

Analysis Of Acceptance Factors Of Tiket Pendakian Application Using UTAUT

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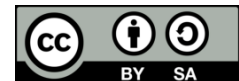
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ABSTRACT

The popularity of mountain climbing has created a need for an efficient and user-friendly reservation system. However, in December 2024, the Tiket Pendakian application only received a rating of 3.9 on digital platforms, reflecting user dissatisfaction with the application's functionality and user experience. Complaints included unstable connections and login failures. The purpose of this study was to analyze the factors influencing user acceptance of the Tiket Pendakian application using the Unified Theory of Acceptance and Use of Technology (UTAUT) model. This study applied a quantitative approach through an online questionnaire distribution, which successfully collected 390 respondents from various regions in Indonesia. After the data cleaning process, 371 valid data were analyzed using the Partial Least Square technique through SmartPLS 3 software. The research model includes nine hypotheses that measure the influence between factors on the intention and actual behavior of using the application. The results of the study proved that six hypotheses were significantly accepted, including Performance Expectancy, Social Influence, Hedonic Motivation, and Habit having a significant positive effect on Behavioral Intention, and Behavioral Intention and Habit having a positive and significant effect on ICT Usage Behavior. Meanwhile, Effort Expectancy and Facilitating Conditions on Behavioral Intention, as well as Facilitating Conditions on ICT Usage Behavior, did not have a significant effect. It can be concluded that perceived usefulness, social influence, enjoyment of use, habits, and intention to use are the main factors that shape user behavior in using the Tiket Pendakian application.

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1. Introduction

Mountain climbing is increasingly popular among various groups, offering a relaxing escape from the daily routine [1]. However, this activity requires not only physical and logistical preparation but also administrative preparation, one of which is booking climbing tickets. This process is often challenging for climbers, especially beginners, due to the strict rules, quotas, and schedules involved. Climbing destination managers now implement ticketing and quota restrictions to manage the number of climbers and preserve the natural environment, ensuring that climbing areas are not damaged by excessive human activity.

The Tiket Pendakian application is a digital innovation that simplifies online ticket reservations, avoiding long queues. This application also helps managers monitor visitor numbers in real time, maintain safe quotas, and preserve the environment [2]. This digital system improves process efficiency and data collection accuracy, which is crucial for reporting and decision-making in overall nature tourism management. Launched in March 2023, the app has attracted over 50,000 users with a 3.9-star rating as of December 2024, offering features such as ticket booking, transportation services, porters, certified guides, location tracking, weather forecasts, and Open Trip and Private Trip options.

However, an analysis of user reviews on the Google Play Store indicates that the Tiket Pencakian app still faces challenges in terms of user acceptance, with complaints about slow connections, login failures, and repeated data input. Some users also suggested adding features such as hiking trail maps and comprehensive mountain information. The app's success depends on user acceptance, which is influenced by various factors as explained in technology acceptance models such as the Unified Theory of Acceptance and Use of Technology (UTAUT) [3]. UTAUT explains how perceptions of usefulness, ease of use, and social influence influence technology use intentions.

Previous research has shown that technology acceptance in the context of ticket booking has been a focus of attention for many researchers. Research by Venkatesh et al. (2012) showed that factors in the UTAUT model, such as Performance Expectancy and Effort Expectancy, significantly influence users' intention to adopt an online ticket booking system [4]. Research by Ali et al. (2022) showed that Performance Expectancy, Hedonic Motivation, and Habit significantly influence users' behavioral intentions to utilize information and communication technology (ICT) in the tourism sector. Although Effort Expectancy, Social Influence, and Facilitating Conditions did not show a significant influence, actual ICT usage behavior is highly dependent on user behavioral intentions and habits [5]. These results suggest that understanding the components that influence technology acceptance is crucial to improving user experience and application success.

This study adopts the Unified Theory of Acceptance and Use of Technology (UTAUT) as the primary analytical framework to evaluate the factors that influence user acceptance of the Tiket Pendakian application. The original UTAUT model includes four core determinants—Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. In this research, the model is further modified by incorporating two additional variables, namely Hedonic Motivation and Habit, to provide a more comprehensive understanding of user behavior in the context of digital outdoor activity services. These additional variables are considered highly relevant because recreational applications, especially those related to hiking and nature-based tourism, are not only used for practical purposes but also for enhancing user enjoyment and reinforcing repetitive behavioral patterns.

By integrating these variables, the study aims to identify various forms of convenience, challenges, and user perceptions that may affect their intention to use and continue using the application. The analysis is expected to reveal how each factor contributes to user acceptance, such as how perceived usefulness improves trust in the system, how ease of use reduces technological barriers, and how enjoyment or satisfaction influences long-term engagement. Furthermore, the inclusion of Habit is essential for understanding whether users tend to repeatedly rely on the application as part of their routine preparation before hiking.

2. Research Method

This study uses a conceptual model developed from the Unified Theory of Acceptance and Use of Technology framework. This model consists of eight variables: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, Habit, Behavioral Intention, and Information and Communication Technology Use Behavior. This model aims to understand how various user perception factors influence intentions and actual behavior in using digital applications in the context of mountain climbing activities [5].

The Performance Expectancy variable describes users' beliefs that using the Ticket Pencak application will increase the effectiveness and efficiency of ticket booking and climb planning. Effort Expectancy relates to users' perceptions of the ease of learning and using the application, including ease of navigation, interface appearance, and clarity of instructions. Social factors, such as friends, family, or the climbing community, influence a person's decision to use the application. Facilitating Conditions refer to the availability of supporting resources, such as adequate devices, internet access, and technical assistance that enable users to operate the application smoothly [6].

Hedonic Motivation refers to the level of pleasure a user feels when using an application, such as an attractive design, fun features, or a satisfying user experience. Habit describes a user's tendency to use the application automatically as part of their habit in planning a hike [7]. Behavioral Intention is a variable that

describes the extent to which a person has the desire, intention, or tendency to use the Tiket Pendakian Application. Information and Communication Technology Use Behavior refers to the actual behavior or concrete actions taken by users in using the application [8]. This variable includes how often users access the application, the extent to which the application's features are utilized in hiking activities, and the user's consistency in making the application part of their technological routine.

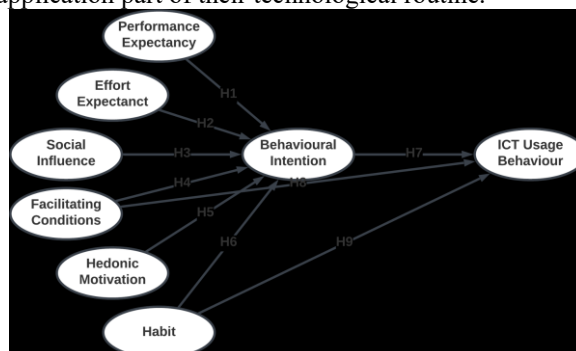


Figure 1. Conceptual Model

This study proposes nine hypotheses based on the conceptual model depicted in Figure 1. The hypotheses proposed are shown in Table 2.

Table 2. Hypothesis

Hypothesis	
H1	Performance Expectancy has a significant positive effect on Behavioral Intention in Using the Tiket Pencak Application
H2	Effort Expectancy has a significant positive effect on Behavioral Intention in Using the Tiket Pencak Application
H3	Social Influence has a significant positive effect on Behavioral Intention in Using the Tiket Pencak Application
H4	Facilitating Conditions has a significant positive effect on Behavioral Intention in Using the Tiket Pencak Application
H5	Hedonic Motivation has a significant positive effect on Behavioral Intention in Using the Tiket Pencak Application
H6	Habit has a significant positive effect on Behavioral Intention in Using the Tiket Pencak Application
H7	Behavioral Intention has a significant positive effect on ICT Usage Behavior in Using the Tiket Pencak Application
H8	Facilitating Conditions has a significant positive effect on ICT Usage Behavior in Using the Tiket Pencak Application
H9	Habit has a significant positive effect on ICT Usage Behavior in Using the Tiket Pencak Application

This study proposes a series of hypotheses aimed at exploring the influence of various factors on behavioral motivation and actions when using the Tiket Pendakian application [5]. Hypotheses H1 to H6 propose that Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, and Habit have a positive and significant effect on Behavioral Intention in using the Tiket Pendakian application. These findings indicate that increases in performance expectancy, perceived ease of use, social support, enabling conditions, pleasure drive, and user habits will encourage stronger intentions to use the Tiket Pendakian application. Furthermore, hypotheses H7 to H9 analyze the relationship between Behavioral Intention and ICT Usage Behavior, where it is proposed that higher behavioral intentions will contribute to increased information technology usage behavior. In addition, Facilitating Conditions and Habit are also expected to have a significant positive influence on ICT Usage Behavior. The population in this thesis is users of the Tiket Pendakian application in Indonesia. Since the exact number of users is unknown, an infinite population approach is used by applying the Lemeshow formula to determine the minimum representative sample size [9]. The Lemeshow formula is stated as follows.

$$n = \frac{Z^2 \times P(1 - P)}{e^2} \quad (1)$$

Description:

- = minimum sample size
- = Z score at 95% confidence level
- = estimated population proportion
- = margin of error

Therefore, the sample size calculation is as follows.

$$n = \frac{(1,645)^2 \times 0,5(1 - 0,5)}{(0,05)^2} \quad (2)$$

$$n = \frac{2,706 \times 0,25}{0,0025}$$

$$n = \frac{0,6765}{0,0025}$$

$$n = 270,6$$

Based on these calculations, the minimum sample size required was 271 respondents. To ensure representativeness of the entire population, the Simple Random Sampling technique was used [10]. Quantitative data collection was conducted by distributing a questionnaire through social media using Google Forms. This questionnaire was designed based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model and contained statements measuring user acceptance factors for the Tiket Pencakian application. To measure this, a five-point Likert scale was used [11]. Table 2 contains the research instruments used.

Table 3. Research Instruments

Variable	Item	Factor
Performance Expectancy	PE1	I find the app useful for hiking
	PE2	I find the app speeds up the ticket booking process
	PE3	I find the app convenient to use when traveling
	PE4	I find the app enhances the quality of my trip
Effort Expectancy	EE1	I find the app interface easy to understand
	EE2	I find the app features uncomplicated
	EE3	I find the app easy to use
	EE4	I find the app improves my booking skills
Social Influence	SI1	I feel people around me consider the app necessary
	SI2	I feel my family and friends support its use
	SI3	I feel the app gives a cool impression when used
	SI4	I feel the app is worth recommending to others
Facilitating Conditions	FC1	I feel the app can be used with the devices I have
	FC2	I feel the app suits the resources I possess
	FC3	I feel the app is compatible with the technology I use
	FC4	I feel support is available if I face any issues
Hedonic Motivation	HM1	I find the app enjoyable to use
	HM2	I find the app provides a satisfying experience
	HM3	I find the app entertaining when planning a hike
	HM4	I find the app enhances my hiking experience
Habit	Hbt1	I am accustomed to using this app
	Hbt2	I feel the need to use it every time I go hiking
	Hbt3	I always use it because of its benefits
Behavioral Intention	BI1	I intend to continue using it in the future
	BI2	I plan to use it more frequently
	BI3	I will keep using it in the near future
	BI4	I will recommend it to others
ICT Usage Behavior	ICTUB1	I use it to support hiking activities
	ICTUB2	I often use it to plan my hiking trips
	ICTUB3	I often use it to purchase hiking tickets
	ICTUB4	I use it to monitor schedules and ticket availability

3. Result and Discussion

The questionnaire was distributed online to reach a wider audience from various regions in Indonesia [12]. A total of 390 respondents were collected, which then served as the basis for the data analysis process. The data first underwent a data cleaning process to ensure the quality and accuracy of the information obtained [13]. This stage included checking for missing values, identifying redundant answers, and identifying 19 unusual answer patterns, which were subsequently removed from the dataset. This study used a total of data from 371 respondents. The large sample size increases the reliability and validity of the research results, allowing the findings to be generalized to understand the behavior and perceptions of Tiket Pendakian app users in Indonesia.

3.1. Inferential Analysis

This study applies inferential statistical analysis to test the outer model, inner model, and hypothesis [14]. A total of 372 respondents were used in this study, all of whom were users of the Tiket Pencakian application. SmartPLS 3 software was used to analyze the relationships between the constructs studied.

3.2. Outer Model

To evaluate the reliability and validity of the data, testing was conducted on the outer model. Validity was measured through convergent validity and discriminant validity, while reliability was measured using Cronbach's Alpha and Composite Reliability. A construct is declared valid if its outer loading indicator is >0.7 and AVE >0.5 [15]. Discriminant validity occurs if the outer loading of an indicator is greater than the outer loading on another construct, and the square root of AVE is greater than the correlation between other latent constructs. Data are considered reliable if the Cronbach's Alpha and Composite Reliability of each construct are >0.7 . This study presents the outer loading and AVE values for each indicator and construct analyzed in the model.

Table 4. Convergent Validity Value

Variable	Item	Outer Loading	AVE
Performance Expectancy	PE1	0.735	0.566
	PE2	0.779	
	PE3	0.747	
	PE4	0.749	
Effort Expectancy	EE1	0.766	0.584
	EE2	0.794	
	EE3	0.767	
	EE4	0.728	
Social Influence	SI1	0.789	0.591
	SI2	0.755	
	SI3	0.727	
	SI4	0.800	
Facilitating Conditions	FC1	0.770	0.564
	FC2	0.770	
	FC3	0.751	
	FC4	0.711	
Hedonic Motivation	HM1	0.806	0.620
	HM2	0.787	
	HM3	0.774	
	HM4	0.782	
Habit	Hbt1	0.830	0.684
	Hbt2	0.825	
	Hbt3	0.826	
Behavioral Intention	BI1	0.822	0.620
	BI2	0.802	
	BI3	0.759	
	BI4	0.764	
ICT Usage Behavior	ICTUB1	0.761	0.628
	ICTUB2	0.783	

Variable	Item	Outer Loading	AVE
	ICTUB3	0.833	
	ICTUB4	0.792	

Reliability testing was conducted to assess the ability of the instruments used in this study to produce consistent data over time [16]. A construct is considered reliable if its Cronbach's Alpha and Composite Reliability values are above 0.7. The results indicate that these indicators consistently evaluate the same latent construct. If the values fall below this limit, the construct is deemed unreliable.

Table 5. Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability
Performance Expectancy	0.744	0.839
Effort Expectancy	0.762	0.849
Social Influence	0.769	0.852
Facilitating Conditions	0.742	0.838
Hedonic Motivation	0.796	0.867
Habit	0.769	0.867
Behavioral Intention	0.795	0.867
ICT Usage Behavior	0.802	0.871

The variables in the model show composite reliability values and Cronbach's Alpha above 0.7 as shown in table 4. Thus, each variable tested in this study is considered feasible and meets the required reliability criteria.

3.3. Inner Model

The inner model test examines the relationships between latent constructs in a structural model, involving the evaluation of R-Square and F-Square. R-Square measures how much variability in the dependent construct can be explained by the independent constructs of the model [17]. A high R-Square value indicates that the independent construct has a greater influence on the dependent construct. A model is said to have strong predictive ability if the R-Square value is ≥ 0.75 , moderate if ≥ 0.5 and weak if ≥ 0.25 [15]. This test is important to determine the extent to which the model is able to explain the phenomenon being studied and serves as a basis for drawing conclusions about the relationships between constructs within the research framework.

Table 6. R-Square Value

Variable	R-Square	Influence
Behavioral Intention	0.709	Moderate
ICT Usage Behavior	0.676	Moderate

The F-Square value measures the extent to which each independent construct influences the dependent construct in a structural model. This indicator indicates the magnitude of the unique influence of an independent construct in increasing the overall predictive effectiveness of the model. A construct is considered to have a large influence if the F-Square value is ≥ 0.35 , a moderate influence if ≥ 0.15 , and is categorized as having a small influence if ≥ 0.02 on the dependent construct. This evaluation is important to determine the significance of each independent construct in explaining the dependent construct and to ensure that the model built is able to describe the relationship between constructs accurately and reliably [18].

Table 7. F-Square Value

Variable	F-Square	Influence
Behavioral Intention		
Performance Expectancy	0.030	Small

Variable	F-Square	Influence
Effort Expectancy	0.000	Small
Social Influence	0.048	Small
Facilitating Conditions	0.005	Small
Hedonic Motivation	0.061	Small
Habit	0.250	Moderate

ICT Usage Behavior		
Facilitating Conditions	0.014	Small
Habit	0.114	Small

3.4. Hypothesis Testing

The hypothesis was tested using SmartPLS 3, using bootstrapping as a statistical procedure. The results of the bootstrapping analysis are presented in the following figure.

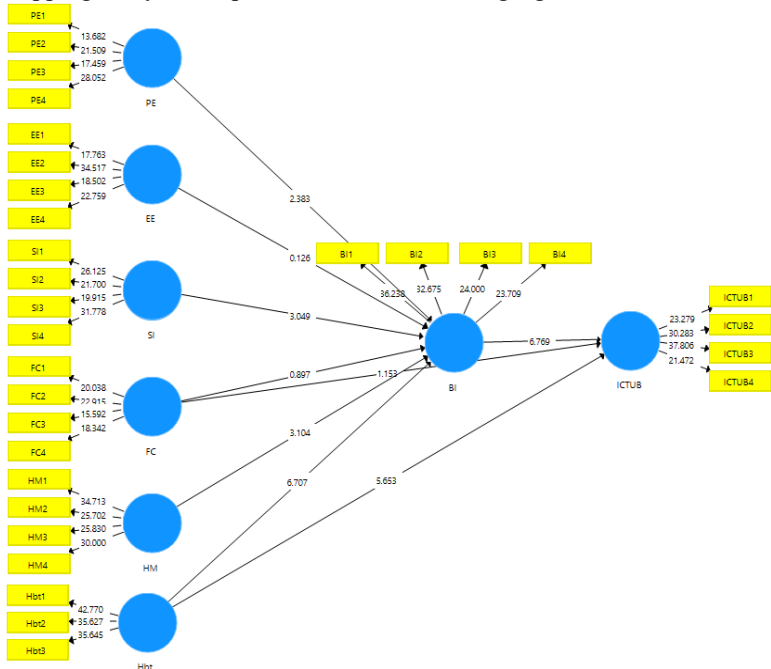


Figure 2. Bootstrapping Results

Figure 2 shows the results of a bootstrapping test using SmartPLS 3 to test the assumptions in the model. The assessment was based on the 0 value, T-statistic, and P-value. The relationship between variables was considered significant if the T-statistic was greater than 1.645 and the P-value <0.05. The complete results of the hypothesis testing are in Table 8.

Table 8. Hypothesis Testing Results

No.	Path	O	T Statistic	P Value	Description
H1	PE→BI	0.144	2.360	0.009	Accepted
H2	EE→BI	0.006	0.128	0.449	Rejected
H3	SI→BI	0.192	3.077	0.001	Accepted
H4	FC→BI	0.051	0.964	0.168	Rejected
H5	HM→BI	0.210	3.048	0.001	Accepted

No.	Path	O	T Statistic	P Value	Description
H6	Hbt→BI	0.388	6.143	0.000	accepted
H7	BI→ICTUB	0.295	3.756	0.000	accepted
H8	FC→ICTUB	-0.094	1.703	0.045	rejected
H9	Hbt→ICTUB	0.298	4.974	0.000	accepted

The results of the Hypothesis 1 test indicate that Performance Expectancy has a positive and significant effect on Behavioral Intention when using the Tiket Pencak application. This is consistent with the study by Ali et al. (2022), which confirmed that performance expectancy significantly impacts an individual's desire to use information technology [5]. Therefore, applications need to emphasize the benefits and efficiency offered to encourage users to use them consistently.

Hypothesis 2 states that Effort Expectancy does not have a significant positive effect on Behavioral Intention when using the Tiket Pencak application. This is consistent with the study by Park et al. (2021), which showed that ease of use is not always a primary factor in application usage intention [19]. Development can be focused on features that provide added value, rather than simply technical convenience.

Hypothesis 3 indicates that Social Influence has a positive and significant impact on Behavioral Intention when using the Tiket Pencak application. This is consistent with the study by Ramadhan et al. (2022), which stated that influences from the surrounding environment, such as friends and family, contribute to usage decisions [12]. Therefore, promotional strategies involving the climbing community can strengthen application adoption.

Hypothesis 4 states that supporting conditions do not have a significant positive effect on behavioral intention when using the climbing ticket app. This aligns with the findings of Zain et al. (2024), who showed that the availability of supporting facilities is not always the primary driver of usage intention [20]. Users are more motivated by personal perceptions of benefits than external support.

Hypothesis 5 states that Hedonic Motivation has a positive and significant effect on Behavioral Intention when using the Climbing Ticket app. This finding is consistent with research by Ali et al. (2022), which shows that enjoyment and satisfaction when using an app can increase the desire to continue using it. Therefore, it is important to provide a pleasant and visually appealing user experience.

Hypothesis 6 states that Habits have a positive and significant effect on Behavioral Intention when using the Climbing Ticket app. This is reinforced by research by Ali et al. (2022), which states that habits play a crucial role in forming usage intentions [5]. Features that encourage routine use need to be developed to strengthen user loyalty.

Hypothesis 7 states that behavioral intention has a positive and significant effect on ICT usage behavior when using the Ticket Climbing application. This finding aligns with research by Purwanto et al. (2020), which shows that a strong intention to use technology will directly impact actual behavior [21]. Therefore, efforts to increase user intention from the outset need to be a priority in application development and socialization.

Hypothesis 8 states that facilitating conditions do not have a significant positive effect on ICT usage behavior when using the Ticket Climbing application, as the direction of the relationship is negative, although significant. This finding aligns with research by Anggraini et al. (2024), which states that facilitating conditions do not always influence actual behavior if users do not feel significantly helped [22]. Application development should focus more on individual user experiences rather than simply providing general technical support.

Hypothesis 9 states that habits have a positive and significant influence on ICT usage behavior when using the Ticket Climbing application. This aligns with research by Alfarizi et al. (2023), which confirmed that strong habits drive actual technology use [23]. Therefore, creating repeatable and easily accessible interactions is key to building user engagement with the application.

4. Conclusion

This study, entitled "Analysis of Acceptance Factors of the Tiket Pendakian Application Using UTAUT," aims to identify variables that influence users' tendency to use the Tiket Pendakian application. The UTAUT model used includes Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, and Habit to assess their influence on Behavioral Intention and ICT Usage Behavior.

The test results showed that six of the nine main hypotheses were significantly accepted: Performance Expectancy, Social Influence, Hedonic Motivation, and Habit on Behavioral Intention, and

Behavioral Intention and Habit on ICT Usage Behavior. These six factors were proven to have a significant positive influence on users' intention and actual behavior in using the Tiket Pendakian Application. On the other hand, Effort Expectancy and Facilitating Conditions on Behavioral Intention, and Facilitating Conditions on ICT Usage Behavior, did not show a significant influence.

Therefore, it can be concluded that perceived application usefulness, social encouragement, enjoyable experiences while using the application, habits, and usage intentions play a crucial role in shaping user behavior. These results provide practical contributions for application developers and managers to focus development strategies on aspects of functionality, user experience, and the creation of positive, supportive habits.

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