

Analysis of Intention to Use E-Wallet Dana with the Utaut Approach and Perceived Risk

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ABSTRACT

The use of digital wallet applications will continue to grow in Indonesia. This research intends to see how the Unified Theory Of Acceptance And Use Of Technology (UTAUT) model introduced by (Vankatesh, 2003) and perceived risk in influencing a person's intention to use a digital wallet. The research data was collected by distributing questionnaires online through G- form. A total of 110 samples were used in this study. Data processing was carried out using smartpls. From the results of the study, it was found that the variables of performance expectancy, effort expectancy, social influence, and facilitating conditions have a positive and significant effect on the intention to use the DANA e-wallet, while the perceived risk variable has no influence on the intention to use the DANA e-wallet.

INTRODUCTION

Following the development of financial technology today, Indonesia already has various types of *E-wallets* (digital wallets) that have been circulating in the community. Bank Indonesia noted that there are five digital wallets that are most widely used, namely GoPay, OVO, DANA, ShopeePay, and LinkAja. Payment methods using digital wallets are used more than other digital payment methods. Digital wallets are used by 81%, *virtual accounts* by 60%, bank transfers by 55%, *cash on delivery* (cod) by 55%, paylater 32%, qris by 31%, retail outlets 22%, instant debit 12%, and credit cards 9% (Annur, 2022). The same research was also conducted by Visa Indonesia in 2023 and showed that digital wallets are more widely used than other payment methods. The practical and easy use of digital wallets encourages someone to use them. (Alalwana et al, 2018) a new system that is easy to use stimulates a person's intention to use it. In the UTAUT theory according to (Vankatesh, 2003) there are four main reasons that influence a person's intention to use technology, namely *Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions*. research on a person's intention to adopt a new technology using the UTAUT model has been studied by (Esawe, 2022; Kilani et al, 2023; Sivathanu, 2023; Bommer et al, 2022).

In addition to providing services that are easily accessible, the security of a new system also affects a person's intention to adopt a system. This aims to prevent consumers from potential risks that will be detrimental in the future. (Gupta et al, 2020) risk is considered an important factor during the process of operating the latest digital wallet technology. Indonesia has regulated policies regarding digital wallets in Law no.13/POJK.02/208 concerning digital financial innovation in the financial services sector. In addition, digital wallets must also obtain an operating license from Bank Indonesia. Although companies providing digital wallet services must have licenses from Bank Indonesia and OJK, until now DANA's digital wallet has not been supervised by OJK. According to the daily article *Bisnis Tempo*, customers of e-wallet DANA have experienced losses in the form of loss of balance on the e-wallet. This is a potential risk that may be experienced by customers in the future. Even so, this still makes DANA digital wallet the third most widely used digital wallet in Indonesia. A survey conducted by Katadata in 2023 with a sample of 1,300 people 61% of whom were DANA users. The same research was also conducted by Ipsos Marketing with similar results, namely out of 81% of digital wallet transactions, 40% are GoPay users, 24% are OVO users, and 17% are DANA users.

Research on the effect of perceived risk has been studied by previous researchers. (Arora et al, 2023) revealed that perceived risk has no impact on behavioral intentions in using digital wallets. This finding has the same results as research by (Widodo et al, 2019; 2020; and Ozkan et al, 2010). Different findings are found in research (Ramtiyal et al, 2022) that intention to use is negatively influenced by perceived risk. This is in line with research by (Almaiah et al, 2023; and Liebana et al, 2019). The addition of the Perceived

risk variable in this study is a novelty in research on the intention to use a digital wallet.

Based on the phenomenon that occurs regarding the increase in the number of DANA e-wallet users in Indonesia today and followed by differences in the findings of previous research on the factors that influence a person's intention to use a digital wallet, the authors intend to research the "**ANALYSIS OF INTENTION TO USE DANA E-WALLET WITH UTAUT APPROACH AND PERCEIVED RISK**" to fill the gap between previous research and find out whether perceived risk has an influence on intention to use DANA e-wallet.

THEORETICAL REVIEW

The Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT is a technology acceptance model developed through various stages to determine individual experiences in using new technology. Vankatesh 2003 defines intention to use as a person's desire to use information technology with the expected purpose. In other words, intention is defined as the tendency to respond positively or negatively to an event, individual, event, or intuition (Ajzen et al., 1980). The UTAUT model introduced by Vankatesh 2003 describes four variables that influence a person's intention to use a technology system.

1. Performance Expectancy

Performance expectancy is defined as the extent to which a person believes that using the system will help him achieve benefits at work (Vankatesh, 2003). Previous research has examined the effect of *Performance Expectancy* on the intention to use a digital wallet. (Alalwana, 2018) *Performance Expectancy* has an influence on intention to use. This is in line with research (Esawe, 2022) *Performance Expetancy* significantly affects the intention of consumer behavior in using digital wallets, and (Sivathanu, 2018) *Performance Expectancy* significantly affects the intention to use digital wallets. A person is more likely to adopt a service when he believes that the system used contributes positively to his life (Farah et.al, 2018; Madan & Yadav, 2018; Qasim & Shahab, 2019). Thus, the following hypothesis is made:

H1 : Performance expectancy has a positive and significant effect on the intention to use the DANA digital wallet.

2. Effort Expectancy

Effort Expectancy is defined as the level of ease associated with using the system (Vankatesh, 2003). Research to measure the effect of *Effort Expectancy* on the intention to use a digital wallet has been conducted previously. *Effort Expectancy* has a positive and significant effect on the intention to adopt a digital wallet (Arora et al., 2023). This research is the same as research by (Sivathanu, 2018) that the intention to use a digital wallet is influenced by *Effort Expectancy*. *Effort expectancy* significantly influences the intention to adopt an

e-wallet (Soodan & Rana, 2020; Chresentia & Suharto, 2020; Raihan & Rachmawati, 2019; Widodo et.al, 2019). Thus, the following hypothesis is made:

H2 : Effort expectancy has a positive and significant effect on the intention to use e-wallet DANA.

3. *Social Influence*

Vankatesh 2003 defines *social influence* as the extent to which an individual feels that other people who are important to him believe that he should use a new system. Previous research has examined the effect of social influence on the intention to use an *e-wallet*. (sivathanu, 2018) the intention to use *e-wallets* is positively and significantly influenced by *social influence*. These findings are in line with research (Arora et al, 2023) *social influence influences a person's intention to use an e-wallet positively and significantly*. Thus, the following hypothesis is made:

H3 : *Social Influence has a positive and significant effect on the intention to use e-wallet DANA.*

4. *Facilitating Conditions*

Vankates 2003 defines *facilitating conditions* as the extent to which an individual believes that organizational and technical infrastructure exists to support system use. The intention to use an e-wallet that is influenced by facilitating conditions has been previously studied. (Arora et al, 2023) found that facilitating conditions have a positive and significant effect on the intention to use e-wallets. These findings are supported by research (Jiale et al, 2021) *facilitating conditins have a positive and significant effect on the intention to use an e-wallet* and (sivathanu, 2017) *Facilitating Conditions affect a person's intention to use a digital wallet*. Facilitating conditions such as technical support, ease of use, and security significantly influence the intention to use e-wallets (Teng & Khong, 2021; Alalwan et al, 2018; Musyafii, et al 2021). Thus, the following hypothesis is made:

H4 : *Facilitating Conditions have a positive and significant effect on the intention to use the DANA e-wallet.*

5. *Perceived risk*

Kleijnen et al, (2007) define perceived risk as consumers' perception of uncertainty and negative impacts that may occur from using a product or service. A person's intention to use a technology that is influenced by perceived risk has been studied before. (Alrawad et al, 2023) *Perceived Risk significantly affects the intention to use an e-wallet*. The results of this study are the same as research (Ramtiyal et al, 2022) *intention to use is negatively influenced by Perceived Risk*. There is a negating relationship between perceived risk and intention to use e-wallet (Thakur and Srivasta, 2014). Thus, the following hypothesis is made:

H5: Perceived Risk has an influence on the intention to use *e-wallet*,
DANA

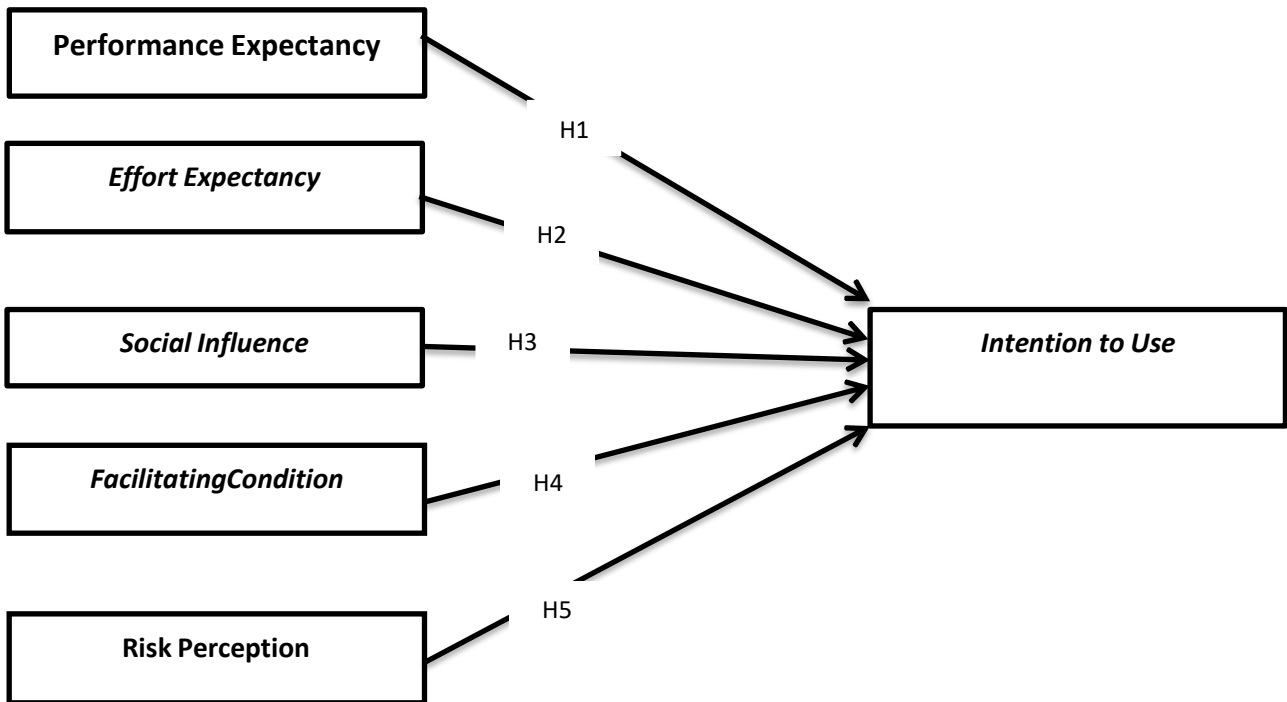


Figure 1. Thinking Framework (Vankatesh, 2003; kleijnen, 2007)

METHODOLOGY

The form of research used in this study is quantitative research method. The reason for using this form of research is because in general quantitative aims to determine whether a method, media, or treatment has an influence or relationship with the subject under study. This study has five dependent variables, namely *Performance Expectancy*, *Effort Expectancy*, *Social Influence*, *Facilitating Conditions* and *Perceived Risk*. With one independent variable, namely *Intention to Use*.

Data collection begins with distributing questionnaires through social media in the form of *G-form*. The population in this research is residents of Sumatra with the consideration of having used the *DANA e-wallet* and having the intention to use the *DANA e-wallet*. Non- probability sampling methods, specifically purposive sampling techniques, are applied as sampling in this research (Sugiyono, 2013) This technique involves selecting samples from data sources based on certain considerations. In accordance with the requirements set (Hair et al., 2010), the sample size must be used at least 5 times for each indicator and a maximum of 10 times, the sample required for this study amounted to 105-210 respondents. Furthermore, the data that has been obtained is processed using SmartPLS to test its validity and reliability.

Data Analysis Method

The application SmartPLS 4.0.9.7 was used to process the data of this study to find the relationship between variables. SEM contains two main components: Outer Model and Inner Model (Hair et al., 2010).

Evaluation of the Measurement Model (Outer Model)

Outer model refers to each indication that is associated with other variables. In order to evaluate validity, convergent as well as discriminant validity should be considered. Convergent factors identified (Abdillah & Hartono, 2015) include outer loading > 0.7, communality < 0.5, and Average Variance Extracted (AVE) > 0.5. The reliability test has two components, namely Cronbach's Alpha and Composite reliability. (Hair et al., 2011) said the reliability value of Cronbach's Alpha and Composite must be > 0.7

0.50 is moderate and 0.25 is weak. In hypothesis testing, the direction of the coefficient value serves as a representation of the level of significance. The T statistic value determines the path coefficient. This value must be > 1.96 for two-tailed hypotheses and > 1.64 for one-tailed hypotheses to meet the requirements of the hypothesis testing procedure, which requires an alpha of 5% and a statistical significance probability level of 80% (Hair et al., 2011).

RESULTS

Indicator	Convergent Validity		Discriminant Validity	Status
	Loading Factor	AVE		
PE		0.744		Valid
PE 1a	0.861		0.861	
PE 1b	0.860		0.860	
PE 1c	0.789		0.789	
PE 2a	0.890		0.890	
PE 2b	0.866		0.866	
PE 2c	0.868		0.868	
PE 3a	0.877		0.877	
PE 3b	0.886		0.886	
PE 3c	0.831		0.831	
PE 4a	0.861		0.861	
PE 4b	0.880		0.880	
PE 4c	0.869		0.869	
PE 5a	0.829		0.829	
PE 5b	0.880		0.880	

PE 5c	0.883		0.883	
EE		0.736		Valid
EE 1a	0.901		0.901	
EE1b	0.751		0.751	
EE 1c	0.831		0.831	
EE 2a	0.855		0.855	
EE 2b	0.910		0.910	
EE 2c	0.877		0.877	
EE 3a	0.836		0.836	
EE 3b	0.868		0.868	
EE 3c	0.881		0.881	
SI		0.784		Valid
SI 1a	0.819		0.819	
SI 1b	0.875		0.875	
SI 1c	0.877		0.877	
SI 2a	0.907		0.907	
SI 2b	0.905		0.905	
SI 2c	0.894		0.894	
SI 3a	0.889		0.889	
SI 3b	0.910		0.910	
SI 3c	0.891		0.891	
FC		0.699		Valid
FC 1a	0.914		0.914	
FC 1b	0.847		0.847	
FC 1c	0.749		0.749	
FC 2a	0.832		0.832	
FC 2b	0.836		0.836	
FC 2c	0.808		0.808	
FC 3a	0.778		0.778	

FC 3b	0.814		0.814	
FC 3c	0.932		0.932	
PR		0.916		Valid
PR 1a	0.931		0.931	

PR 1b	0.964		0.964	
PR 1c	0.969		0.969	
PR 2a	0.974		0.974	
PR 2b	0.964		0.964	
PR 2c	0.967		0.967	
PR 3a	0.962		0.962	
PR 3b	0.944		0.944	
PR 3c	0.936		0.936	
NM		0.678		Valid
NM 1a	0.865		0.865	
NM 1b	0.827		0.827	
NM 1c	0.843		0.843	
NM 2a	0.814		0.814	
NM 2b	0.830		0.830	
NM 2c	0.801		0.801	
NM 3a	0.788		0.788	
NM 3b	0.816		0.816	
NM 3c	0.834		0.834	
NM 4a	0.837		0.837	
NM 4c	0.812		0.812	
NM 4c	0.813		0.813	

Source: Personal Data in 2024

The validity test findings in Table 1. are the results of all variables tested. All of these variables are *Performance expectancy* (PE), *Effort expectancy* (EE), *Social Influence* (SI), *Facilitating Conditions* (FC), *Perceived Risk* (PR), and *Intention to Use* (NM). According to (Hair et al., 2021) Whenever the correlation is 0.7 or higher, the reflection measure is considered strong. Each

variable has a factor loading value > 0.7 , so all constructs are valid. For an AVE value of at least 0.5, if the AVE value is > 0.5 , the construct is considered valid. In this test, the AVE value > 0.5 was obtained. Then the items used are valid and meet the requirements of convergent validity.

Reliability Test

Variables	Cronbach's Alpha	Composite Reliability (rho_a)	Status
Performance expectancy	0.875	0.876	Reliable
Effort expectancy	0.855	0.858	Reliable
Social Influence	0.865	0.866	Reliable
Facilitating Condition	0.846	0.851	Reliable
Perceived Risk	0.889	0.903	Reliable
Intention to Use	0.857	0.857	Reliable

Source: Personal
 Data in 2024

Indicator values are considered reliable when the Composite reliability and Cronbach's alpha values have a value > 0.70 (Hair et al., 2021). For the six characteristics mentioned above, the Composite reliability and Cronbach's alpha scores are both > 0.70 . As a result, each construct in this research is reliable.

Inner Model

Variables	R-Square
Intention to Use	0.847

Source Personal
 Data in 2024

The level of exogenous clarity in explaining endogenous constructs can be measured by R-square. The R Square value for the Intention to Use variable is 0.847. Based on the above results, it explains that the percentage of consumer purchasing decision indicators can be explained by all exogenous constructs, which is 84.7%.

Hypothesis Test

Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic	P Values	Description
PE > NM	0.345	0.347	0.034	10.258	0.000	Accepted

EE > NM	0.335	0.334	0.045	7.422	0.000	Accepted
SI > NM	0.221	0.221	0.044	5.017	0.000	Accepted
FC > NM	0.223	0.222	0.055	4.021	0.000	Accepted
PR > NM	-0.002	-0.002	0.021	0.087	0.931	Rejected

Source:
Personal Data
in 2024

Hypothesis testing analysis can be considered influential if the T statistics value is 1.64 or more when the significance level is 5% or 0.05. If T statistics > 1.640 and P value < 0.050, the effect is significant.

DISCUSSION***The Effect of Performance Expectancy on Intention to Use***

In testing the hypothesis of the *Performance Expectancy* variable, the T Statistic test value is $10,258 > 1.64$. The P value obtained is $0.000 < 0.05$, which means that the *Performance Expectancy* variable has a positive and significant effect on intention to use. Thus, H1 is accepted. This is in line with research (Esawe, 2022) *Performance Expectancy* significantly affects consumer behavior intentions in using digital wallets, and (Jiale et al, 2021) *Performance Expectancy* significantly affects the intention to use digital wallets.

The Effect of Effort Expectancy on Intention to Use

In testing the hypothesis of the *Effort Expectancy* variable, the T Statistic test value is $7.422 > 1.64$. The P value obtained is $0.000 < 0.05$, which means that the *Effort Expectancy* variable has a positive and significant effect on intention to use. Thus, H2 is accepted. This study confirms research by (Arora et al, 2023) *Effort Expectancy* has a positive and significant effect on the intention to adopt a digital wallet, (Jiale et al, 2021) the intention to use a digital wallet is influenced by *Effort Expectancy*

and research (Alduais et al 2022) *Effort Expectancy* affects the intention to use an e-wallet positively and significantly.

The Influence of Social Influence on Intention to Use

In testing the hypothesis of the *Social Influence* variable, the T Statistic test value is $5.017 > 1.64$. The P Value obtained is $0.000 < 0.05$, which means that the *Social Influence* variable has a positive and significant effect on intention to use. Thus, H3 is accepted.

This study confirms research by (Sivathanu, 2017) the intention to use an *e-wallet* is positively and significantly influenced by *social influence*, (Alduais et al, 2022) *social influence* has a positive and significant effect on the intention to use an e-wallet and (Arora et al, 2023) *social influence* affects one's intention to use an e-wallet positively and significantly.

The Effect of Facilitating Conditions on Intention to Use

In testing the hypothesis of the *Facilitating Conditions* variable, the T Statistic test value is $4.021 > 1.64$. The P value obtained is $0.000 < 0.05$, which means that the *Facilitating Conditions* variable has a positive and significant effect on intention to use. Thus, H4 is accepted. This study confirms research by (Arora et al, 2023) *facilitating conditions* have a positive and significant effect on the intention to use an *e-wallet* and is supported by research (Jiale et al, 2021) *facilitating conditions* have a positive and significant effect on the intention to use an e-wallet and (Sivathanu, 2017) *Facilitating Conditions* affect a person's intention to use a digital wallet.

The Effect of Perceived Risk on Intention to use

In testing the hypothesis of the Perceived Risk variable, the T Statistic test value is $0.087 > 1.64$. The P Value obtained is $0.931 > 0.05$, which means that the Perceived Risk variable has no influence on intention to use. Thus, H4 is rejected. This study is in line with research (Malik et al, 2021) that there is no relationship between intention to use digital wallets and Perceived Risk and in line with research (Ozkan, 2010) that there is no relationship between Perceived Risk variables and intention to use.

Theoretical Implications

Theoretically, this study uses the UTAUT theory introduced by Vankatesh, 2003 to help explain how the constructs of this framework affect the intention to use a digital wallet. This study found that performance expectancy, effort expectancy, social influence, and facilitating conditions have a positive and significant effect on the intention to use the DANA e-wallet. In addition, the findings of this study add to the literature regarding the effect of perceived risk on the intention to use the DANA e-wallet, and it was found that perceived risk has no influence on the intention to use the DANA e-wallet.

Practical Implications

In practical implications, the findings of this study should enhance decision-makers' understanding of the role of these factors and can help them design successful tactics to drive intentions to use the DANA e-wallet. This innovation may start at the individual level but by coordinating efforts and focusing on sustainable development, transformation that is not only local but global can also be achieved.

CONCLUSIONS AND RECOMMENDATIONS

This study found that the *Performance Expectancy* variable has a positive and significant effect on the intention to use the DANA E-wallet, the *Effort Expectancy* variable has a positive and significant effect on the intention to use the DANA E-wallet, the *Social Influence* variable has a positive and significant effect on the intention to use the DANA E-wallet, the *Facilitating Conditions* variable has a positive and significant effect on the intention to use the DANA E-wallet, and the *Perceived Risk* variable has no influence on the intention to use the DANA E-wallet.

This study was mostly filled by women and students. Suggestions for further research samples to be tested are filled by men and those who already have income so that they can get diverse results through a wider range of samples.

FURTHER STUDY

Conduct a comprehensive literature review on UTAUT theory, the concept of usage intention, e-wallet Dana, and factors that influence risk perception in the adoption of digital financial technology.

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