

# The Impact of Perceived Usefulness, Perceived Ease of Use, Attitude, and Behavioral Intention on Behavioral of Indonesia's E-Wallet Usage: The Moderating Role of Trust

Guruh Ghifar Zalzalalah\*, Tiara Khairunnisa, Gulam Hazmin

Universitas PGRI Yogyakarta, Indonesia

\*Corresponding author: [guruh@upy.ac.id](mailto:guruh@upy.ac.id)

## ABSTRACT

Technological innovation in the financial industry, known as financial technology has been developed to support digital payment concept, such as E-Wallets. This system has become popular among the general public for everyday transactions. The purpose of this study is to investigate the behavioral of Indonesian's e-wallet usage with specific attention of the moderating role of trust. This study integrated TAM and TPB theory to address an insight related these issues. The sample in this study was 450 respondents of Indonesia's e-wallet usage. The technique used in this research uses a non-probability sampling technique with a purposive sampling method. Data analysis in this study used Wappls version 7.0 with the Structural Equation Modeling Partial Least Square (SEM-PLS) analysis technique. The results of the research reveal that perceived usefulness, perceived ease of use and attitude have a positive and significant effect on behavioral intentions, behavioral intentions have a positive and significant effect on e-wallet usage behavior. Interestingly, trust has negative effect on the relationship between behavioral intentions and e-wallet usage behavior. These result contrast with previous findings that found trust has positive effect on the relationship between behavioral intention and behavior. Therefore, the result of this study give a new research's insight regarding the behavioral of e-wallet usage and a new information for practice based of financial industry in Indonesia.

**Keywords:** TAM, TPB, Financial Technology, E-Wallet

## Citation:

Zalzalalah, G. G., Khairunnisa, T., & Hazmin, G. (2024). Conference Proceedings Paper: The Impact of Perceived Usefulness, Perceived Ease of Use, Attitude, and Behavioral Intention on Behavioral of Indonesia's E-Wallet Usage: The Moderating Role of Trust. *Proceedings of ASBN International Conference 2024* (pp. 247-259), Yogyakarta, Indonesia. ASEAN School of Business Network.

DOI: <https://doi.org/10.64458/asbnic.v1.23>

## INTRODUCTION

The rapid development of information and communication technology has had a significant impact on human life. Availability of a variety of mobile applications, encouraging consumers to switch from conventional payments to digital payments (Abdullah et al., 2020). (Che Nawi et al., 2022). This is in line with the Sustainable Development Goals. (SDGs). There are 17 SDGs, which are development agreements that drive transformative action for sustainable development based on human rights and equality principles, thus driving social, economic, and environmental progress. (United Nations, 2015). The 2030 Agenda for Sustainable Development encompasses a series of 17 integrated and interlinked sustainable developments. The ninth goal is industry, innovation, and infrastructure, which focus on

this research, in line with technological developments.

The goal of the ninth SDG is to build robust infrastructure, enhance inclusive and sustainable industries, and drive innovation (United Nations, 2015). According to Mhlanga (2022), one of the technology innovations in the financial industry is fintech (financial technology). So, the relationship between technology and SDGs today is a financial industry called e-wallet. E-wallet is a mobile application installed on a user's phone that allows users to save money and connect to a bank account to make transactions without having to bring money. (Senali et al., 2023). The payment system using e-wallets is growing and is in great demand by the general public. Thus, the existence of e-wallets has become the most widely used payment method by the people in Indonesia. Cited from (Goodstats, 2023), based on a report from East Ventures (EV) showing that e-wallet owns a percentage of 81%.

E-wallet as a modern means of payment gives users an alternative to carrying out various transactions by offering an easy and fast online transaction process (Che Nawi et al., 2022). Moreover, e-wallets are considered safer due to the protection provided by each user's password. The most frequently used e-wallet application by Indonesian people is Gopay, as evidenced by data quoted by Databoks (2023) stating that users of Gopays in Indonesia reach (71%), followed by OVO users (70%), and Dana users (61%). Contextually, with technological advances, it is easier for someone to use an e-wallet application for payments that can be made anywhere and at any time. Thus, encouraging consumers to switch from conventional payments to digital payments (Abdullah et al., 2020). The high level of fintech services in the form of e-wallets compared to other fintech services will continue to increase. Based on a report previously in 2023, it was found that e-wallet is the payment method most widely used by Indonesian people. This allows people to increase their intention to use e-wallets. The higher a person's intention, the higher the usage behavior of the e-wallet application (Al-Rahmi et al., 2021). This research integrated two theories, namely, the Technology Acceptance Model (TAM) from Davis (1989) and the Theory of Planned Behavior by Ajzen (1991), to gain a perspective regarding the behavioral of Indonesia's e-wallet usage and adding a moderating variable, trust. The aim is to find out why e-wallets are currently the digital payment method most widely used by Indonesian people.

Empirically, the results of previous research show that there is a relationship that is inconsistent with the results of previous researchers. Research conducted by Tian et al. (2023), Khan & Abideen (2023), and To & Trinh (2021) stated that attitude and perceived usefulness have a positive and significant effect on behavioral intentions. However, this is not in line with research conducted by De Luna et al. (2019) and Jesuthasan & Umakanth (2021), which states that attitude and perceived usefulness have no effect on behavioral intentions. As well as other research conducted by Rehman et al. (2019) states that the moderating role of trust can strengthen the relationship between behavioral intentions and usage behavior. However, this is not in line with research conducted by Tian et al. (2023) which states that the moderating role of perceived trust cannot strengthen the relationship between behavioral intentions and usage behavior. The existence of differences from the results of previous research can be a problem and a research gap that needs to be refined.

## **HYPOTHESIS DEVELOPMENT**

### **Perceived Usefulness and Behavioral Intention**

A perceived usefulness is a person's belief in using a particular system (Venkatesh et al., 2003). (Putri et al., 2022). If someone feels that the information provided in the e-wallet app is useful, then they will use it. On the contrary, if someone thinks that the media is less useful then they won't use them. The behavioral intentions in using a system are influenced by the perceived usefulness. A study conducted by Tian et al. (2023) found that perceived usefulness has a positive and significant influence on behavioral intentions. Later, a study carried out by Khan & Abideen (2023) also showed that perceived usefulness has positive and meaningful influences on behavior intentions. To & Trinh researchers (2021) also conducted a study in which the results obtained by perceived usefulness had a positive,

significant impact on conduct. This means that the more usefulness is felt the more it increases the intention of consumer behavior.

H1: Perceived usefulness has a positive and significant influence on the behavioral intentions of users of e-wallet applications.

### **Perceived Ease of Use and Behavioral Intention**

Perceived ease of use is the degree of confidence that a technology system is simple and does not require any effort to use it (Putri et al., 2022). (Sunny & George, 2018). It can be said that a person's degree of confidence in using a technology system is simple and does not require the effort of the user. This perceived ease of use will reduce the energy, mind, and time spent using a technology. Behavioral intentions are also influenced by the ease of use felt when using an e-wallet. A study conducted by Tian et al. (2023) found that perceived ease of use has a positive and significant influence on behavioral intentions. Later, a study carried out by Khan & Abideen (2023) showed that perceived ease of use had a positive, significant effect on behavior intention. This means that the higher the perceived convenience, the increases the intention of consumer behavior.

H2: Perceived ease of use has a positive and significant influence on the behavioral intentions of users of e-wallet applications.

### **Attitude and Behavioral Intention**

Attitude refers to the judgment of each individual against the desire to use a technological system. A person's assessment of a technology system used can be positive or negative. Attitude is an individual's opinion of the outcome of a certain behavior. Besides, attitude also depends on past experiences. (Rehman et al., 2019). Therefore, attitude plays an important role in creating an intention to commit a particular behavior. One predictor that affects behavioral intentions in using technology is attitude. (Chan & Lay, 2021). A study conducted by Tian et al. (2023) found that attitudes have a positive and significant influence on behavioral intentions. Later, a study carried out by Kınış & Tanova (2022) also showed that attitude has a positive influence and a significant effect on behavior intention. This means that the better the attitude given the more the intention of consumer behavior.

H3: Attitudes have a positive and significant influence on the behavioral intentions of e-wallet application users.

### **Behavioral Intention and Behavior**

Behavioral intention is the willingness of an individual to use or continue to use technology, taking into account the determining factors that influence the use of technology. (Al-Rahmi et al., 2021). Intention reflects the user's desire to participate in certain behaviors. According to Armansyah (2021) behavioral intention indicates the intention of the technology used to use the product or service effectively. The higher the intention or desire of the user, the higher the rate of use of technology by the user. In addition, behavioral intent is also a factor in determining the behavior of using an e-wallet. (Yang et al., 2021). A study conducted by Tian et al., (2023) found that behavioral intentions have a positive and significant influence on user behavior. Later, a study conducted by Khan & Abideen (2023), also showed that behavior intentions positively and significantly influence user behavior. This means that the higher the behavioral intention, the higher the consumer usage behavior.

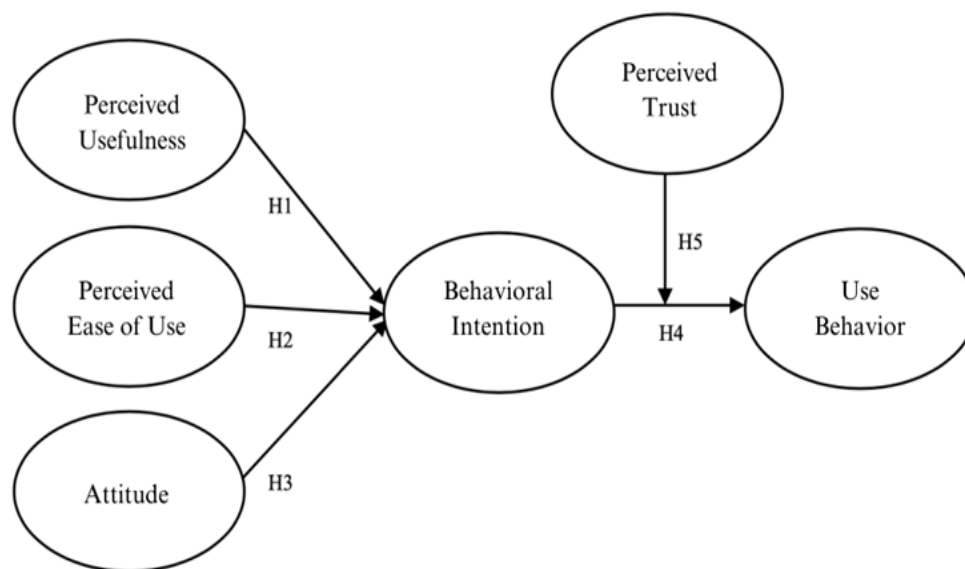
H4: Behavioral intentions have a positive and significant influence on user behavior in e-wallet application users.

### The Moderating Role of Trust

Trust is the positive expectation of the individual that one has a belief in the words, actions, and decisions of others. (Tian et al., 2023). The emergence of confidence in the use of e-wallet is influenced by experience (Alalwan et al., 2017). If trust can be managed well, it will affect the long-term loyalty of e-wallet users. The perceived confidence associated with digital payments is an important factor that directly influences behavioral intentions toward technology. (Sabli et al., 2021). Based on previous research has identified that trust is perceived as an important factor that can influence the intention of consumer behavior when using the e-wallet application as a payment method. Consumers with high confidence are expected to be able to make intentions using e-wallets compared to consumers with low confidence. Thus, the belief variable is perceived as a moderation variable that is suggested to adopt between intentional behavior and usage behaviour (Mensah et al., 2020). This is supported by research conducted by Rehman et al. (2019) which showed that trust moderates (strengthens) the relationship between behavioral intent and user behavior.

H5: Trust moderates the relationship between behavioral intent and usage behavior in e-wallet users.

### Research Model



**Figure 1.** Research Model

### METHOD

This study employed quantitative methodology to associate an understanding of individual behavior toward e-wallets. In quantitative research, researchers always try to prove or reverse a relationship or hypothesis that exists in the minds of researchers and generally use systematic logic and follow a linear research path (Neuman, 2014). The time spent on this study is estimated to be about four months, starting from February 2024 to May 2024. The place of execution of this research was carried out in various regions in Indonesia. Primary data refers to information obtained directly from the researcher related to a variable of interest for a specific purpose of the study. (Sekaran & Bougie, 2017). The sampling technique in this study uses nonprobability samplings. These sampler techniques do not provide equal chances for every member of the population to be selected as a sample and the selected respondent must be able to understand the contents of the questionnaire (Sugiyono, 2019). The sample characteristics used in this research referring to the research conducted by Tian et al. (2023) are as follows: Users of e-wallet applications and Have ever made transactions using e-wallet applications more than three times. The total of respondents used in this study was 450 respondents.

A self-administered survey-based questionnaire was used in this study, in which survey items were drawn from previous studies. The data collection technique used in this study uses non-probability sampling, where each population element does not have the same probability as the research sample. One of the nonprobability sampling techniques used in this study is purposive sampling, a sampling technique with certain considerations (Sekaran and Bougie, 2013). The measurement scale in this study uses a 5 Likert-Scale, from 1 for strongly disagree and 5 for strongly agree. This study uses six variables, namely perceived usefulness, where the instruments for statement items are adapted from Senali et al. (2023), perceived ease of use is adapted by Venkatesh et al. (2012), attitude is adapted by Kadir et al. (2022), behavioral intention is adapted by Singh et al. (2020), behavior is adapted by Sivathanu (2019), and trust is adapted by Pavlou & Fygenson (2006).

The structural equation model analysis technique was used in this study. The analysis used to carry out SEM analysis in this study is Partial Least Square (PLS). PLS is used because it can perform analytical calculations efficiently on small samples and complex models (Sholihin and Ratmono, 2013). Besides PLS being used to explain whether there is a relationship between latent variables, PLS can also be used to confirm theories (Chin and Newsted, 1999). The software used in this research is WarpPLS edition 8.

## RESULTS

### Demographic Respondent: Gender and Age

Data on the characteristics of respondents based on Table 1. on gender was obtained, which showed that there were 180 male respondents with a percentage of 40%, and female respondents were 270 people with a percentage of 60%. So, it can be explained that Most of the respondents' characteristics based on gender were women, with a total of 270 people and a percentage of 60%. Based on Table 1. data on the characteristics of respondents based on age was obtained, which showed that respondents aged 18-21 years were 90 people and had a percentage of 20%, respondents aged 22-25 years were 190 and had a percentage of 42%, respondents who were There were 145 people aged 26-29 years and had a percentage of 32%, and respondents aged <30 years were 25 people and had a percentage of 6%, so it can be explained that most of the characteristics of respondents based on age were respondents aged 22-25 years. , namely 190 people, with a percentage of 42%.

**Table 1.** Demographic Respondents: Gender and Age

Variables		Number	Percentage
Gender	F	270	60
	M	180	40
Total		450	100
Age	18-21	90	20
	22-25	190	42
	26-29	145	32
	< 30	25	6
Total		450	100

### Demographic Respondent: Region

Data obtained on the characteristics of respondents based on provincial origin based on domicile shows that the total number of respondents is 450, which are spread into several regions in Indonesia. Based on Table 2, it can be explained that the dominants of respondents based on regions are respondents who live in Yogyakarta, namely 70 people with a percentage of 16%.

**Table 2.** Demographic Respondents: Regions

Regions	Respondent	
	Frequency	Percentage
Yogyakarta	70	16%
Central Java	55	13%
West Java	30	6%
Jakarta	50	11%
Banten	20	4%
East Java	43	11%
South Sumatera	30	7%
Jambi	20	4%
North Sumatera	30	7%
Riau Islands	11	2%
Riau	29	6%
Bengkulu	15	3%
Bangka Belitung Islands	17	4%
Lampung	30	6%
<b>Total</b>	<b>450</b>	<b>100%</b>

### Demographic Respondent: E-Wallet Applications

Data obtained on the characteristics of respondents based on the e-wallet application used shows that the total number of respondents was 510 users, and most of them used more than one e-wallet application. Respondents who use the Gopay e-wallet application are 110 users and have a percentage of 22%; respondents who use the OVO e-wallet application are 70 users and have a percentage of 14%; respondents who use the Dana e-wallet application are 80 users and have a percentage of 16%, respondents who use the ShopeePay e-wallet application are 140 users and have a percentage of 26%, respondents who use the LinkAja e-wallet application are 50 users and have a percentage of 10%, and respondents who choose others are 60 users and have percentage of 12%, it can be explained that the majority of respondents based on Table 3., the e-wallet application used were respondents who used the ShopeePay e-wallet application, namely 140 users with a percentage of 26%.

**Table 3.** Demographic Respondents: E-Wallet Applications

E-Wallet Applications	Respondent	
	Frequency	Percentage
Gopay	110	22%
OVO	70	14%
Dana	80	16%
ShopeePay	140	26%
Linkaja	50	10%
Others	60	12%
<b>Total</b>	<b>510</b>	<b>100%</b>

### Measurement Model

Hair et al., (2010) stated that convergent validity has two conditions for the data used to be considered good, namely: a loading value above 0.5 and a p-value below 0.05. The total sample in this study was 313 respondents, the values of all loading factors in this study were above 0.5. The next test is to look at the Average Variance Extracted (AVE) value of each variable. According to Hair et al. (2010), if the AVE value is more than 0.5, then the constructed value is fulfilled in terms of validity, and the results of convergent validity testing in the study show that all variables have met the minimum AVE criteria of 0.5. Construct reliability tests can also be carried out by looking at Cronbach's alpha values greater

than 0.7, and other parameters that can be used using Composite Reliability values greater than 0.6 (Hair et al., 2010). In this study, Cronbach's alpha value for each variable was above 0.7, and the composite reliability value for each variable was above 0.6; this indicated that all construct variables had good reliability. The result can be seen in Table 4.

**Table 4.** Measurement Model Result

Constructs		Loading	AVE	Cronbach Alpha	Composite Reliability
Perceived Usefulness (PU)	PU1	0.912	0.814	0.886	0.929
	PU2	0.926			
	PU3	0.868			
Perceived Ease of Use (PEU)	PEU1	0.833	0.752	0.890	0.924
	PEU2	0.880			
	PEU3	0.880			
	PEU4	0.875			
Attitude (ATT)	ATT1	0.787	0.607	0.870	0.902
	ATT2	0.779			
	ATT3	0.799			
	ATT4	0.793			
	ATT5	0.752			
	ATT6	0.761			
Behavioral Intention (BI)	BI1	0.850	0.790	0.867	0.919
	BI2	0.917			
	BI3	0.899			
Behavaior (B)	B1	0.760	0.707	0.860	0.906
	B2	0.862			
	B3	0.863			
	B4	0.872			
Trust (T)	T1	0.897	0.801	0.917	0.941
	T2	0.909			
	T3	0.910			
	T4	0.863			

### Structure Model Analysis

Model fit testing is carried out to see whether the model built represents the results of the data obtained before testing the hypothesis. The result of model fit can be seen in Table 5. The results in Table 5 show that the model in this study has a good goodness of fit, APC value ( $p < 0.001$ ), ARS value ( $p < 0.001$ ), AARS value ( $p < 0.001$ ). The AVIF and AFVIF values in Table 5 are 2.058 and 1.603 respectively. The multicollinearity test itself was carried out to ensure that there were no similarities between variables which could lead to biased results, based on these results it can be concluded that there was no multicollinearity problem in this study. The results of the GoF value in Table 5 are 0.489 so that based on these results, the model in this study has a great fit. Overall, based on all indicators of model fit, it can be concluded that the model in this study is fit.

**Table 5.** Model Fit

Indicators	Value
Average path coefficient (APC)	$P < 0.001$
Average R-squared (ARS)	$P < 0.001$
Average adjusted R-squared (AARS)	$P < 0.001$
Average block VIF (AVIF)	2.058
Average full collinearity VIF (AFVIF)	1.603
Tenenhaus GoF (GoF)	0.489

## DISCUSSION

### Model Path Analysis and Hypothesis Testing Discussion

Based on the results of research that has been conducted, it is known that perceived usefulness has a positive and significant effect on behavioral intentions. This is proven by the value (path coefficient) = 0.09 and p-value = 0.02. A significance value below 5% or 0.05 indicates that perceived usefulness significantly affects behavioral intentions. Therefore, the research results prove that the first hypothesis is accepted. Thus, the higher the perceived usefulness of using the e-wallet application, the higher the behavioral intention to use the e-wallet application. The results of this research are in line with research conducted by Tian et al. (2023), which states that there is a significant influence of perceived usefulness on behavioral intentions. These results represent that there is a relationship between individual perceptions of perceived usefulness and behavioral intentions in using e-wallet payment technology. However, these findings are not in accordance with the research results of Jesuthasan & Umakanth (2021) which stated that there was no positive and significant influence of perceived benefits on behavioral intentions.

**Table 6.** Hypothesis Result

Variables	$(\beta \text{ \& } p\text{-value})$ (Direct effect)				
	PU	PEU	ATT	BI	B
Perceived Usefulness (PU)				0.094*	
Perceived Ease of Use (PEU)				0.280*	
Attitude (ATT)				0.273*	
Behavioral Intention (BI)					0.461*
Behavior (B)					
Moderation					
Trust*Behavioral Intention (T*BI)				-0.098*	

\* < 0.05

Based on the results of research that has been conducted, it is known that perceived ease of use has a positive and significant effect on behavioral intentions. This is proven by the path coefficient = 0.280 and the p-value = <0.001. A significance value below 5% or 0.05 indicates that perceived convenience influences behavioral intentions. Based on the research results, it can be proven that the second hypothesis is accepted. Thus, the higher the perceived ease of using the e-wallet application, the greater the behavioral intention to use the e-wallet application. Perceived ease of use has an influence on behavioral intentions. When an e-wallet application is easy to learn, it can be said that the application will encourage someone to use it. According to Zia & Alzahrani (2022), users tend to be more accepting of technology if the technology is easy to use. Perceived ease of use is a belief that using technology will provide a feeling of freedom from certain efforts that will influence the decision-making process technology (Astari et al., 2022). The results of this research are in line with research by Tian et al. (2023), which states that perceived convenience has a positive and significant effect on behavioral intentions. This shows that the perceived ease of using digital technology can increase users' behavioral intentions to use e-wallet applications. Likewise, this research is also supported by Khan & Abideen (2023) that perceived convenience has a positive and significant effect on behavioral intentions.

Based on the research results, it is known that attitude has a positive and significant effect on behavioral intentions (X4). This is proven by the path coefficient = 0.273 and the p-value <0.001. A significance value below 5% or 0.05 indicates that attitudes influence behavioral intentions. Based on the research results, it can be proven that the third hypothesis is accepted. Thus, the higher the attitude



towards using e-wallet, the greater the behavioral intention to use the e-wallet application. Users' feelings or attitudes also determine their tendency to use new technology. When users believe that using the e-wallet application system is an interesting and fun idea, it will generate behavioral intentions to use the system. According to Ali et al. (2020), generation Z always follows trends that are viral on social media, so they tend to prioritize emotional functions more than functional factors. This research is in line with research by Tian et al. (2023), which states that attitude has a positive and significant effect on behavioral intentions, meaning that someone who has a higher positive attitude towards using technology, then that person's behavioral intentions will also be high so they will feel satisfied when using it. technology. However, this research contradicts research conducted by De Luna et al. (2019), which states that attitudes do not significantly affect behavioral intentions. To increase behavioral intentions, e-wallets must be able to create a positive attitude towards users when making transactions.

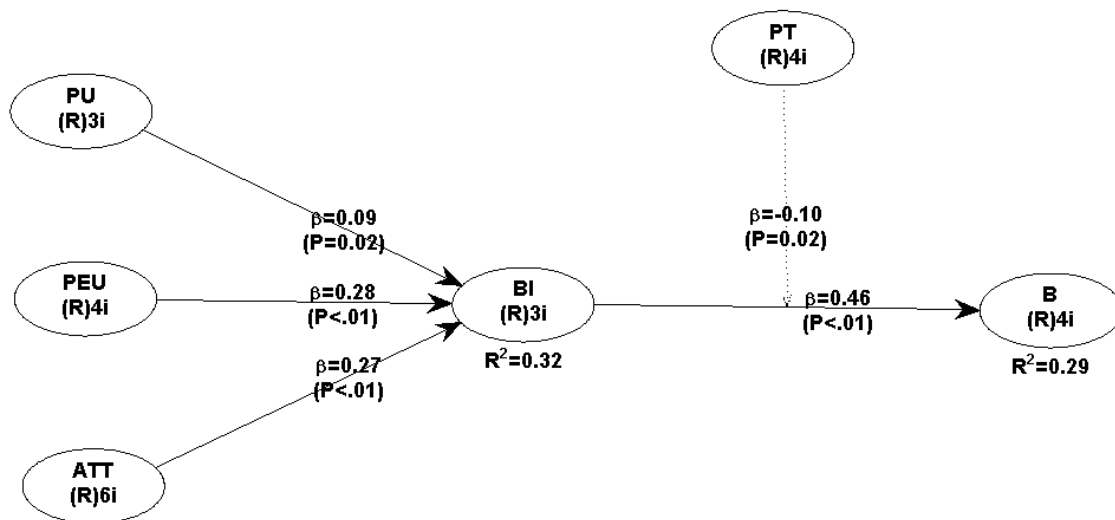


Figure 2. Framework Result

Based on the research results, it is known that behavioral intention has a positive and significant effect on usage behavior. This is proven by the path coefficient = 0.461 and the p-value <0.001. A significance value below 5% or 0.05 indicates that behavioral intentions influence usage behavior. Based on the research results, it can be proven that the fourth hypothesis is accepted. Thus, the higher the behavioral intention to use the e-wallet application, the more the behavior of using the e-wallet application will increase. Several positive considerations and user conditions cause a person's intention to use an e-wallet application, so this intention will make a person feel that they can carry out financial transactions via e-wallet. According to Alam et al., (2021) stated that the frequency of users using e-wallet applications is directly proportional to the extent to which a person has the behavioral intention to use e-wallet. This research is in line with research conducted by Tian et al. (2023), which states that behavioral intentions have a positive and significant effect on usage behavior. This shows that a high level of behavioral intention towards the e-wallet system will increase usage behavior in using the e-wallet application. Apart from that, research conducted by Armansyah (2021) also states that behavioral intentions positively and significantly affect usage behavior.

Based on the research results, it is known that the moderating role of trust has a negative and insignificant effect on the relationship between behavioral intentions and usage behavior. This is proven by the value (path coefficient) = -0.098 and p-value = 0.018. A significance value below 5% or 0.05 indicates that the moderating role of perceived trust cannot strengthen the relationship between behavioral intentions and usage behavior. Based on the research results, it proves that the fifth hypothesis is not supported. Thus, the higher the perceived trust in using the e-wallet application, the weaker the relationship between behavioral intention and usage behavior of the e-wallet application.

This finding is interesting because this contradicts previous research by Rehman et al. (2019), which states that the moderating role of trust can moderate (strengthen) the relationship between behavioral intentions and usage behavior. We assumed that because most respondents had more than one e-wallet application, using the Internet to make digital payments was still unsafe in terms of account, network, and personal data security. According to To & Trinh (2021), e-wallet users need to be assured that payments via e-wallet applications can be trusted. However, this finding is in line with research conducted by Tian et al. (2023), which states that the moderating role of perceived trust cannot moderate the relationship between behavioral intentions and usage behavior. Therefore, the moderating role of perceived trust is not an element that can strengthen the relationship between behavioral intentions and usage behavior in e-wallet applications, users will use e-wallets if they feel the need without being motivated by feelings of confidence or not towards the e-wallet application

## CONCLUSION

The conclusion that can be drawn is that perceived benefits, perceived convenience, and attitudes have a positive and significant effect on behavioral intentions, behavioral intentions have a positive and significant effect on e-wallet usage behavior. An interesting finding is that perceived trust has an insignificant influence on the relationship between behavioral intentions and usage behavior, where this result is inversely proportional to previous research findings. For practitioners, to be able to maintain and improve consumer usage behavior, e-wallet should improve and improve the performance of the e-wallet system so that users can experience the benefits and convenience obtained from e-wallet. Furthermore, e-wallets need to clearly inform the new features available because it can help users to have a good attitude towards e-wallet services. It is best that e-wallets can also maintain and prioritize the security aspects installed in the e-wallet system so that they can increase consumer confidence when making payment transactions. In addition, the role of companies in realizing the ninth sustainable development goal must be increased further so that technological innovations in the financial industry, especially in e-wallets, can develop even more rapidly so that they can realize the sustainable development goals directed by the United Nations in 2030. Further research is recommended for focuses on the role of perceived trust which has a significant influence on the relationship between behavioral intentions and e-wallet usage behavior in Indonesia.

## Recommendations

It is hoped that the results of this research will be able to provide input to companies, especially e-wallet applications, in increasing perceived benefits, perceived convenience, attitudes and behavioral intentions, as well as perceived trust. The results of this research can be an opportunity for further research to explain various other factors that drive usage behavior. This research has implications for encouraging future research to consider factors outside this research such as perceived service quality, perceived risk, and other variables that may influence usage behavior on e-wallets in the future.

## REFERENCES

- Abdullah, N., Redzuan, F., & Aziah Daud, N. (2020). E-wallet: Factors influencing User Acceptance Towards Cashless Society in Malaysia Among Public Universities. *Indonesian Journal of Electrical Engineering and Computer Science*, 20(1), 67. <https://doi.org/10.11591/ijeecs.v20.i1.pp67-74>.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).

- Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors Influencing Adoption of Mobile Banking by Jordanian Bank Customers: Extending UTAUT2 with Trust. *International Journal of Information Management*, 37(3), 99–110. <https://doi.org/10.1016/j.ijinfomgt.2017.01.002>.
- Alam, M. M. D., Alam, M. Z., Rahman, S. A., & Taghizadeh, S. K. (2021). Factors influencing Mhealth Adoption and its Impact on Mental Well-Being During COVID-19 Pandemic: A SEM-ANN Approach. *Journal of Biomedical Informatics*, 116, 103722. <https://doi.org/10.1016/j.jbi.2021.103722>.
- Ali, H., Lilik, P., Nugroho, H., Halim, T., Firdaus, K., & Huda, H. (2020). Indonesia Gen Z Millennial Report 2020: The Battle of Our Generation. *PT Alvara Strategi Indonesia*, 134.
- Al-Rahmi, A. M., Shamsuddin, A., Alturki, U., Aldraiweesh, A., Yusof, F. M., Al-Rahmi, W. M., & Aljeraiwi, A. A. (2021). The Influence of Information System Success and Technology Acceptance Model on Social Media Factors in Education. *Sustainability*, 13(14), 7770. <https://doi.org/10.3390/su13147770>.
- Armansyah, R. F. (2021). Herd Behavior in Using Mobile Payment with Unified Theory of Acceptance and Use of Technology (UTAUT2). *Jurnal Manajemen Dan Kewirausahaan*, 23(2), 111–128. <https://doi.org/10.9744/jmk.23.2.111-128>.
- Astari, A. A. E., Yasa, N. N. K., Sukaatmadja, I. P. G., & Giantari, I. G. A. K. (2022). Integration of Technology Acceptance Model (TAM) and Theory Of Planned Behavior (TPB): An E-Wallet Behavior with Fear of Covid-19 As A Moderator Variable. *International Journal of Data and Network Science*, 6(4), 1427–1436. <https://doi.org/10.5267/j.ijdns.2022.5.008>.
- Chan, S. H., & Lay, Y. F. (2021). Effects of Attitude, Self-efficacy Beliefs, and Motivation on Behavioural Intention in Teaching Science. *Eurasian Journal of Educational Research*, 21(93). <https://doi.org/10.14689/ejer.2021.93.11>.
- Che Nawi, N., Mamun, A. A., Hayat, N., & Seduram, L. (2022). Promoting Sustainable Financial Services Through the Adoption of eWallet Among Malaysian Working Adults. *SAGE Open*, 12(1), 215824402110711. <https://doi.org/10.1177/21582440211071107>.
- Chin, W. W., & Newsted, P. R. (1999). "Structural Equation Modeling Analysis with Small Samples Using Partial Least Squares". In R. H. Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 307–341). Thousand Oaks: CA: Sage Publications.
- Databoks. (2023). *Survei Pengguna Dompot Digital: Gopay dan OVO Bersaing Ketat* | Databoks. <https://databoks.katadata.co.id/datapublish/2023/07/25/survei-pengguna-dompot-digital-gopay-dan-ovo-bersaing-ketat>.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319. <https://doi.org/10.2307/249008>.
- De Luna, I. R., Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2019). Mobile Payment is Not All the same: The Adoption of Mobile Payment Systems Depending on the Technology Applied. *Technological Forecasting and Social Change*, 146, 931–944. <https://doi.org/10.1016/j.techfore.2018.09.018>.
- Goodstats. (2023). *E-wallet Jadi Metode Pembayaran Terpopuler di Indonesia 2022, Ini Potensinya Pada 2025 Mendatang*—GoodStats. <https://goodstats.id/article/e-wallet-jadi-metode-pembayaran-terpopuler-di-indonesia-2022-ini-potensinya-pada-2025-mendatang-FONnm>.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th Edition). New York: Pearson Prentice Hall.

- Jesuthasan, S., & Umakanth, N. (2021). Impact of Behavioural Intention on E-Wallet Usage During Covid-19 Period: A Study from Sri Lanka. *Sri Lanka Journal of Marketing*, 7(2), 24–48. <https://doi.org/10.4038/sljmuok.v7i2.63>.
- Kadir, H. A., Ismail, R., Wok, S., & Manan, K. A. (2022). *The Mediating Effect of Attitude on E-Wallet Usage Among Users in Malaysia*. *Journal of Communication Education*, 2(1).
- Khan, W. A., & Abideen, Z. U. (2023). Effects of Behavioural Intention on Usage Behaviour of Digital Wallet: The Mediating Role of Perceived Risk and Moderating Role of Perceived Service Quality and Perceived Trust. *Future Business Journal*, 9(1), 73. <https://doi.org/10.1186/s43093-023-00242-z>.
- Kınış, F., & Tanova, C. (2022). Can I Trust My Phone to Replace My Wallet? The Determinants of E-Wallet Adoption in North Cyprus. *Journal of Theoretical and Applied Electronic Commerce Research*, 17(4), 1696–1715. <https://doi.org/10.3390/jtaer17040086>.
- Mensah, I. K., Chuanyong, L., & Zeng, G. (2020). Factors Determining the Continued Intention to Use Mobile Money Transfer Services (MMTS) Among University Students in Ghana: *International Journal of Mobile Human Computer Interaction*, 12(1), 1–21. <https://doi.org/10.4018/IJMHCI.2020010101>.
- Mhlanga, D. (2022). The Role of Financial Inclusion and FinTech in Addressing Climate-Related Challenges in the Industry 4.0: Lessons for Sustainable Development Goals. *Frontiers in Climate*, 4, 949178. <https://doi.org/10.3389/fclim.2022.949178>.
- Neuman, W.L. (2014). "Social Research Methods: Qualitative and Quantitative Approaches", 7<sup>th</sup> Ed. *Edinburgh Gate: Pearson Education Limited*.
- Pavlou & Fygenson. (2006). Understanding and Predicting Electronic Commerce Adoption: An Extension of the Theory of Planned Behavior. *MIS Quarterly*, 30(1), 115. <https://doi.org/10.2307/25148720>.
- Putri, D. E., Sinaga, O. S., Sudirman, A., Augustinah, F., & Dharma, E. (2022). Analysis of the Effect of Perceived Ease of Use, Perceived Usefulness, Trust, and Cashback Promotion on Intention to Use E-wallet. *International Journal of Economics, Business and Management Research*, 06(11), 63–75. <https://doi.org/10.51505/IJEBMR.2022.61105>.
- Rehman, S. U., Bhatti, A., Mohamed, R., & Ayoup, H. (2019). The Moderating Role of Trust and Commitment Between Consumer Purchase Intention and Online Shopping Behavior in the Context of Pakistan. *Journal of Global Entrepreneurship Research*, 9(1), 43. <https://doi.org/10.1186/s40497-019-0166-2>.
- Sabli, N., Pfordten, N. E., Supian, K., Azmi, F. N., & Solihin, A. I. M. (2021). *The Acceptance of E-Wallet in Malaysia*. *Selangor Business Review*, 6(1), 1–14.
- Sekaran, U., & Bougie, R. (2017). *Metode Penelitian untuk Bisnis: Pendekatan Pengembangan-Keahlian* (Edisi 6, Buku 1). Jakarta: Salemba Empat.
- Sekaran, U., & Roger B. (2013). "Research Methods for Business", 6<sup>th</sup> Ed. India: Printer Trento Srl.
- Senali, M. G., Iranmanesh, M., Ismail, F. N., Rahim, N. F. A., Khoshkam, M., & Mirzaei, M. (2023). Determinants of Intention to Use e-Wallet: Personal Innovativeness and Propensity to Trust as Moderators. *International Journal of Human-Computer Interaction*, 39(12), 2361–2373. <https://doi.org/10.1080/10447318.2022.2076309>.
- Sholihin, Mahfud dan Ratmono, Dwi. (2013). "Analisis SEM-PLS dengan WrapPLS 3.0 Untuk Hubungan Nonlinear dalam Penelitian Sosial dan Bisnis". Yogyakarta: Penerbit ANDI.

- Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining Factors in the Adoption and Recommendation of Mobile Wallet Services in India: Analysis of the Effect of Innovativeness, Stress to Use and Social Influence. *International Journal of Information Management*, 50, 191–205. <https://doi.org/10.1016/j.ijinfomgt.2019.05.022>.
- Sivathanu, B. (2019). Adoption of Digital Payment Systems in the Era of Demonetization in India: An Empirical Study. *Journal of Science and Technology Policy Management*, 10(1), 143–171. <https://doi.org/10.1108/JSTPM-07-2017-0033>.
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bndung: Alfabeta.
- Sunny, P., & George, A. (2018). Determinants of Behavioral Intention to Use Mobile Wallets—A Conceptual Model. *Journal of Management (JOM)*, 5(5), 52–62.
- Tian, Y., Chan, T. J., Suki, N. M., & Kasim, M. A. (2023). Moderating Role of Perceived Trust and Perceived Service Quality on Consumers' Use Behavior of Alipay e-wallet System: The Perspectives of Technology Acceptance Model and Theory of Planned Behavior. *Human Behavior and Emerging Technologies*, 2023, 1–14. <https://doi.org/10.1155/2023/5276406>.
- To, A. T., & Trinh, T. H. M. (2021). Understanding Behavioral Intention to Use Mobile Wallets in Vietnam: Extending the TAM Model with Trust and Enjoyment. *Cogent Business & Management*, 8(1), 1891661. <https://doi.org/10.1080/23311975.2021.1891661>.
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development* | Department of Economic and Social Affairs. <https://sdgs.un.org/2030agenda>.
- Venkatesh, Morris, Davis, & Davis. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425. <https://doi.org/10.2307/30036540>.
- Venkatesh, Thong, & Xu. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36(1), 157. <https://doi.org/10.2307/41410412>.
- Yang, M., Mamun, A. A., Mohiuddin, M., Nawawi, N. C., & Zainol, N. R. (2021). Cashless Transactions: A Study on Intention and Adoption of E-Wallets. *Sustainability*, 13(2), 831. <https://doi.org/10.3390/su13020831>.
- Zia, A., & Alzahrani, M. (2022). Investigating the Effects of E-Marketing Factors for Agricultural Products on the Emergence of Sustainable Consumer Behaviour. *Sustainability*, 14(20), 13072. <https://doi.org/10.3390/su142013072>.