk objectively (Ricciardi & Rice, 2014). Therefore, most e-business researchers define perceived risk as a complex construct influenced by an individual consumer's perspective on issues such as the source of the risk, the risk's potential damage, and events that could harm the consumer during the online transaction. Thus, researchers opine that perceived risk has valid and distinctive factors depending on the situation and context (Tanveer et al., 2021, Bélanger & Carter, 2008; Herrero Crespo & Rodríguez Del Bosque Rodríguez, 2008). This study will adopt Featherman and Pavlou's (2003) definition of perceived risk. The authors define this concept, within the online booking context, as the possibility of damage when a consumer pursues an ideal outcome via electronic devices.

Relationship Between Perceived Risk and Performance Expectancy

Performance expectancy (PE) is defined as the extent to which a given technological product will help the consumer in doing certain things (Venkatesh et al., 2003). Within the UTAUT2 model, effort expectancy and performance expectancy play a similar role in influencing a consumer's view about the perceived usefulness and perceived ease of use of a good or service. Thus, one can reasonably assume that consumers with positive attitudes toward e-booking are likely to experience lower risk perception. However, it is important to also consider how performance expectancy affects perceived risk, especially considering that consumers will perceive risk either consciously or unconsciously when deciding whether to embrace a given good or service. These uncertainties are also likely to increase when using the internet as a mediator between consumers and businesses, especially given the security concerns (Mangiò et al., 2020). Thus, the loss probability and the subsequent costs associated with the loss contribute to perceived risk. Kumar et al. (2023) explain that this, in turn, influences how a consumer evaluates a product, and their willingness to embrace a given technology.

This study thus proposes the hypothesis below:

(H1) A negative relationship exists between perceived risk and performance expectancy.

Relationship Between Perceived Risk and Effort Expectancy

Consumers associate effort expectancy with the relative ease with which they can utilize a certain technological product (Venkatesh et al., (2003). Numerous consumer behavior studies conducted to assess the association between effort expectancy and a consumer's willingness to buy have concluded that there is a significant and positive association between these concepts (Gupta et al., 2008; Al-Gahtani et al. 2007 & Pai and Tu., 2011). This is as shown in Table 1-1 below.

Related research by Venkatesh et al. (2003) also found that effort expectancy significantly affects early stages of internet experience, especially among women using innovative technologies. The authors also note that the perceived difficulty associated with using a given

system reduces as the consumer gains more experience using the given technology. Thus, the more consumers learn about a new technology, the easier it becomes to use. More recent studies by Chang et al. (2016) found no significant connection between perceived risk and effort expectancy, which suggests that these two concepts may not be associated at all.

Table 1-1: A Summary of studies on effort expectancy's effect on behavioral intention

Association	Researchers	Research	Researchers	Positive/negative Connection
Effort expectancy -> behavioral intention	(Pai and Tu, 2011)	(Camilleri, 2024)	(B. Gupta et al., 2008) moderated by gender	Significant positive relationship
Effort expectancy -> behavioral intention	(Al-Gahtani et al., 2007) Relationship is moderated by level of experience and age		(Khalid et al., 2021)	Nonsignificant relationship

Within the risk context, a potential customer who perceives a product as difficult to understand is likely to avoid purchasing it, considering it risky (Moore & Benbasat, 1991). This highlights the difficulties potential customers encounter when adopting innovative technologies and illustrates how such challenges can influence their perceived risk, either increasing or decreasing it. Roselius (1971) explains, effort expectancy plays a crucial role in reducing risk. It is thus apparent that consumers who feel that e-booking services are easy to use also tend to view them as not risky.

This study thus proposes the hypothesis below:

(H2) A negative association exists between effort expectancy (EE) and perceived risk (PR)

How Performance Expectancy and Effort Expectancy Influence Trust

The impact that perceived usefulness and perceived ease of use may have on customers' intention to embrace online bookings is an issue that continues to intrigue consumer behavior researchers (del Carmen Pérez-Ricardo & García-Mestanza, 2023). Most studies conducted on this issue reveal that these constructs are positively and significantly associated with trust. For instance, a recent study by Rahi et al. (2019) concluded that effort expectancy and perceived performance expectancy were positively associated with trust. This suggests that the more effort a customer must exert, the less trust they will have in a system or new technology. They are also likely to have reduced trust in their ability to control the system or to monitor online transactions and procedures. There is a growing body of literature which suggests that effort expectancy is a critical antecedent of trusting belief in e-booking (Pennington et al., 2003 & Malhotra et al., 2004). A more current study by Chang et al. (2017) revealed a positive relationship between trust and effort expectancy.

Bélanger & Carter's (2008) the study highlighted trust as a vital element in perceived risk theory. This is consistent with older studies by Teo and Liu (2007) and Yousafzai et al. (2003), who regard trust as being dependent on a good or service's perceived ease of use and perceived usefulness. Based on these studies, the concepts of effort expectancy, risk, and performance expectancy are all vital components of trust, and can influence a customer's attitudes towards electronic service, and their intention to take part in these online transactions (Li et al., 2008; Pavlou, 2003). Additionally, the above constructs also stand out as critical factors that can be used to evaluate the means of payment that a customer selects from multiple payment options.

Considering the above, this study also proposed the hypothesis below:
(H3) A positive association exists between performance expectancy (PE) trust belief (TR)
(H4) A positive relationship exists between effort expectancy (EE) and trusting belief (TR).

The Impact of Social Influence on Trust

Venkatesh et al., (2003) explains that social influence (SI) is the extent to which consumers believe that their friends or family will approve or disapprove of them buying a given product or embracing a given service/technology. Social influence is thus largely subjective and influenced by social factors. These factors are particularly likely to influence younger consumers who frequently interact with technology. The variable of social influence measures peer influence on Internet technology use. While Venkatesh et al. (2003) Suggested in this early study that social influence was only significant in a mandatory context, his more recent studies found it to be significant in voluntary contexts.
Wathanakom (2023) argues that social influence indirectly influences consumers' intentions. According to the author, this process is called internalization. Bagozzi (2007) reiterates the above, explaining that members of a social reference group can impact a customer's intention to adopt new technology through internalization and also as a result of a need for compliance. In this context, internalization refers to the process through which a person adopts a significant reference group's belief and integrates them into their own belief system (Zittoun & Gillespie, 2015). Consequently, social influence can directly impact a consumer's attitudes and beliefs, as these norms can sway their intentions (Cobelli et al., 2024). Researchers such as Venkatesh and Davis (2000) have even suggested that a consumer may perceive a system as helpful if their significant reference group holds a similar perception. Li et al. (2008) argue that, in the absence of sufficient information or knowledge about a given system, individuals tend to rely on the opinions of their significant referentsThis results in customers inadvertently fully adopting these borrowed beliefs and mirroring similar levels of confidence in a given system. More recent studies, however, highlight gender as a moderating effect that distinguishes males from females in their intentions to use new technologies (Faqih, 2016). Singh et al.'s (2020) study corroborates the above, concluding that the willingness to adopt new technologies is higher in women than in men.
The hypothesis below thus arises:
(*H5) A positive association exists between social influence (SI) and trust belief (TR)*

Behavioral Intention

Behavioral intention relates to a customer's willingness to perform a certain behavior (Ajzen and Fishbein, 1975). The UTAUT2 model incorporates the concepts below as predictors of consumer behavior.

- Performance expectancy
- Effort expectancy
- Habit
- Hedonistic motivations
- Price value
- Facilitating conditions
- Social influence

Researchers have adopted new theoretical elements of perceived risk and trust belief, arguing that they are the critical drivers of behavioral intention. However, introducing these new constructs into the UTAUT2 model does not change behavioral intention. The existing literature has investigated how trusting beliefs and the level of perceived risk influence a customer's intention to embrace a given good or service, with earlier studies largely concluding that perceived risk has a direct impact on behavioral intention." (Bonsón Ponte et al., 2015; Chang &

Chen, 2008; Kaur & Arora, 2020) arrange in the paragraph from older to newer. Conversely, several recent studies conclude that perceived risk does not directly affect behavioral intention (Castaldo et al., 2024; S. E. Chang et al., 2017; Faqih, 2016; & Sohn et al., 2016). This research maintains that perceived risk and behavioral intention are indirectly related via trust belief.

Trust Belief's Impact on the Relationship between Perceived Risk and Behavioral Intention

Consumers are typically unable or unwilling to trust new forms of payment methods in the early stages of the online booking process (Rawat et al., 2024). It is only with certain protections, such as regulations or buyer protection through upgraded technology, that consumers can trust these methods. This suggests a need for strategic efforts to encourage trusting behavior as a necessary precursor to the success of online services (Müller & Wöhler, 2023). It is through such mechanisms that consumers can be more trustful of servers during their first visits. They may also be more willing to adopt risks when transacting over these servers from then onwards (Zhou et al., 2016). It is thus apparent that system-related risks can either encourage or discourage trust formation during the initial stages of electronic commerce. Thus, it is arguable that perceived risk affects consumers' trusting behavior when using online payment methods, especially during the early stages. As Srisathan et al. (2024) observe that a web user's experience will positively affect their degree of perceived trust, while at the same time negatively affecting perceived risk. Therefore, one may conclude that perceived risk is an antecedent of trust, especially in the later, advanced stages of electronic commerce. To put it practically, a consumer's level of initial trust in an institution may reduce their perceived cumulative risk while also increasing trust, which will in turn encourage them to frequently use e-commerce.

It is clear from the above that having trusting attitudes may be dependent on whether the consumer perceives risk, especially because the risk affects the transaction and the process itself. Therefore, any factors that can potentially result in a loss to the consumers are classified under risk. An additional study by Castaldo et al. (2024) also concludes that there is no direct connection or association between perceived risk and behavior.

In examining how perceived risk relates to trust, trust is viewed as dependent on the degree of risk involved (Cisternas et al., 2024). One of the features of e-booking is that the consumer is only able to access the website via an internet-enabled device, and not physically. Additionally, there is limited regulatory control in e-booking, which increases the risk that a customer's information could be accessed by unauthorized persons. It is also difficult to predict what happens during an online transaction, and the processes themselves are complex and difficult to monitor. All these factors heighten perceived risk and undermine trust towards the hotel's e-booking platforms (Chung & Yu, 2021).

Thus, the hypothesis below is proposed:

(H6) A negative association exists between perceived risk (PR) and trust belief (TR)

(H7) Trust belief (TR) completely mediates the negative association between perceived risk (PR) and behavioral intention (BI)

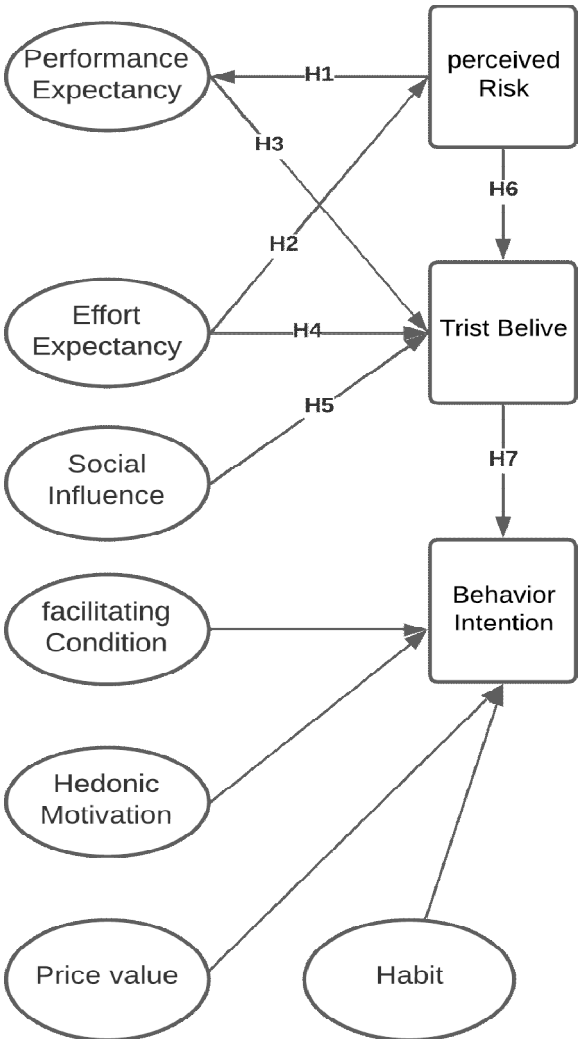

Figure 1-1 Completed Conceptual Framework Model

Relationships Retested

This research builds on existing literature and will simply re-test the above relationships within the context of the study. It's imperative to note that these connections have been observed and supported by a large body of existing literature ((Escobar-Rodríguez & Carvajal-Trujillo, 2014; A. Gupta et al., 2018; Siyal et al., 2024). Retesting these relationships, therefore, offers an avenue to better explain and understand them and also to improve this study's model fit (see Figure 1-1).

Conditions that Facilitate Online Transactions

These conditions relate to whether there is technical support available to assist a user when interacting with a system (Venkatesh et al. (2003). Within an organizational context, if the core concepts of effort expectancy and performance expectancy are present, then these conditions significantly influence whether a customer embraces a new technology, as shown in Table 1-2 below.

However, there have been several studies conducted in developing countries that have concluded that the availability of facilitating conditions does not influence a customer's buying

intention. These studies were conducted in India and Malaysia (Nawi et al., 2017, & Gupta et al., 2018).

Table 1-2: **Summary of Studies on Facilitating Conditions' Influence on Behavioral Intention**

Association between constructs	Source	Source	Source	Is the relationship positive or negative
Facilitating conditions on behavioral intention			Utomo et al., 2021	Non-significant relationship
Facilitating conditions on behavioral intention			Humida et al., 2022	Significant positive relationship
Facilitating conditions on use			Al-Gahtani et al., 2007 moderated by age	Non-significant relationship
Facilitating conditions on use	(B. Gupta et al., 2008)	(Neufeld et al., 2007)	Al-Gahtani et al., 2007 absence of moderators	Significant positive relationship

Venkatesh et al., (2012) argues that within the consumer behavior context, these conditions influence both use behavior and behavioral intention.

Habit

There are differing definitions of habit in current literature. For instance, Robbins and Costa (2017) define habit as an involuntary reaction to a given situation. Another scholar such as Kim et al. (2005) view habit as previous behavior. Several studies have concluded that habit significantly affects technology use, but these studies challenge the role that behavioral intention plays (Limayem et al., 2007; Söllner et al., 2024; Tamilmani et al., 2019). Additionally, other scholars explain that habit indirectly affects technology use (Venkatesh et al. (2012). The researchers also note that habit may also weaken the association between technology users and behavioral intention (see Table 1-3).

Table 1-3: Comparing Habit's Effect on Behavioral Intention and Actual Use

Association	Researchers	Researchers	Is the relationship positive or negative?
Habit on behavioral intention	(Escobar-Rodríguez & Carvajal-Trujillo, 2014)	(Vance Wilson et al., 2010)	Positive Significant relationship
Habit on actual use	(Tamilmani et al., 2019)	(Söllner et al., 2024)	Positive significant relationship

Hedonic Motivations

Hedonic motivation is the pleasure a user will derive from using a given technology (Venkatesh et al., 2012; Brown and Venkatesh, 2005; Chang et al. 2023; Nikolopoulou et al. 2021). Various

constructs relate to hedonic motivation. These include 'playfulness' and 'pleasure', which stand out as vital factors in determining behavioral intention about new technologies and actual use (Brown & Venkatesh, 2005; Y.-W. Chang et al., 2023; Nikolopoulou et al., 2021).

A study by Zhang et al. (2012) on mobile applications' use proposes that consumers will have a greater acceptance of a new technology if the mobile application produces high entertainment value. A study by Baptista & Oliveira (2015) also found a significant statistical relationship between hedonic motivation and behavioral intention. As such, hedonic motivations can be used to explain behavioral intention as shown in Table 1-4.

Table 1-4: A Comparison of How Hedonic Motivation Influences Behavioral Intention

Association	Researchers	Researchers	Researchers	Is the relationship positive or negative
Hedonic motivation's influence on behavioral intention	(Heijden, 2004)	(Sledgianowski & Kulviwat, 2009)	(Yang, 2010)	Positive and significant relationship

Price Value

Price value is described within this study's context as the extent to which price affects a consumer's willingness to utilize online booking. Earlier studies suggested that price directly impacted perceived value (Ali & Bhasin, 2019). In this relationship, the consumers perceived a product as less valuable the higher its price increased, and vice versa (Wang, 2012, Dodds et al, 1991 and Bushara et al., 2023). This is consistent with Wang & Wang's (2010) the argument that the consumer's unwillingness to adopt e-booking is partly because online service providers do not provide competitive prices that motivate customers to take part in the transaction. The consumers, therefore, do not perceive these services as valuable. Thus, consumers may compare how the cost of e-booking services compares to the costs of traditional booking methods, such as making phone enquiries or driving to an agency.

The Research Methodology

This study utilizes evidence triangulation – a research approach that combines multiple sources of evidence to optimize a study's validity and credibility (Bhandari, 2023). Primary data collection was done through online cross-sectional surveys. The study used pre-validated scales and adopted rigorous measurement steps in questionnaire design and sample population selection by adopting the focus group method and a pilot study to limit common method bias.

Population Sampling

This study adopted the non-probability method of sampling, as access to the total population was both unnecessary and limited (Saunders et al., 2019). In this method, the researcher gathered data by sampling the target population. This research used primary methods to ensure scientific validity. The first procedure was self-selection. This method involves sending invitations on multiple platforms to potential respondents to participate in web-based surveys. The second method involved volunteer panels. Here, respondents receive an invitation to take part in an online survey after providing their demographic data. This study also conducted several statistical tests, including Little's MCAR, ML, and KMO to validate the sampling method and to collect data for measuring the model study's variables.

Focus Groups

This study arranged focus groups in two main phases. During the initial phase, 14 Business School staff members received a questionnaire. The goal of this phase was to seek comments and critical reviews. The researchers also engaged in personal, one-on-one discussions with some members of the academic staff to generate more in-depth insight from their suggestions and recommendations. Most of the comments related to how the questions were phrased, item sequencing, and the presentation. This phase provided insightful suggestions on how to work the questionnaire items, modify the overall look of the questionnaire, and how to improve the sequences. The researchers made some minor changes to the question format and proceeded to the second phase.

The second phase involved actual group discussions. This study invited PhD students. These students needed to meet the following criteria:

- Were acquainted with hotel electronic booking services
- were Arabic natives in the Business School, to participate

On arrival, the participants received refreshments. The session then began after a short welcome message, a brief discussion of the ground rules, and a brief on the topic. The participants needed to sign consent forms provided by the study after the brief introduction sessions. They were then encouraged to speak openly and informally during the discussions. After all, these discussions needed to be open to optimize responses. In the early sessions of the focus groups, the participants were requested to offer brief introductions of themselves. They were then asked to name something that they had bought over the Internet.

This study categorized the questions into 8 categories. All of these topics are related to the questionnaire's layout and design. As recommended by Saunders et al.'s (2019), these queries were open-ended. These questions addressed issues such as questionnaire timing, structure, and coherence, and the question's wording. The study also designed possible inquiries to accompany each question. Some of the key elements discussed included initial impressions, overall themes, and suggestions for improvements. The focus group discussions also provided actionable suggestions through the think-aloud episodes. This included a suggestion to reduce the cover letter's length. This reduction was to help improve the questionnaire's response rate. In this phase, the researcher identified and corrected some spelling errors and modified some questions' wording to improve understanding. One excellent example of some of these recommendations was a suggestion from one of the colleagues about social influence: "Persons whose opinions I value often advise me to embrace e-booking services."

Format and Layout

This study utilized online survey software as the primary platform and mode of distribution. This supported advanced search while also maximizing distribution reach. The selected software – Smartsurveys.com, had an engaging and secure layout, and it also prevented missing questions or multiple responses for optimal accuracy. This software also had a skip function to make it possible for participants to skip specific questions depending on their responses. This also made it easy for the researchers to compare the collected data, save it, and display it in workbooks to facilitate analysis.

The survey questions were all voluntary, allowing the participants to stop or continue their own accord. The use of the above software also ensured anonymity and confidentiality. The average completion time for these questions was 7-11 minutes. The software also displayed the completion percentage in each frame to guide the respondents, who were only able to navigate to the frames that followed by clicking on the next page section. The questionnaire layout did not

include question numbers. This was to avoid discouraging the respondents. Its software prevented incomplete questionnaires, making sure that users did not select specific questions to answer while ignoring the rest. The software also highlighted any incomplete questions and issued the respondent with a reminder when they tried to navigate to the next sections without completing the questions within a frame. To cater to those who felt coerced into answering questions, the questionnaire layout included a non-response option.

This questionnaire aimed to encourage the respondents to submit their unique influences and experiences within the e-booking context. Additionally, the questionnaire also sought to encourage the respondents to self-report their personal backgrounds and to offer insight into their purchasing patterns related to online bookings. A multi-choice layout was thus selected as the most ideal for this questionnaire. The questionnaire opted for a five-point Likert scale for the questions, allowing the respondent to indicate their extent of agreement or disagreement with the provided statement. The questionnaire had a total of 31 questions. These were categorized as follows:

i. Demographic data
ii. Facilitating Conditions and Social Influences
iii. Attitudes towards the Internet
iv. Evaluation of Perceived Risk and Trust
v. Effort expectancy and Performance Expectancy
vi. E-booking and Travel Patterns
vii. Price Value, Habit, and Hedonistic Motivation
viii. Behavioral Intention Vs Actual Use

Questionnaire Translation

This questionnaire's primary targets were Saudi nationals. Thus, following survey design and preparation, the next step was translation into the target respondents' native Arabic tongue. The study selected and used back translation. In this process, translated text is then retranslated into its original language. Brislin (1970) describes this approach as one of the most popular approaches in international research.

However, some scholars warn about this approach's limitations. For instance, this approach does not take into account the differences in how monolingual and bilingual speakers use language, and how difficult it is to include the literal and implied meanings of a given statement when translating text (Douglas & Craig, (2007).

To counter the above limitations in this translation process, the researcher completing the translations would submit it to two Saudi students pursuing their doctorate in linguistics for a final appraisal before integrating the students' suggestions. Two specialists in the Arabic language would then review the Arabic version and create a final version, which included both the student's and specialists' suggestions. The study availed this version for a pilot test before rolling it out.

The Pilot Study

Previous studies have shed light on common questionnaire issues that can easily be identified and resolved in the pilot studies phase. Some of these problems as listed below:

1. Questions that overlap
2. Typographic errors
3. Poor survey length
4. Unreliable workings

5. Omissions or erroneous instructions
6. Lack of motivational tactics, and
7. Inappropriate requests for personal information.

It is possible for some dimensions to overlap. It immediately became apparent that there was no consensus on integrating the principal dimensions in online shopping literature. These overlapping dimensions could cause conflict or introduce further confusion in the existing literature. It was during the conduct of this study that the researchers realized these inconsistent findings. Knowledgeable colleagues first revised the questionnaire and offered crucial insight to ensure its efficiency, format appropriateness, relevance, and completion. The questionnaire then underwent cognitive pretesting. This constituted think-aloud observations and strategies. Finally, the researchers set up a preliminary pilot study which mirrored the procedures that had been suggested for the main study. This was to make sure that the queries included would generate actionable insight about the rate of response and the total response time. The researchers also used the final revision phase to identify and correct typographic errors. An independent party that was not connected to the study was invited to perform this step.

The study collected 41 questionnaires over one week as part of the pilot study. A comments box was integrated under each question so that respondents in the pilot study could write down any comments. These modifications and comments included the following:

- Translators made one spelling mistake
- Two confusing sentence sentences were written in Arabic. These were reworded
- The questionnaire missed two questions (age and gender) because these questions had not been translated. These questions are now included
- Most respondents responded to the survey via smartphones. As a result, many of the respondents complained that the font size and the appearance of the items were not optimal. Therefore, we reduced points on the Likert scale from 7 to 5.
- Some of the respondents responded that they did not have a credit card. They cited this reason as the primary barrier that prevented them from making online bookings. Consequently, we included a new response to the question: 'Please tell us why you have not made any online bookings during this period'. This response was 'I did not have a credit card.'
- Consider using 'piping options' to include the name of the website in the questions. For instance:
- Please select the degree to which you agree with the following statements about how you perceive hotel e-booking sites – (show the website brand name here);
- The above question would look as follows, for those people who have not booked hotel services through a website.
- Please indicate the degree to which you agree with the following statements regarding your perception of hotel e-booking sites.

The study conducted an initial PLS-SEM analysis to measure the current instruments' level of reliability and validity. The results of this analysis were satisfactory. Thus, we proceeded to the next phase of collecting data for the main study.

Data analysis and Discussion

In this study, the respondents completed 529 surveys. After completion and sorting, we found that 433 surveys were completed. The number of partially completed surveys reduced from 529 to 398 after we removed the cases that either didn't answer the questions on the common bias

question or didn't meet the target population criteria, as was done by Siritzky et al. (2023). Some of the issues with the criteria included:

- not meeting the age criteria of 18 years
- not meeting the nationality criteria within this study's context (Saudi Arabian nationals)
- Not meeting the location criteria (only those living overseas for either studies or work

Normality

The present study used Maximum Likelihood Estimation (MLE) – a process that uses observed data to provide an estimate of an assumed probability distribution's parameters, to test for normality. The study selected the MLE method as the preferred approach to test for normality. Using the recommendations that researchers Doane & Seward (2011) and Cramer & Howitt (2004) provide, this research adopted ± 1.960 as the threshold value to evaluate non-normality. Measurements of skewness and kurtosis revealed that all the values were within the selected threshold save for: BI1, BI2, EE1, EE3, EE4, PE1, PE2, SI1, FC2, SOR3, and S13, and PV1. These values deviated slightly from normality. However, these slight deviations do not have any significant impact on the research outcomes when using the MLE estimation tool, since the sample size (n=398) is larger than 200 (n>200).

A probability plot was also used in this study to evaluate whether the dataset showed a normal distribution. According to Hair et al., (2010),the remaining values show a non-normal distribution when they fall along a diagonal, and only a few values deviate from this diagonal.

Measurement Models' Evaluation

The process of analyzing reflective measuring models is made up of three main items:

- Composite reliability
- Convergent reliability
- Discriminant validity

The first is described as a measure of internal consistency within items on a scale in order to assess the study's reliability. The 2nd item employs average variance extracted (AVE) to evaluate the model and determine how the tests are correlated with other tests that measure similar concepts. The third employed cross-loadings and used the Fornell-Larcker criterion. The following sections will illustrate the standards for evaluating reflective measurement models as shown in Table 1-8.

Table 1-8. Measure Model Evaluation's Results

	Cronbach's alpha	Composite reliability (rho_a)
BI	0.893	0.894
EE	0.723	0.730
FC	0.724	0.728
HA	0.786	0.802
HM	0.914	0.928
PE	0.709	0.740
PER	0.855	0.856
PV	0.462	0.462
SI	0.654	0.689
TR	0.769	0.771

Internal Consistency

Researchers typically analyze internal consistency first when assessing measurement models using Cronbach's alpha. This measure provides a reliability estimate, which depends on the correlations among the indicator variables (see Table 1-8). Researchers Hair et al. (2017) propose compose reliability as an alternative measure for internal consistency. Instead of focusing on observed variables' intercorrelations, this measure emphasizes the variance in the indicator variables' outer loadings with a range of 0 to 1. Lower values indicate a low degree of reliability, and vice versa. It is the same as Cronbach's alpha.

Hair et al. (2010) notes that values around 0.70 (0.7 – 0.9) or higher are widely regarded as desirable in more advanced phases of exploratory research, while values around 0.6 (0.6 – 7) are allowable in investigative studies.

Table 1-9. Composite Reliability Test Results

	Composite reliability (rho_a)	**Composite reliability (rho_c)**
BI	0.894	0.933
EE	0.730	0.844
FC	0.728	0.879
HA	0.802	0.862
HM	0.928	0.945
PE	0.740	0.838
PER	0.856	0.896
PV	0.462	0.788
SI	0.689	0.806
TR	0.771	0.897

Researchers such as Hair et al. (2017) argue that true reliability estimates lie between the Cronbach's alpha scores and the composite reliability scores. Although researchers view the former as ideal since it is more conservative, the composite value provides an overvalued degree of internal consistency. This means that it provides comparatively higher reliability estimates than Cronbach's alpha. The dataset for this study meets the test for internal consistency reliability, as shown in Table 1-9 and Table 1-10.

Table 1-10: Cronbach's Alpha Scores

	Cronbach's alpha
BI	0.893
EE	0.723
FC	0.724
HA	0.786
HM	0.914
PE	0.709
PER	0.855
PV	0.462
SI	0.654
TR	0.769

Convergent Reliability

This measure assesses the degree of correlation between tests that measure similar concepts. The most used tool to evaluate convergent reliability of given concepts is the Average Variance Extracted (AVE) tool. Most researchers also use outer loadings to assess an indicator's reliability by examining their outer loadings values (Hair et al., 2017).

Indicator Validity

As previously discussed, an indicator's outer loadings values can be used to determine composite reliability. Values greater than 0.708 typically indicate high indicator reliability. If these values fall below this value and 0.4, then the researcher is advised to consider eliminating the specific indicator whose outer loadings are weak to increase the AVE so that it's greater than the composite reliability score. These indicators or outer loadings should be substantial on the lower side. This is because outer loadings may also weaken the composite reliability score. Some researchers, such as Bagozzi et al. (1991 and J. F. Hair et al. (2011) also argue in favor of removing indicators which have outer loadings values that fall below 0.4. Table 1-11 summarizes this study's outer loadings for indicators.

Table 1-11: Outer loadings

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
BI1 <- BI	0.901	0.901	0.014	65.748	0.000
BI2 <- BI	0.911	0.911	0.013	72.236	0.000
BI3 <- BI	0.910	0.909	0.013	70.767	0.000
EE2 <- EE	0.792	0.790	0.040	19.661	0.000
EE3 <- EE	0.771	0.770	0.048	15.960	0.000
EE4 <- EE	0.841	0.841	0.030	28.318	0.000
FC1 <- FC	0.896	0.896	0.022	41.673	0.000
FC2 <- FC	0.874	0.872	0.027	32.682	0.000
HA1 <- HA	0.837	0.837	0.016	52.171	0.000
HA2 <- HA	0.842	0.842	0.019	43.538	0.000
HA3 <- HA	0.753	0.752	0.029	26.242	0.000
HA4 <- HA	0.683	0.683	0.049	13.868	0.000
HM1 <- HM	0.899	0.899	0.015	60.019	0.000
HM2 <- HM	0.940	0.940	0.008	123.459	0.000
HM3 <- HM	0.930	0.930	0.008	113.122	0.000
PE1 <- PE	0.878	0.879	0.015	58.690	0.000
PE2 <- PE	0.830	0.830	0.024	35.111	0.000
PE3 <- PE	0.669	0.669	0.043	15.705	0.000
PER1 <- PER	0.783	0.782	0.024	32.329	0.000
PER2 <- PER	0.749	0.748	0.028	26.803	0.000
PER3 <- PER	0.818	0.818	0.019	42.968	0.000
PER4 <- PER	0.825	0.825	0.017	47.405	0.000
PER5 <- PER	0.804	0.804	0.022	37.041	0.000
PV1 <- PV	0.815	0.813	0.040	20.323	0.000
PV3 <- PV	0.797	0.797	0.032	24.827	0.000
SI1 <- SI	0.776	0.774	0.040	19.608	0.000
SI2 <- SI	0.682	0.678	0.063	10.762	0.000

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
SI3 <- SI	0.825	0.824	0.045	18.166	0.000
TR2 <- TR	0.907	0.907	0.011	85.779	0.000
TR3 <- TR	0.896	0.896	0.017	52.843	0.000

As evident in Table 1-11, the study eliminated four items because their outer loadings were weak. These indicators needed to be excluded to optimize the reliability of the remaining constructs. The study also eliminated the following items:

- EE1
- FC4
- FC3
- PV2
- SI2
- HM4
- PE3 and
- TR1.

Additionally, items SI2 and PV2 also had outer loadings that lay below 0.7. However, these items were maintained in the study since removing them would not influence the reliability scores of the related constructs, as Hair et al. (2017) recommend.

Average Variance Extracted (AVE) Scores

This measure commonly determines a construct's degree of convergent validity. If this value is larger than 0.5, this would indicate that for those specific constructs, the AVE can describe more than 50 percent of the variance in its indicators' factor loadings (Hair et al. (2017). Conversely, values below 0.5 suggest that the construct fails to adequately explain its indicator variables, on average. Based on Table 1-12, 0.531 was the lowest AVE. Thus, this data meets the required degree of convergent reliability.

Table 1-12: Summary of Average Variance Extracted (AVE) Values

	Average variance extracted (AVE)
BI	0.823
EE	0.643
FC	0.783
HA	0.611
HM	0.852
PE	0.636
PER	0.634
PV	0.650
SI	0.582
TR	0.813

Discriminant Validity

Fornell and Larcker (1981) explain that discriminant validity's criteria maintain that the AVE for each construct needs to be greater than the value of the correlation between the greatest concept and any underlying variable squared. This means that the researcher should compute the square root of the average variance extracted and juxtapose it with the correlations between the underlying concepts. The AVE's square root should be greater than the horizontal and vertical cross-correlations. Tables 1-13 and 1-14 highlight

The tables highlight that all the values meet the discriminant validity measurement tests. Each value highlighted is therefore more significant than any underlying cross-correlations.

Table 1-13.: Cross Loadings

	BI	EE	FC	HA	HM	PE	PER	PV	SI	TR
BI1	0.901	0.435	0.478	0.636	0.557	0.673	-0.443	0.576	0.301	0.633
BI2	0.911	0.437	0.455	0.713	0.552	0.600	-0.418	0.533	0.381	0.632
BI3	0.910	0.447	0.497	0.713	0.629	0.628	-0.448	0.578	0.378	0.667
EE2	0.295	0.792	0.505	0.325	0.279	0.362	-0.272	0.211	0.267	0.372
EE3	0.395	0.771	0.532	0.362	0.363	0.468	-0.261	0.277	0.279	0.407
EE4	0.468	0.841	0.512	0.397	0.403	0.512	-0.309	0.460	0.217	0.439
FC1	0.486	0.501	0.896	0.441	0.334	0.493	-0.388	0.337	0.339	0.531
FC2	0.443	0.642	0.874	0.424	0.362	0.446	-0.358	0.351	0.195	0.443
HA1	0.683	0.448	0.509	0.837	0.572	0.566	-0.415	0.443	0.251	0.600
HA2	0.577	0.347	0.362	0.842	0.580	0.457	-0.338	0.381	0.232	0.489
HA3	0.622	0.271	0.296	0.753	0.523	0.443	-0.285	0.451	0.306	0.474
HA4	0.454	0.339	0.346	0.683	0.414	0.432	-0.217	0.291	0.246	0.423
HM1	0.504	0.409	0.360	0.563	0.899	0.450	-0.346	0.383	0.174	0.417
HM2	0.647	0.412	0.377	0.634	0.940	0.512	-0.437	0.453	0.264	0.504
HM3	0.605	0.389	0.351	0.663	0.930	0.451	-0.408	0.434	0.218	0.461
PE1	0.637	0.456	0.484	0.524	0.409	0.878	-0.366	0.477	0.261	0.654
PE2	0.551	0.485	0.459	0.416	0.370	0.830	-0.342	0.353	0.301	0.522
PE3	0.466	0.402	0.309	0.534	0.464	0.669	-0.272	0.426	0.245	0.458
PER1	-0.373	-0.227	-0.302	-0.304	-0.353	-0.306	0.783	-0.244	-0.178	-0.407
PER2	-0.368	-0.311	-0.347	-0.338	-0.278	-0.337	0.749	-0.249	-0.138	-0.416
PER3	-0.398	-0.262	-0.295	-0.326	-0.328	-0.315	0.818	-0.302	-0.160	-0.439
PER4	-0.389	-0.274	-0.371	-0.308	-0.313	-0.353	0.825	-0.264	-0.148	-0.431
PER5	-0.387	-0.315	-0.358	-0.355	-0.448	-0.328	0.804	-0.250	-0.189	-0.455
PV1	0.510	0.410	0.384	0.394	0.379	0.497	-0.260	0.815	0.128	0.383
PV3	0.489	0.234	0.240	0.428	0.365	0.346	-0.271	0.797	0.281	0.374
SI1	0.257	0.228	0.296	0.287	0.168	0.257	-0.090	0.166	0.776	0.283
SI2	0.210	0.221	0.192	0.191	0.086	0.153	-0.136	0.127	0.682	0.169
SI3	0.389	0.267	0.215	0.268	0.256	0.320	-0.223	0.255	0.825	0.294

	BI	EE	FC	HA	HM	PE	PER	PV	SI	TR
TR2	0.668	0.481	0.524	0.576	0.444	0.615	-0.497	0.429	0.369	0.907
TR3	0.610	0.432	0.471	0.582	0.461	0.632	-0.477	0.418	0.234	0.896

Table 1-14: Discriminant Validity test: Evaluation using Fornell-Larcker Criterion

	BI	***EE***	***FC***	***HA***	***HM***	***PE***	***PR***	***PV***	***SI***	***TR***
BI	***0.907***									
EE	***0.485***	***0.802***								
FC	***0.526***	***0.642***	***0.885***							
HA	***0.758***	***0.451***	***0.489***	***0.782***						
HM	***0.640***	***0.436***	***0.392***	***0.674***	***0.923***					
PE	***0.698***	***0.560***	***0.531***	***0.611***	***0.512***	***0.798***				
PR	***-0.481***	***-0.351***	***-0.422***	***-0.411***	***-0.433***	***-0.412***	***0.796***			
PV	***0.620***	***0.402***	***0.388***	***0.509***	***0.461***	***0.525***	***-0.329***	***0.806***		
SI	***0.390***	***0.314***	***0.306***	***0.331***	***0.240***	***0.335***	***-0.204***	***0.252***	***0.763***	
TR	***0.710***	***0.507***	***0.552***	***0.642***	***0.502***	***0.691***	***-0.541***	***0.470***	***0.336***	***0.901***

Note. All square root values of the average variance extracted fall on the diagonal; the rest of the entries represent the correlations

Structural Model's Evaluation

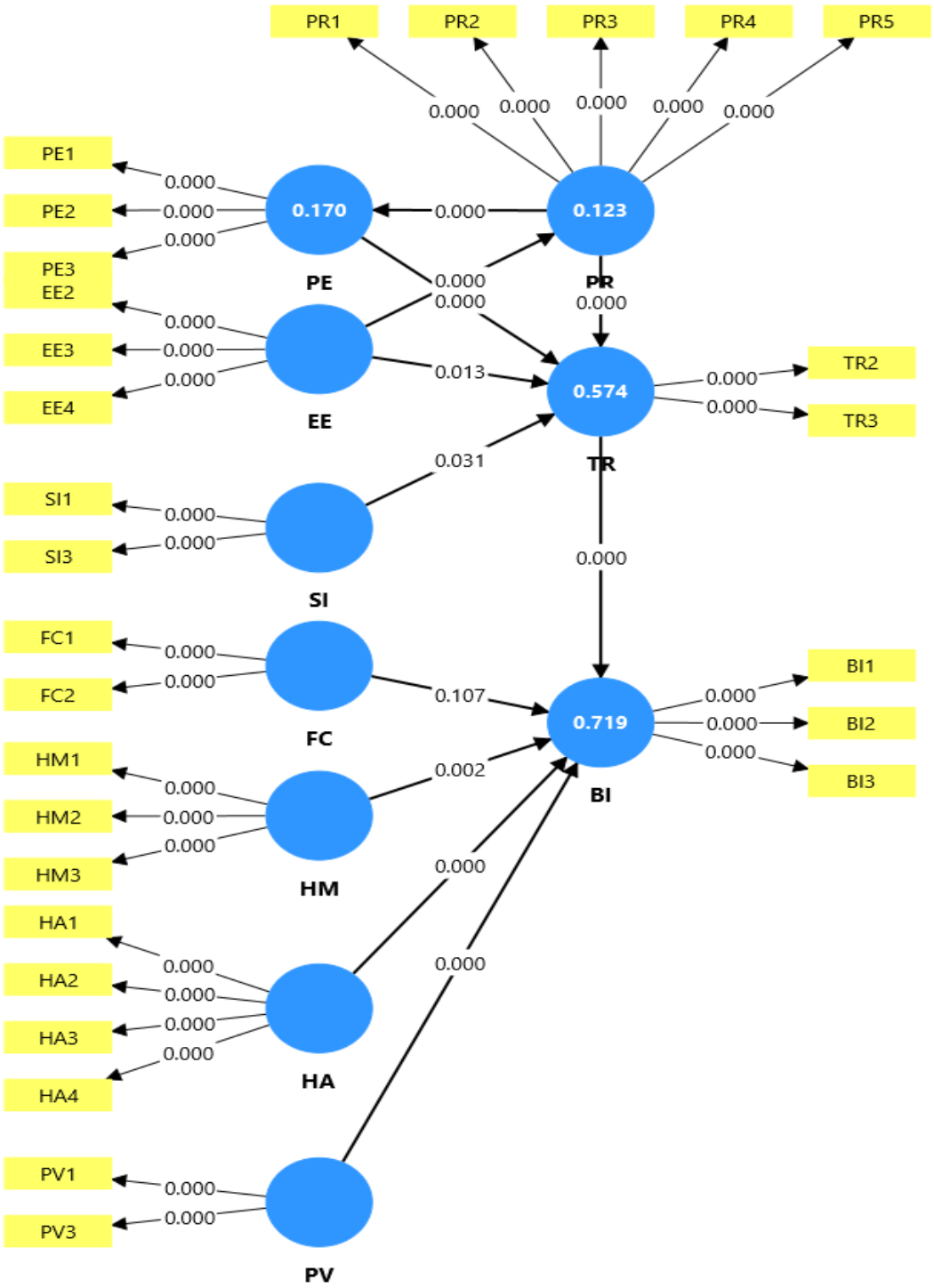

Figure 1-2 Structural model measurement results

Level of Significance Analysis Using Path Coefficients

This study determined a coefficient's significance by working out the standard error through the bootstrapping method. This standard error approach allows the researcher to compute p and t values of associated structural path coefficients. If the t values are larger than their critical value

at a specific coefficient level, then the coefficient is described as statistically significant. A value of 1.67 at a 10 percent significance level is the frequently used value in two-tailed tests. Studies also commonly employ a critical value of 1.9 at a lower error probability percentage. If the significance is lower than 1 percent, studies tend to employ a critical value of 2.57. Conversely, one-tailed tests employ critical values of 1.28, 1.65, and 2.33 at 10%, 5%, and 1% confidence levels. Table 1-15 portrays each hypothesis's path coefficients.

Table 1-15: Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	
(H2) EE -> PR	**-0.351**	**-0.355**	**0.048**	**7.344**	**0.000 *****	**Supported**
(H4) EE -> TR	**0.110**	**0.113**	**0.044**	**2.491**	**0.013 ***	**Supported**
(H3) PE -> TR	**0.479**	**0.476**	**0.047**	**10.217**	**0.000 *****	**Supported**
(H1) PR -> PE	**-0.412**	**-0.416**	**0.049**	**8.426**	**0.000 *****	**Supported**
(H6) PR -> TR	**-0.287**	**-0.286**	**0.045**	**6.425**	**0.000 *****	**Supported**
(H5) SI -> TR	**0.093**	**0.094**	**0.043**	**2.160**	**0.031 ***	**Supported**

*p ≤ 0:05; ***p ≤ 0:001; **p ≤ 0:01;

Nonetheless, most of the studies employ empirical *p values* to estimate significant values. Here, the *p value* is equal to the probability of obtaining a *t value,* which has a similar extremity as the observed value. However, this depends on the null hypothesis. Thus, the corresponding *p-values* should be less than 0.05 for studies that assume a 5 percent significance level, which suggests a strong association at that level.

As the bootstrapping results in Figure 1-2 and Table 1-15, the path coefficients that correspond to performance expectancy reveal that there is a robust and positive relationship between this construct and truest belief, with a *t-value* of 11.842 at a sub 0.000 significance level. Additionally, there is a robust negative association between perceived risk at *p-values* of less than 0.000. The *p*-value for the association between perceived risk and performance expectancy is 0.000, while the corresponding *t-value* is 8.426. There is also a strong but negative association existing between a consumer's perceived risk and their degree of trust belief, given a *t*-value of 6.425 and a corresponding 0.000 *p*-value. The results show that social influence on trust belief was also significantly associated, given a *t*-value of 2.160 and a *p-value* of 0.031. There is also a significant relationship between effort expectancy and trust belief, given the 2.491 *t-value* and a 0.013 *p*-value.

Table 1-16: Cause-Effect Relationships: Testing for Mediator Effect

	Path	Original Sample	Standard Deviation	Sample Mean	*p* Values	*t* Values
Direct Effect	Perceived risk-> behavioral	-0.0356	0.0330	-0.0340	0.255	1.101

	intention				
Indirect Effect	Perceived risk -> behavioral intention	-0.1160	0.0255	-0.1145	0.002	4.256

*p ≤ 0:05; ***p ≤ 0:001; **p ≤ 0:01;

Data analysis results above also indicate that there is also a positive association between effort expectancy and perceived risk. This study also reveals that trust is the mediator of the relationship between behavioral intention and perceived risk. Accordingly, the higher the level of trust, the less the perceived risk associated with a given purchase. Hair et al.,(2017) note that an insignificant direct influence suggests indirect mediation. This provides the best-case scenario since it suggests that the specific mediator meets the criteria of the hypothesized relationship (**H7**) as shown in Table 1-16.

Coefficient of Determination (R^2)

Table 1-17 shows that ($R^{2)}$ values range from 0 to 1, with values nearer to 1 indicating a high level of accuracy and predictive power. However, it is difficult to create R^2 principles that are universally accepted. This is because this figure depends on the discipline and complexity of the model. For example, values of 0.200 are considered high in disciplines like consumer satisfaction and consumer behavior research. In comparison, values ranging from 0.75 and above are considered ideal. However, Hair et al. (2011) and Henseler et al. (2009) explain that R^2 values of 0.25, 0.5, and 0.75 are considered weak, moderate, and substantial, respectively, for endogenous latent variables in studies focusing on marketing concepts.

Figure 1-2 shows that the proposed model for this study was able to explain up to 0.709 of the variance in consumers' buying intentions within the study context. As Hair et al. (2011) note, this value is considered moderate. Additionally, perceived risk had a 0.765 coefficient of determination measure, which is substantial within a consumer-behavior-related discipline. The measure for trusting belief was 0.543, as shown in Table 1-17 below. This is considered moderate in consumer-behavior-related disciplines. The measure for performance expectancy was relatively low at 0.159. This suggests that performance expectancy does not adequately explain the variance in buying intention, making it a weak concept in this regard, as shown in Figure 1-2 and Table 1-17.

Table 1-17: Coefficient of Determination measures

	R-square	**R-square adjusted**
BI	0.719	0.716
PE	0.170	0.168
PR	0.123	0.121
TR	0.574	0.570

Results and Implications

This research revealed that most hotel services' electronic bookers were both experienced and regular internet users. This study also reveals critical patterns. For instance, this study shows that e-bookers frequently use the Internet to search for information when compared to those who do not use the Internet for their travel bookings. Most consumers who have embraced online booking have been frequent Internet users for 12 years or more. This study suggests that consumers who are typically frequent internet users are more likely to embrace new technologies. This is parallel with a study by Citrin et al.(2000), who found that heavy Internet

users were more likely to adopt e-booking when compared to light and non-Internet users. The findings of this study also suggest that e-bookers rely on comprehensive information about a given product, and they tend to compare prices before purchasing goods and services. These users use search tools available on the internet to source this information. However, only a small group of these users who responded to the study were regular e-bookers who used the internet to make travel bookings at least 8 times a year. Thus, these findings imply that most e-booking consumers only seek these services one or two times annually. This is, of course, subject to seasonal changes and other factors. On the other hand, frequent e-bookers are typically early adopters of new technologies who exhibit positive attitudes towards these innovative technologies. They are also frequent internet users.

Booking frequency aside, online bookers for hotel services use the Internet to seek accommodation largely because the descriptions are simpler, and most hotel services, such as hotels and flights, are commodified. This greatly supports online booking. This study also revealed that consumers who use the internet to make travel bookings prefer booking.com. 83 percent of e-bookers preferred this site, which reveals low competition among providers of online booking services in the country. Furthermore, these consumers prefer websites that offer a wide range of product offerings to supplement the hotel service and to set themselves apart. Nonetheless, most websites do not appreciate the importance of providing various offerings for different goods and services in Saudi Arabia's local currency.

This is analogous to the concept of 'booking under one roof', where the customer can conveniently enjoy a wide range of goods and services. It is also apparent that e-booking consumers favor specific websites, which implies that they are loyal primarily to those brands that are established and popular, where consumers derive significant benefits. This also aligns with the survey results, revealing that consumers achieve higher levels of confidence when using specific brands.

These results thus highlight that consumers who book hotel services online are also likely to purchase various other goods and services over the internet. This study's results also reveal that consumers who have already embraced e-booking for hotel services and other products and offers, such as car rentals and cruise ships. This suggests that e-bookers who regularly buy goods and services over the internet are more likely to buy new product offerings on the same platform, because they are already satisfied by their previous online buys.

This research also reveals that consumers in Saudi Arabia are more willing to accept e-booking services, and their use of these services is affected by their level of perceived ease of use and perceived risk. This is consistent with studies by Blaise et al., (2018), Faqih, (2016), Nawi et al, (2017), Taneja and Bharti (2022), Weck and Afanassieva (2023) and Yin et al. (2016) who note that greater levels of trust (trust belief) positively influence behavioral intention, making these consumers more willing to embrace electronic services. These findings also highlight trust as a vital component in consumers' willingness to accept risks associated with online transactions (decrease perceived risk), particularly when they are required to provide confidential information such as bank details, contact information, and credit card info. Additionally, this study also suggests that it is important to build the level of trust in e-booking among the citizens.

Theoretical Implications

Introducing trust belief and perceived risk, two antecedents for uncertainty, offered an ideal basis for creating a more grounded understanding of how trust and fear for hotel e-services arise among consumers. The numerous tests conducted in this study reveal that the level of e-booking acceptance is insignificantly influenced by perceived risk. This has been echoed in other studies

such as (Chang et al., 2017; Faqih, 2016; Moodley & Govender, 2016; Sohn et al., 2016; Tanveer et al., 2021; Yin et al., 2016). This suggests that variables associated with trust belief completely mediate perceived risk's influence. This perceived influence differs from previous declarations from parallel studies that have used the technology acceptance model. However, the hypothesized model suggested that there is a direct relationship between consumers' adoption of electronic booking, trust belief, and perceived risk, which is a major inconsistency. Thus, the theoretical implication is that trust belief, and perceived risk should be viewed as opposing forces that influence a customer's willingness to embrace electronic booking.

This study highlighted that a consumer's willingness to embrace a new technology is greatly influenced by fear of a negative outcome (perceived risk). Additionally, effort expectancy also had a positive impact on the level of trust consumers place in e-booking. This research thus highlights that a consumer's level of perceived risk and performance expectancy are negatively associated. Therefore, if a customer viewed electronic booking as useless, it is expected that they would also view the system as useless. Furthermore, this study observes that consumers tend to have higher trust in a system if they perceive the online system as simple and easy to use. On the other hand, this study revealed that the extent to which perceived risk influences behavioral intention depends largely on trust. In addition, a study by Faqih (2016) observed that social influence also significantly impacted female consumers' level of trust belief. This suggests that female customers will rely on external influence when deciding whether to embrace electronic booking or not, which in turn determines how much trust they have in e-booking systems.

This study did not find a significant association between behavioral intention and perceived risk. However, this study did reveal that these pairs of concepts had a strong indirect association. This, therefore, suggests that trust acts as a mediator in the relationship between these two concepts. This also implies that trusty belief determines the association between these concepts. Thus, the higher the degree of perceived risk, the lower the level of trust, which in turn dissuades consumers from embracing electronic booking. This also suggests that trust and perceived risk are typically related. As evident in Table 1-16, trust mediates the relationship between these pairs of concepts.

The association that exists among behavioral intention, perceived risk, and trust belief indicates that these concepts are strong predictors of the adoption of e-booking services. However, each of these three dependent constructs was influenced by the independent constructs affecting them. For example, this study revealed that financial and privacy risks strongly predict e-bookers' perceived risk. On the other hand, service risk and social risk did not affect or predict perceived risk. This study also revealed a negative association between performance expectancy and perceived risk. This suggests that consumers are afraid of incurring financial losses when using the Internet to book online services. This also suggests that consumers generally are adamant about disclosing their personal information during online transactions because it makes them vulnerable to attacks. Additionally, it was evident that consumers were unlikely to use e-booking services if they viewed them as risky, whether or not the service benefited them.

Perceived risk (PR), performance expectancy (PE), and effort expectancy (EE) influence trust belief. On the same breadth, this study also revealed that social influence substantially affects relationships with trusting belief. This study also observed that citizens would trust e-booking services more if they viewed it as useful. This singles out perceived usefulness as the primary driver of increasing trust and supporting intentions to use technology. On the same breadth, consumers have more trust in a system if they view it as easy and simple to use. In this study, perceived risk also affected trust. Thus, consumer trust increases as perceived risk decreases.

From a social influence perspective, this study observed that consumers influence each other, and this affects how much they trust a given system. Thus, if the system users exhibit increasing trust towards a system, then the non-users are also likely to have more trust in the system. However, this was subject to gender. After applying gender as a moderator, this study showed that trust among male consumers is not increased by their friends and family. However, trust among female users is significantly affected by their friends and family.

Lastly, this study determined that effort expectancy, social risk, and service risk did not have a significant association with perceived risk.

As shown in Table 1-15, this study supported 11 out of the 14 hypotheses presented. These hypotheses also had strong coefficient scores and statistically significant *t*-standard values.

Study Limitation

The research design adopted in this research was a cross-sectional study. Thus, this study collected data from the target population at a singular point in time. This means that this study evaluated behavioral Intention (BI) and all other independent variables related to e-booking at the same time. This is consistent with a wide body of recent research (Chao, 2019; Liu et al., 2019; Mohamad et al., 2021). This study proposes a longitudinal study approach for future studies using an expanded UTAUT2 model. This would allow more meaningful interpretations of the UTAUT2 model's factors and facilitate a more robust interpretation of how different interventions influence BI.

The second major limitation in this study is generalizability. Accordingly, a study's findings are generalizable if they can be applied to different populations or situations. However, this study specifically targeted online hotel bookers in Saudi Arabia. Therefore, it can be argued that consumers in this region have different purchasing patterns and behaviors compared to those in other countries. It is also arguable that these consumers are directly affected by the country's extent of technological advancement. Thus, it may not be possible to generalize this study's findings to other countries. However, had the study been conducted in other nations with further levels of technological development, then the relevant constructs, results, and patterns that this study has established may have been different? Thus, there is a need for further research to address this issue and to assess multicultural generalizability challenges.

Additionally, this current study sourced data primarily from Saudi Arabia's western and central parts. However, the respondents' profiles show that the participants in this study were from different locations and had different educational backgrounds.

A further limitation of this study was its limited context. This study's context was the hotel industry and specifically electronic booking for hotel services. This industry's unique feature, therefore, undermined the research findings' generalizability. This also implies that this study's findings should be interpreted cautiously beyond the travel industry.

Directions for Future Research

Considering the above limitations, there are several suggestions for future studies that will enhance this study's research findings. Thus, this section suggests several intriguing options for future research based on this study's findings.

This study deliberately sought to include a broader range of factors to explain the various elements that could encourage consumers to adopt new technology. However, there is a need to further investigate other factors linked with complex consumer features and possibly include these factors in the study's theoretical framework. Broadly, future research should aim to expand the current model for technology acceptance to a greater extent and inculcate additional

significant concepts as proposed by Bagozzi, (2007) and Venkatesh et al. (2012). Discovering whether direct associations exist between other variables, save for those included in the UTAUT2 model, may indicate that this model's expansion is necessary to include other mediating factors. As such, future research could perhaps expand the technology acceptance models by including other theoretical concepts associated with e-booking. For instance, it would be exciting to investigate how factors such as consumer satisfaction and personal traits influence e-booking adoption.

The present study viewed hotel services as one industry. However, this industry includes other major services such as those associated with leisure, tourism destinations, and hospitality. Therefore, future studies may benefit by corroborating this study's generalizability across other business types within the industry.

Furthermore, this research was centered around particular tourism agencies – electronic booking for hotel services. It would be interesting if future studies sought to replicate this research or corroborate the conceptual model's generalizability by focusing on other tourism services. Some excellent examples include hotels and airlines. This offers a favorable road ahead since, based on the present study, it is implied that the measures utilized can be applied similarly to other hotel services. As such, replicating this research within the context of other travel services could theoretically improve our understanding of consumer adoption behavior. This would, in turn, help generate better tactics for products and services to optimize returns and stimulate improvements.

As stated previously in this study, conducting subsequent studies along a longitudinal approach could allow researchers to better assess the spatial underlying forces that impact new technology adoption. Venkatesh et al. (2003, 2012) offers some relief on this possibility by stating that the concepts under the UTAUT2 model have been shown to affect technology use in longitudinal research. While using a longitudinal approach would extend the study period and its cost, it could potentially produce stronger suggestions. Additionally, it has the potential to provide a more grounded understanding of consumption features and of the dynamic and collective influence between them, as well as their hypothesized associations. This study, therefore, proposes that subsequent studies should adopt a longitudinal format.

Lastly, future studies should conduct more innovative studies to replicate as well as validate the technology use model and to assess the present study's robustness. Keeping in mind that this study's generalizability is inherently restricted to the hospitality services context, future studies should expand the adopted model, the study hypotheses, and other contexts such as the airline or insurance industries. These replicated studies have the potential to expand the current research's results' generalizability. This path offers tremendous potential, especially because the tourism industry seems to have the fastest growth rate on the Internet.

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