# Integration of Technology Acceptance Model and Information System Success Model to Analyze User Satisfaction and Continuity of Use in Ticket Booking on the "Access By KAI" Application

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## ABSTRACT
Access by KAI is an application that focuses on ordering train tickets which was developed and published by PT Kereta Api Indonesia as KAI Access since 2014. As a train ticket ordering application, the Access by KAI application has around 12,419,711 registered users with a total number of users. There are 6,101,343 active ones. With that many users, the Access by KAI application currently has a rating of 1.6/5 on the Appstore and 2.2/5 on the Playstore (as of December 1, 2023). Based on the explanatory description, this research aims to find out what variables support or influence user satisfaction and intentions to continue using the Access by KAI application as a train ticket booking application. This research applies quantitative methods using an integrated information system success model (ISSM) and technology acceptance model (TAM). Data collection in this research was carried out through distributing questionnaires using Google Form by applying purposive sampling techniques. The target respondents are Access by KAI application users aged 17 to 65 years who have experience ordering train tickets on the Access by KAI application. From the results of distributing the questionnaire, 234 respondents were obtained, which was then analyzed using partial least squares - structural equation modeling (PLS-SEM) using SmartPLS 4 software. From the research analysis carried out, the results were that ten hypotheses were accepted and five hypotheses were rejected.

## ARTICLE HISTORY
*Received* 20 July 2024
*Revision* 1 April 2025
*Accepted* 30 April 2025

## KEYWORD
Application;
User Satisfaction;
Behavioral Intention to Use;
Information System Success Model;
Technology Acceptance Model

## 1. INTRODUCTION
Information analysis is the process of drawing conclusions from available data and finding explanations for that data to support decision-making (Zelik et al., 2018). The

analysis of an application plays a crucial role in the development and management cycle of information systems (Cladera, 2021). For a company, managing information systems effectively is essential as it forms the basis for gaining a competitive advantage (Pratomo et al., 2023). Given the significant role of technology today, it is important for companies to recognize that developing information technology and information systems in their business processes is a strategic resource, as the process of technology development is critical for the success of the company's growth (Ashshidiqy & Ali, 2019).

User satisfaction is a critical aspect to consider in the development of an application system (Radlinski, 2020). User satisfaction is crucial for the success of an application or information system (Wantania et al., 2021). It is a personal emotional response to the services or products provided by a company or institution and can be influenced by factors such as age, gender, and academic level. Overall, the importance of user satisfaction in an application not only creates a positive experience for users but also establishes a strong foundation for sustainable success and growth (Zhang et al., 2022). In an era where the variety of application choices is increasing, paying attention to and prioritizing user satisfaction is not just a smart strategy but also key to building strong relationships, a positive reputation, and high competitiveness in an ever-evolving market.

The sustainability of application or system usage is an aspect that cannot be overlooked. Understanding users' intentions to continue using online technology is crucial for both practitioners and academics, as it impacts the continued use of online technology (Yan et al., 2021). Sustainable usage intention refers to an individual's ongoing desire or intention to continue using a product, service, or technology. It reflects users' willingness to maintain the use of the product or service over an extended period.

PT Kereta Api Indonesia (Persero), or PT KAI, is a state-owned enterprise responsible for railway operations in Indonesia. Founded in 1945, it has become the backbone of land transportation in the country. With the advancement of technology, PT KAI has continually innovated to enhance its services. One such innovation was the launch of the Kereta Api Indonesia Mobile Application (Kabila) in 2011, which provided features such as schedules, fares, special offers, chat rooms, restaurant menus, and a loyalty program. At that time, the application utilized SMS-based ticket booking in line with the prevailing technology. In 2014, PT KAI updated its application to KAI ACCESS, implementing an E-Ticketing system known as the Rail Ticketing System (RTS), which allows for the documentation of ticket sales without physical documents.

In this study, the object of analysis is the Access by KAI application, which serves as the ticket booking system. As of June 2023, Access by KAI has 12,419,711 registered

users, with 6,101,343 active users, including premium members. The majority of railway ticket sales transactions this year, amounting to 61.56%, were conducted through the Access by KAI application, and this proportion has been increasing over the past three years. Given its widespread usage, the Access by KAI application should ideally exhibit high user satisfaction and sustained usage intentions. However, as of December 1, 2023, the application has a rating of 1.6/5 on the App Store and 2.2/5 on the Play Store. This indicates that there are areas needing improvement to achieve higher ratings as part of consumer evaluations of the Access by KAI application. Therefore, the researcher intends to conduct a study to analyze user satisfaction and the intention to continue using the Access by KAI application for ticket booking.

## 2. RESEARCH FRAMEWORK

### 2.1 Information System Success Model

This study focuses on individual performance, and the Information Systems Success Model (ISSM) has been widely used to explain both individual and organizational performance (DeLone & McLean, 2003). Several studies assert that this model is suitable for explaining individual performance and can be used with other models or variables (Baabdullah et al., 2019). The DeLone & McLean Information Systems Success Model has been extensively employed to measure and explain the success of information system implementation.

In 1992, the model proposed by DeLone & McLean consisted of six variables used to measure the success of an information system: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. Subsequently, in 2003, DeLone & McLean updated the model by adding service quality and intention to use variables, as well as combining the individual impact and organizational impact variables into a net benefits variable. According to research conducted by (Jogiyanto, 2007), the DeLone & McLean Information Systems Success Model is an extended version of previous studies. The following illustrates the DeLone & McLean Information Systems Success Model (2003).

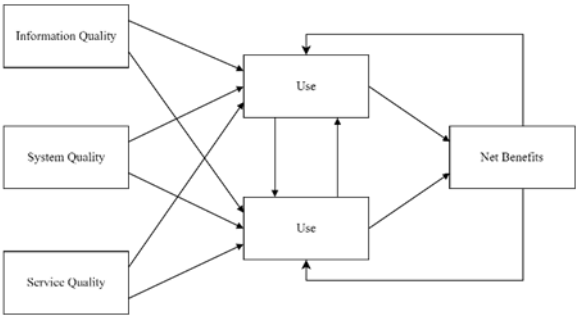


**Figure 1.** ISSM Model

## 2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is an analytical method used to determine user acceptance of new technology. Proposed by (Davis et al., 1989), TAM is based on the Theory of Reasoned Action (TRA) by (Ajzen & Fishbein, 1975), which focuses on individual actions and perceptions to determine attitudes and behavioral intentions. The purpose of TAM is to explain the factors influencing user acceptance of technology. This model formulates concepts about how users accept and use technology. The factors influencing technology acceptance can originate from both users and systems.

Cognitive aspects, individual characteristics, personality, and individual anxiety about the impact of technology are factors originating from users. Meanwhile, system factors involve computer networks and computer conditions. As the name suggests, TAM (Technology Acceptance Model) is an analysis model to understand user behavior in accepting technology. According to TAM, it is an information systems theory that models how users come to accept and use technology (Davis et al., 1989). This means that TAM is an information systems theory that models how users come to accept and use technology. TAM employs five variables: external variables, perceived ease of use, perceived usefulness, attitude toward using, behavioral intention to use, and actual system usage. These six variables constitute the TAM model, as illustrated in Figure 1.

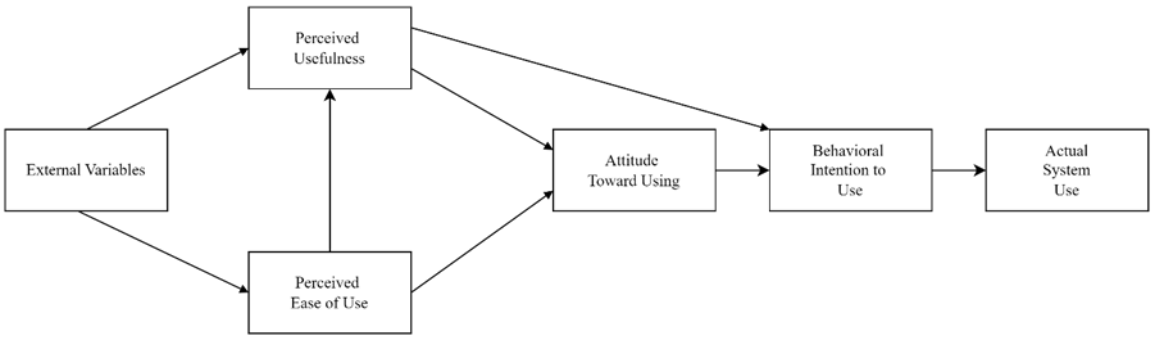


**Figure 2.** TAM Model

## 2.3 Integration of Technology Acceptance Model (TAM) and ISSM

The proposed model is based on the Technology Acceptance Model (TAM) (Davis et al., 1989). Both TAM and the Theory of Planned Behavior (TPB) effectively predict behavioral intention to use, or users' intentions to continue using an information system. TAM is slightly easier to apply than TPB, but it provides less specific information for development (Mathieson, 1991). Rauniar et al. (2014) demonstrate how TAM can effectively predict individual adoption and user willingness to use social

media sites like Facebook, based on factors such as perceived ease of use, critical mass, site capability, and perceived privacy concerns. Other studies also explain how TAM can elucidate the behavioral intention to continue using an information system (Kim & Park, 2012).

The Information Systems Success Model also successfully explains how to analyze user satisfaction with an information system. Seddon and Kiew (1996) describe how system quality and information quality, variables in the Information Systems Success Model, account for 75% of user satisfaction with an information system. Hsiao et al. (2016) show that user satisfaction is a key variable driving continued use of social media applications on smartphones. Kim et al. (2018) explain how user satisfaction affects the intention to continue using freemium software but does not influence the intention to purchase such software. Afnan (2018) indicates that while KAI's e-ticketing system has high user satisfaction, this satisfaction does not drive consumers to use the e-ticketing system.

In the research model proposed by Legramante et al. (2023), which integrates TAM and ISSM, six variables are integrated. Three variables are from TAM: perceived ease of use, perceived usefulness, and behavioral intention to use. Two variables are from the Information Systems Success Model: information quality and user satisfaction. In this model, behavioral intention to use is influenced not only by user satisfaction but also by perceived ease of use and perceived usefulness. The authors add system quality and service quality from the Information Systems Success Model, as these variables also impact the use of information systems, particularly in the context of online ticketing or e-ticketing systems (Megawati et al., 2020).

## 3. RESEARCH METHODS

### 3.1 Defining variables and indicators

The research instrument comprises two sections written in Indonesian. The first section pertains to the demographic profile of the respondents, encompassing questions related to gender, age, education, and occupation, and two questions related to application use (Access by KAI application used and frequency of use). The second section consists of statements corresponding to indicators/items concerning system quality (SQ), information quality (IQ), service quality (SERVQ), perceived ease of use (PEOU), perceived usefulness (PU), user satisfaction (US), behavioral intention to use (BI).

**Table 1.** Variables and Indicators of This Study

| Variables | Measured Attributes | Related Studies |
|---|---|---|

| | | | |
|---|---|---|---|
| System Quality (SQ) | | The Access by KAI app rarely experiences errors when booking train tickets. | (DeLone & McLean, 2003; Yel et al., 2020) |
| | SQ1 | The Access by KAI app quickly responds to ticket bookings | |
| | SQ2 | | |
| | SQ3 | The Access by KAI app has high security standards. | |
| | SQ4 | | |
| | SQ5 | The Access by KAI app is convenient and easy for booking train tickets. | |
| | | The Access by KAI app is well-structured. | |
| Information Quality (IQ) | | The Access by KAI app has a user-friendly layout and interface. | (Legramante et al., 2023; Napitupulu et al., 2017) |
| | | The Access by KAI app makes ticket booking easy to navigate. | |
| | IQ1 | The Access by KAI app provides easy-to-understand booking information. | |
| | IQ2 | | |
| | IQ3 | The Access by KAI app provides comprehensive booking information. | |
| | IQ4 | | |
| | IQ5 | I find the Access by KAI app's ticket booking features comfortable. | |
| | IQ6 | | |
| | IQ7 | | |
| | | The Access by KAI app provides accurate ticket booking information. | |
| | | The Access by KAI app offers relevant ticket booking information. | |

| | | | |
|---|---|---|---|
| Service Quality (SERVQ) | SERVQ 1<br>SERVQ 2<br>SERVQ 3<br>SERVQ 4<br>SERVQ 5 | The Access by KAI app offers solutions for train ticket booking issues.<br>The Access by KAI app quickly processes train ticket transactions.<br>The Access by KAI app simplifies schedule searches when booking train tickets.<br>The Access by KAI app offers tailored ticket booking services to meet my needs.<br>The Access by KAI app's ticket booking service meets my expectations. | (Bahaddad, 2017; DeLone & McLean, 2003) |
| Perceived Ease of Use (PEOU) | PEOU1<br>PEOU2<br>PEOU3<br>PEOU4<br>PEOU5 | The Access by KAI app is easy to learn for train ticket booking.<br>The Access by KAI app is easy to control for train ticket booking.<br>The Access by KAI app is clear and easy to understand for train ticket booking.<br>The Access by KAI app enhances flexibility in train ticket booking.<br>Overall, the Access by KAI app is user-friendly for train ticket booking. | (Legramante et al., 2023; Napitupulu et al., 2017) |
| Perceived Usefulness (PU) | PU1<br>PU2<br>PU3<br>PU4<br>PU5 | Using the Access by KAI app speeds up my train ticket booking.<br>Using the Access by KAI app makes me more efficient in booking train tickets. | (Legramante et al., 2023; Napitupulu et al., 2017) |

| | | | |
|---|---|---|---|
| | | Using the Access by KAI app makes booking train tickets easier for me. | |
| | | The Access by KAI app is helpful for booking train tickets. | |
| | | Overall, using the Access by KAI app is beneficial for booking train tickets. | |
| User Satisfaction (US) | | Using the Access by KAI app for train ticket booking is the right choice. | (Legramante et al., 2023; Yel et al., 2020) |
| | US1 | I'm satisfied with my experience using the Access by KAI app. | |
| | US2 | I'm satisfied with the performance of the Access by KAI app. | |
| | US3 | | |
| | US4 | | |
| | US5 | I'm happy using the Access by KAI app for train ticket bookings. | |
| | | Overall, I'm satisfied with using the Access by KAI app for train ticket bookings. | |
| Behavioral Intention to Use (BI) | BI1 | I intend to continue using the Access by KAI app for train ticket bookings | (Legramante et al., 2023; Napitupulu et al., 2017) |
| | BI2 | | |
| | BI3 | I'll frequently use the Access by KAI app for upcoming train ticket bookings. | |
| | BI4 | | |
| | | I plan to consistently use the Access by KAI app for all my train ticket bookings. | |
| | | I recommend using the Access by KAI app for train ticket bookings. | |

## 3.2 Defining Sample and Distributing The Questionnaire

Based on a deep review of the literature, this study uses one of the non-probability sampling techniques, namely purposive sampling. Purposive sampling involves deliberately selecting samples based on specific criteria to gather pertinent information that may not be attainable from other sources (Taherdoost, 2016). Data collection took place three weeks, from April 8, 2024, to April 29, 2024. During this data collection period, the minimum target number of respondents was 250 samples (Hair et al., 2017), with predetermined criteria being predetermined, namely respondents aged at least 17 years who are users of Access by KAI app for booking train ticket.

Based on the data collection process, a total of 288 respondents completed online questionnaires. Subsequently, data screening was conducted, resulting in 288 datasets deemed suitable for further analysis. At this stage, the data were collected by distributing the questionnaire to users of Access by KAI app for booking train ticket via Google form. There were a total of 288 respondents. The questionnaire used a Likert scale with a scale of strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5).

## 3.3 Data Analysis

This study employed partial least squares–structural equation modeling (PLS-SEM) for data analysis. PLS-SEM was chosen as it is widely recognized in the quantitative research community for assessing the relationships between independent and dependent variables in research models (Zuhdi et al., 2016). The PLS-SEM method adopts a regression-based approach, emphasizing efforts to minimize residual variance in the dependent variable. The PLS-SEM analysis in this study involves two tests: the outer model and the inner model (structural model).

## 3.4 Hypothesis Testing

After testing the outer model and the inner model, the hypothesis analysis in this study utilizes the structural model test, or inner model, by evaluating the path coefficients using p-values and t-values for each relationship between variables in the research model. in Figure 2. This path diagram adopts ISSM and TAM which are integrated by taking several dimensions or hypotheses. After all the data on users who ordered train tickets on the Access by KAI application, the author then analyzed and compared the results of all hypotheses (H1-H15). The hypotheses in this study are as follows:

H1 = System quality has significant effect on user satisfaction.

H2 = System quality has significant effect on perceived ease of use.

H3 = System quality has significant effect on perceived usefulness.

H4 = Information quality has significant effect on perceived ease of use.

H5 = Information quality has significant effect on user satisfaction.

H6 = Information quality has significant effect on perceived usefulness.

H7 = Service quality has significant effect on perceived ease of use.

H8 = Service quality has significant effect on perceived usefulness.

H9 = Service quality has significant effect on user satisfaction.

H10 = Perceived ease of use has significant effect on behavioral intention to use.

H11 = Perceived ease of use has significant effect on user satisfaction.

H12 = Perceived ease of use has significant effect on perceived usefulness.

H13 = Perceived usefulness has significant effect on user satisfaction.

H14 = Perceived usefulness has significant effect on behavioral intention to use.

H15 = User satisfaction has significant effect on behavioral intention to use.

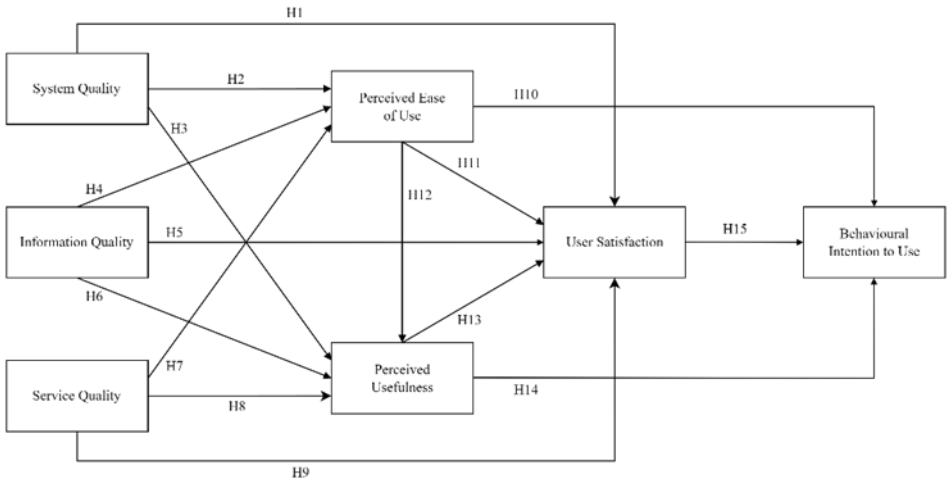


**Figure 3.** Path Diagram

# 4 RESULTS AND DISCUSSION

## 4.1 Demographic Analysis

Based on data from 288 respondents who filled out the questionnaire, the number of male respondents to this study was 61 people or 21% of the total 288 respondents. Meanwhile, the number of female respondents is 227, or 79% of the total 288 respondents. Respondents of the female gender dominated this study, this finding aligns with the study conducted by Kamila (2023), which also analyzed user satisfaction with an information system and found that female respondents had

higher response rates than male respondents. Meanwhile, in terms of age distribution, the majority of respondents in this study were aged between 17 - 25 years old, with a total of 270 people or 94% of the total 288 respondents. This age group is mostly students or college students. This group of students is Generation Z, which is often the target of large-scale internet surveys because they are computer and internet users (Ozok et al., 2010).

Most of the respondents had the last education in SMA/SMK, with a total of 175 people and a total of 288 respondents. The next order is in the D4/S1 education group, with a total of 102 people. Then, for respondents with the last D1, D2, D3, and S2 education, there were total 11 people. Education level is often a crucial factor that reflects online consumer behavior, as online consumers tend to be more educated than traditional consumers (Franque et al., 2021).

The analysis of respondents' characteristics based on the frequency of train ticket bookings through the Access by KAI app reveals diverse usage patterns. A majority of 72% (207 respondents) booked tickets more than six times, making this the largest group. Additionally, 13% (38 respondents) booked 3-4 times, 9% (27 respondents) booked 1-2 times, and 6% (16 respondents) booked 5-6 times. This data indicates that most respondents are high-frequency users, with the majority booking tickets more than six times. The demographic profile of respondents is shown in Table 2.

**Table 2.** Demographic Profile of Respondents

| Respondent profile | Total | Percentage |
|---|---|---|
| Gender | | |
| Male | 61 | 21% |
| Female | 227 | 79% |
| Age | | |
| 17-25 years | 270 | 94% |
| 26-35 years | 17 | 5% |
| 36-45 years | 1 | 1% |
| Educational Stage | | |
| Secondary School | 175 | 61% |
| Associate’s Degree | 8 | 3% |

| | | |
|---|---|---|
| Bachelor's Degree | 102 | 35% |
| Master's Degree | 3 | 1% |
| Application Usage | | |
| 1-2 times | 27 | 9% |
| 3-4 times | 38 | 13% |
| 5-6 times | 16 | 6% |
| >6 times | 207 | 72% |

## 4.2 Measurement Model Test Results (Outer Model)

The first stage of the validity test is convergent validity, evaluated using outer loading and average variance extracted (AVE) parameters. Convergent validity is achieved through high correlation between variable values and their measuring items or indicators. According to (Hair et al., 2017), outer loading values are considered valid if they have a minimum value of 0.7 for each variable indicator.

The initial outer loading values in this study are presented in Table 3. Following the validity test, the reliability test measures the reliability and consistency of respondents' answers using the research instruments. This study evaluates internal consistency reliability using two parameters: Cronbach's alpha and composite reliability. The results, presented in Table 3, show that all values for both Cronbach's alpha and composite reliability exceed 0.8 for each variable. According to (Hair et al., 2017), reliability values above 0.7 are considered high and meet the minimum threshold, while values between 0.6 and 0.7 are considered moderate.

**Table 3.** The Measurement Model

| Variable | Indicator | Outer Loading | Information | Cronbach's Alpha | Composite Reliability | Information |
|---|---|---|---|---|---|---|
| Behavioral Intention to use (BI) | BI1 | 0,914 | *Valid* | 0,906 | 0,908 | *High* |
| | BI2 | 0,903 | *Valid* | | | |
| | BI3 | 0,911 | *Valid* | | | |
| | BI4 | 0,804 | *Valid* | | | |
| Information Quality (IQ) | IQ2 | 0,775 | *Valid* | 0,877 | 0,881 | *High* |
| | IQ3 | 0,804 | *Valid* | | | |
| | IQ4 | 0,726 | *Valid* | | | |
| | IQ5 | 0,805 | *Valid* | | | |
| | IQ6 | 0,786 | *Valid* | | | |
| | IQ7 | 0,827 | *Valid* | | | |
| | PEOU1 | 0,877 | *Valid* | 0,910 | 0,912 | *High* |

| | | | | | | |
|---|---|---|---|---|---|---|
| Perceives Ease of Use (PEOU) | PEOU2 | 0,838 | *Valid* | | | |
| | PEOU3 | 0,887 | *Valid* | | | |
| | PEOU4 | 0,823 | *Valid* | | | |
| | PEOU5 | 0,862 | *Valid* | | | |
| Perceived Usefulness (PU) | PU1 | 0,908 | *Valid* | 0,934 | 0,935 | *High* |
| | PU2 | 0,907 | *Valid* | | | |
| | PU3 | 0,923 | *Valid* | | | |
| | PU4 | 0,854 | *Valid* | | | |
| | PU5 | 0,858 | *Valid* | | | |
| Service Quality (SQ) | SERVQ2 | 0,751 | *Valid* | 0,819 | 0,823 | *High* |
| | SERVQ3 | 0,819 | *Valid* | | | |
| | SERVQ4 | 0,861 | *Valid* | | | |
| | SERVQ5 | 0,786 | *Valid* | | | |
| System Quality (SQ) | SQ2 | 0,796 | *Valid* | 0,818 | 0,824 | *High* |
| | SQ3 | 0,741 | *Valid* | | | |
| | SQ4 | 0,852 | *Valid* | | | |
| | SQ5 | 0,827 | *Valid* | | | |
| User Satisfaction (US) | US1 | 0,830 | *Valid* | 0,910 | 0,911 | *High* |
| | US2 | 0,864 | *Valid* | | | |
| | US3 | 0,843 | *Valid* | | | |
| | US4 | 0,865 | *Valid* | | | |
| | US5 | 0,883 | *Valid* | | | |

The next validity test is the evaluation of discriminant validity, which assesses whether a variable is distinct from others and cannot be represented by them. The Fornell-Larcker criterion is used for this evaluation, involving the calculation of the square root of the AVE. The square root of the AVE for each variable should be greater than its highest correlation with any other variable. Table 4 presents the Fornell-Larcker criterion results.

**Table 4.** The Discriminant Validity Check

| | BI | IQ | PEOU | PU | SERVQ | SQ | US |
|---|---|---|---|---|---|---|---|
| BI | 0,884 | | | | | | |
| IQ | 0,470 | 0,79 | | | | | |
| PEOU | 0,576 | 0,770 | 0,858 | | | | |
| PU | 0,583 | 0,629 | 0,770 | 0, | | | |
| SERVQ | 0,517 | 0,788 | 0,801 | 0, | 0,805 | | |
| SQ | 0,458 | 0,744 | 0,716 | 0, | 0,751 | 0,80 | |
| US | 0,627 | 0,734 | 0,753 | 0, | 0,787 | 0,71 | 0,85 |

## 4.3 Structural Model Test Result (Inner Model)

The purpose of this study is to conduct a comprehensive evaluation of the research model through various analytical techniques, including model fit testing, path coefficient analysis, determination coefficient ($R^2$), effect size ($f^2$), and predictive relevance ($Q^2$). Model fit tests are crucial for assessing the compatibility of the research model with the sample data, thereby helping to mitigate or avoid specification errors. The criteria used to evaluate model fit in this study include the standardized root mean square residual (SRMR), the exact fit test (encompassing Euclidean and Geodesic values), and the normed fit index (NFI). As presented in Table 5, the results of these model fit tests indicate that the research model meets the required standards, confirming its adequacy and suitability for the data.

**Table 5.** Variables And Indicators of This Study

| Criterion | Limit Value | Model Value | Information |
|---|---|---|---|
| SRMR | < 0,08 | 0,052 | *Good fit* |
| d_ULS | < 95 | 1,522 | *Good fit* |
| d_G | < 95 | 0,874 | *Good fit* |
| NFI | > 0,9 | 0,830 | *Marginal fit* |

**Table 6.** Model Fit Outputs

| variable | R-Square | Information |
|---|---|---|
| BI | 0,433 | *high* |
| PEOU | 0,701 | *high* |
| PU | 0,635 | *high* |
| US | 0,707 | *high* |

The evaluation of the inner model was conducted using the coefficient of determination, specifically the R-square ($R^2$) value. The R-square value serves as an indicator to assess the quality of the developed structural model. It provides insight into how well the model explains the variation within the data, ranging from 0 to 1. A

higher R-square value indicates a stronger predictive capability of the model, signifying that it can explain a greater amount of variability in the dependent variable. According to Hair et al. (2017), in research related to consumer behavior aimed at explaining customer satisfaction or loyalty, an R-square value of 0.20 or higher is considered substantial. In this study, the R-square values are presented in Table 6, demonstrating the model's explanatory power. The purpose of assessing effect size is to evaluate the strength of the contribution of an exogenous variable in explaining an endogenous variable.

This assessment utilizes the R-square ($R^2$) value as an indicator. By analyzing effect size, we can understand the extent of the impact an exogenous variable has on an endogenous variable within the model. The R-square value helps measure how well the exogenous variable explains the variation in the endogenous variable, providing a clearer picture of the effectiveness of the relationships between variables in the research model. In this study, effect sizes are categorized as follows: an $f^2$ value between 0.02 and 0.15 is considered weak, an $f^2$ value between 0.15 and 0.35 is considered moderate, and an $f^2$ value greater than 0.35 ($f^2 > 0.35$) is considered strong. If the $f^2$ value is less than 0.02 ($f^2 < 0.02$), it indicates no significant effect (Hair et al., 2017).

In this study, four hypotheses were identified with f-square values less than 0.02, indicating weak effects between the variables. These hypotheses are IQ–PU, PEOU–BI, PEOU–US, and SQ–PU. Nine hypotheses exhibited f-square values in the range of 0.15 to 0.35, suggesting moderate effects between the variables. These hypotheses include PU–BI, PU–US, IQ–PEOU, IQ–US, SERVQ–PU, SERVQ–US, SQ–PEOU, SQ–US, and US–BI. Additionally, two hypotheses demonstrated f-square values greater than 0.35, indicating strong effects between the variables, specifically PEOU–PU and SERVQ–PEOU.

The subsequent inner model test is the path coefficient analysis. The path coefficient aims to measure the strength of the relationships between variables in the research model. The values of the path coefficient range from -1 to +1, indicating the strength and direction of the relationship between each pair of variables within the model. The path coefficient values for this study are presented in Table 7, illustrating the strength and direction of each relationship in the research model.

**Table 7.** Results of path coefficients, t statistics, and p values

| hypothesis | Relationship | Original Sample (O) | t Statistics | p Values | Information |
|---|---|---|---|---|---|
| H1 | IQ → PEOU | 0,300 | 2,370 | 0,018 | Accepted |
| H2 | IQ → PU | -0,094 | 2,327 | 0,020 | Accepted |
| H3 | IQ → US | 0,170 | 1,500 | 0,134 | Rejected |
| H4 | PEOU → BI | 0,136 | 4,475 | 0,000 | Accepted |
| H5 | PEOU → PU | 0,516 | 2,448 | 0,014 | Accepted |
| H6 | PEOU → US | 0,107 | 1,399 | 0,162 | Rejected |
| H7 | PU → BI | 0,203 | 5,714 | 0,000 | Accepted |
| H8 | PU → US | 0,247 | 3,204 | 0,001 | Accepted |
| H9 | SERVQ → PEOU | 0,444 | 3,689 | 0,000 | Accepted |
| H10 | SERVQ → PU | 0,321 | 1,281 | 0,200 | Rejected |
| H11 | SERVQ → US | 0,279 | 1,320 | 0,187 | Rejected |
| H12 | SQ → PEOU | 0,160 | 5,602 | 0,000 | Accepted |
| H13 | SQ → PU | 0,098 | 4,233 | 0,000 | Accepted |
| H14 | SQ → US | 0,143 | 1,510 | 0,131 | Rejected |
| H15 | US → BI | 0,376 | 4,472 | 0,000 | Accepted |

## 5 CONCLUSION

This study aims to explore the factors influencing behavioral intention to use and user satisfaction among users booking train tickets through the Access by KAI application. Employing a quantitative approach and utilizing the partial least squares - structural equation model (PLS-SEM) analysis, the study reveals insights using SmartPLS 4 software. The findings indicate that system quality, information quality, service quality, and perceived usefulness are crucial variables supporting user satisfaction. Particularly, service quality exhibits the strongest influence on user satisfaction. Additionally, the study highlights that user satisfaction significantly impacts the intention to continue using the Access by KAI application for ticket booking.

These results underscore the importance of service quality in enhancing user satisfaction and emphasize the role of user satisfaction in driving continued usage intention within the Access by KAI application ecosystem. Based on the study's findings on factors affecting user satisfaction and continued usage intention of the Access by KAI app for train ticket booking, recommendations emerge for future research and stakeholders. Future studies should aim for a broader age range in respondent distribution to enhance validity. Additionally, expanding research scope to include more variables influencing user satisfaction and continued usage intention is crucial.

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