

The Role of Satisfaction in Mediating the Effect of Perceived Usefulness and Perceived Ease of Use on Continuance Intention of Kereta Api Indonesia Access Application

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ABSTRACT

Digital technology, including the Access KAI app, facilitates train ticket booking. This study, involving 200 respondents and analyze with SEM-PLS 3, finds that perceived usefulness significantly influences satisfaction and continuance intention, while perceived ease of use only affects satisfaction and needs satisfactions as a mediator to influence continuance intention. These result support Davis' (1989) TAM and Zikmund *et al.*'s (2003) Satisfaction theory on how perceived usefulness, perceived ease of use, and satisfaction in driving continuance intention.

INTRODUCTION

Technology helps companies understand customers and meet their needs more personally. One example is smartphone applications (Pratama, 2023). According to Elysa et al. (2023), apps enable buying, selling, and digital payments. Sumantri & Maulana (2024) note that apps ease access to information and services, while Diantini et al. (2019) highlight their role in buying transport tickets online.

Transportation is moving people or goods using human or machine power (Santosa & Wahyuni, 2020). Shafie et al. (2023) state public transport is vital for mobility in congested cities. Setiawan & Novita (2021) say trains are among Indonesians' favorite transport modes, supported by Central Statistics Agency data comparing passenger numbers in 2023–2024.

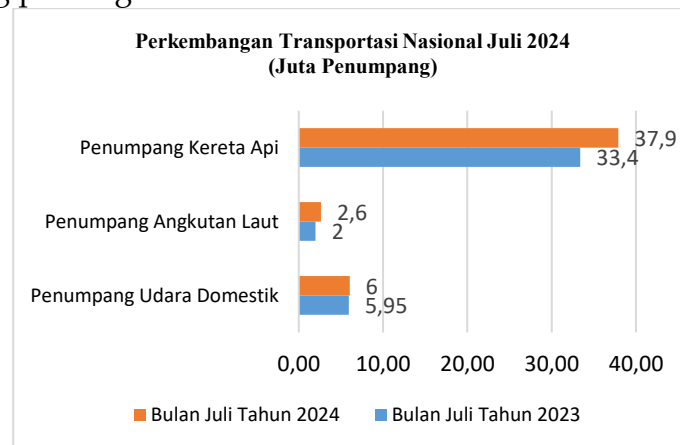


Figure 1. National Transportation Development Chart

Source: Badan Pusat Statistik, 2024

The Indonesian Railway Company (KAI) implemented technology through the Access by KAI app, which was initially launched in 2014 as KAI Access and updated in 2023 (Bahfein & Alexander, 2023). As of 2023, the app has more than 12 million registered users, with an increase in train ticket bookings through the app. Didiek Hartantyo as President Director of PT Kereta Api Indonesia stated that users of the Access by KAI application are dominated by generation Z and millennials (katadata.co.id, 2023).

Generational groupings according to Beresford Research (2014) are presented in the following table:

Table 1. Generational Groupings

Generations	Born	Current Ages
Gen Z	1997 - 2012	12 - 27
Millennials	1981 - 1996	28 - 43
Gen X	1965 - 1980	44 - 59
Boomers II	1955 - 1964	90 - 69
Boomers I	1946 - 1954	70 - 78
Post War	1928 - 1945	79 - 96
WWII	1922 - 1927	97 - 102

Source: beresfordresearch.com, 2024

Before using the application, consumers need to first accept the technology. Davis (1989) explains that people tend to accept technology if they believe it is useful (perceived usefulness) to improve their performance and easy to use (perceived ease of use). In this context, the Access by KAI application allows users to book train tickets quickly and efficiently, saving time compared to conventional methods, with the booking process carried out through features in the application. Changes in the design and features of Access by KAI are interesting to study, especially regarding perceptions of usability and convenience, considering that the previous version had a simpler interface.

Joni Martinus, Vice President of Public Relations, said that new features such as KAIPay and Railpoint make the KAI Access application even more attractive (Khoirunnissa, 2022). However, some users still have difficulty adapting to the new look, which can reduce the perceived ease and usefulness of the app. This difference in reviews indicates a gap in user perceptions that needs to be further investigated regarding its effect on interest in continued use. Overall, the Access by KAI application is useful in providing relevant and accessible travel services.

According to Irsyad & Hapsari (2023), perceived usefulness has a significant effect on continuance intention, where the higher the perceived usefulness, the greater the user's desire to continue using the application because of the perceived benefits. However, this result is different from the findings of Rantung et al. (2020) which states that perceived usefulness does not affect continuance intention. This difference in findings indicates inconsistencies in Davis' (1989) technology acceptance model theory, thus opening up opportunities for further research.

Olivia & Marchyta (2022) found that perceived ease of use also has a significant effect on continuance intention, where the easier the application is to use, the higher consumer interest. However, Banjarnahor & Setyorini argue otherwise, that perceived ease of use has no effect, because the application has not provided clear enough feature information. This difference in findings, based on Davis' (1989) technology acceptance model theory, is an important reason for further research.

Meanwhile, Zikmund et al. (2003) define satisfaction as a post-purchase evaluation that arises from comparing pre-purchase expectations with actual performance, which is one of the factors driving consumer loyalty, in addition to trust, emotional ties, reduced choice, habits, and historical relationships with companies.

Based on the phenomenon of inconsistent research results related to perceived usefulness and convenience, as well as satisfaction theory from Zikmund et al. (2003), researchers are encouraged to fill this research gap by including satisfaction as a mediating variable.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) developed by Davis (1989) is a model used to predict and explain how users accept information technology (Davis & Venkatesh, 1996). This model explains that a person's interest in using a system (system

usage intentions) is influenced by two main factors, namely perceived usefulness and perceived ease of use.

Xavier et al. (2023) asserted that TAM is a theoretical framework that explains the use of technology based on these two perceptions. They also added that the perceived usefulness and ease of use of the application will increase user satisfaction, which then encourages interest in continued use.

Based on these definitions, it can be concluded that TAM serves to predict and explain user acceptance of information technology. Technology use is influenced by perceptions of usefulness and convenience, which play an important role in fostering satisfaction and continuance intention. The form of the technology acceptance model is shown in figure below:

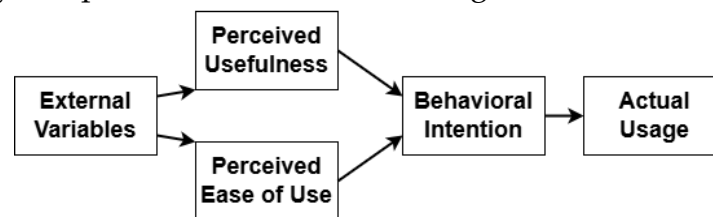


Figure 2. Technology Acceptance Model

Source: Davis & Venkatesh (1996:20)

Davis & Venkatesh (1996) explain that the Technology Acceptance Model (TAM) is a tool for assessing and predicting user acceptance of emerging information technologies. TAM is used to evaluate the market potential of various new applications in the fields of multimedia, image processing, and pen-based computing, thereby assisting investment decision-making in product development. TAM is designed to understand how external factors, such as system design, training, or user confidence in computers, affect system acceptance and use. These factors do not directly influence interest or usage decisions, but rather through perceived usefulness and perceived ease of use of the system.

Perceived Usefulness

In forming a perception of usefulness, a person compares what a software or application is capable of doing with what they need to accomplish Davis & Venkatesh (2004: 34). Furthermore, Davis & Venkatesh (2004: 35) explain that a person can judge how useful a system is just by understanding what the system can do, without having to try it directly. In addition, perceived usefulness refers to the goals or results to be achieved by using technology.

According to Xavier et al., (2023: 385) in their research, a positive attitude from users when using an application will encourage users to optimize the use of the application. Furthermore, Xavier et al., (2023: 386) explain that perceived usefulness is a user's subjective perception or evaluation of the capabilities received by the technology.

Based on the results of research by Irsyad & Hapsari (2023); Banjarnahor & Setyorini (2022); Xavier (2023) perceived usefulness has a significant influence on continuance intention. However, this contradicts the research of Rantung et al.,

(2020); Song & Jo (2023); Hafidhuddin & Nurul (2023) which states that perceived usefulness has no influence on continuance intention.

H1: Perceived usefulness has a significant influence on continuance intention.

H3: Perceived usefulness has a significant influence on satisfaction.

Perceived Ease of Use

Perceived ease of use is a person's belief that using a system will be free of effort. Perceived ease is related to the level of difficulty or ease of using the system, which can be assessed by trying the system directly (Davis & Venkatesh, 2004: 35). According to Xavier et al., (2023: 1) in their research, perceived ease of use refers to how someone easily uses an information technology system.

Based on the results of research by Olivia & Marchyta (2022); Mariana et al., perceived ease of use has a significant influence on continuance intention. However, this contradicts the research of Banjarnahor & Setyorini (2022); Song & Jo (2023) which states that perceived ease of use has no influence on continuance intention.

H2: Perceived ease of use has a significant influence on continuance intention.

H4: Perceived ease of use has a significant influence on satisfaction.

Satisfaction

Satisfaction according to Zikmund et al., (2003; 72) is a post-purchase or post-choice evaluation which is the result of a comparison between pre-purchase expectations and actual performance, where satisfaction is one of the driving factors for consumer loyalty. Sumarwan (2020: 15) states that after consuming a product or service, consumers will have a feeling of satisfaction or dissatisfaction with the product or brand that has been consumed. According to Xavier et al., (2023: 2) satisfaction is a consumer's expectation of service, as well as an overall sense of pleasure and satisfaction felt while using the service. From the above definition, it can be concluded that satisfaction is the result of post-purchase evaluation, where consumers have expectations of the services they use. As well as feeling happy and satisfied while using the service.

Based on the results of research by Hafidhuddin & Nurul (2023) which states that satisfaction has a significant effect on continuance intention. Similar results were obtained by Catherine & Tjokrosaputro (2023) and Xavier et al., (2023) that satisfaction has a significant effect on continuance intention.

H5: Satisfaction has a significant influence on continuance intention

Continuance Intention

According to Catherine & Tjokrosaputro (2023) sustainable use interest is a user's behavior towards a technology that influences the ongoing intention to use the technology and recommend the technology to others.

Technology Acceptance Model (TAM) states that a person's interest in using a technology is influenced by perceived usefulness and perceived ease of use (Davis & Venkatesh, 2004:36).

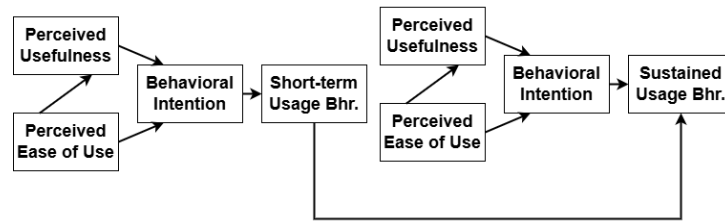


Figure 3. Short-term Usage of TAM

Source: Davis & Venkatesh (2004:37)

In the short-term TAM model, perceived usefulness, perceived ease of use, and intention drive the initial use of a technology. This initial use is short-term usage. Then the initial use of technology will then affect the interest in continued use. Continuance Intention can eventually become long-term usage. Reactions from users at each stage drive subsequent usage interest. The long-term usage model of TAM can be seen on the figure below.

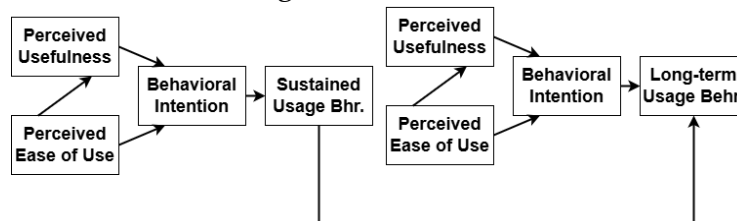


Figure 4. Long-term Usage of TAM

Source: Davis & Venkatesh (2004:37)

From the development of the hypothesis, a research framework was formed as presented in figure 5 below.

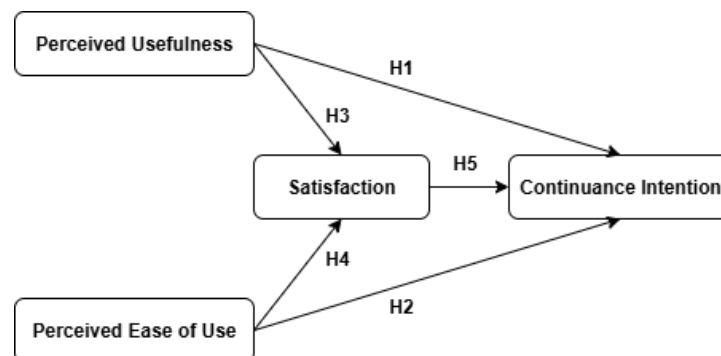


Figure 5. Framework of Thought Diagram

METHODOLOGY

This research design uses a causal research design that aims to determine evidence of a cause-and-effect relationship (Malhotra & Dash, 2016: 80). In this study, the causal research design aims to identify the effect of perceived usefulness and perceived convenience on interest in continued use, with satisfaction as a mediating variable.

The data for this study were obtained from 200 respondents who use the Access by KAI application aged 17-43 years and have used the application at least once in the last three months (late 2024 to early 2025). Data were collected

through questionnaires and analyzed quantitatively using SmartPLS 3 software with the Partial Least Squares-Structural Equation Model (PLS-SEM) technique.

The population in this study are prospective passengers who have used the Access by KAI application. The population is infinite, which means that the population size is unknown or unlimited. The respondent criteria used in this study are as follows:

- a. Respondents in this study are users who have used the Access by KAI application at least once.
- b. The age of respondents is millennials and generation Z and millennials with an age range of 17-43 years as the majority users of the Access by KAI application.
- c. Respondents used the application within the last 3 months so that the data obtained was relevant to the development of the latest features in the application.

This research uses purposive sampling technique in nonprobability sampling, which is a method in which not all members of the population have the same chance of being selected (Sugiyono, 2017). The sample size was set at 200 respondents, according to the minimum size required for marketing research (Malhotra & Dash, 2016).

The data analysis technique in this study uses the Structural Equation Model (SEM), which helps explain the relationship between independent and dependent variables through a series of equations that describe the relationship between these variables. In SEM there is Partial Least Square SEM (PLS-SEM). According to Yamin & Kurniawan (2009), PLS is an alternative SEM method suitable for analyzing complex variable relationships. PLS consists of two parts, namely the inner model that explains the relationship between latent constructs, and the outer model that explains the relationship between latent constructs and their indicators. The following table below are the indicators adapted from previous research to measure this study's variables:

Table 2. Variables and Indicators

According to Davis & Venkatesh (2004: 35) a person can judge how useful a system is just by understanding what the system can do, without having to try it directly. In addition, perceived usefulness refers to the goals or results to be achieved by using technology.	
Perceived usefulness is an individual's belief that using the Access by KAI application will provide benefits and is considering useful in supporting the needs or activities of the application user.	
Source	Perceived usefulness indicators (X1)
Davis (1989)	Effective
Davis (1989)	Useful
Li & Fang (2019)	Giving newest information
Li & Fang (2019)	Can view account information
According to Davis & Venkatesh, 2004: 35), perceived ease of use is a person's belief that using a system will be free of effort. Perceived ease of use is related to the level of difficulty or ease of using the system, which can be assessed by trying the system directly	

Perceived ease of use is an individual's belief that using the Access by KAI application will make it easier and does not require a lot of energy and the use of the Access by KAI application will be easy to understand.	
Source	Perceived ease of use indicators (X2)
Davis & Venkatesh (2004), Ashfaq et al. (2020)	Clear
Davis & Venkatesh (2004), Ashfaq et al. (2020)	Understandable
Davis & Venkatesh (2004), Ashfaq et al. (2020)	Effortless
Davis & Venkatesh (2004), Ashfaq et al. (2020)	Easy to use
Ashfaq et al. (2020)	Easy to find the product to buy
Satisfaction according to Zikmund et al., (2003; 72) is a post-purchase or post-choice evaluation which is the result of a comparison between pre-purchase expectations and actual performance, where satisfaction is one of the driving factors for consumer loyalty.	
Satisfaction is the result of post-purchase evaluation of train tickets, where consumers have expectations of the Access by KAI application service they use. As well as feeling happy and satisfied while using the Access by KAI application service.	
Source	Satisfaction indicators (Z)
Wang et al. (2018)	Satisfied with the application
Wang et al. (2018)	Application meets expectations
Xavier et al. (2023)	Felt happy while using the app
Wang et al. (2018)	The experience of using the app is pleasant
According to Catherine & Tjokrosaputro (2023) sustainable use interest is a user's behavior towards a technology that influences the ongoing intention to use the technology and recommend the technology to others.	
Continuance Intention is a user's behavior towards a technology that affects the ongoing intention to continue using the Access by KAI application and recommend the Access by KAI application to others.	
Source	Continuance intention indicators (Y)
Amoroso & Lim (2017)	Consider long term use of the app
Amoroso & Lim (2017)	Through all considerations, expect to continue using the app in the future
Li & Fang (2019)	Will often to use application in the future
Li & Fang (2019)	Very recommended others to use the application

RESEARCH RESULT

Respondent Characteristic

The characteristics of respondents in this study are users of the KAI Access application aged between 17-43 years. The data on the characteristics of the research respondents are as follows:

Table 3. Respondent's Answer

Category	Description	Frequency	%
Age	17 - 27 years old	174	87%
	28 - 43 years old	26	13%
	Yes	200	100%

User of Access Kereta Api Indonesia Application	No	0	0%
Actively participate in the process of using Access KAI application	Yes	200	100%
	No	0	0%
Have purchased train tickets using Access KAI application	Yes	200	100%
	No	0	0%
Purchased Access KAI train tickets in the last 3 months	Yes	200	100%
	No	0	0%

Based on the characteristics of 200 respondents in the table above, 174 respondents (87%) are aged 17-27 years (Generation Z) and 26 respondents (13%) are aged 28-43 years. All respondents (100%) are users of the KAI Access application, actively use the application to book train tickets, have booked tickets through the application, and made reservations in the last 3 months, so they fit the research criteria.

Description of Respondent's Answer

Descriptive analysis of respondents' answers describes respondents' responses regarding indicators on each variable. Independent variables include perceived usefulness (X1) and perceived ease of use (X2). Then the dependent variable is continuance intention (Y), and the mediating variable is satisfaction (Z). The indicators studied use a Likert scale with a score of 1 - 5.

In this study, the percentage value and frequency of respondents were used to explain the results of respondents' answers. Then the average value (mean) and description of the results of each variable are calculated for each statement on the questionnaire. The calculation of the interval value on the respondent's answer is as follows:

Table 4. Interval Score

Interval	Description
$1,00 < a = <1,80$	Strongly Disagree
$1,91 < a = <2,60$	Disagree
$2,81 < a = <3,40$	Quite Agree
$3,71 < a = <4,20$	Agree
$4,21 < a = <5,00$	Strongly Agree

Source: Simamora (2005)

Based on the table above, the average category for each statement item can be determined. The following are the results of the analysis of the responded answer for each statement item:

a) Perceived Usefulness (X1)

Table 5. Perceived Usefulness Analysis Results

Item	Score					Total	Mean	Description
	1	2	3	4	5			
X1.1.1	0	2	5	48	145	200	4,68	Strongly Agree

X1.1.2	1	7	16	46	130	200	4,49	Agree
X1.2.1	0	1	2	32	165	200	4,81	Strongly Agree
X1.2.2	1	5	16	39	139	200	4,55	Agree
X1.3.1	3	11	56	64	66	200	3,90	Agree
X1.3.2	3	5	40	67	85	200	4,13	Agree
X1.4.1	1	2	14	88	95	200	4,37	Strongly Agree
X1.4.2	0	0	5	30	165	200	4,80	Strongly Agree
Total							4,46	Sangat Setuju

b) Perceived Ease of Use (X2)

Table 6. Perceived Ease of Use Analysis Results

Item	Score					Total	Mean	Description
	1	2	3	4	5			
X2.1.1	0	1	8	66	125	200	4,58	Agree
X2.1.2	0	3	11	62	124	200	4,54	Agree
X2.2.1	0	1	5	49	145	200	4,69	Strongly Agree
X2.2.2	0	2	7	54	137	200	4,63	Strongly Agree
X2.3.1	0	8	9	47	136	200	4,56	Agree
X2.3.2	0	4	10	54	132	200	4,57	Agree
X2.4.1	0	1	9	51	139	200	4,64	Strongly Agree
X2.4.2	1	8	14	47	130	200	4,49	Agree
X2.5.1	0	1	10	46	143	200	4,66	Strongly Agree
X2.5.2	3	6	40	66	85	200	4,12	Agree
Total							4,55	Strongly Agree

c) Satisfaction (Z)

Table 7. Satisfaction Analysis Results

Item	Score					Total	Mean	Description
	1	2	3	4	5			
Z1.1	0	1	8	67	124	200	4,57	Agree
Z1.2	2	2	14	62	120	200	4,48	Agree
Z2.1	0	4	14	61	121	200	4,50	Agree
Z2.2	2	5	17	64	112	200	4,40	Agree
Z3.1	0	1	9	55	135	200	4,62	Strongly Agree
Z3.2	0	3	14	52	131	200	4,56	Agree
Z4.1	1	1	13	62	123	200	4,53	Agree
Z4.2	0	2	20	65	113	200	4,45	Agree
Total							4,51	Strongly Agree

d) Continuance Intention (Y)

Table 8. Continuance Intention Analysis Results

Item	Score					Total	Mean	Description
	1	2	3	4	5			

Y1.1	3	1	18	40	138	200	4,55	Agree
Y1.2	2	4	18	54	122	200	4,45	Agree
Y2.1	2	2	11	52	133	200	4,56	Agree
Y2.2	1	2	16	49	132	200	4,55	Agree
Y3.1	1	0	12	54	133	200	4,59	Strongly Agree
Y3.2	1	1	26	43	129	200	4,49	Agree
Y4.1	1	1	10	47	141	200	4,63	Strongly Agree
Y4.2	2	6	14	45	133	200	4,51	Agree
Total							4,54	Strongly Agree

Outer Loadings

Table 9. Outer Loadings Results

Variabel	Loading	AVE	Rho_A	Cronbach Alpha	Composite Reliability
Perceived Usefulness (X1)		0,538	0,792	0,788	0,853
X1.1.1	0,764				
X1.1.2	0,721				
X1.2.1	0,768				
X1.2.2	0,712				
X1.4.2	0,678				
Perceived Ease of Use (X2)		0,537	0,895	0,891	0,912
X2.1.1	0,779				
X2.1.2	0,683				
X2.2.1	0,763				
X2.2.2	0,763				
X2.3.1	0,726				
X2.3.2	0,784				
X2.4.1	0,766				
X2.4.2	0,603				
X2.5.1	0,708				
Continuance Intention (Y)		0,646	0,924	0,920	0,935
Y1.1	0,674				
Y1.2	0,791				
Y2.1	0,856				
Y2.2	0,876				
Y3.1	0,869				
Y3.2	0,848				
Y4.1	0,807				
Y4.2	0,678				
Satisfaction (Z)		0,651	0,924	0,923	0,937
Z1.1	0,801				
Z1.2	0,780				
Z2.1	0,781				

Z2.2	0,799				
Z3.1	0,822				
Z3.2	0,771				
Z4.1	0,865				
Z4.2	0,831				

The perceived usefulness variable is measured by initially 8 indicators of which 5 remain (X1.1.1-X1.4.2) after outliers, having outer loadings of 0.678-0.768. The perceived ease of use variable is measured by initially 10 indicators which become 9 (X2.1.1-X2.5.1) with outer loadings of 0.603-0.784. Values above 0.7 are considered good, but values in the range of 0.6 are still acceptable if the AVE is good, so the indicator is considered valid. The Continuance Intention variable is measured by 8 indicators (Y1.1-Y4.2) with outer loadings of 0.674-0.876, while the Satisfaction variable is also measured by 8 indicators (Z1.1-Z4.2) with outer loadings of 0.771-0.865. Overall, all indicators have a good contribution in measuring their latent variables, and the final model is declared valid even though some indicators still have an outer loading value below 0.7.

Reliability Evaluation and Average Variance Extracted (AVE)

The discriminant validity evaluation uses several indicators, namely Cronbach's Alpha, Rho_A, Composite Reliability, and Average Variance Extracted (AVE), as listed in Table 4.4. Cronbach's Alpha (0.788-0.923) indicates high internal reliability, while Rho_A (0.792-0.924) also confirms construct reliability. Composite Reliability (0.853-0.937) indicates the consistency of the relationship between items within each construct. All AVE values exceed 0.50, proving good convergent validity, so the SEM-PLS model can be continue.

HTMT

In the Discriminant Validity Test there are Heterotrait-Monotrait ratio (HTMT) and Fornell-Larcker matrices. The requirement for the maximum threshold HTMT test is 0.90 (Hair et al., 2019: 788).

Table 10. HTMT Results

	Satisfaction	Continuance Intention	Perceived Usefulness
Continuance Intention	0,814		
Perceived Usefulness	0,840	0,801	
Perceived Ease of Use	0,880	0,722	0,859

Based on the overall data in the table above, the results is good, because all data is below 0.90. This shows that Discriminant Validity can be said to be good. To strengthen the HTMT data, this research requires bootstrapping and looking at the Bias Corrected Confidence Intervals table.

Table 10. Bias Corrected Confidence Intervals Results

	Original Sampel (O)	Sample Mean (M)	Bias	2.5%	97.5%
X1 -> Z1	0.327	0.325	-0.002	0.196	0.454
X1 -> Y1	0.319	0.318	-0.001	0.159	0.489

X2 -> Z1	0.563	0.566	0.003	0.430	0.686
X2 -> Y1	0.034	0.038	0.004	-0.146	0.226
Z1 -> Y1	0.492	0.491	-0.002	0.326	0.656

It can be seen that the range of confidence intervals (2.5% - 97.5%) for each variable is below 1, so Discriminant Validity can be said to be good. In addition, it can be seen that the bias associated with bootstrapping estimation is very low so that research can be continued.

Fornell-Larcker

Table 11. Fornell-Larcker Results

	Satisfaction	Continuance Intention	Perceived Usefulness	Perceived Ease of Use
Satisfaction	0,807			
Continuance Intention	0,754	0,804		
Perceived Usefulness	0,736	0,706	0,733	
Perceived Ease of Use	0,800	0,660	0,727	0,733

The requirement for the Fornell-Larcker test is that the AVE must be greater than the correlation between variables. In table above, the AVE value (the value given in the green column) is always greater than the correlation between other variables. So based on the Fornell-Larcker results it can be understood that the Discriminant Validity requirements are met.

Cross Loading

Table 12. Cross Loadings Results

	Perceived Usefulness	Perceived Ease of Use	Satisfaction	Continuance Intention
X1.1.1	0,764	0,582	0,619	0,530
X1.1.2	0,721	0,512	0,458	0,398
X1.2.1	0,786	0,569	0,565	0,603
X1.2.2	0,712	0,465	0,407	0,409
X1.4.2	0,678	0,513	0,592	0,585
X2.1.1	0,539	0,779	0,568	0,504
X2.1.2	0,397	0,683	0,525	0,369
X2.2.1	0,494	0,763	0,599	0,466
X2.2.2	0,484	0,763	0,580	0,406
X2.3.1	0,457	0,726	0,660	0,446
X2.3.2	0,521	0,784	0,673	0,550
X2.4.1	0,551	0,766	0,618	0,598
X2.4.2	0,603	0,716	0,508	0,468
X2.5.1	0,629	0,708	0,582	0,501
Z1.1	0,604	0,664	0,801	0,569
Z1.2	0,563	0,594	0,780	0,532
Z2.1	0,639	0,661	0,781	0,585
Z2.2	0,502	0,655	0,799	0,573
Z3.1	0,621	0,651	0,822	0,626

Z3.1	0,594	0,622	0,771	0,693
Z4.1	0,637	0,699	0,865	0,659
Z4.2	0,580	0,613	0,831	0,615
Y1.1	0,473	0,480	0,509	0,674
Y1.2	0,450	0,484	0,576	0,791
Y2.1	0,585	0,527	0,605	0,856
Y2.2	0,590	0,544	0,626	0,876
Y3.1	0,601	0,587	0,660	0,869
Y3.2	0,575	0,537	0,604	0,848
Y4.1	0,612	0,536	0,656	0,807
Y4.2	0,642	0,527	0,584	0,678

All items have a higher correlation with the variable they measure than other variables, so discriminant validity is considered good. Perceived Usefulness, Perceived Ease of Use, Satisfaction, and Interest in Continued Use each show the highest correlation with their own variables.

VIF

To see the level of collinearity, it requires VIF testing. According to Hair et al., (2019: 779) the VIF value above 5 can be said to have an indication of collinearity between predictor constructs.

Table 13. VIF Results

	VIF
X1 -> Z1	2.118
X1 -> Y1	2.464
X2 -> Z1	2.118
X2 -> Y1	3.143
Z1 -> Y1	3.237

VIF results shown have proven there is no indication of collinearity. So the research can be continued.

Path Coefficient

Table 14. Path Coefficient Results

Variable Relation	Path Coefficient	<i>t</i> Statistic	<i>p</i> Value	Result Significance	R ²	Result R ²
Z -> Y	0,492	5,958	0,000	Signficant	0,613	Moderate
X1 -> Y	0,319	3,772	0,000	Significant		
X2 -> Y	0,034	0,361	0,718	Non-Significant		
X2 -> Z	0,563	8,493	0,000	Significant	0,688	Moderate
X1 -> Z	0,327	4,929	0,000	Significant		
R ² = 0.75 (Substantial), 0.50 (Moderate), 0.25 (Weak) (Hair <i>et al.</i> , 2019:780)						

Hypothesis testing is done through Path Coefficient by bootstrapping 5,000 subsamples in SmartPLS 3. Almost all coefficients are positive, indicating most relationships between variables are significant. As a result, perceived usefulness has a significant effect on continuance intention ($p = 0.000$; $t = 3.772$; H1 accepted),

perceived ease of use has no significant effect on interest in continuance intention ($p = 0.718$; $t = 0.361$; H2 rejected), perceived usefulness has a significant effect on satisfaction ($p = 0.000$; $t = 4.929$; H3 accepted), perceived ease of use has a significant effect on satisfaction ($p = 0.000$; $t = 8.493$; H4 accepted), and satisfaction has a significant effect on interest in continuance intention ($p = 0.000$; $t = 5.958$; H5 accepted).

Effect Size (f^2)

In the Discriminant Validity Test there are Heterotrait-Monotrait ratio (HTMT) and Fornell-Larcker maIn this test, it is known that to see the value on Effect Size (f^2) according to Hair et al., (2019: 780) a value of 0.02 is a small effect, a value of 0.15 is a medium effect, a value of 0.35 is a large effect, and a value of less than 0.02 indicates no effect.

Table 15. Effect Size Results

	f^2	Effect
X1 -> Z	0,164	Medium
X2 -> Z	0,484	Large
X1 -> Y	0,108	Medium
X2 -> Y	0,001	No Effect
Z -> Y	0,196	Medium

Coefficient of Determination (R^2)

In this test, a value of 0 indicates no relationship, while a value of 1 indicates a perfect relationship. A value of 0.75 is considered substantial, 0.50 moderate, and 0.25 weak (Hair et al., 2019: 780). The test results show that no variable has a value of 0, so all variables are interconnected. As for the results, the effect of perceived usefulness and perceived ease of use on satisfaction of 68.8% is classified as a moderate relationship, as well as the effect of perceived usefulness and perceived ease of use on continuance intention of 61.3% which also includes a moderate relationship.

Table 16. Coefficient of Determination Results

	R Square	R Square Adjusted
Satisfaction (Z)	0,691	0,688
Continuance Intention (Y)	0,619	0,613

Indirect Effect

It is known that perceived usefulness and perceived convenience have an indirect effect on interest in continued use through satisfaction, so that all variables have an indirect and significant effect on each other. This can be seen from the indirect effect of perceived usefulness with a p -value of $0.000 < 0.05$ and a t -statistic of $3.685 > 1.96$, and the indirect effect of perceived convenience with a p -value of $0.000 < 0.05$ and a t -statistic of $4.751 > 1.96$.

Table 17. Indirect Effect Results

	t statistics	p values
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X1 -> Z -> Y	3.685	0.000
X2 -> Z -> Y	4.751	0.000

Q-Square (Q^2)

The Q-Square results show a value greater than 0 on the Satisfaction and Continuance Intention variables, so the predictive accuracy of the two variables is acceptable.

Table 18. Q-Square Results

	Q ² Predict	
Satisfaction (Z)	0,678	Accepted
Continuance Intention (Y)	0,518	Accepted

DISCUSSION

This research was conducted on users of the Access KAI application who are mostly Generation Z aged 17-27 years, a group that prioritizes practical and useful technology. The results of this study support Davis' (1989) Technology Acceptance Model (TAM) theory, which states that perceived usefulness and perceived ease of use are important factors in technology acceptance. In addition, this research is also supports Zikmund's (2003, 2004) theory of customer satisfaction, which states that satisfaction arises when the user experience matches expectations. This finding is also in line with previous studies such as Olivia and Marchyta (2022), Hafidhuddin and Nurul (2023), Xavier et al. (2023), Hapsari et al. (2023), Song and Jo (2023), and Novira et al. (2024).

In this study, perceived usefulness is proven to have a significant effect on satisfaction, because users feel that the Access KAI application is very helpful for booking tickets, even though the promo information is still considered less attractive. The more useful the application, the more satisfied users are, and perceived usefulness also drives their interest in continuing to use the application in the future. Meanwhile, perceived ease of use also has a major effect on satisfaction, as the application is considered easy to use, especially in following ticket booking instructions, although some additional features such as RailFood are still considered less than optimal. However, perceived ease of use does not directly affect continuance intention. This means that ease of use makes users feel satisfied, and it is this satisfaction that ultimately drives their desire to continue using the app.

In addition, satisfaction is shown to have a significant effect on continuance intention. Users feel happy using the app and tend to recommend it to others. Satisfaction is also an important link for the influence of perceived usefulness and perceived ease of use on continuance intention. Thus, although the Access KAI application has been rated as very useful and easy, developers still need to improve features, promo information, and user experience so that Generation Z is increasingly satisfied and continues to be interested in using this application for their travel.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that perceived usefulness has a positive and significant effect on continuance intention, while perceived ease of use does not have a significant direct effect on continuance intention, but can affect it indirectly through satisfaction. In addition, satisfaction is proven to have a positive and significant effect on continuance intention, as well as being an important mediator in the relationship between perceived usefulness and perceived ease of use on continuance intention. This study has several limitations, so it is recommended that further research be conducted over a longer period of time so that the results are more in-depth and representative. Future research is also expected to consider the regional origin of respondents because geographical factors can affect user perceptions and behavior, and use the latest version of SEM-PLS so that the analysis is more accurate and in accordance with technological developments.

ADVANCED RESEARCH

This research still has some limitations. First, the research only presents a general description of the characteristics of respondents without specifically examining geographical aspects that may affect user perceptions and behavior. Second, the scope of this research is limited to the Access by KAI application as a single object, so that testing and proving the Technology Acceptance Model (TAM) theory cannot be generalized to other similar applications in the field of transportation or public services. Third, this study only uses the variables of perceived usefulness, perceived ease of use, satisfaction, and continuance intention. For the development of future research, it is recommended to consider using other mediating variables besides satisfaction, as well as adding new independent variables besides perceived usefulness and perceived ease of use, in order to gain a more thorough understanding of the factors that influence the continued use of digital applications.

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