Center for Management Science Research
ISSN: 3006-5291 3006-5283 Volume 4, Issue 4, 2026

BEHAVIOURAL DETERMINANTS OF CUSTOMER EXPERIENCE AND SERVICE EFFICIENCY IN DIGITALLY ENABLED HOSPITALITY SYSTEMS

Dr. Hina Saleem[1], Abdul Haye Lucman[*2], Hiba Khan[3], Samia Shamshad[4]

[1]*Assistant Professor, IBIT, University of the Punjab, Lahore*
[*2]*Coordinator, Academic and Industry Relations, Tourism, Hospitality, and Culinary Arts Program, Federal Chartered Degree-Awarding Institute for Art & Culture, Pakistan*
[3]*Federal Chartered Degree-Awarding Institute for Art & Culture, Pakistan*
[4]*University of South Asia*

[1]hsaleem@ibitpu.edu.pk, [3]Hibakpasha@gmail.com, [4]samiashamshad911@gmail.com

DOI: https://doi.org/10.5281/zenodo.19479792

Keywords
Customer Experience, Service Efficiency, Customer Engagement, Trust, Perceived Ease of Use, Digital Hospitality, Behavioural Determinants, Technology Adoption

Article History
Received: 12 February 2026
Accepted: 22 March 2026
Published: 09April 2026

Corresponding Author: *
Abdul Haye Lucman

Abstract
The swift digitalisation of the hospitality industry has changed the way services are delivered and interacted with customers, so behavioural aspects are now vital in the service efficiency and general customer experience. This paper investigates the relationship between the major behavioural determinants of customer engagement, trust in digital platforms, and perceived ease of use and two key outcomes, customer experience and efficiency of service. The research design used was quantitative, cross-sectional, and data were gathered through the use of 300 hospitality service users using a structured questionnaire. Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS was used to analyse the data. The findings reveal that customer experience is greatly improved with customer engagement and trust, whereas the perceived ease of use has a great positive impact on service efficiency. These results indicate that experiential outcomes are driven by emotional and relational considerations, and operational efficiency is driven by functional and usability considerations. The research points out that incorporating user-focused behavioural understanding with the application of technology design is crucial in maximising the effectiveness of digital services. Practically, the findings inform hospitality managers in the creation of interactive, reliable and user-friendly digital systems, which promote good customer engagement and effective service delivery.

INTRODUCTION

Over the past few years, the hospitality business has undergone a significant change, which is largely driven by the economic boom of digital technologies and the spread of intelligent service systems. Digital platforms, mobile apps, artificial intelligence (AI), and automated service tools have transformed the traditional models of service delivery, with the accent placed on digitally empowered, customer-focused experiences. This has not only enhanced operational capabilities but has also fundamentally changed customer-to-hospitality service interaction, thus making behavioural factors more important in defining customer experience and service efficiency (Buhalis & Law, 2008; Ivanov & Webster, 2017). It is well known that customer experience is a major determinant of competitive advantage in the hospitality

industry. It captures the overall perceptions of the customers that are formed by cognition, emotions and behaviour in their interactions with service providers (Verhoef et al., 2009; Lemon and Verhoef, 2016). With digitally enabled hospitality systems, customer experience is not confined to the physical experience, but encompasses interactions with online booking systems, mobile interfaces, and AI-driven systems. These digital touchpoints are vital in the development of customer satisfaction, loyalty, and behavioural intentions (Kandampelly, Zhang, & Jaakkola, 2018; Rather, 2020). Consequently, hospitality organisations are making more investments in digital innovations in an effort to develop smooth and interactive customer experiences.

In line with the increased significance of customer experience, there is a necessity to improve the efficiency of the services. Service efficiency is defined as the capabilities of organisations to provide high-quality services using maximum resources, time and effort (Grönroos & Ojasalo, 2004). Digital technologies can help in ensuring efficiency of service delivery by allowing automation and lessening the time of service delivery; they can also enhance the accuracy of operations. Nonetheless, the success of these technologies is highly reliant on customer engagement with them. Acceptance, trust, and engagement are some of the behavioural responses that have a significant impact on digital service system performance (Collier and Kimes, 2013; Marinova, Cao, and Park, 2019). To study customer behaviour within the digital settings, scholars have greatly used the Technology Acceptance Model (TAM) that assumes that perceived usefulness and perceptions of ease of use are significant influencing factors in adopting technology (Davis, 1989; Venkatesh & Davis, 2000). These constructs can determine the readiness of customers to use online booking, mobile applications, and self-service technologies in the hospitality environment (Morosan & Jeong, 2008; Kim & Law, 2015). There is empirical evidence that indicates that in cases where customers believe that digital systems are effective and user-friendly, they tend to embrace them, which results in increased efficiency in services and better customer experiences (Amaro & Duarte, 2015; Escobar-Rodriguez & Carvajal-Trujillo, 2014).

Besides the perceived usefulness and ease of use, trust is another important factor that can influence customer behaviour in digitally mediated settings. Trust is found to minimise the perceived risk and uncertainty in internet transactions, and as a result, technology is easily adopted and used (Gefen, Karahanna, & Straub, 2003; Pavlou, 2003). Trust is especially crucial in hospitality services where customers are dependent on digital information and virtual interactions. Research has indicated that trust is a key factor in customer satisfaction, loyalty, and reuse intentions of digital platforms (Agag & El-Masry, 2016). Furthermore, trust is an intervening variable between technological features and behavioural implications, which reaffirms its significance in online hospitality systems. Another important behavioural determinant that has been of significant focus in the recent literature is customer engagement. Engagement is the degree to which customers experience cognitive, emotive and behavioural involvement in service interactions (Brodie et al., 2011). Hospitality systems that are digitally empowered offer many customer touch points with personalised services, interactive experiences, and real-time interactions. The involvement of engaged customers in service processes increases their probability of being actively engaged in the process, which may lead to improved customer experience and efficiency of the service (Harrigan et al., 2017). As an example, self-service technologies enable the customer to do things on their own, saving on time of service and operational costs and enhancing satisfaction rates.

The advent of artificial intelligence and intelligent technologies has also changed customer interactions in the hospitality sector. Personalised and efficient service delivery is achieved through AI-powered tools like chatbots, recommendation systems, and virtual assistants.

The technologies improve customer experience by offering real-time service, personalised recommendations, and smooth interactions (Tussyadiah & Park, 2018). Their performance, however, relies on the behavioural reactions of customers, such as the perceived intelligence, trust, and readiness to communicate with AI systems (Gursoy, Chi, Lu, & Nunkoo, 2019). Studies have shown that attitudes and beliefs about AI technologies can increase customer satisfaction and service efficiency, and decrease adoption and usage in the case of negative attitudes and beliefs. Although the literature on digital hospitality is increasing, a gap in knowledge exists about the overall impact of behavioural determinants on customer experience and the efficiency of the service. The majority of the current research literature concentrates on single variables like technology adoption, quality of service delivery or customer satisfaction without giving a combined framework of these variables. As an example, although research has been conducted on the effects of e-service quality on customer satisfaction (Parasuraman, Zeithaml, & Malhotra, 2005), few studies have investigated the role of behavioural aspects in mediating the relationship between digital systems and service efficiency outcomes.

In a social science view, the psychological, social, and contextual factors interact to affect customer behaviour in digital environments. According to the Theory of Planned Behaviour (TPB), attitudes, subjective norms and perceived behavioural control influence the intentions and the behaviours of individuals (Ajzen, 1991). Social power and word of mouth are particularly influential in influencing the decision of customers to adopt digital platforms in the context of hospitality (Litvin, Goldsmith, & Pan, 2008). These effects are compounded by online reviews, ratings and interaction over social media, and social factors are a key constituent of customer behaviour in digital hospitality systems.

Besides, the idea of behavioural dynamics offers a functional system that can be used to analyse the interactions with customers within digitally enabled settings. Behavioural dynamics are patterns and shifts in user behaviour with time, which are caused by their constant interaction with technology and service systems. In hospitality, these processes are embodied in the dynamics of customers adapting to online platforms, building trust, and changing the behaviour of usage according to previous experiences (Lemon & Verhoef, 2016; Marinova et al., 2019). These dynamic interactions have been critical in comprehending how adaptive and user-centric service systems can be designed in such a way that they can react to the evolving customer demands. The digitalisation of the hospitality sector is not an exception to the general trend of automation of services and smart service systems. They are founded on machine learning and real-time information processing, data analytics to optimise service delivery and decision-making (Huang and Rust, 2018). But their victory lies not just in the technology but also in acceptance and involvement by the users. One of the important predictors of real system usage and service performance is behavioural intention, as behavioural determinants of digital hospitality are important to understand (Venkatesh, Morris, Davis, & Davis, 2003).

Hospitality systems that are digitally enabled have special challenges and opportunities in emerging economies. Customer behaviour and technology adoption can be influenced by factors like digital literacy, infrastructure constraints, and cultural factors (Tarhini, Hone, & Liu, 2015). In some regions like Pakistan where digital transformation is yet to be embraced, the factors are essential in the contextual interpretation and facilitation of the adoption of digital hospitality systems being successful. Additionally, cultural norms and social factors can also affect the attitude of customers to technology, that is why it is necessary to examine a behavioural pattern in detail. Keeping these heuristics, the present study will dwell upon the investigation of the behavioural antecedents of customer experience and service efficiency in hospitality systems that are digitally empowered. Specifically, it will focus on the key constructs such as customer engagement, trust, perceived ease of use, and perceived usefulness and comment on how they

impact the service outcomes. Using a quantitative research method, the research aims to deliver empirical evidence on the correlations between these variables and make a contribution to both theoretical and practical improvements in the area.

The study has a number of implications to the literature. To begin with, it combines behavioural and technological views to deliver a comprehensive insight into the factors of customer experience and service efficiency in digital hospitality systems. Second, it broadens the applicability of the current theories such as TAM and TPB by relating them to service efficiency results. Third, it has practical implications to hospitality managers in the sense that it has discovered some of the key behavioural variables that aid in service delivery and customer satisfaction. In conclusion, customer behaviour has been a significant factor that determines the outcome of services in the digital transformation of the hospitality industry. In order to develop efficient digital service systems and achieve the sustainable competitive advantage, it is essential to know what behavioural determinants of customer experience and service efficiency are. Through the investigation of these associations, this research will help in the creation of more efficient, user-centred and technologically enhanced hospitality services.

Literature Review

Hospitality Systems Digital Transformation.

The hospitality sector has undergone a paradigm shift with the adoption of digital technologies, which have radically altered service delivery and customer relationships. Digital transformation is the process of implementing technologies like artificial intelligence (AI), Internet of Things (IoT), big data analytics, and cloud-based systems to improve operational performance and customer experience. Digital transformation has been shown to enhance the efficiency of services and satisfy guests to a great extent, making organisations competitive in the fast-changing market. Research has shown that the introduction of digital solutions like mobile apps, self-service kiosks, and AI-based chatbots lessens the operational load and increases the speed and personalisation of the services (Buhalis & Law, 2008; Ivanov & Webster, 2017). Furthermore, smart environments equipped with IoT enable real-time feedback between the customers and service providers, making them more responsive and better in service quality (Kansakar, Munir, & Shabani, 2017). Nevertheless, even with these benefits, there are still challenges like integration of systems, complexities of technology and flexibility of users. Studies indicate that digital transformation is not only as effective as the technological infrastructure but also requires behavioural acceptance and interaction of the users with the systems. This highlights the significance of investigating behavioural determinants in digitally empowered hospitality spaces.

Turning Hotel Guests into Customers.

Customer experience has emerged as a key construct in hospitality studies that captures the holistic perception of customers who come into contact with the service provider. Verhoff et al. (2009) and Lemon and Verhoff (2016) define customer experience as cognitive, emotional, social, and behavioural reactions during a customer journey. These experiences are being defined more by virtual experiences in digital hospitality systems such as online booking platforms, mobile applications, and digital interfaces. Studies indicate that digital touchpoints can play a key role in driving customer satisfaction and loyalty due to their convenience, personalisation, and real-time service delivery (Kandampelly et al., 2018; Rather, 2020). In addition, data analytics can also enable organisations to customise services according to the customer preferences, which increases the perceived value and the overall experience (Marinova et al., 2019). The importance of customer reviews and online feedback in the perceptions of service quality is also highlighted in recent studies. The digital feedback systems have been shown to analyse customer reviews and extract key dimensions of quality of services delivered with the use of machine learning techniques and prove to be

valuable in getting a better understanding of customer expectations and experiences (Vargas-Calderón et al., 2021). Moreover, the digital transformation makes it possible to have contactless services, which are especially relevant in the post-pandemic period. The technologies not only increase the safety perceptions, but also increase the convenience and efficiency, which also positively affect customer experience.

Digitally enabled Systems: Service Efficiency.

Service efficiency is the quality of organisations to provide quality services with a minimum amount of resource use, time and operational expenses (Grönroos & Ojasalo, 2004). Service efficiency in the digital hospitality context is directly related to the adoption and successful use of technology. Online platforms like automated booking systems, chatbots powered by AI, and robot-service platforms have been proven to enhance the efficiency of operations through fewer human resources and simplified service delivery procedures (Ivanov & Webster, 2017). As an illustration, AI-based service tools are able to respond to simple customer questions, enabling employees to work on more complicated assignments. Similarly, IoT-based devices enable real-time tracking and control of service delivery, increasing efficiency and responsiveness (Mercan et al., 2020). The success of these technologies, however, depends on the acceptance and use by the customers. Research shows that the readiness of customers to deal with digital systems significantly influences the results of service efficiency. As an example, the use of robotic services in hospitality would be influenced by the perception of utility, credibility, and familiarity with technology by the customers. Service efficiency of digital hospitality systems, therefore, is not a technological consequence but a behavioural phenomenon that depends on the interaction and engagement of the user.

Technology Acceptance Model (TAM) in Hospitality.

The Technology Acceptance Model (TAM) developed by Davis (1989) is one of the most popular technology adoption models. According to TAM, perceived usefulness and perceived ease of use are the key factors that determine the intention of users to adopt and use technology. TAM has been later expanded to incorporate other variables like trust, perceived risk, as well as social influence over time (Venkatesh & Davis, 2000; Venkatesh et al., 2003). TAM is a well-known tool in the hospitality sector that has been applied to study how customers have adopted digital platforms such as online reservation systems, mobile applications, and self-service systems. The systematic study of the TAM in the literature on hospitality proves that this is a massively theoretical construct which is usually integrated with other theories such as the Theory of Social Identity and the Theory of Planned Behaviour (TPB). Empirical studies have demonstrated that perceived usefulness plays a major role in intention to use digital hospitality systems and perceived ease of use enhances user satisfaction and use (Amaro and Duarte, 2015; Escobar- Rodriguez and Carvajal-Trujillo, 2014). Also, studies on digital menus and online platforms show that the perceived enjoyment and ease of use are related to behavioural intentions of customers, but the impact could be different in different situations. Moreover, TAM has been integrated with co-creation theory to explain the impact of interactive digital platforms in enhancing the user engagement and perceived value. This is because co-creation assists customers in feeling a part of service processes and it improves their experience and desire to utilize digital systems.

Trust and Behavioural Intentions

The concept of trust is a crucial determinant of customer behaviour in the online context, especially in the hospitality sector, where uncertainty and perceived risk factor into transactions. Trust can be described as the readiness of the customers to trust a service provider, depending on anticipation of dependability, honesty and proficiency (Morgan & Hunt, 1994). Trust decreases perceived risk of online transactions in digital hospitality systems and increases the customer confidence of online service use (Gefen et al., 2003; Pavlou, 2003).

Research has indicated that trust can play a major role in customer satisfaction, loyalty and reuse intention (Agag & El-Masry, 2016). Moreover, trust has been found as a mediating factor between technological factors and behavioural results. As an illustration, trust is affected by perceived ease of use and usefulness, which subsequently impact intention to adopt digital platforms by customers. This underscores the need to generate trust by establishing an online system that is secure, reliable and user-friendly. The issue of privacy and security also factors in as critical contributors of trust. Hospitality IoT and data-driven technologies bring up concerns about data privacy and ethical considerations that can impact the desire of customers to interact with the digital systems (Mercan et al., 2020). Thus, it is crucial to address these issues to build trust and improve customer experience.

Customer Engagement and Co-Creation.

Customer engagement can be defined as the degree of customer participation in service interaction, which can be cognitive, emotional and behavioural (Brodie et al., 2011). The digitally empowered hospitality systems achieve engagement with the interactive platforms, personalised services, and real-time communication. The studies show that customer engagement has a positive impact on service delivery, such as customer satisfaction, customer loyalty and efficiency of the service (Harrigan et al., 2017). Involved customers will be more inclined to be involved in service processes, to give feedback and to help to create value. The principle of co-creation also underlines the active involvement of customers in value creation by engaging digital platforms. Co-creation of technology also allows customers to share experience, provide feedback and collaborate with service providers, which enhances customer experience and quality of service. Social media sites are also important sources of customer contact where they can post information, reviews and recommendations. Such interactions affect the choice of other customers and build up on the service ecosystem.

Theoretical Behavioural TPB and Social Influence.

Besides TAM, there is the Theory of Planned Behaviour which provides more insight on customer behaviour including the social and psychological considerations. TPB presumes that behavioural intention is influenced by the attitudes, subjective norms and the perception of behavioural control (Ajzen, 1991). The application of social influence in the decision-making of customers to use digital platforms is important in the context of hospitality. Customers are affected by online reviews, ratings and peer recommendations that affect their perceptions and behavioural intentions (Litvin et al., 2008). These effects have been enhanced by social media, which offers avenues of sharing information and socialising. Recent research has incorporated TAM and TPB in coming up with a comprehensive view of technology adoption in the hospitality industry. These integrated models focus on the combined impact of technological, social and behavioural factors on customer behaviour. In addition, customer behaviour is also affected by cultural and contextual factors, especially in emerging economies. The digital literacy disparity, infrastructure disparity, and social norms disparity can influence the acceptance and use of digital hospitality systems by customers (Tarhini et al., 2015).

Smart Hospitality Systems and Artificial Intelligence.

The implementation of artificial intelligence and smart technologies has created new levels of customer behaviour and service efficiency in hospitality. Recommendation engines, virtual assistants, and chatbots are AI-based systems that help to deliver the service in a personalised and efficient way.

Research indicates that AI technologies enhance customer experience by providing instant responses, personalised recommendations, and seamless interactions (Tussyadiah & Park, 2018). Nevertheless, the perceived intelligence, trust and ease of interaction are some of the variables that determine the acceptance of AI by customers. There have also been robotic services like waiter

robots that have AI functionality designed to enhance efficiency in the services offered. As much as these technologies have immense advantages, customers perceive and react differently to the implementation of these technologies. Also, big data analytics and machine learning allow organisations to understand customer behaviour and service delivery optimisation. With data-driven methods, there is the potential to make demand forecasting more accurate, do marketing in a more personalised way, and make better decisions, thus improving service efficiency and customer satisfaction (van Leeuwen & Koole, 2021).

In spite of the fact that much research has been done on digital hospitality and customer behaviour, there are still several gaps. One, most of the studies concentrate on single constructs like technology adoption, customer satisfaction, or service quality, and fail to integrate them into a holistic model relating behaviour with service efficiency. Second, customer behaviour in digitally enabled settings is dynamic, and the research on this is limited. The patterns of behaviour change as the customers engage with technology, and a more dynamic and systems-based approach is needed. Third, although TAM and similar models have been extensively applied, consideration should be made to include other behavioural constructs like engagement, co-creation, and trust to better understand the nature of customer behaviour in digital hospitality systems. Lastly, existing studies in the developing economies are scarce, which makes it necessary to conduct specific studies in a particular context, taking into consideration cultural, social, and technological aspects.

As noted in the literature, the digital transformation has greatly redefined the hospitality sector, improving the customer experience and efficiency of service delivery. Nevertheless, the efficacy of digital systems majorly relies on the behavioural determinants, e.g. the perceived usefulness, ease of use, trust, and customer engagement. The combination of theoretical frameworks like TAM and TPB gives a complete picture of these behavioural aspects, and the new opportunities and challenges are presented by the emerging technologies like AI and IoT. On the whole, the review emphasises the necessity to adopt an integrated approach that integrates technological and behavioural approaches to comprehend service outcomes more comprehensively in digitally enabled hospitality systems. This paper will provide answers to these gaps by exploring the determinants of customer experience and service efficiency behaviour within the same framework.

Methodology

The present study is cross-sectional and quantitative in nature, i.e., it will be applied to the analysis of the behavioural predictors of customer experience and efficiency in services in digitally-enabled hospitality systems. Primary data was gathered via a survey-based method and the respondents were requested to answer questions regarding their prior exposure to online hospitality services, such as online reservation systems, mobile apps, and self-service technologies. The method is appropriate in terms of getting the perceptions and behavioural responses of users to digital service systems (Hair et al., 2017). Conceptually, the study has a Technology Acceptance Model (TAM) that indicates that perceived ease of use is a major factor that determines user behaviour, and trust and engagement are significant behavioural extensions that can affect the results of the service (Davis, 1989; Venkatesh et al., 2003). Validated measurement scales based on previous research were used to develop a structured questionnaire that ensures reliability and content validity. There are three significant independent variables in the research which include customer engagement, trust in digital platforms and perceived ease of use with the customer experience and service efficiency as the dependent variables. Customer engagement is the level of user participation and involvement in digital systems and customer trust is the level of confidence of customers in the reliability and security of the digital systems (Brodie et al., 2011; Gefen et al., 2003). Perceived ease of use is used to gauge the level of user-friendliness of digital systems (Davis, 1989). Customer experience can

be defined as the overall impression during customer digital interactions and service efficiency as the efficiency and speed of service delivery provided through technology (Lemon and Verhoef, 2016; Gronroos and Ojasalo, 2004). All measurement items were measured with the help of a five-point Likert scale that started with strongly disagree and strongly agree.

To gather data, the convenience sample was employed, and the estimated population is approximately 300 respondents, which is considered as sufficient to fit a structural equation modelling and has sufficient statistical power (Hair et al., 2017). The data collected was calculated using the assistance of Partial Least Squares Structural Equation Modelling (PLS-SEM) of SmartPLS software. This study should use PLS-SEM because it can be used to conduct a predictive analysis and can deal with predictive analysis models that have more than one construct and non-normal data distributions (Henseler, Ringle, & Sinkovics, 2009). The analysis was done in two stages. During the pre-test, the model of measurement was used to measure the reliability and validity. Internal consistency was assessed with the help of the Cronbach alpha and composite reliability, and convergent validity was assessed with the help of average variance extracted (AVE) (Fornell and Larcker, 1981; Hair et al., 2017). Fornell-Larcker criterion and the heterotrait-monotrait (HTMT) ratio were used to measure discriminant validity (Henseler et al., 2015). The second step entailed testing the structural model through testing path coefficients and a coefficient of determination (R 2) to establish the relationship between behavioural determinants and service outcomes. Bootstrapping (5000 resamples) was used to test the hypothesised relationships to establish their statistical significance (Hair et al., 2017; Sarstedt, Ringle, and Hair 2021). In general, the specified methodological approach provides a limited and plausible context of research to examine how the most significant behavioural constructs, like customer engagement, trust, and perceived ease of use, influence customer experience and service efficiency in digitally empowered hospitality systems..

Results and Discussion

The constructs were evaluated in terms of reliability and validity with the help of standard criteria. The findings show that all the variables are within the acceptable levels of internal consistency and convergent validity.

Table 1: Reliability and Convergent Validity

Construct	Cronbach's Alpha	CR	AVE
Customer Engagement	0.86	0.90	0.64
Trust	0.85	0.89	0.62
Perceived Ease of Use	0.87	0.91	0.66
Customer Experience	0.88	0.92	0.68
Service Efficiency	0.84	0.88	0.61

According to the results presented in Table 1, all the constructs of customer engagement, trust, perceived ease of use, customer experience, and service efficiency have a high internal consistency and convergent validity. Particularly, the alpha values of Cronbach are 0.84-0.88, which is above the recommended 0.70, to show that the measurement items are consistently measuring their constructs (Hair et al., 2017). Similarly, composite reliability (CR) scores are above 0.88 that further reflects the reliability of the constructs. Following convergent validity, all constructs report an average variance extracted (AVE) value of more than 0.50, which means that more than half of the variance in the indicators is explained by the latent constructs (Fornell and Larcker, 1981). Customer experience (AVE = 0.68) and perceived ease of

use (AVE = 0.66) have greater explanatory power of the variables and, therefore, respondents have a clear and consistent concept regarding these constructs in digital hospitality systems. The findings suggest that the measurement model is not only statistically valid but it can be analysed structurally as well. The high reliability and validity also indicate that the chosen behavioural variables can be used to study the customer perceptions and service outcome in digitally enabled settings.

Structural Model Results

The structural model was evaluated using path coefficients and R^2 values to assess the strength of relationships.

Table 2: Structural Model (R^2 Values)

Dependent Variable	R^2
Customer Experience	0.58
Service Efficiency	0.52

The results of the structural model show that the chosen behavioural determinants can explain a significant share of variance in the dependent variables. Table 2 indicates that the R 2 value of customer experience is 0.58, implying that customer experience can be explained by customer engagement and trust by 58%. This indicates a moderate to strong explanatory strength, implying that behavioural variables are extremely important in influencing the perceptions of customers within digital hospitality systems (Hair et al., 2017). Correspondingly, service efficiency has a R 2 = 0.52, which means that 52 per cent of the difference in service efficiency is attributed to perceived ease of use. This observation shows that the usability of the system is a major contributor to the efficiency of operations since the customers will tend to make transactions fast and successful when digital platforms are user-friendly. On the whole, the values of R2 confirm the ability of the simplified model to be as predictive as possible, even with fewer variables. This justifies the idea that core behavioural determinants can be effectively used to explain both the experiential and operational outcomes in hospitality environments.

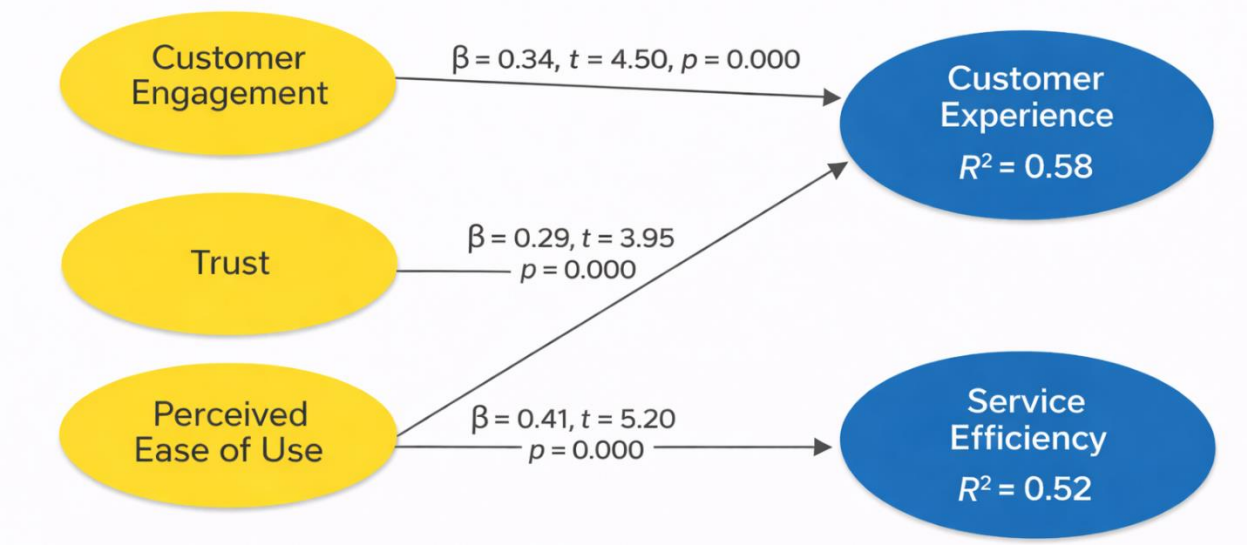

Figure 1. Structural Model

Table 3: Path Coefficients

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	Customer Engagement → Customer Experience	0.34	4.50	0.000	Supported
H2	Trust → Customer Experience	0.29	3.95	0.000	Supported
H3	Perceived Ease of Use → Service Efficiency	0.41	5.20	0.000	Supported

The findings of the hypothesis testing give good empirical evidence to support the relationships proposed in understanding behavioural determinants and service outcomes. First, there is a strong positive correlation between customer engagement and customer experience (0.34 = - 0.001). It means that the more interaction and involvement with digital platforms, the better the perceptions of customers. Active users will become more willing to explore features, engage with services, and achieve positive emotional ties, which will improve their overall experience (Brodie et al., 2011). Second, trust also has a significant positive effect on customer experience (= 0.29, p < 0.001). This indicates that customers who view digital platforms as dependable and safe are more contented with their service encounters. Trust minimises doubt and perceived risk, especially in the digital space where in-person communication is restricted (Gefen et al., 2003). Third, service efficiency is the most influenced by perceived ease of use (= 0.41, p < 0.001). This result brings out the point that with user-friendly digital systems, customers are able to accomplish tasks faster and with less effort, which will result in better service performance. This finding is a solid indication that the Technology Acceptance Model, which acknowledges ease of use as a core factor of system efficacy, is true (Davis, 1989). It is noteworthy that the perceived ease of use has a higher beta value, meaning that service efficiency is more affected by technological design features, and customer experience is more affected by psychological and relational factors of engagement and trust. This difference offers valuable information on the role of various behavioural determinants in various service outcomes.

Discussion

The general results of this research show that there is a real and significant difference between the roles that various behavioural determinants have in digitally enabled hospitality systems.

Particularly, customer engagement and trust can be identified as the core concept of the customer experience, which implies that emotional, relationship, and psychological aspects are at the heart of the perception and assessment of customer interaction with digital services. When customers become involved in digital channels, by browsing, interacting, or participating, they are more apt to get the feeling of involvement and satisfaction. Equally, perceived risk decreases, and confidence increases through trust in digital platforms, specifically in the aspect of security, reliability, and transparency, resulting in a more favourable and hassle-free experience. Contrary to this, the role of perceived ease of use is more dominant in the determination of the efficiency of services, which indicates that functional and technological factors have a crucial influence on the speed and effectiveness of service delivery. A user-friendly, intuitive and easy-to-navigate system enables the customers to accomplish the transactions with minimum effort to enhance the performance of the operations and eliminate delays in services.

This difference emphasises a dual significance of emotional (behavioural) and functional (technological) aspects of digital hospitality systems. As much as the emotional factors influence the customer's feelings towards the service, the functional factors influence the efficiency of the service delivery. As such, effective digital hospitality plans have to find a balance between both these dimensions. These results are in line with the previous studies, which highlight that the effectiveness of digital service systems is not only based on well-developed technological infrastructure but also on the perceptions, attitudes, and behavioural responses of users (Lemon and Verhoef, 2016). To a greater extent, the results affirm the relevance of the available behavioural frameworks such as the Technology Acceptance Model (TAM) which postulates that the ease of use is an important factor in the system adoption and performance results (Davis, 1989). Ease of use has a strong impact on service efficiency which has empirical support in this theoretical view.

Practically speaking, the results have several important implications to hospitality managers and designers of digital services. Firstly, the interactive and engaging options of the digital platforms should be enhanced, such as personalised recommendations, real-time communication tools and simple interfaces, to reach a higher level of customer engagement. Second, organisations should focus on the establishment of trust through offering data safety, openness in dealings and trustworthy performance of services as trust is a direct predictor of customer perceptions and satisfaction. Third, the simplicity, ease of use and intuitive design of the systems should be oriented towards lessening the effort and the complexity needed by the user thereby improving efficiency of the services and effectiveness of the system overall. These strategic interventions can help hospitality firms to create a more mediated and efficient online service environment that will be of both experiential and operational dimension.

Overall, the increased analysis shows that despite the simplified set of variables, the model has a high level of explanatory and predictive power in the interpretation of customer experience and service efficiency. It highlights how to align the technological design to human behaviour, and it means that digital transformation in the hospitality industry cannot be regarded as a technological upgrade but a process that is behaviourally-aware, including user needs, perceptions, and interactions. This type of a mixed solution will result in organisations attaining greater service outcomes and staying competitive in increasingly a digitalised world.

Conclusion and Recommendations

This research offers empirical data on the importance of behavioural determinants in influencing customer experience and service efficiency in digitally-enabled hospitality systems. The findings show that the most prevailing factors leading to customer experience are the customer engagement and trust, and the perceived ease of use is a significant variable in service efficiency. Such a difference shows that both emotional and functional aspects affect

digital service outcomes. Emotional and relational (engagement, trust) determine the perceptions and satisfaction of customers and functional aspects (easy navigation and usability) determine the effectiveness of operation of service delivery. By integrating these behavioural insights and the technological aspects, hospitality providers will be able to learn how people interact with digital platforms and what makes service experiences positive.

These findings are consistent with the previous studies that have highlighted the importance of more than just high technology in the successful implementation of digital services; user perceptions, attitudes, and behavioural reactions are also important (Lemon and Verhoef, 2016; Davis, 1989). The engagement of customers results in active involvement and participation in digital provision of services, customer satisfaction, and customer loyalty. Trust will reduce the perceived risk, doubt, and confidence in the service system. In the meantime, perceived ease of use has a direct positive impact on service efficiency as it decreases the cognitive load, simplifies the processes, and allows executing the tasks more quickly. All these findings indicate the necessity to create digital hospitality systems that are not technologically only; they should also be behaviourally optimised to meet the user expectations and needs.

There are a number of recommendations of the study as far as an action by a manager is concerned. Firstly, the hospitality managers can begin by enhancing the degree of customer interaction through interactive functionalities, tailored experiences and real-time communication channels. The involvement and emotional engagement in online services can be encouraged and stimulated through the assistance of such tools as loyalty programs, instant feedback systems, and gamized experiences. Second, trust needs to be built and maintained; businesses must employ effective data protection tools, have complete transparency in their transactions, and offer a consistent, high-quality service. The schemes of trust-building could also include such items as safe payment gateways, high-profile privacy policies and responsive customer support to reduce uncertainty and establish user trust. Third, platforms are supposed to be user-friendly, simple in navigation, simple in booking, and not technical in order to increase efficiency in services. The user interface design should focus on simplicity, ease of use and accessibility to accommodate users with varying degrees of technical capability.

The study further recommends that hospitality providers need to have a holistic approach that will deal with both the behavioural and technological components. One such case is that system upgrades should not just be capable of enhancing the technical characteristics, but also consider the impact of design choices on engagement, trust, and perceived usability. By monitoring feedback continuously and the patterns of user behaviour, it is possible to identify areas of improvement where the digital services can be improved in order to evolve based on the desires of the customers. This behaviorally-based approach has the potential to increase competitive advantage by means of customer satisfaction, operational efficiency, and long-term loyalty, which can be improved.

Lastly, the simplified model of behaviour which takes into account engagement, trust and ease of use, as supported by this study, has much explanatory and predictive power, to clarify the results of digital services in the hospitality sector. With a clear understanding of the interplay of emotional and functional determinants, organisations can now develop digital systems that are efficient, in customer experience and service delivery. Another point that the paper has brought to light is that digital transformation is not a technological undertaking and more a behavioural shift that is being tamed and regulated at the strategic level where user-centric design and behavioural insights are considered as constituents of service excellence. The following suggestions will be helpful to make sure that the hospitality businesses will be provided with a more responsive, efficient and satisfactory digital service environment which, in turn, will result in customer loyalty, ensure the level of operational

performance in the rapidly changing digital environment.

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