The Effects of Mobile Accommodation App Quality Perception on Continual Use Intention through Expectation Confirmation and Satisfaction

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Abstract

This research investigates the relationship between the information quality, service quality, and system quality of lodging apps and the users' expectations, level of satisfaction, and intent to continue using them. For this objective, 418 respondents participated in a survey. To evaluate the hypotheses, the collected data were examined using SPSS 22.0 and AMOS 22.0 statistical software. This study constructed a model using information quality, service quality, system quality, expectancy, satisfaction, and intention to continue using the pre- and post-use relationship of users of accommodation applications. The results of testing the hypotheses indicated that system quality had no significant effect on expectancy, system quality and service quality had no significant effect on satisfaction, and all other hypotheses had significant effects. The conclusion of this research is that the app's system quality, including access speed, access barriers, and privacy, does not satisfy pre- and post-use expectations. In addition, the system quality and service quality of the application have little effect on the app's satisfaction. The information quality of the application has a considerable impact on expectation confirmation and satisfaction, expectation confirmation has an impact on satisfaction, and expectation confirmation and satisfaction have an impact on intention to continue using.

Keywords: Expectation Confirmation, Satisfaction, Continuance Use Intention, Accommodation App

1. Introduction

Mobile is a wireless communication network that enables you to access services anywhere, unlike conventional Internet. It may be seen as a service that ensures mobility and spatiality, since several services can be used while traveling without being tied to a certain place. Accessing and comprehending user

impressions of mobile applications is essential. In this context, several approaches and studies have been conducted regarding the measuring of mobile properties [1]. Among these techniques, one that stands out takes the particular aspects of the mobile environment into account. With the fast expansion of the market for lodging apps, several app service providers have entered the industry. In 2016, the average number of monthly users of lodging apps surpassed 7 million, and the market value surpassed 300 billion won. In 2022, 'Yanolja' will be the most popular accommodation app, followed by' Interparktour', 'Airbnb', and 'Agoda'. In instance,

Yanolja, which launched its official website in 2007, is well-known for its motel reservation service and acquired 'Hotel Now' to broaden its offerings to include hotel bookings. It also introduced capabilities such as leisure and pension bookings and worked with international hotel chains and 'Rakuten Full Stay', a Japanese platform specialized in shared lodging, to offer reservation services for accommodations worldwide [2]. Alternatively, 'Goodchoice', which launched its service in April 2014 and entered the market late, has implemented camera safe zones, smartphone entry and exit functions, My Room, My Kit, and an accommodation professional academy, whereas Yanolja is attempting to differentiate itself with additional service functions such as the lowest price reward system, member guarantee system, real reviews, and VR room information. In particular, the number of 'Goodchoice' users climbed by 16 percent in the second half of 2022, when the corona epidemic was almost finished and the demand for international travel surged. This was owing to the debut of international airline tickets in May 2021 and the popularity of international hotel-and-accommodation packages, which led to an increase in the number of application users. The average number of monthly active users on Yanolja, the industry leader, is 3.94 million, compared to 3.38 million on our site. As a result of the huge proportion of bookings made via accommodation applications, hotel owners are compelled to join the platform, despite their expensive advertising expenses and fees paid to corporations [3,4].

When the rate of booking via lodging apps rises, the significance of different extra services inside the application grows, and the quality of these services impacts the booking rate and income of each accommodation firm. This research tries to determine if the quality of the application matches the user's expectations by assessing the application's quality in a variety of ways, as well as how this influences the user's happiness and intent to continue using the program.

2. Theoretical Background

2.1 Mobile Accommodations App Quality Perceptions

According to DeLone and McLean's (2003) Information System Success Model, various studies have used information quality, service quality, and system quality to determine the influence of the quality of lodging applications on expectation confirmation, satisfaction, and the intention to continue using the apps [5]. DeLone and McLean (1992), who reviewed a variety of research and presented the influencing characteristics of successful information systems, are the ones who established the information system success model[6]. The model was upgraded in 2003 to account for the quickly changing technology. The initial model solely addressed the quality of the information and the system; however, the new model also addressed the quality of the service. In particular, the term "information quality" refers to the user's perception of the importance and relevance of the information in question; "system quality" refers to the user's perception of their ability to make effective use of the system; and "service quality" refers to the user's perception of the overall quality of the service while it is being utilized. In the context of the accommodation application, information quality is defined as the quality of the information that is provided about the accommodation that is being provided. Service quality is defined as the perception of responding quickly to problems and providing customized services, which are the services that are being provided for accommodation. Finally, system quality is defined as the overall quality of the safety of personal information, the speed at which access can be gained, and access to the application itself.

2.2 Expectancy Confirmation and Satisfaction

Consumer expectancy confirmation is the process of identifying the stage of perceptual expectations that arise as a result of actual usage of a product, and it is an essential concept for determining whether consumers will continue to use the product [7]. Consumer Behavior Using the Theory of Planned Behavior, the Theory of Reasoned Action, and the Technological Acceptance Model, the majority of research is conducted. The Theory of Planned Behavior, Theory of Reasoned Action, and Technological Acceptance Model are utilized to predict the relationship between attitude and behavioral intention. These theoretical frameworks are seen to prioritize initial acceptance [8]. Supposedly, the expectation confirmation model may explain post-acceptance user behavior [8]. The concept of expectation confirmation has been widely utilized in consumer behavior research, notably within the marketing industry. It has been employed extensively in consumer behavior research, notably marketing, to grasp client purchases and repurchases [9]. The congruence or incongruence between expectations before a purchase and the outcome (performance) produced by early experiences has been identified as a key factor in determining customer happiness and provides a foundation for assessing the repeat behavior of consumers. According to expectation confirmation theory, usage satisfaction is a major factor in determining intent to continue [10] The expectation confirmation model postulates that user pleasure is determined by expectancy confirmation and perceived usefulness prior to use, and that perceived usefulness impacts usage intention based on the degree of anticipation congruence throughout the usage stage. In other words, the user's pre-use expectations and post-use experience are more congruent the greater the user's enjoyment and usage purpose [11].

Expectancy confirmation refers to the degree of confirmation between actual performance and expectations, and expectancy confirmation theory is used to describe system user behavior in the post-adoption context of information systems [12]. According to Oliver (1980) [13], who established the expectancy confirmation model, customers form initial expectancies before to acquiring a product or service and then employing it. Following the first usage, people build a perception of the product's or service's performance and evaluate that impression in light of their initial expectations.

If their needs are met, they will be satisfied, and satisfied consumers will then establish repurchase intentions. Moreover, low expectations and excellent performance have a favorable impact on consumer satisfaction and desire to continue using, whereas high expectations and bad performance have the opposite effect. Consequently, the purpose of this study is to determine the effect of expectation fulfillment on satisfaction in hospitality applications.

2.3 Continuance Use Intention

Initial usage (adoption) and sustained usage are two separate phases of user behavior that correlate to the frequency with which an application is utilized. According to Oliver (1999) [14], a customer's continuation intention is their resolve to stay a repeat shopper despite exposure to alternative offers. Mcdougall & Levesque (2000) define reuse intention as the possibility that a consumer will employ a service again. According to McDougall & Levesque, repurchase intention is the inclination of customers to employ a service again and recommend it to others [15].

Bhattacherjee (2001) proposed a late acceptance model that blends the existing technology acceptance model with the expectation confirmation model and said that the success of IT acceptance should be determined by continuing use intention as opposed to temporary acceptance intention [16]. This model

indicates that usefulness is positively associated with user satisfaction and persistence, whereas expectation confirmation is positively associated with both. In addition, pleasure influences future use intent, perceived usefulness, and expectation conformity. This study utilizes the user's intention to continue using the app as its dependent variables because to the expanding number of accommodation applications.

3. Research Method

3.1 Sample Design and Measurement Tools

In The present study aimed to examine the correlation between the perceived quality of a mobile accommodation app, congruence between expectations and satisfaction, and the intention to continue using the app. The survey was conducted among people who have used the mobile accommodation app at least once for their accommodation. The data collection period was from January 27th to February 4th, 2023, and 418 participants were surveyed through an online survey after obtaining their consent by explaining the purpose and content of the study to them. A total of 418 surveys were collected, and all of them were used in the final analysis. Based on previous studies that have investigated the relationship between the perceived quality of a mobile accommodation app, congruence between expectations and satisfaction, and the intention to continue using the app, the present study established measurement items. The evaluation items were composed by modifying the items presented in previous studies to fit the research purpose, and the following 5-point Likert scale items were established.

Table 1. List of measurement

Variables	Measurement Items	References
Information Quality	The lodging app I use tends to provide sufficient information that I need. The lodging app I use tends to provide accurate information. The lodging app I use tends to provide detailed information.	[5, 6]
System Quality	The lodging app I use tends to protect personal information securely. The lodging app I use tends to have a fast connection speed. The lodging app I use tends to have minimal connectivity issues, making it easy for me to use whenever I want.	[5, 6]
Service Quality	The lodging app I use tends to provide competitive and professional services. The lodging app I use tends to respond promptly if any problems arise. The lodging app I use tends to continuously provide services that suit me.	[5, 6]
Expectation Confirmation	The quality of the lodging app I use and the actual lodging I use tends to meet my expectations. The services of the lodging app I use and the actual lodging I use tend to meet my expectations. The lodging facilities provided by the lodging app I use tend to fulfill my expected value of use.	[7, 16]
Satisfaction	Overall, I am satisfied with the lodging app I use. I have had many satisfying experiences using the lodging app I use.	[24]

	Compared to the effort I put into lodging reservations in the past, I am highly satisfied with the lodging app's performance.	
continuance use intention	In the future, I plan to use lodging apps rather than making reservations directly. I will continue to use lodging apps in the future. If possible, I will use lodging apps for lodging reservations	**[10]**

3.2 Analysis Method

In order to verify the hypothesis presented in this study, we have performed an analysis by using covariance structure analysis. Covariance structure analysis can simultaneously analyze the complex causal relationship between latent variables including measured values without individually approaching to analyze the causal relationship between the variables suggested by each hypothesis. Therefore, we judged that this analysis was suitable for this study. SPSS 22.0 and AMOS 22.0 were used as tools for our analysis.

3.3 Hypotheses Establishment

1) Relationship between mobile accommodation app quality perception and Expectation Confirmation

The relationship between the perceived quality of a mobile booking app (App) and the match between expectations and reality can be described as follows:

Perceived quality refers to an individual's evaluation of the overall excellence or superiority of a product or service. In the case of mobile booking apps, it refers to how users perceive the app's functionality, design, usability, reliability, security, etc.

Expectations, on the other hand, refer to what users anticipate or expect from a mobile booking app in terms of its features, performance, and benefits [9, 23].

The relationship between perceived quality and the match between expectations and reality is significant because users tend to form their opinions and perceptions of a product or service based on their expectations. If the app meets or exceeds their expectations, they are likely to perceive it as high quality [10, 22]. However, if the app does not meet their expectations, they may perceive it as low quality, regardless of its actual features and performance.

Therefore, it is crucial for mobile booking apps to understand the expectations of their users and strive to meet or exceed those expectations in order to maintain a high level of perceived quality. By doing so, they can increase customer satisfaction and loyalty, which in turn can lead to increased usage and positive word-of-mouth recommendations. Based on the above discussion, the following hypotheses were established.

Hypothesis 1-1: The quality perception of information in the mobile accommodation app will have a positive effect on expectation congruence.

Hypothesis 1-2: The quality perception of system in the mobile accommodation app will have a positive effect on expectation congruence.

Hypothesis 1-3: The quality perception of service in the mobile accommodation app will have a positive effect on expectation congruence.

2) Relationship between perception of mobile lodging app quality and satisfaction

The relationship between mobile lodging app (App) quality perception and satisfaction can have a significant impact on customer behavior and decision making. If a customer perceives the quality of a mobile booking app to be high, they may be more likely to be satisfied with their experience using the app, including the booking process, customer service, and the overall accommodations [7, 24]. On the other hand, if a customer perceives the quality of the app to be low, they may be less satisfied with their experience and may be less likely to use the app in the future [9, 22]. Thus, it is important for mobile booking app companies to monitor and maintain a positive perception of their app's quality in order to retain customers and attract new ones. Based on the above discussion, the following hypotheses were established.

Hypothesis 2-1: The quality of information in the mobile lodging app will have a positive effect on satisfaction.

Hypothesis 2-2: The quality of the system in the mobile lodging app will have a positive effect on satisfaction.

Hypothesis 2-3: The quality of service in the mobile lodging app will have a positive effect on satisfaction.

3) Relationship between Expectation Confirmation, Satisfaction, and continuance use intention

Expectancy-matching and satisfaction have a relationship with the intention of continued use in mobile accommodation apps [7, 24]. The perception of app quality and how well it matches the user's expectations can directly affect their level of satisfaction with the app. When a user perceives the app quality to be high and the app meets their expectations, they are more likely to experience a higher level of satisfaction [16, 22]. This in turn can lead to a higher intention of continued use and loyalty to the app. On the other hand, if the app does not match the user's expectations or has low perceived quality, the user may experience a lower level of satisfaction, which can negatively impact their intention to continue using the app in the future. Based on the above discussion, the following hypotheses were established.

Hypothesis 3: Expectation-Confirmation match will have a positive impact on satisfaction.

Hypothesis 4: Expectation-Confirmation match will have a positive impact on continuance use intention the mobile accommodation app.

4) Relationship between satisfaction and continuance use intention

The relationship between satisfaction and continuance use intention the mobile lodging app can be described as follows: satisfaction is considered as a key predictor of an individual's continuance use intention a product or service. If a person is satisfied with the quality of a mobile lodging app, they are more likely to have a positive attitude towards using the app again in the future. On the other hand, if they are not satisfied

with the app, they may be less likely to use it again or switch to another app [9, 23]. This highlights the importance of satisfying customers to increase the likelihood of them continuing to use the app, which in turn can lead to increased customer loyalty and repeat business. Based on the above discussion, the following hypotheses were established.

Hypothesis 5: Satisfaction will have a positive effect on the continuance use intention the mobile accommodation app.

3.4 Research Model

Based on the above hypotheses, we have established a research model as shown in <Figure 1> in order to empirically analyze the effect.
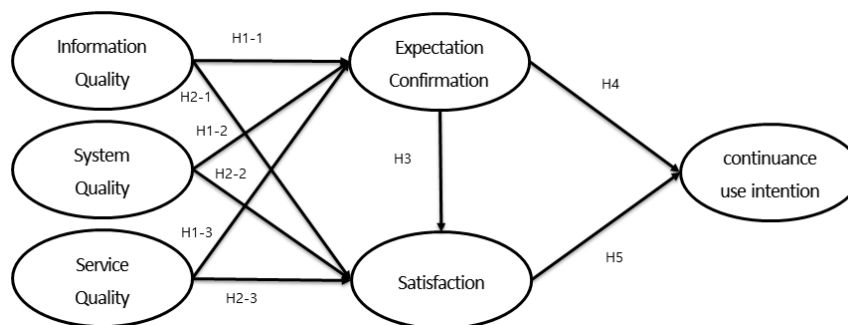

Figure 1. Research model

4. Analysis Results

4.1 Sample Characteristics

The demographic characteristics of the sample used in this study are as follows. Firstly, in terms of gender, there were 173 males (41.4%) and 245 females (58.6%). In addition, by age, there were 118 people in their 20s (28.2%), 269 people in their 30s (64.4%), and 31 people in their 40s (7.4%). By type of lodging app used, Yeogi-Eottae was used by 122 people (29.2%), Yanolja was used by 153 people (36.6%), Interpark Tour was used by 71 people (17.0%), Airbnb was used by 54 people (12.9%), and other was used by 18 people (4.3%). Lastly, the number of actual lodging reservations made through the lodging app in the past 6 months were: 1 or fewer times by 14 people (3.3%), 2 to 4 times by 135 people (32.3%), 5 to 8 times by 140 people (33.5%), 9 to 15 times by 77 people (18.4%), and 16 or more times by 52 people (12.4%).

4.2 Reliability and Validity of Measurement Items

We conducted a validation test of the measurement model using the data (n=418), finally collected. Tests commonly used to verify the validity of a measurement model include a reliability test and a validity test of measurement items. Among them, the validity of the measurement items was tested using convergent validity and discriminant validity. For reliability verification, Cronbach's α coefficient (0.7 or higher), which is most commonly used in social science research, was used [17]. In addition, among the results of confirmatory factor

analysis using AMOS, the factor loading value was used for intensive validity verification, and in general, it is considered significant if the factor loading is ±0.4 or higher [18].

Discriminant validity is used to verify the degree to which two similar concepts are clearly distinguished, and for this purpose, the average variance extracted (AVE) proposed by Fornell and Larcker (1981) and Pearson correlation analysis methods were used. In each constituent concept, if the square root value of AVE exceeds the correlation coefficient value between the constituent concept and other constituent concepts, discriminant validity is considered to exist [20].

Table 2. Reliability and validity of measurement items

Variables	Measurement Items	Factor Loadings	Measurement Errors	Cronbach's α	C.R	AVE
Information Quality	IQ3	0.788	0.239			
	IQ2	0.841	0.144	0.865	0.923	0.800
	IQ1	0.861	0.134			
System Quality	SyQ3	0.899	0.129			
	SyQ2	0.943	0.076	0.908	0.936	0.832
	SyQ1	0.790	0.265			
Service Quality	SeQ3	0.872	0.257			
	SeQ2	0.924	0.153	0.846	0.858	0.674
	SeQ1	0.636	0.566			
Expectation Confirmation	EC3	0.818	0.183			
	EC2	0.872	0.125	0.866	0.925	0.805
	EC1	0.793	0.192			
Satisfaction	Sat3	0.861	0.179			
	Sat2	0.823	0.192	0.858	0.906	0.764
	Sat1	0.772	0.253			
Continuance Use Intention	CUI3	0.758	0.258			
	CUI2	0.849	0.153	0.840	0.903	0.757
	CUI1	0.803	0.211			

<Table 2> shows the results of the reliability and validity tests of the variables used in this study. As a result of measuring reliability, there were no items that hinder reliability, and the Cronbach's α value used for reliability verification was distributed from 0.840 to 0.908 and was above the recommended value (0.7 or more), so it was judged that the reliability of the measurement item was secured [18]. In addition, the factor loading value that verifies the validity was also found to be more than the standard value suggested in previous studies, so there was no problem in the validity of the measurement items. Finally, it is judged that the validity of discrimination using the average variance extraction value was secured because it appeared that there was no problem [17, 20]. These results statistically prove the internal consistency and validity of the survey questions. <Table 2> shows the results of verifying the reliability and validity of the measurement model. In addition, as shown in <Table 3>, the square root value of the variance extraction value indicated on the

diagonal line was larger than the correlation coefficient of each factor. As a result, discriminant validity between construct concepts was secured.

Table 3. Correlations among constructs

Variables	Correlation coefficients between variables					
	1	2	3	4	5	6
1) Information Quality	**0.894**					
2) System Quality	0.084	**0.912**				
3) Service Quality	0.317**	0.186**	**0.821**			
4) Expectation Confirmation	0.430**	0.019	0.213**	**0.874**		
5) Satisfaction	0.435**	0.049	0.247**	0.564**	**0.874**	
6) Continuance Use I	0.386**	0.053	0.249**	0.586**	0.564**	**0.870**
Average	4.151	2.045	3.557	3.942	4.002	3.999
Std. dev	0.657	0.764	0.885	0.648	0.705	0.666

** $p < 0.01$, number at the diagonal line is average variance extracted (AVE).

4.3 Verification of Goodness-of-Fit of Measurement Model

After verifying the reliability and validity of the measurement model, a goodness-of-fit test was conducted using AMOS in order to verify whether the collected data fit the research model. A total of 28 measurement items were used in order to verify the goodness-of-fit of the initial measurement model. In order to verify the goodness-of-fit for the values commonly used in previous studies, values for GFI (Goodness-of-fit Index) 0.9 or higher, NFI (Normed Fit Index) 0.9 or higher, RMR (Root Mean Square Residual) 0.05 or lower, and CFI (Comparative Fit Index) 0.9 or higher were used. According to the result of verifying the goodness-of-fit of the measurement model, the goodness-of- fit was χ^2=201.867 (df=120), p=0.000, CMIN/DF=1.682, RMR=0.027, NFI=0.956, CFI=0.982, GFI=0.950, AGFI=0.928, TLI=0.976, IFI(Delta2)=0.982, and all indices were above the recommended values, so there were no problems with the goodness-of-fit. This result can be interpreted that the data collected to verify this research model is suitable for the research model [18, 20].

4.4 Verification Results of Research Hypotheses

After verifying the validity of the measurement model using a total of 200 data, a structural equation model (SEM) was conducted using AMOS in order to verify the effect between the variables presented in the research model. By conducting structural equation analysis, two important results can be derived. The first result is the degree of goodness-of-fit for the structural model. Looking at the goodness-of-fit for the research model, the values χ^2=204.611 (df=123), p=0.000, CMIN/DF=1.664, RMR=0.028, NFI=0.955, CFI=0.982, GFI=0.949, AGFI=0.929, TLI=0.977, IFI(Delta2)=0.982 were found. Therefore, when examining the fitness indices centered on CFI, TLI, and RMR presented by Hong (2000) as model fitness indices, it was confirmed that the fitness of the research model was generally good.
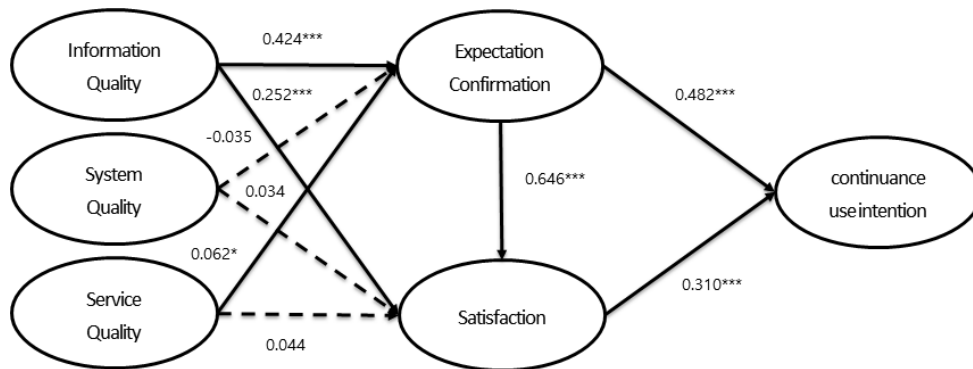
Figure 2. Results of research hypotheses

The results of the hypothesis testing are as follows:

First, in terms of perceived quality of the mobile lodging app (App), information quality has a positive impact with β=0.424 on expectation-congruence, and Hypothesis 1-1 is supported. Additionally, system quality has no impact with β=-0.035 on expectation-confirmation, and Hypothesis 1-2 is rejected. Finally, service quality has a positive impact with β=0.062 on expectation-confirmation, and Hypothesis 1-3 is supported.

Second, in terms of perceived quality of the mobile booking app (App), information quality has a positive impact with β=0.252 on satisfaction, and Hypothesis 2-1 is supported. Moreover, system quality has no impact with β=0.034 on satisfaction, and Hypothesis 2-2 is rejected. Additionally, service quality has no impact with β=0.044 on satisfaction, and Hypothesis 2-3 is rejected.

Third, expectation-confirmation has a positive impact with β=0.646 on satisfaction, and Hypothesis 3 is supported.

Fourth, expectation- confirmation has a positive impact with β=0.482 on the continuance use intention, and Hypothesis 4 is supported.

Finally, satisfaction has a positive impact with β=0.310 on the continuance use intention, and Hypothesis 5 is supported.

Table 4. The result of research model

Hypothesis	Path			Path coefficients	Results
H1-1	Information Quality	->	Expectation Confirmation	0.424***	Adoption
H1-2	System Quality	->	Expectation Confirmation	-0.035	Rejection
H1-3	Service Quality	->	Expectation Confirmation	0.062*	Adoption
H2-1	Information Quality	->	Satisfaction	0.252***	Adoption
H2-2	System Quality	->	Satisfaction	0.034	Rejection
H2-3	Service Quality	->	Satisfaction	0.044	Rejection
H3	Expectation Confirmation	->	Satisfaction	0.646***	Adoption

H4	Expectation Confirmation	->	continuance use intention	0.482***	Adoption
H5	Satisfaction	->	continuance use intention	0.310***	Adoption

*** p<0.01, * p<0.1

5. Conclusion

In this study, 418 users with experience using accommodation applications participated in an empirical analysis to determine the effects of information quality, system quality, and service quality of an application on expectation confirmation and satisfaction, as well as the effects of expectation confirmation on the intention to continue using the application.

The following are the outcomes: First, application information quality and service quality have a favorable impact on expectation confirmation, but system quality has no discernible impact. This recommends that while supplying users with apps, particular attention should be made to prevent the occurrence of personal information, slow access speeds, and access failures. Second, information quality has a positive effect on satisfaction, but system and service quality have no significant effect. This shows that supplying users with accurate and diversified information about the accommodations given by the application has a positive effect on user happiness; thus, it is essential to find and display the information that users desire. Thirdly, expectation confirmation influences satisfaction positively. It is essential for application service providers to identify and supply the information and service levels that consumers wish to receive through the app in advance in order to ensure user satisfaction. Fourth, expectation confirmation and satisfaction have a positive effect on the intention to continue using the application, indicating that application service providers must understand what makes users satisfied and provide services accordingly to ensure that users continue to use the application as opposed to using it only temporarily.

However, there are several limitations to this study. First, the gathered sample is biased towards certain age groups rather than a wide range of age groups, and it is biased towards certain areas, limiting the generalizability of the findings. The study would have greater significance if it were done by integrating a variety of indicators of individual characteristics that influence the intention to keep implementing the service.

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References

[1]   Cho, L., & Kim, C., "A study of the effects of mobile SNS app usage factors on users' satisfaction and continuance intention: Focusing on the moderating effect of social commerce involvement," *E-Business Research*, Vol. 22, No. 1, pp. 137-155, 2021.

[2]   Mk.co.kr,   https://khis-primo.hosted.exlibrisgroup.com/permalink/f/1v7l1qm/TN_cdi_moazine_primary_1046398, 2016.

[3]   Mk.co.kr,   https://khis-
      primo.hosted.exlibrisgroup.com/permalink/f/1v7l1qm/TN_cdi_moazine_primary_1337269, 2019.

[4]   Mk.co.kr,   https://khis-
      primo.hosted.exlibrisgroup.com/permalink/f/1v7l1qm/TN_cdi_moazine_primary_1068416, 2016.

[5]   DeLone, W. H., & McLean, E. R., "The DeLone and McLean model of information systems success: A
      ten-year update," *Journal of Management Information Systems*, Vol. 19, No. 4, pp. 9-30, 2003.

[6]   DeLone, W. H., & McLean, E. R., "Information systems success: The quest for the dependent variable,*"*
      Information Systems Research, Vol. 3, No. 1, pp. 60-95, 1992.

[7]   Bhattacherjee, A., "Understanding information systems continuance: An expectation-confirmation model,"
      MIS Quarterly, Vol. 25, No. 3, pp. 351−370, 2001.

[8]   Oh, K., & Lee, K., "Smartphone-based game market trends: focusing on the iPhone and app stores," *Korea
      Journal of the Multimedia Society*, Vol. 13, No. 1, pp. 14-23, 2009.

[9]   Thong, J. Y. L., Hong, S. J., & Tam, K. Y., "The effects of post-adoption beliefs on the expectation
      confirmation model for information technology continuance," *International Journal Human-Computer
      Studies*, Vol. 64, No. 9, pp. 799-810, 2006.

[10] Yoon, J., Yoo, Y., & Lee, J., "Effects of YouTube vlog usage motivation and user characteristics on usage
      satisfaction and continuance intention," *Journal of the Korean Contents Association*, Vol. 20, No. 4, pp.
      189-201, 2020.

[11] Kim, D., & Kim, J., "Measures to improve user satisfaction and continuous use of social network service
      (SNS)," *Information Systems Review*, Vol. 17, No. 1, pp. 171-197, 2015.

[12] Seo, P., Lee, Y., & Jung, N., "An examination of factors affecting the intention to continue using an airline
      reservation system using the expectancy matching model," *Journal of Hotel Management*, Vol. 22, No. 3,
      pp. 249-264, 2013.

[13] Oliver, R. L., "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decision,"
      Journal of Marketing Research, 17(4), (1980), 460-469.

[14] Oliver, R. L., "Whence consumer loyalty?," *Journal of Marketing*, Vol. 63, No. 4, pp. 46-63, 1999.

[15] McDougall, G. H., and Levesque, T., "Customer satisfaction with services: putting perceived value into
      the equation," *Journal of Services Marketing*, Vol. 14, No. 5, pp. 392-410, 2000.

[16] Bhattacherjee, A., "Understanding information systems continuance: An expectation-confirmation model,"
      MIS Quarterly, Vol. 25, No. 3, pp. 351-370, 2001.

[17] Hong, S.H., "The Criteria for Selecting Appropriate Fit Indices in Structural Equation Modeling and Their
      Rationales," *Korean Journal of Clinical Psychology*, Vol. 19, No. 1, pp. 161-177, 2000.

[18] Kang, H, "Discussions on the Suitable Interpretation of Model Fit Indices and the Strategies to Fit Model
      in Structural Equation Modeling," *Journal of the Korean Data Analysis Society*, Vol. 15, No. 2, pp. 653-
      668, 2013.

[19] Fornell, C., & Larcker, D. F, "Evaluating structural equation models with unobservable variables and
      measurement error," *Journal of marketing research*, Vol. 18, No. 1, pp. 39-50, 1981.

[20] Hermida, R., Luchman, J. N., Nicolaides, V., & Wilcox, C, "The issue of statistical power for overall
      model fit in evaluating structural equation models," *Computational Methods in Social Sciences*, Vol. 3,
      No. 1, pp. 25, 2015.

[21] Park, Y. S. & Han, M. H, "The Effects of Perceived Risk and Perceived Quality On the Consumer`s Online
      Buying Behavior," *Korean Journal of Marketing*, Vol. 16, No. 1), pp. 59-84, 2001.

[22] Eum, H-S, "A Study on the Measurement of Service Quality in Information Systems," *Korean
      Corporation Management Review*, Vol. 7, No. 1, pp. 155-180, 2000.

[23] Hwang, B-C, Chung, K. S., & Noh, M. J, "An Empirical Study on Relationships between Characteristics of Mobile Payment Services and Continuance Intention," *Korean Business Education Review*, Vol. 31, No. 4, pp. 591-615, 2016.

[24] An, K. H., Lee, S. B., Lee, S. B., & Suh, Y. H, "An effect of O2O service users' motivation on loyalty through expectation-confirmation and satisfaction," *Journal of the Korean Society for Quality Management*, Vol. 46, No. 4, pp. 923-938, 2018.

[25] Kim, Y. C., & Jeong, S. R, "A study on Factors that Influence the Usage of Mobile Apps − Based on Flow Theory and Unified Theory of Acceptance and Use of Technology − ," *Journal of Internet Computing and Services*, Vol. 14, No. 4, pp. 73-84, 2013.

[26] Genc-Nayebi, N., & Abran, A, "A systematic literature review: Opinion mining studies from mobile app store user reviews," *Journal of Systems and Software*, Vol. 125, pp. 207-219, 2017.