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Exploring the Direct and Mediated Impacts of User Perceptions on Intention to Use E-Wallets

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Abstract - The rapid growth of e-wallets in Indonesia has been great especially in Semarang where a lot of people have adopted this payment method however users have also experienced problems in the understanding of the application features, easy operation, and concerns over data security. This study looked at the direct and indirect effects of perceived usefulness, perceived ease of use, and perceived security on the intention of using e-wallets in Semarang, with attitude as the mediating variable. A quantitative cross-sectional survey was conducted among 165 respondents using a five-point Likert scale. The data were analyzed using the PLS-SEM method. The findings indicate that perceived usefulness and perceived ease of use substantially impact one's attitude; however, perceived security has no effect; perceived usefulness and attitude considerably influence the intention to use, yet perceived ease of use and perceived security do not; and finally, the interaction between attitude and perceived usefulness as well as perceived ease of use significantly predicts intention to use whereas the interaction between attitude and perceived security is not significant. The results demonstrate that e-wallet adoption intention in Semarang is mostly influenced by users' perception of the usefulness and ease of the system which calls for service providers to focus more on functional value and user experience.

Keywords: Perceived Usefulness, Perceived Ease of Use, Perceived Security

1. Introduction

The digitization of transactions in Indonesia has significantly altered the payment system the national payment system. The establishment of the National Non-Cash Movement (GNNT) by Bank Indonesia in 2014 was a major milestone that led to the rapid departure of cash-based transactions to the more efficient and user-friendly electronic payment systems (Ruslim et al., 2024). One of the major contributions to the electronic payment ecosystems has been the introduction of e-wallets such as OVO, GoPay, DANA, ShopeePay, and LinkAja. The number of e-wallet accounts has been on the rise, growing at a yearly average rate of 47.4%, and the value of transactions has been increasing by as much as 88.3% (Tarigan, 2025). At the end of July 2025, the total national transaction value stood at IDR 85.7 trillion, with the national user base increasing by 116 million new users, thus making Indonesia the leading e-wallet market in Southeast Asia (Bank Indonesia, 2025; IDC IntoBrief, 2022).

E-wallets are in general attractive to users because of the convenience, efficiency, and practicality they offer, and especially Generation Z sees these kinds of services as very easy and highly useful to their everyday financial activities (Belmonte et al., 2024). Such a trend is visible also at the local level, for instance, in Semarang City, where the use of digital payments has been on the rise for a while now. The government of Semarang city has been a great facilitator of this change by encouraging the use of non-cash transactions in the public sector, especially by the lead way of a digital payment system implementation on Trans Semarang in cooperation with AstraPay to make passenger transactions fast and more convenient (Puspitoningrum, 2021). Moreover, the e-wallets usage in Semarang has been made possible by the emergence of major platforms like DANA, which had close to 620,000 users in the city in September 2023, and the number has been rising towards 2025 (Metro Semarang, 2023).

After the increasing use of e-wallets that was noticed both nationally and locally (e.g. in Semarang City), the Technology Acceptance Model (TAM) serves as a theoretical base to figure out the factors that affect users' attitudes and their engagement with digital payment systems. According to this model, the perceived usefulness is a very important factor, as it shows how much the users think that employing e-wallets makes them more effective and efficient in doing financial transactions (Davis, 1989). Studies on the matter have shown that perceived usefulness has a significant positive effect on the users' attitudes and their intention to adopt e-wallets (Almaiah et al., 2023; Chawla & Joshi, 2019; Gómez-Hurtado et al., 2025; Jin et al., 2025; Kınış & Tanova, 2022; Persadha et al., 2024; Ruslim et al., 2024). In addition to this, perceived ease of use is also a crucial factor in TAM and it relates to the degree to which the users feel that the e-wallet systems are easy to learn and operate and that there is

no need for much effort (Davis, 1989). Furthermore, earlier studies also find that perceived ease of use has a positive impact on user attitudes and facilitates the intention of using e-wallets continuously (Almaiah et al., 2023; Chawla & Joshi, 2019; Kınış & Tanova, 2022; Persadha et al., 2024; Rashid et al., 2025; Sidanti et al., 2022; Tahar et al., 2020).

Even though e-wallets use has been rapidly spreading and it was expected that perceived usefulness and perceived ease of use would lead to higher acceptance, a local experiment in Semarang reveals that these TAM factors can still impede acceptance. Rodiah & Melati (2020) discovered that in the millennial group in Semarang, 46% consider e-wallets as lacking multifunctionality, 15% have trouble understanding the usage, and 15% continue to worry about security risks. Likewise, Safitri et al. (2022) in a research also done in Semarang, informed that 63.6% of Generation Z users feel that the ease of transaction is the cause of more consumptive behavior, thus, their attitude towards e-wallets changes. The results show that while a number of large cities in Indonesia have taken the digital payment route smoothly, Semarang reveals a peculiar urban-rural mismatch situation where the demographic environment is technologically mature, but fundamental TAM factors still lead to substantial resistance. Moreover, this distinctive combination of rapid urban digital infrastructure development and lingering user-level barriers makes Semarang an analytically valuable case for exploring the dynamics of e-wallet acceptance.

Users mainly in Semarang who have limited functionality, trouble understanding the system operation, and security worries that persist, have raised security as the most important issue in conducting digital transactions. Perceived security, in this case, is the user's belief that their personal information and financial data are safe from the threats like fraud, hacking, or data misuse (Khasawneh & AlBahsh, 2024). As a result, it becomes a significant factor in explaining the adoption of e-wallet. Several empirical studies have indicated that perceived security has a great impact on the attitudes of users and their intention to use e-wallets (Almaiah et al., 2023; Chawla & Joshi, 2019; Hamid et al., 2023; Khasawneh & AlBahsh, 2024; Ruslim et al., 2024; Sidanti et al., 2022; Tahar et al., 2020). The Technology Acceptance Model also highlights attitude as the main factor that leads to behavioral intention, as mentioned by Davis (1989). This discovery has motivated researchers to extend TAM by suggesting that attitude is a mediator that links the perception of usefulness, ease of use, and security with the intention to use. Several empirical studies have found a relationship of mediation supported between these factors (Chawla & Joshi, 2019; Persadha et al., 2024; Ruslim et al., 2024; Sidanti et al., 2022).

The issues raised by research backed up the idea that the main perceptual factors of the Technology Acceptance Model and its extensions, which have been proposed to influence users' intention to use e-wallets, not only be the direct factors but also operate indirectly through their attitudes. This research figures out the problem of how perceived usefulness, perceived ease of use, and perceived security influence intention to use e-wallets both directly and indirectly via attitude. Hence, the aim of this study, which corresponds to the research problem is to empirically determine and analyze the effects of these three perceptual factors on the intention to use e-wallets through the mediating role of attitude in the context of Semarang City.

This research novelty is in the development of an Extended Technology Acceptance Model (TAM) by adding perceived security as an additional explanatory factor and placing attitude as a mediating variable connecting perceived usefulness, perceived ease of use, and perceived security to the intention to use e-wallets. The arrangement of this configuration as a single model has not been previously tested, and therefore it provides a more detailed theoretical account of user adoption behavior. The study also reinterprets the research of Fertiwi et al. (2025), who determined the e-wallet usage in Aceh Province. By Semarang location of the analysis with different demographic and behavioral characteristics of Semarang users provide new empirical insights that show how local differences determine the changes in the digital payment adoption process that varies in different regions of Indonesia.

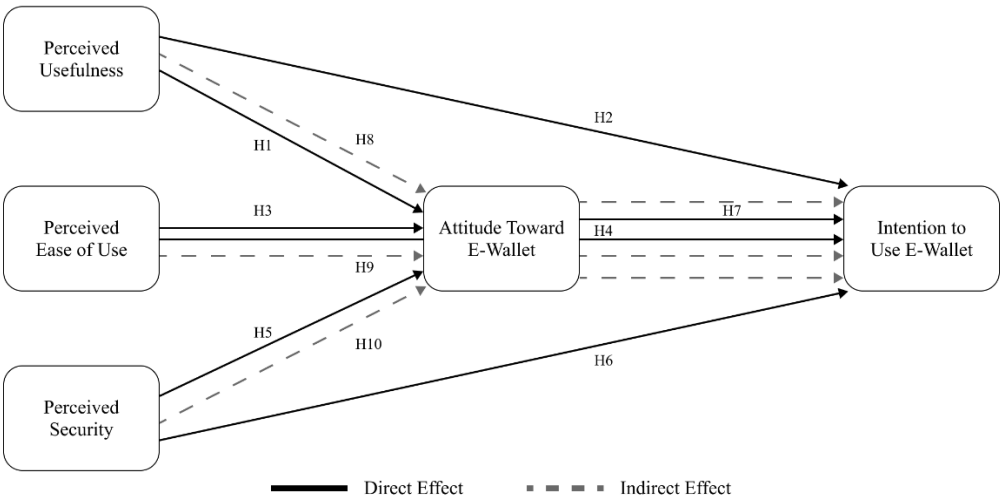
2. Research Methods

2.1 Research Design

This study employs the Extended Technology Acceptance Model, which has been adapted in various research contexts (Abuhassna et al., 2023; Belmonte et al., 2024; Natasia et al., 2022; Sciarelli et al., 2022). The original model was introduced by Davis (1989) with three main factors: perceived usefulness, perceived ease of use, and user attitudes toward usage, which have been widely applied to examine e-wallet usage intentions (Jin et al., 2020; Kınış & Tanova, 2022; Ruslim et al., 2024). Over a long period of time, this model has been worked out to be a more comprehensive one by incorporating more variables like security, trust, and lifestyle compatibility (Chawla & Joshi, 2019; Matar & Aloqaily, 2025). This research is based on the Extended Technology Acceptance Model and it aims at finding out the factors that influence users' e-wallet usage intentions in Semarang City. Among these factors, perceived security is the most significant one as a source of both attitudes and e-wallet usage intentions (Sidanti et al., 2022).

The research is a development of an integrated model founded on the Extended Technology Acceptance Model by merging the variables of perceived usefulness, perceived ease of use, perceived security, attitude, and intention to use (Ruslim et al., 2024). This model serves as an instrument to study the direct and indirect

interactions between variables, thus, giving a deeper insight into the factors influencing the intention to use an e-wallet in Semarang City. The pictorial form of the research model is illustrated in Figure 1.



Data processed by researchers, 2025

Figure 1. Research Model

Based on Figure 1, this study proposes the following hypotheses:

H1: Perceived Usefulness (PU) has a positive effect on Attitude (AT) in e-wallet usage in Semarang City.
H2: Perceived Usefulness (PU) has a positive effect on Intention to Use (IU) e-wallets in Semarang City.
H3: Perceived Ease of Use (PEOU) has a positive effect on Attitude (AT) in e-wallet usage in Semarang City.
H4: Perceived Ease of Use (PEOU) has a positive effect on Intention to Use (IU) e-wallets in Semarang City.
H5: Perceived Security (PS) has a positive effect on Attitude (AT) in e-wallet usage in Semarang City.
H6: Perceived Security (PS) has a positive effect on Intention to Use (IU) e-wallets in Semarang City.
H7: Attitude (AT) has a positive effect on Intention to Use (IU) e-wallets in Semarang City.
H8: Attitude (AT) mediates the effect of Perceived Usefulness (PU) on Intention to Use (IU) e-wallets in Semarang City.
H9: Attitude (AT) mediates the effect of Perceived Ease of Use (PEOU) on Intention to Use (IU) e-wallets in Semarang City.
H10: Attitude. Attitude (AT) mediates the effect of Perceived Security (PS) on Intention to Use (IU) e-wallets in Semarang City.

2.2 Methodology

The researchers used a quantitative method and a cross-sectional design to investigate the causal relationships among variables (Maier et al., 2023). Participants' responses were obtained through an online questionnaire employing a five-point Likert scale, the data collection took place in October 2025 (Lim, 2025). Partial Least Squares-Structural Equation Modeling (PLS-SEM) was the data analysis method employed. The subjects of the research were the e-wallet users in the Semarang City but the total population was unquantified. This led to the non-probability purposive sampling approach with the following criteria: 1) respondents were 17 years of age or older, 2) they resided in Semarang City, and 3) they were frequent users of e-wallet services. The sample size was estimated in accordance to the recommendation provided by Hair & Alamer (2022) which states that an absolute minimum sampling size of 5-10 subjects is required for every variable in the questionnaire while conducting SEM analysis Therefore, the sample of 165 valid respondents is considered more than enough to yield stable and reliable parameter estimates according to this guideline.

The study has considered the usage of e-wallets as a whole, without the need to distinguish between various platforms, since the main goal was to illustrate the typical behavior of the people in Semarang City when they use different e-wallet applications. To have a real picture of such use, more than one e-wallet could have been chosen by the respondents as a way of showing how many and what kinds of applications they had installed on their phones. The questionnaire provided examples of major e-wallets commonly used in Indonesia, including GoPay, DANA, OVO, ShopeePay, and LinkAja, and also offered an open-ended response option for participants to specify any additional platforms they used. The permission for multiple selections allowed the analysts to be better able to understand the variety and the level of e-wallet engagement among the Semarang City residents.

This study is primarily concerned with examining how perceived usefulness, perceived ease of use, and perceived security affect both directly and indirectly the intention to use e-wallets. The variable attitude is

considered as a mediating variable in the model, which is in line with the propositions of the technology acceptance research cited in the references (Chawla & Joshi, 2019; Persadha et al., 2024; Ruslim et al., 2024; Sidanti et al., 2022). All the measurement items that were used to evaluate the constructs were taken from recognized instruments that have been validated in the same context of e-wallet adoption and user intention. Hence, Table 1 shows the complete set of measurement items for each variable necessary for this research.

Table 1. Research Indicators

Variable	Code	Statement	Source
Perceived Usefulness (PU)	PU1	1. Using an e-wallet makes my payments more practical.	Adapted from Ruslim et al. (2024) and Persadha et al. (2024).
	PU2	2. Using an e-wallet increases my effectiveness in daily activities.	
	PU3	3. Using an e-wallet saves me time when making payments.	
	PU4	4. Using an e-wallet helps me manage my finances.	
Perceived Ease of Use (PEOU)	PEOU1	1. It is easy for me to install an e-wallet application on my phone.	Adapted from Ruslim et al. (2024), Gómez-Hurtado et al. (2025), and Persadha et al. (2024).
	PEOU2	2. I have no difficulty learning how to use an e-wallet.	
	PEOU3	3. It is easy to find the features I need in an e-wallet.	
	PEOU4	4. I can use an e-wallet without needing extra effort.	
Perceived Security (PS)	PS1	1. I feel safe using an e-wallet with security features such as PIN or fingerprint.	Adapted from Ruslim et al. (2024), Belmonte et al. (2024), and Gómez-Hurtado et al. (2025).
	PS2	2. I feel secure because my e-wallet transactions remain private from others.	
	PS3	3. I am not worried about my data or account being stolen when using an e-wallet.	
	PS4	4. I feel safe from losing the money I have in my e-wallet.	
Attitude (AT)	AT1	1. I like using e-wallet for my payments.	Adapted from Ruslim et al. (2024) and Gómez-Hurtado et al. (2025).
	AT2	2. I feel that using an e-wallet is part of today's lifestyle.	
	AT3	3. I think paying with an e-wallet is a good choice.	
	AT4	4. I feel satisfied using an e-wallet because it is beneficial.	
Intention to Use (IU)	IU1	1. I will use e-wallet more frequently in my daily activities.	Adapted from Ruslim et al. (2024), Belmonte et al. (2024), and Rashid et al. (2025).
	IU2	2. I am committed to using an e-wallet as my main payment method.	
	IU3	3. I prefer to keep using my favorite e-wallet for my payments in daily life.	
	IU4	4. I would rather use an e-wallet than cash for receiving or sending payments.	

Data processed by researchers, 2025

The data were processed using Partial Least Squares–Structural Equation Modeling to examine the 10 proposed hypotheses. The analysis began with an assessment of the outer model, in which validity and reliability were evaluated through factor loadings, average variance extracted, Cronbach's Alpha, and composite reliability. All indicators met the criteria for convergent validity, and all constructs demonstrated satisfactory reliability. Once the measurement model was confirmed, the structural model was inspected to observe the outer loadings and the directional relationships among constructs in the path diagram. Discriminant validity was then tested using the Heterotrait–Monotrait ratio, and the results indicated that each construct was sufficiently distinct from the others. The inner model was evaluated using R-square values to determine the model's ability to explain variance in the endogenous constructs, showing an adequate level of predictive power. Finally, hypothesis testing and effect size estimation were conducted through a bootstrapping procedure to assess both direct and indirect effects among the variables (Hair & Alamer, 2022).

3. Result and Discussion

3.1 Respondent Characteristics

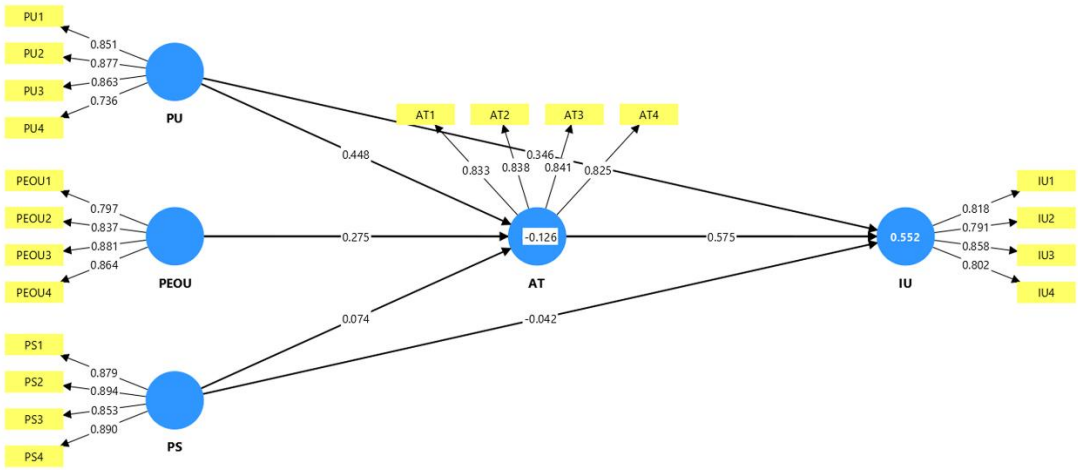
This study involved 165 respondents distributed evenly across 16 sub-districts in Semarang City. The highest distribution came from Gunungpati Sub-district at 24.85%, followed by Ngaliyan at 9.09%, Pedurungan and Tembalang each at 8.48%, Semarang Barat at 7.27%, and other sub-districts cumulatively reaching 41.82%. Based on demographic characteristics, the majority of respondents were female at 57.58%, while males accounted for 42.42%. In terms of age, the 25–34 years group dominated with 36.36%, followed by the 17–24 years age

group at 33.94%, the 35–44 years group at 20.61%, and respondents aged 45 years and above at 9.09%. Based on educational background, most respondents held bachelor's degrees (S1) at 39.39%, followed by high school graduates at 33.33%, diploma holders at 16.97%, master's degree holders (S2) at 9.09%, and doctoral degree holders (S3) at 1.21%. In terms of occupation, students and private sector employees were the two largest groups, each at 31.52%, followed by civil servants at 12.12%, entrepreneurs at 9.70%, homemakers at 7.88%, and other groups at 7.27%.

In terms of usage behavior, most respondents used only one e-wallet at 49.09%, while the rest used two to more than five e-wallet applications. ShopeePay was the most widely used e-wallet in Semarang City with a usage rate reaching 30.82%. These results reflect that e-wallet penetration in Semarang City has been evenly distributed across various sub-districts and accepted by community groups with diverse backgrounds, indicating an increasingly mature level of digital financial technology adoption in Semarang City.

3.2 Validity and Reliability Test

This study was mainly focused on verifying the validity and reliability of the constructs of the research model by means of outer loading assessment. The researchers went through all the measurement items to make sure that each indicator was the most accurate way to represent its respective construct. The findings indicated that all factor loadings were >0.70, thus confirming that the outer loadings were in line with the requirements of convergent validity (Cheung et al., 2024). The path coefficients between the constructs along with the outer loadings of each indicator are depicted in Figure 2, which helps to understand the strength of the relationships among variables and the degree of contribution of each indicator to its construct.



Data processed by researchers, 2025

Figure 2. Path Coefficients and Outer Loadings

In addition to outer loadings, the constructs were further tested for reliability and convergent validity using average variance extracted (AVE), Cronbach's Alpha (α), and composite reliability (CR). All AVE values were >0.50, indicating that the indicators adequately represented their constructs (Cheung et al., 2024). Cronbach's Alpha and composite reliability values for all constructs exceeded the threshold of >0.70, demonstrating sufficient internal consistency. The detailed results of these tests are presented in Table 2, confirming that all constructs in this study, namely perceived usefulness, perceived ease of use, perceived security, attitude, and intention to use, satisfied the validity and reliability requirements in accordance with standard quantitative research procedures (Cheung et al., 2024).

Table 2. AVE, Cronbach's Alpha, and Composite Reliability

Variable	AVE	α	CR
PU	0.694	0.851	0.900
PEOU	0.715	0.868	0.909
PS	0.773	0.902	0.932
AT	0.696	0.854	0.902
IU	0.669	0.836	0.890

Data processed by researchers, 2025

Discriminant validity testing was conducted using the Heterotrait-Monotrait Ratio (HTMT) approach to ensure clear distinctions between constructs. The test results in Table 3 show that all Heterotrait-Monotrait Ratio

(HTMT) values were < 0.85, which indicates that there is no excessive correlation between constructs in the research model (Cheung et al., 2024). Thus, the constructs of perceived usefulness, perceived ease of use, perceived security, attitude, and intention to use are declared to meet discriminant validity and are capable of accurately representing the concepts measured in the context of e-wallet usage.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

	AT	IU	PEOU	PS	PU
AT					
IU	0.829				
PEOU	0.727	0.499			
PS	0.590	0.435	0.713		
PU	0.804	0.728	0.805	0.698	

Data processed by researchers, 2025

The R-square (R^2) value represents the amount of variance in an endogenous variable that is explained by exogenous variables in the research model and thus is a measure of the model's explanatory power. Here, the attitude variable is associated with an R^2 of 0.520, implying that 52.0% of the variability in users' attitudes toward e-wallets is attributed to the combined effects of perceived usefulness, perceived ease of use, and perceived security. In the same way, the construct of intention to use has an R^2 of 0.552, which indicates that 55.2% of the variance in users' intention to use e-wallets can be accounted for by the exogenous variables together with the mediating effect of attitude. Usually, an R^2 value of 0.50 is regarded as moderate, which means that the model offers a fairly strong explanation of the endogenous constructs. These figures reflect that the research framework is able to capture a considerable portion of the factors that drive both the attitude and the intention to use e-wallets, thus emphasizing its sufficiency in forecasting user behavior in Semarang City (Hair & Alamer, 2022).

3.3 Hypothesis Test

To assess the specific contribution of each construct to endogenous constructs, the effect size (f^2) results are presented in Table 4. The f^2 values show that attitude has a moderate effect on intention to use ($f^2 = 0.353$), perceived usefulness provides a small effect on attitude ($f^2 = 0.194$) and intention to use ($f^2 = 0.103$), while perceived ease of use and perceived security have very small effects on both constructs ($f^2 < 0.02$). According to Hair & Alamer (2022), f^2 values of 0.02, 0.15, and 0.35 are categorized as small, moderate, and large effects respectively, thus attitude is proven to provide the most significant contribution to the formation of e-wallet usage intention compared to other constructs.

Table 4. Effect Size

	AT	IU
AT	-	0.353
PEOU	0.070	0.015
PS	0.006	0.002
PU	0.194	0.103

Data processed by researchers, 2025

Table 5. Hypothesis Testing Results

Hypothesis	Path coefficient	T-stats	P-value	Result
H1: PU → AT	0.448	4.188	0.000	Accepted
H2: PU → IU	0.346	4.043	0.000	Accepted
H3: PEOU → AT	0.275	2.806	0.005	Accepted
H4: PEOU → IU	-0.126	1.251	0.211	Rejected
H5: PS → AT	0.074	0.970	0.332	Rejected
H6: PS → IU	-0.042	0.510	0.610	Rejected
H7: AT → IU	0.575	7.529	0.000	Accepted
H8: PU → AT → IU	0.258	3.626	0.000	Accepted
H9: PEOU → AT → IU	0.158	2.396	0.017	Accepted
H10: PS → AT → IU	0.042	0.994	0.320	Rejected

Hypothesis testing findings indicate that perceived usefulness is the factor that most powerfully and clearly changes the attitude and intention to use e-wallets, confirming that Hypotheses 1 and 2 are accepted. In other words, if users recognize that the use of e-wallets makes their lives easier, for example, by providing fast and convenient transactions, then they are likely to create a positive attitude towards e-wallets and show a higher level of the intention to use them. The current findings are consistent with those of the previous studies which consider perceived usefulness as the main factor that leads to user attitudes and usage intentions of digital technologies (Almaiah et al., 2023; Chawla & Joshi, 2023; Gómez-Hurtado et al., 2025; Kınış & Tanova, 2022; Persadha et al., 2024; Ruslim et al., 2024).

Perceived ease of use significantly positively influences the attitude, thereby Hypothesis 3 is accepted. It means that the convenience and user-friendliness of e-wallet applications are very instrumental in generating positive user evaluations. This finding is in line with the research works that were mentioned by the authors and which put forward the idea that the factor perceived ease of use is the one which mostly leads to the formation of positive attitudes toward the adoption of technology (Almaiah et al., 2023; Chawla & Joshi, 2019; Kınış & Tanova, 2022; Mukhra et al., 2023; Persadha et al., 2024; Sidanti et al., 2022). Contrary to that, the influence of the perceived ease of use of e-wallets on the perception of intention of using such a method is, however, very weak; therefore, it has been concluded that Hypothesis 4 is rejected. It indicates that although providing users with easy access to products or services would help in the creation of positive attitudes, the product if directly without intervention of the user cannot be driven to usage intention.

Perceived security has a non-significant influence of security perception on neither attitude nor behavioral intention of using e-wallets. Consequently, Hypotheses 5 and 6 were rejected. This finding could be explained by users' low level of security risk awareness which in turn means that they put security on a normal basis but do not really think about it when they have to choose their attitude or make up their intentions. By this way, it becomes very important for the e-wallet providers to communicate effectively and constantly let the users know about the security measures in order to increase their awareness and keep their trust.

Attitude positively affected the intention to use which led to the confirmation of Hypothesis 7 (accepted) and is in line with studies that stress the importance of the core role of attitude as one of the major factors leading to e-wallet usage intention (Almaiah et al., 2023; Chawla & Joshi, 2019; Gómez-Hurtado et al., 2025; Kınış & Tanova, 2022; Mukhra et al., 2023; Persadha et al., 2024; Ruslim et al., 2024; Sidanti et al., 2022). The mediation analysis also reveals that attitude mediates the link between perceived usefulness and the intention to use (Hypothesis 8 accepted), as well as the relation between perceived ease of use and intention to use (Hypothesis 9 accepted). The results corroborate the previous studies which found that a positive attitude is the way through which perceived usefulness and ease of use have an impact on behavioral intentions (Chawla & Joshi, 2019; Mukhra et al., 2023; Persadha et al., 2024; Sidanti et al., 2022). On the contrary, attitude does not mediate the relationship between perceived security and intention to use (Hypothesis 10 rejected) which is representative of a situation where the perception of security has little to no influence on the formation of the attitude.

4. Conclusion

This study shows that Perceived Usefulness is the most dominant factor in influencing e-wallet usage intentions in Semarang City. The community tends to use e-wallets when they experience tangible benefits such as ease of transactions, automatic financial recording, and quick access to promotions or other financial services. This finding reinforces the core concept of the Technology Acceptance Model (TAM) that perceived benefits play a direct role in forming behavioral intentions. Practically, the greater the utility value perceived by users, the higher the tendency of users to continue adopting and using e-wallets in daily activities.

Perceived Ease of Use has a positive effect on user attitudes, but does not have a direct effect on usage intention. This indicates that ease of use functions as a builder of positive attitudes, not as the main driver of behavioral intentions. Users who are already familiar with digital payment technology tend to regard ease of use as a matter of course. Thus, ease of use plays an indirect role through the formation of positive attitudes which then encourage the desire to continue using e-wallets through simple and comfortable usage experiences.

Unlike other variables, Perceived Security does not influence attitudes or usage intentions. This indicates that users see security as an element that is automatically present in an e-wallet system, rather than as an important consideration that shapes e-wallet attitudes. Users seem to concentrate more on the benefits of e-wallets, as well as on their ease of use, than on the security features that are assumed to be already in place. Service providers are expected to secure and protect users' personal information, but it is the enhancement of users' perceptions of benefits and the ease of use of the system that will be the more effective in promoting the continued use of e-wallets.

Given the results of this study, e-wallet providers should enhance features that are easy to use, provide benefits that are visible, and most importantly, secure systems to protect user information and ensure trust. Subsequent studies should consider incorporating different variables, such as trust, social influence, and perceived risk, as well as expanding the geographic scope of their samples for comparative studies over various e-wallet

systems in different cities or regions in and outside Indonesia so as to acquire a more complete picture of e-wallet adoption.

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