ANALYSIS OF FACTORS AFFECTING THE INTENTION TO USE THE DANA APPLICATION IN LOMBOK BASED ON THE TAM MODEL

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ABSTRACT

This study aims to analyze the factors that influence the intention to use the DANA e-wallet using the SEM-PLS method. Measurement model evaluation was conducted through Convergent Validity and Discriminant Validity tests to ensure that the research instrument was valid and reliable. A bootstrapping test was used to determine the significance of relationships between latent variables, with a t-value threshold of 1.96 at the 5% significance level. Data were collected from 130 respondents selected through purposive sampling based on the criteria of being at least 17 years old, residing in East Lombok, understanding the DANA application, and having the intention to use it.

The results show that each variable has a different influence on the intention to use DANA. Perceived Usefulness did not have a significant effect (t = 1.676; p = 0.094). In contrast, Perceived Ease of Use had a positive and significant effect (t = 2.533; p = 0.011), indicating that the easier the application is to use, the stronger the user's intention to adopt it. Perceived Security also had a positive and significant effect (t = 3.039; p = 0.002), meaning that a higher sense of security increases users' likelihood of continuing to use DANA.

Keywords: *Intent To Use, E-Wallet, DANA, SEM-PLS, Financial Technology*

INTRODUCTION

Digital transformation in the financial sector has encouraged the emergence of an electronic-based payment system that is increasingly in demand by the Indonesian people. The growth of internet access and the increase in smartphone ownership are the main factors driving the adoption of digital financial services, including e-wallets such as DANA (Putri et al., 2022). In fact, the consumption of digital transactions in Indonesia has increased significantly in the last five years, showing a change in people's behavior towards a cashless payment system (Irsyad, 2023).

The success of e-wallet usage is greatly influenced by the acceptance of the technology from the user's perspective before the adoption decision is made. In the context of this study, the Technology Acceptance Model (TAM) approach is the most widely used theoretical framework to explain the behavior of technology system adoption. TAM emphasizes that the intention or intention to use technology is the main factor that affects the actual actions of users (Saputra, 2024). Therefore, the intention of use is an important variable that must be studied in understanding the adoption of digital payment applications such as DANA.

One of the most dominant factors in TAM is Perceived Usefulness (PU). Users will be more likely to use a technology if they believe that it provides real benefits and increases the effectiveness of daily activities. In the use of e-wallets, these benefits can be in the form of faster transaction processes, flexibility of use, and ease of access at any time (Amelia et al., 2025).

In addition, Perceived Ease of Use (PEOU) is also an important determinant of technology acceptance. The easier an app is to use, the higher the tendency of users to utilize it sustainably. Simple interface design, easy-to-learn features, and navigation can clearly improve users' perception of convenience in using digital payment applications (Yuwono et al., 2025). DANA as one of the e-wallet platforms in Indonesia competes through ease of use by highlighting a simple navigation system and extensive service support.

On the other hand, this study adds that the security factor (Perceived Security) also plays a crucial role in the intention of using digital financial applications. Concerns about the risk of data leakage, fraud, and illegal access to personal information are still one of the main obstacles to e-wallet acceptance in Indonesia (Nurul et al., 2023). User evaluation of encryption, authentication, account protection, and the clarity of transaction notifications can affect a person's level of trust and intention in using digital payment applications (Marbun & Nasution, 2024).

This research is important because the results of previous studies focused more on urban areas, while Lombok as a developing region has different characteristics of digital user behavior and has not been explored much. In addition, digital security risks are still a concern for the public, so it is necessary to study the extent to which perceived security affects the intention to use DANA in this area. This research is also theoretically important because it contributes to strengthening the TAM model in the context of the latest generation of digital financial services that continue to evolve.
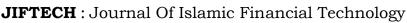
LITERATURE REVIEW
Technology Acceptance Model (TAM)

TAM is a development of the Theory of Reasoned Action (TRA) which states that a person's behavior is determined by the intention of the behavior, while the intention is influenced by the attitude towards the behavior (Davis et al., (1989). TAM states that there are two main constructs that determine the level of acceptance of technology, namely Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived Usefulness (PU) refers to the level of confidence users have that using a technology will provide benefits and improve their performance. The greater the perceived benefits, the greater the tendency of a person to accept and use the technology. Venkatesh and Davis (2000) developed TAM2 that integrates Perceived Security as an additional determinant in technology adoption.

1. *Perceived Usefulness* (PU)

Perceived Userfulness is a user's perception of the usability of the system where a system can speed up work, improve performance, increase task effectiveness, get the information needed by users, have overall benefits, and so

on (Septiani, 2024). According to Venkatesh and Davis et al., (1989)that the indicators of Perceived Userfulness are as follows:

a) The use of the system is able to improve individual performance (improves job performance). In this case, in searching for a product or service, it is easier to do it with an application.

b) The use of the system is able to increase the level of individual productivity (increases productivity). In this case, in the use of an application, users can increase their productivity.

c) The use of the system is able to increase the effectiveness of individual performance (enhances effectiveness). In this case, using an online application is one of the effective ways to make purchases and get a product or service.

d) The use of the system is useful for individuals. In this case, using an application is reliable and useful when you need a product or service that you want online, especially when in an urgent (emergency) situation.

2. Perceived Ease of Use (PEOU)

Perceived Ease of Use refers to a system that is user-friendly, easy to understand, and simple to use, where this ease involves behavior in conducting technology-based financial transactions to avoid problems that may arise due to the technology (Rebina et al., 2025). In the study (Thasya et al., 2025) that the Perceived Ease Of Use indicators are as follows:

a) Ease of learning how to use the system.

b) User interaction with the system is clear and understandable.

c) It's easy to become proficient in using the system.

d) The ease of using the system is in accordance with the user's wishes.

3. Perceived Security (PS)

According to (Armesh et al., 2010) there are still many consumers who are reluctant to release their credit card information to online merchants, for fear of losing control of their accounts, so an evaluation is needed in security features and attributes, which include the Site provides encryption, the Site that requires users to set up an account with an ID and password, Confirmation on the screen after completing the purchase process for ensure accuracy (Udayana et al., 2018).

According to Raman Arasu and Viswanathan, (2022) the indicators of perceived security are:

a) Security guarantee.

b) Data confidentiality.

4. Intention to use DANA

Intention to use funds is a person's tendency to make decisions in allocating or using their money on a certain financial instrument, application, service, or activity. In general, the intention describes a person's readiness to take a financial action in the future. The intention to use the DANA application

is significantly influenced by various factors, including perceived usability, ease of use, and security (Suci Ramadhani, 2022).

According to Venkatesh and Davis et al., (1989) that the indicators of Intention to Use DANA are as follows:
a) Perceived Userfulness.
b) Perceived Ease Of Use.
c) Perceived Security.

METHODS

In this study, the evaluation of the measurement model was carried out to ensure that each indicator was able to accurately reflect the latent construct. This evaluation is important so that the model built has adequate validity and reliability before further analysis is carried out. Therefore, the test was carried out through a series of statistical tests that included Convergent Validity, and Discriminant Validity as the basis for assessing the quality of the instrument and the overall suitability of the model.

The bootstrapping test was used to assess the significance of the relationship between latent variables in the structural model with a resampling technique of the original data repeatedly. Hair et al. (2018) and Henseler et al. (2019) recommend a total of 5,000 bootstraps to produce stable parameter estimates, 200–1,000 bootstrap samples are already considered adequate in PLS. The significance of the relationship is assessed using the t-statistical value, where the coefficient is considered significant if t > 1.96 at a significance level of 5%.

The data collection technique used in this study is data collection through filling out questionnaires carried out by consumers who know and intend to use DANA e-wallets as a non-cash means of payment. Then secondary data in this study was obtained from various sources such as articles, journals, scientific writings, books, the internet, and others. In this study, a non-probability sampling method was used, namely through purposive sampling sample design. The method was used to select individuals who met the following research criteria:
a. Minimum age of 17 years
b. Domicile East Lombok
c. Know and understand the DANA application and its use
d. Intend to use the DANA application.

To anticipate the existence of incomplete or invalid questionnaires, the number of respondents to be distributed is set at 130 respondents. This number is expected to be able to produce representative data and support the SEM-PLS analysis optimally.

RESULT AND DISCUSSION

Respondent Characteristics

Table 1 respondent by Age

Age Group	Sum	Persentase
17-21 year	32	24.6%

22-26 year	68	52.3%
27-30 year	21	16.2%
30-35 year	5	3.8%
>35 year	3	2.3%

Source: self-treated, 2025

Based on the table above, after adjusting to 130 respondents, the age group of 22-26 years dominated with a percentage of 52.3%. This dominance of young people shows that the intention to use digital services, such as e-wallets or modern payment systems, mainly comes from groups that are in the early productive phase and have high technological acceptance. The 17–21 age group which reached 24.6% also showed a similar trend, where the use of digital financial technology became part of their daily activities. Meanwhile, respondents over the age of 27 have a smaller percentage so their contribution to usage intent is relatively lower. This shows that the intensity of intention to use digital services tends to decrease with age in this study.

Quantitative Analysis

1. Validity Test
   a. Convergent Validity

Table 2 Results of Outer Loading convergent validity

	PU	PEOU	PS
PU.1	0.921		
PU.2	0.877		
PU.3	0.895		
PU.4	0.887		
PEOU.1		0.833	
PEOU.2		0.87	
PEOU.3		0.881	
PEOU.4		0.874	
PS.1			0.928
PS.2			0.936

Source: primary data processed SmartPLS 4.1.1.4, 2025

The results of the Outer-Loading test showed that all indicators in the PU, PEOU, and PS constructs had values above 0.70 so that they met the convergent validity criteria. A high loading value on each indicator indicates that the entire item in question is able to represent a well-measured construct. Thus, the measurement model is declared valid and can be used in subsequent analysis.

   b. Discriminant validity

Table 3 Kriteria Fornell-Lacker

	PU	PEOU	PS	NP

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PU	0.895			
PEOU	0.859	0.865		
PS	0.676	0.686	0.932	
NP	0.787	0.804	0.747	0.868

Source: primary data processed SmartPLS 4.1.1.4, 2025

Based on the results of the discriminant validity evaluation using the Fornell-Lacker criteria, the AVE square root values (shown on the main diagonal) for each construct of PU (0.895), PEOU (0.865), PS (0.932), and NP (0.868) were higher than their correlation with other constructs in the same row and column. This condition shows that each latent variable has a good discriminating ability because it is better able to explain its own indicators compared to other construct indicators. Thus, all constructs in the model meet the criteria of discriminant validity and are suitable for use in subsequent structural analysis.

c. *Cross-Loading*

Table 4 Cross-Loading Values

	PU	**PEOU**	**PS**	**NP**
PU.1	0.921	0.815	0.635	0.753
PU.2	0.877	0.706	0.572	0.701
PU.3	0.895	0.773	0.616	0.702
PU.4	0.887	0.782	0.595	0.655
PEOU.1	0.76	0.833	0.586	0.752
PEOU.2	0.752	0.87	0.591	0.69
PEOU.3	0.73	0.881	0.615	0.675
PEOU.4	0.723	0.874	0.577	0.653
PS.1	0.628	0.608	0.928	0.676
PS.2	0.632	0.668	0.936	0.716
NP.1	0.69	0.745	0.651	0.909
NP.2	0.752	0.743	0.667	0.869
NP.3	0.596	0.595	0.628	0.825

Source: primary data processed SmartPLS 4.1.1.4, 2025

The results of cross-loading testing showed that each indicator had the highest loading value in the construct it was supposed to measure compared to the loading value in other constructs. For example, the PU.1–PU.4 indicator has the highest value in the PU construct, the PEOU.1–PEOU.4 indicator has the highest value in the PEOU construct, the PS.1 and PS.2 indicators have the highest value in the PS construct, and the NP.1–NP.3 indicator has the highest value in the NP construct. This condition meets the criterion of discriminant validity, where the indicator is more representative of its original construct than other constructs. Thus, all indicators in the model are declared to have good discriminating capabilities and are suitable for use in advanced analysis.

2. Model Struktural (Inner Model)
    a. R-square (R2)

Table 5 R-square Value (R2)

	R-square	**Adjusted R-square**
NP	0.736	0.729

Source: primary data processed SmartPLS 4.1.1.4, 2025

The results of the analysis showed that the R-square value for the NP construct was 0.736, which means that the independent variables in the model were able to explain 73.6% of the variation in the Intent of Use (NP) construct. This value belongs to a strong category according to the criteria, which classify an R^2 of 0.67 or more as a substantial model. Meanwhile, the Adjusted R-square value of 0.729 indicates that after accounting for the number of predictors in the model, the variable explainability remains high and does not undergo a significant reduction. Thus, the structural model can be stated to have excellent explanatory power to the NP construct.

b. Uji Hypothesis (Bootstrapping)

Table 6 hypothesis test (boostrapping)

	T statistik (|O/STDEV|)	**P values**	**Information**
PU-> NP	1.676	0.094	Insignificant
PEOU-> NP	2.533	0.011	Signifikan
PS-> NP	3.039	0.002	Signifikan

Source: primary data processed SmartPLS 4.1.1.4, 2025

Perceived userfulness towards the intention of using DANA

The results of the analysis showed that the influence of Perceived Ease of Use (PEOU) on the Intention to Use the DANA application had a value of t = 1.676 and p = 0.094, which means it was greater than the significance limit of 0.05. Thus, the relationship was declared insignificant at a significance level of 5%, so the proposed hypothesis was rejected. These findings show that ease of use has not been a factor that strongly influences the intention of the people of Lombok in using the DANA application. These results are in line with several previous studies that have also found that PU does not always have a significant effect on the intention to use digital financial technology. Putri et al., 2022) report that users tend to be more influenced by the perception of benefits than ease of use in deciding to use e-wallets. This result is different from many previous studies that confirm that PU is a strong factor in shaping the intention to use technology.

Research conducted by (Ritonga, 2022) shows that Perceived Usefulness has a positive and significant effect on Shopee PayLater's Intention to Use, where real benefits such as the ease of buying first and paying later are clearly felt by users,

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thereby increasing students' interest in continuing to use the service. This means that when the benefits are considered relevant, real, and often felt in everyday life, then PU can strongly increase the intention of use. Therefore, in the context of this study, it can be concluded that DANA users in Lombok may have achieved a good level of technological adaptation so that usefulness is no longer a determining factor, while other aspects such as convenience, security, or trust play a stronger role in shaping the intention of use.

Perceived Ease Of Use towards the intention of using DANA

The test results showed that the Perceived Ease of Use variable had a positive and significant effect on the e-wallet usage intention, with a t-statistic value of 2.533 and a p-value of 0.011. A t-statistic value that exceeds the critical limit of 1.96 and a p-value smaller than 0.05 confirms that the hypothesis is acceptable. These findings show that the easier the app is to use, the higher the individual's intention to utilize e-wallets in their daily financial transaction activities. These results are in line with the research of Rasyiddin, 2024) proving that the perception of convenience is a significant determinant in the use of mobile banking, where users who find features easy to understand are more likely to continue using the application. Similar findings are also shown by Budiantara, 2019) which states that Perceived Ease of Use along with other factors significantly increase the intention to make online transactions on the MSME product marketplace.
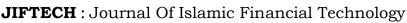
Perceived Security towards the intention of using DANA

The test results showed that the Perceived Usefulness variable had a positive and significant effect on the intention of using e-wallets, with a t-statistic value of 3.039 and a p-value of 0.002. A t-statistic value that exceeds the critical limit of 1.96 and a p-value smaller than 0.05 confirm that the hypothesis is accepted. The test results showed that the Perceived Security variable had a positive and significant effect on the intention of using an e-wallet. This illustrates that the higher the level of security that users feel, the greater their tendency to be interested in using e-wallets in digital transaction activities.

These findings are in line with research conducted by Kumala, 2020), which shows that security aspects in digital payment services make an important contribution to the increase in user interest, especially in a generation that is not fully accustomed to digital technology. Generation X in the study placed security as an important factor so that they were willing to use GoPay services in food and beverage purchases. Thus, the results of this study strengthen the view that security guarantees, such as data protection, transaction encryption, verification features, and trust in service providers are the key to increasing people's intention to use e-wallets in daily financial transactions.

CONCLUSION

Based on the results of the research and discussions that have been carried out regarding the influence of the perception of the benefits of using the use of DANA e-wallets in Lombok, this study can be concluded as follows:

1. The results of the study show that the use of the use (PU) does not have a significant effect on the intention of the Lombok people in using the DANA application. The values t = 1.676 and p = 0.094 indicate that the user does not really make usefulness the main factor in deciding on use. This finding is different from several studies that confirm that the benefits and features that provide real benefits actually affect the interest in using digital services. This means that DANA users in Lombok may be quite familiar with technology so that other factors such as ease, security, or trust are more decisive in shaping the intention to use.

2. The results of the analysis showed that Perceived Ease of Use had a positive and significant effect on the intention to use e-wallets, with a t-statistic value of 2.533 and a p-value of 0.011. This means that the easier the application is to use, the more interested users are in using e-wallets in daily transactions. These findings are also supported by the results of other studies that show that ease of use is an important factor in driving the adoption of digital financial services.

3. The results of the analysis showed that Perceived Security had a positive and significant effect on the intention of using e-wallets, with a t-statistic value of 3.039 and a p-value of 0.002. In addition, Perceived Security has also been proven to have a positive and significant effect on the intention of use. This shows that the greater the sense of security that users feel, the higher their interest in using e-wallets in daily digital transactions.

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