

## Influence of the Technology Acceptance Model on Customer Engagement: The Case of a Travel Booking Mobile Application in China

Yue Huang and Lu Suo, Stamford International University, Thailand

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### Abstract

This study based on the Technology Acceptance Model (TAM) investigated the influence of mobile application attributes on customer engagement with travel booking apps in China. Data were collected from 453 Chinese users of travel booking apps through an online questionnaire; descriptive statistics and structural equation modeling were used to analyze the data. The results showed that mobile app attributes such as perceived usefulness ( $\beta = .193, p < .001$ ), relative price advantage ( $\beta = .253, p < .001$ ) and interface design ( $\beta = .225, p < .001$ ) had a positive influence on consumer engagement with the travel app. Furthermore, app attributes including perceived usefulness ( $\beta = .246, p < .001$ ), perceived ease of use ( $\beta = .245, p < .001$ ), relative price advantage ( $\beta = .281, p < .001$ ) and interface design ( $\beta = .209, p < .001$ ) were positively and significantly associated with satisfaction. In addition, satisfaction ( $\beta = .204, p < .001$ ) was found to positively influence customer engagement with the travel booking app. Finally, satisfaction played a mediating role in the relationship between app attributes and customer engagement. This study contributes to the TAM and travel booking application literature.

**Keywords:** *Customer engagement, satisfaction, TAM, attributes booking app*

### Introduction

With the advent and widespread adoption of mobile access to the Internet, the tourism sector has undergone significant transformations. Mobile access to the Internet, unrestricted by time and space, aligns naturally with the tourism industry. Travel applications (apps) offer considerable convenience to travelers, particularly for independent explorers. By simply downloading necessary travel apps onto their smartphones, tourists can access a range of services without constraints of time or location.

Travel booking apps offer a comprehensive suite of services and benefits that enhance the travel experience for users. From ease of booking, convenient access to deals (Davis, 1989; Venkatesh & Davis, 2000), relative price advantages, a visually appealing interface design (Cyr et al., 2006), and real-time updates (Wang et al., 2012), these applications provide invaluable assistance to travelers, making their journeys more enjoyable and stress-free. These apps cater to diverse travel needs, including pre-trip activities such as booking travel products and planning itineraries, seeking destination information during travels, and sharing travel experiences online post-trip. Due to these advantages, tourism apps have gained favor among travelers. By December 2023, China's online travel booking penetration rate reached 46.6%, with 509 million Internet users (Blazyte, 2024). Consequently, major players in the tourism industry have commenced launching various travel apps to capture this market.

However, amidst intensifying competition in China's mobile Internet sector, the cost of customer acquisition for online travel firms is escalating, making it challenging to solely rely on aggressive subsidies to rapidly expand user numbers. Generally, acquiring new customers proves costlier than retaining existing ones. Hence, online travel companies focus on retaining their current user bases while enhancing user engagement and purchase frequency. With the expansion of WeChat's public platform functionalities, many travel-oriented platforms now feature booking capabilities, diverting some users away from dedicated travel booking apps. Additionally, WeChat introduced "mini programs" in 2016 which do not require downloads and are easily accessible, gaining widespread popularity. Following WeChat's lead, competitors like Baidu and Alipay also introduced similar mini programs, triggering a surge in similar tourism mini programs. As a result, some users have uninstalled travel booking apps in favor of these mini programs, further diverting users from dedicated apps. Despite offering additional sales channels for online tourism enterprises, WeChat public platforms and mini programs suffer from low retention rates and poor user experiences compared to dedicated apps

and cannot replace them. Overall, amidst the current macro and competitive environments, the focus for online travel companies lies in enhancing user retention and increasing purchase frequency.

Much current research on tourism apps centers on their conceptualization, classification (Wang & Xiang, 2012; Pan, 2017; Zhang et al., 2015), user behavior (Young & Hancer, 2014; Trakulmaykee & Benrit, 2015; Albayrak et al., 2021), influence on tourists' decision-making (Chuang, 2020), evaluation (Li, 2017), development, and design (Li, 2013; Dickinson et al., 2015; Han, 2016; Bu, 2019). While valuable, most studies predominantly focus on user behavior, overlooking crucial psychological aspects. Consumer engagement is a multifaceted concept that investigates how consumers emotionally, cognitively, and behaviorally interact with brands, products, or services. Thunderhead (2014) asserted that customer engagement, rooted in service marketing theory, fosters a value-driven, long-term relationship between customers and enterprises, enhancing emotional and behavioral investments and promoting interaction. Although some research has indicated that travel booking mobile apps attributes such as ease of use (Davis, 1989; Venkatesh & Davis, 2000), personalization (Kang & Kim, 2020), functionality (Chen & Tsai, 2019), user interface design (Cyr et al., 2006), content quality (Gretzel & Yoo, 2008), social interaction features (Ayeh et al., 2013), and security (Luo et al., 2010) play critical roles in enhancing customer engagement, few studies have examined the impact of price advantage on consumer engagement. Only a few studies have investigated potential mediating variables between travel booking app attributes and characteristics and customer engagement. To address this gap, this study explored how app attributes, including price advantage, influenced customer engagement in travel booking apps through the mediating variable of satisfaction, using the Technology Acceptance Model. This study aimed to address four research questions:

1. How do the attributes of mobile travel booking apps affect customer engagement?
2. How do these app attributes influence user satisfaction?
3. How does user satisfaction impact customer engagement?
4. Finally, does satisfaction mediate the relationship between mobile travel booking app attributes and customer engagement?

The findings may elucidate the mechanisms of customer engagement in travel booking apps, including the mediating effect of satisfaction, thereby contributing to academic understanding. Additionally, they may offer practical guidance for online travel enterprises and marketers to enhance app functionality, service quality, customer satisfaction, user retention, and repurchase rates.

## **Literature Review**

### ***Technology Acceptance Model (TAM)***

The Technology Acceptance Model, developed by Davis in 1986, is grounded in the notion that our perceptions of technology are shaped by two fundamental elements: perceived usefulness, and perceived ease of use. Perceived usefulness pertains to people's belief in how much a technology can enhance performance or help people achieve their objectives, whereas perceived ease of use relates to the perception of how effortless and straightforward it is to use the technology. According to TAM, these two factors serve as the primary influencers of users' intention to adopt a technology, which subsequently predicts actual usage behavior. Put simply, if people perceive a technology as both useful and easy to use, they would be more inclined to adopt and utilize it.

### ***Travel Booking App Attributes***

Tian et al. (2021) defined a travel booking app as a digital application enabling users to access tourism-related information and seamlessly book tourism products or services such as hotels, air tickets, and scenic area admissions via mobile phones, tablets, or electronic devices. Building on the TAM, Wu (2014) investigated determinants of acceptance behavior towards mobile apps for self-guided tours, finding that perceived interaction, perceived ease of use, perceived usefulness, and subjective norms significantly influenced behavioral willingness. Support conditions and perceived ease of use directly impacted behavior, with behavioral willingness acting as a mediator. Xu and Li (2016) highlighted advantages of travel booking apps, including cost savings, time efficiency, and

convenience; price was a crucial determinant of user behavior. Moreover, Dix et al. (2004) emphasized the significance of designs that are intuitive, aesthetically pleasing, and conducive to fostering user engagement. Thus, this study posits that travel booking apps attributes encompass four key factors: perceived usefulness, perceived ease of use, relative price advantage, and user interface design.

### ***App Attributes and Travel Booking App Customer Engagement***

Gui (2016) developed a model to examine factors influencing users' willingness to continue using tourism apps, revealing a significant positive impact of perceived usefulness on continuous usage intentions. Zheng (2018) also explored continuous usage intentions of travel booking apps and found a significant positive relationship between perceived usefulness and users' willingness to continue usage. Han et al. (2018) studied customer engagement in travel virtual communities, finding that perceived usefulness positively influenced cognitive and emotional engagement. Likewise, Huang (2019) observed a significant positive effect of perceived usefulness on cognitive and emotional engagement in tourism virtual communities. From these analyses, clearly perceived usefulness plays a crucial role in influencing travel booking app customers. Thus, the following hypothesis was examined:

*H<sub>1a</sub>*: Perceived usefulness has a significant positive effect on customer engagement with travel booking apps.

Perceived ease of use refers to the user's perception of how easy it is to comprehend and operate a technology, reflecting the level of effort required to learn it (Davis, 1989). In this study, perceived ease of use is defined as the user's perception of the ease of using a travel booking app. Complexity in usage increases the difficulty for users, leading to a less satisfactory experience and hindering ease of use (Huang et al., 2012). According to Davis's TAM (1989), empirical research has shown that perceived ease of use influences users' attitudes and behavioral intentions towards using a technology. Gui (2016) and Zheng (2018) both found a significant positive impact of perceived ease of use on users' intentions to continue using travel booking apps. Based on these findings, perceived ease of use influences the attitudes and intentions of tourism app users. Thus, the following hypothesis was examined:

*H<sub>1b</sub>*: Perceived ease of use has a significant positive effect on customer engagement with travel booking apps.

Amaro and Duarte (2015) investigated how compatibility, complexity, and relative advantage influence consumers' purchases of online travel products. Relative advantage, complexity, and compatibility significantly and positively affected perceived attitudes, while relative advantage and compatibility positively influenced consumers' purchase intentions. Kang et al. (2015) examined the impact of perceived innovation features on users' intentions to download and use apps, focusing on compatibility, complexity, and relative advantage. They discovered that perceived interactivity and compatibility within relative advantage had a significant positive impact on user involvement, which positively influenced users' intentions to download and use apps. Furthermore, Xu and Li (2016) identified money-saving, time-saving, and convenience as relative advantages of travel booking apps. They determined that relative price advantage significantly and positively impacted users' attitudes and usage behavior towards travel booking apps. Thus, the following hypothesis was examined:

*H<sub>1c</sub>*: Relative price advantage has a significant positive effect on customer engagement with travel booking apps.

User interface design involves an app's visual layout, aesthetics, and interactive elements. A well-designed interface can captivate users, enhancing their interaction with the app. Aesthetically pleasing and intuitively designed interfaces may lead to higher engagement levels (Nielsen, 1993). Cyr et al. (2006) demonstrated that a visually appealing and user-friendly interface significantly improved user satisfaction and engagement. Tuch et al. (2012) stressed that interface design and aesthetics play a crucial role in enhancing user engagement with travel apps. Thus, the following hypothesis was tested:

*H<sub>1d</sub>*: Interface design has a significant positive effect on customer engagement with travel booking apps.

### ***App Attributes and Satisfaction***

According to TAM, users' attitudes toward a technology are influenced by perceived usefulness and perceived ease of use (Davis, 1989). Since satisfaction reflects users' attitudes toward using travel booking app products and services, perceived usefulness and perceived ease of use may impact satisfaction. Gui (2016) investigated the continuous usage behavior of travel app users and found a significant positive effect of perceived usefulness and perceived ease of use on user satisfaction. Similarly, Zheng (2018) examined factors influencing willingness to use travel booking apps from a user experience perspective, revealing that perceived usefulness and perceived ease of use significantly and positively impacted satisfaction. Lee and Kim (2018) analyzed factors driving user intentions to continue using travel booking apps, using Ctrip as an example, and identified perceived usefulness and perceived ease of use as significant drivers of continued usage. Thus, perceived usefulness and perceived ease of use may influence user satisfaction. Johnesue et al. (2019) explored factors influencing users' intentions to continue using a travel booking app (Ctrip), and highlighted economic factors as important determinants of user satisfaction. Consequently, perceived price advantage may also affect user satisfaction. Moreover, Tuch et al. (2012) investigated the impact of visual complexity and prototypicality on user perceptions of website design, highlighting the importance of aesthetics in shaping user satisfaction. Thus, the following research hypotheses were examined:

*H<sub>2a-2d</sub>*: App attributes (perceived usefulness, perceived ease of use, relative price advantage and user interface design) have a significant positive effect on satisfaction.

### ***Satisfaction and Travel Booking App Customer Engagement***

Satisfaction serves as a crucial indicator of relationship quality (Smith, 1998), with higher satisfaction levels indicating a stronger user-platform relationship quality. Additionally, customer engagement reflects the robustness of the user-platform relationship (Vivek, 2009). Hollebeek (2011) contended that relationship quality plays a pivotal role in shaping customer engagement, suggesting that enhancing satisfaction contributes to the establishment of engaged customer relationships. Van Doorn (2010) emphasized the significance of satisfaction in influencing customer engagement, while Shao et al. (2014) identified satisfaction as a key driver of customer engagement behavior. Therefore, the following research hypothesis is examined:

*H<sub>3</sub>*: Satisfaction has a significant positive effect on customer engagement with travel booking apps.

### ***The Mediating Role of Satisfaction***

Mehrabian and Russell (1974) proposed the Stimulus-Organism-Response (S-O-R) Theory, which suggests that external stimuli prompt psychological responses within individuals, leading to behavioral reactions. In the context of travel booking apps, app properties serve as external stimuli, eliciting cognitive and emotional responses within users, which in turn influence their behavioral responses such as engagement or avoidance. These app properties impact users' internal states, particularly satisfaction levels, thereby affecting their perception of the travel booking category. Consequently, app attributes as external stimuli affect users' satisfaction, which subsequently influences the alignment of users with travel booking apps. Thus, the following hypotheses were examined:

*H<sub>4a-4d</sub>*: Satisfaction mediates the effect of app attributes (perceived usefulness, perceived ease of use, relative price advantage, and user interface design) on customer engagement with travel booking apps.

## **Research Methodology**

### ***Population and Sample***

The sample group comprised of Chinese users aged 18 or above who had utilized a travel booking app within the past year. An e-questionnaire link was disseminated via the "WeChat" app, the world's largest standalone mobile app, and potential respondents were furnished with a QR code to access the questionnaire. Due to unknown population size, the sample size was determined using the Cochran formula with a margin of error of .05, resulting in a sample size of 385 (Cochrane, 1977). Data were collected from a total of 478 respondents. Among these, 25 questionnaires from respondents were

deemed unreliable (e.g., giving the same answers to all questions) and were subsequently excluded from the analysis. Consequently, 453 valid questionnaires were utilized for data analysis, surpassing the minimum required sample size.

### ***Measurement***

The research instrument was developed based on a comprehensive literature review, incorporating measures from relevant studies. All items were assessed using a five-point Likert scale. The perceived usefulness construct was evaluated using a scale adapted from Gui (2016) and Pan (2017b), comprising four items. Perceived ease of use was measured using a scale adapted from Tian (2020), consisting of three items. Relative price advantage was assessed using three items adapted from studies by Amaro and Duarte (2015). Interface design was examined using four items adapted from studies by Lewis (2002) Laugwitz et al. (2008), and Chin et al. (1988). Satisfaction was measured using a scale from Pan (2017a) comprising three items. Lastly, customer engagement was evaluated using instruments from Razmus (2021), encompassing six items.

### ***Data Collection and Analysis***

The questionnaire and QR code were distributed to Chinese users who had utilized a travel booking app within the past year via the WeChat application. Upon completion of the questionnaire, participants were encouraged to share the survey with other Chinese users who met the specified criteria. This snowball sampling approach was employed to broaden the sample pool. Data collection commenced in March 2024. As the respondents were Chinese, the questionnaire was crafted in Chinese. To ensure the feasibility and accuracy of the Chinese version, a back-translation method was utilized. An Item Objective Congruence test and Cronbach's alpha were conducted using data from 30 respondents as a pilot test. The Cronbach's alpha values for each variable surpassed the minimum requirement of .70, and the IOC values for each variable exceeded .50. These findings suggested that the questionnaire demonstrated good reliability and validity during the pilot test.

After collecting data, the first step involved inspecting the demographic data using descriptive statistics. Subsequently, the measurement model was analyzed, incorporating confirmatory factor analysis (CFA), which is essential for establishing validity and reliability (Schreiber et al., 2006). This was followed by structural equation modeling (SEM) analysis to test the hypotheses.

## **Research Findings**

### ***Descriptive Analysis***

Among the 453 respondents, over half (57.4%) of the total sample were female. The largest age group comprised individuals aged 18 to 30, accounting for 77.5% of the respondents. Furthermore, a significant majority (68.9%) had attained a Bachelor's degree. In terms of employment, more than half of the respondents were employed in the private sector (52.5%), followed by government sector officials (29.8%). Regarding monthly income, the majority of respondents fell within the range of RMB 3,001-5,000, representing 33.8% of the total sample.

### ***The Measurement Model***

Construct reliability of the measurement model was assessed using three criteria: Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE). Generally, for constructs to be considered reliable, CA and CR values should exceed .70, while the AVE value should be .50 or higher (Hair et al., 2017). As indicated in Table 1, the reliability assessments for the measurement model (CA, CR, and AVE) were found to be appropriate and met the specified criteria. The assessment of discriminant validity, depicted in Table 2, was conducted by comparing the square root of each AVE on the diagonal with the correlation coefficients (off-diagonal) for each construct within the corresponding rows (Fornell & Larcker, 1981). It was observed that the square root of AVE values exceeded the correlation matrix values, indicating that the variables under study could be considered acceptable for the measurement model, thus supporting discriminant validity (Hair et al., 2017).

The model fit indices suggest that the proposed model aligned well with the data based on the evaluation of key criteria. The summary of fit statistics for the measurement model were as follows:  $\chi^2/df = 2.614$ , RMSEA = .046, SRMR = .051, GFI = .932, AGFI = .902, CFI = .961, and TLI = .951. These values exceeded the threshold criteria for model fit indices as suggested by Hair et al. (2010).

**Table 1** Construct Reliability, Validity, and Factor Loadings

Construct	Item	Loadings	CR	AVE	CA
Perceived Usefulness (PU)	PU1	0.847	.903	.701	.902
	PU2	0.830			
	PU3	0.823			
	PU4	0.848			
Perceived Ease of Use (PEU)	PEU1	0.851	.880	.710	.879
	PEU2	0.830			
	PEU3	0.846			
Relative Price Advantage (RPA)	RPA1	0.858	.891	.732	.890
	RPA2	0.852			
	RPA3	0.857			
Interface Design (ID)	ID1	0.731	.913	.726	.912
	ID2	0.869			
	ID3	0.895			
	ID4	0.902			
Satisfaction (SAT)	SAT1	0.850	.886	.722	.885
	SAT2	0.843			
	SAT3	0.856			
	CE1	0.855			
Customer Engagement (CE)	CE2	0.813	.944	.739	.943
	CE3	0.870			
	CE4	0.883			
	CE5	0.871			
	CE6	0.863			

**Table 2** Discriminate Validity

Feature	AVE	PU	PEU	RPA	ID	SAT	CE
PU	.701	<b>.837</b>					
PEU	.710	.412	<b>.843</b>				
RPA	.732	.361	.396	<b>.856</b>			
ID	.726	.448	.426	.409	<b>.852</b>		
SAT	.722	.447	.346	.412	.446	<b>.850</b>	
CE	.739	.377	.498	.519	.578	.487	<b>.860</b>

Note. Diagonal numbers are AVE square root values

### Hypothesis Testing

The results of hypotheses testing, as illustrated in Table 3, indicated that app attributes such as perceived usefulness ( $\beta = .193, p < .001$ ), relative price advantage ( $\beta = .253, p < .001$ ) and interface design ( $\beta = .225, p < .001$ ) positively influenced consumers' engagement toward travel booking Apps. However, perceived ease of use ( $\beta = .129, p > .05$ ) shows no significant relationship with consumers' engagement. Therefore,  $H_{1a}$ ,  $H_{1c}$  and  $H_{1d}$  were supported, while  $H_{1b}$  was not supported. Furthermore, the findings suggested that app attributes, including perceived usefulness ( $\beta = .246, p < .001$ ), perceived ease of use ( $\beta = .245, p < .001$ ), relative price advantage ( $\beta = .281, p < .001$ ), and interface design ( $\beta = .209, p < .001$ ) were positively and significantly associated with satisfaction, supporting  $H_{2a}$ ,  $H_{2b}$ ,  $H_{2c}$  and  $H_{2d}$ . Lastly, satisfaction was found to positively influence customer engagement with in travel booking apps ( $\beta = .204, p < .001$ ). Hence,  $H_3$  was supported.

**Table 3 Results of Hypothesis Testing**

Hypothesis	Path	$\beta$	Ustd.	SE	CR	$p$	Result
H1a	PU→CE	.193	0.208	0.061	3.409	***	Accepted
H1b	PEU→CE	.129	0.132	0.074	1.784	.12	Rejected
H1c	RPA→CE	.253	0.261	0.058	4.503	***	Accepted
H1d	ID→CE	.225	0.228	0.061	3.732	***	Accepted
H2a	PU→SAT	.246	0.280	0.053	5.322	***	Accepted
H2b	PEU→SAT	.245	0.289	0.057	5.097	***	Accepted
H2c	RPA→SAT	.281	0.317	0.055	5.816	***	Accepted
H2d	ID→SAT	.209	0.233	0.069	3.385	***	Accepted
H3	SAT→CE	.204	0.223	0.050	4.440	***	Accepted

Code. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

### Testing of Mediating Effect

In this study, the mediating effect test was conducted using the Bootstrap method of SPSS 25.0 PROCESS, with a sample size of 5000 selected and a confidence interval set at 95%. Firstly, the indirect coefficient of satisfaction in the process of perceived usefulness influencing travel booking app customer engagement was 0.059, with a confidence interval of [0.028, 0.076]. Since the confidence interval does not include zero, it indicated that the mediating effect of satisfaction was significant, thereby supporting  $H_{4a}$ . Similarly, the indirect coefficients of satisfaction in the process of perceived ease of use, relative price advantage, interface design on the customer engagement were 0.051, 0.072 and 0.085, respectively, and the confidence interval of these three paths do not include zero, it indicated that the mediating effect of satisfaction was significant, supporting  $H_{4b}$ ,  $H_{4c}$  and  $H_{4d}$ .

**Table 4 Analysis of Mediating Effect**

Paths	Effect	Bootstrap 95% CI		Result
		Lower	Upper	
$H_{4a}$ : PU → SAT → CE	0.059	0.028	0.076	Supported
$H_{4b}$ : PEU → SAT → CE	0.051	0.027	0.085	Supported
$H_{4c}$ : RPA → SAT → CE	0.072	0.053	0.106	Supported
$H_{4d}$ : ID → SAT → CE	0.085	0.058	0.111	Supported

### Discussion

Based on TAM, this study elucidates the relationship between app attributes, satisfaction, and customer engagement of travel booking apps. The details are as follows:

Firstly, the direct effect of app attributes on travel booking app customer engagement is examined. It is found that perceived usefulness, relative price of app and interface design attributes significantly positively affect travel booking app customer engagement. The effect strength is highest for relative price advantage followed by interface design and perceived usefulness, while perceived ease of use does not significantly impact travel booking app customer engagement. Previous studies have also affirmed that perceived usefulness can influence customer engagement (Han et al., 2019; Mclean et al., 2018). The lack of significant impact of perceived ease of use on travel booking App customer engagement may be attributed to users' high proficiency in utilizing travel booking Apps due to prolonged usage. Additionally, the study results demonstrate that relative price advantage significantly positively influences travel booking app customer engagement, corroborating the importance of pricing in shaping users' attitudes and behaviors, consistent with Xu and Li's (2016) findings. Moreover, Interface design is found positive influence customer engagement, which is line with the research of Tuch et al. (2012). Secondly, satisfaction is found to have a significant positive effect on customer engagement. Customer satisfaction serves as a crucial precursor of customer engagement (Van Doorn et al., 2010; So et al., 2014; Shao et al., 2017), and this study's results corroborate the views of these scholars. Thirdly, the direct effect of App attributes on satisfaction is confirmed. Perceived usefulness, perceived ease of use, relative price advantage, and interface design of travel booking app attributes

all significantly positively impact satisfaction. This outcome aligns with the findings of Gui (2016), Zheng (2018), Lee and Kim (2018) and Tuch et al. (2012). Lastly, satisfaction mediates the relationship between perceived usefulness, perceived ease of use, and relative price advantage on travel booking app customer engagement, indicating that perceived usefulness, perceived ease of use, and relative price advantage indirectly influence travel booking app customer engagement through satisfaction.

## Implications

Firstly, enterprises should prioritize enhancing the ease of use of travel booking apps. While ease of use may not directly impact customer engagement in travel booking apps, it can indirectly influence it by affecting satisfaction. Therefore, it's imperative to improve the user-friendliness of travel booking apps. Simplifying the interface design, providing clear navigation, and avoiding unnecessary details can facilitate users in accessing travel information swiftly and effortlessly. Additionally, highlighting crucial information while minimizing clutter is crucial for user attention.

Secondly, enterprises should strive to improve the usefulness of travel booking apps. Given that perceived usefulness significantly influences customer engagement and indirectly impacts satisfaction, enhancing the functionality of travel apps is crucial. Regular user research and analysis can help in understanding user needs better, allowing companies to gradually enhance app functions to align with user requirements, especially focusing on features like instant search and booking functionalities.

Thirdly, firms should concentrate on cost-effective travel products and promotional strategies. Since relative price advantage significantly affects customer engagement and indirectly influences customer satisfaction, improving perception of product affordability is vital. Strengthening integration within the tourism product chain, offering cost-effective products, and implementing strategic online marketing, especially during peak tourism seasons, can attract users and enhance their engagement.

Lastly, enterprises should prioritize improving user satisfaction. Increasing customer service personnel during peak periods, establishing robust service remediation systems, actively addressing user complaints, and providing personalized and attentive services are essential strategies to enhance user satisfaction. By actively engaging with users, addressing their concerns, and providing exceptional service, travel booking app enterprises can foster trust and loyalty among users, ultimately enhancing customer engagement and loyalty.

## Conclusion

This study aimed to elucidate the influence of app attributes on customer engagement in travel booking apps, exploring factors affecting customer engagement from an enterprise perspective. By delving into the influence of app attributes and satisfaction on customer engagement with travel booking apps, this study not only elucidated the internal workings of customer engagement, but also enriched the theoretical framework of customer engagement. It holds significant implications for enhancing the service quality of online travel enterprises, fostering customer engagement and user stickiness among existing users, and thereby boosting repurchase and bolstering retention rates.

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