

The Effect of Consumer Intention on the Growth of the Use of E-Wallet as a Cash Substitute in Indonesia

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Abstract

The growth in the use of electronic money in Indonesia has been very rapid since it was first released in 2009. In 2021, the number of electronic money transactions in Indonesia Rp. 305.4 trillion. This figure is likely to continue increase every year. The influence of consumer intentions is believed to have a large impact on the growth in the use of electronic money. This study aims to analyse the effect of perceive usefulness, perceived ease of use and perceived of risk covid-19, attitude towards using on intention to use. The total number of respondents used in this study was 417 respondents. This study also uses the purposive sampling method by determining the sample based on the use of e-wallet starting from gender, age, marital status, education, monthly income and how often the e-wallet is used. Based on the results and testing of the data in this study, we found that the data had validity and reliability that met the requirements. Based on the results of the R Square test and hypothesis testing, we found that each variable that must be studied has a positive and significant relationship. It is shown that the perceive usefulness, perceive ease of use, perceive risk of covid-19 and attitudes towards the use of e-wallet have a big influence on intention to use. This research is only limited to users of the e-wallet transaction tool and the results of the study cannot be generalized to other fintech applications, because the name of the company that makes the fintech product can also affect the respondents' answers. Further research, researcher suggest adding other variables that have not been used in this study, such as perceived security and innovative users.

Keywords

perceive usefulness; perceive ease of use; perceive risk covid-19; mattitude toward use; intention to use



I. Introduction

Long before money, humans made transactions using barter practices, namely the exchange of goods and services to get what they wanted. The problem is when the two parties who carried out the exchange transaction did not agree on the exchange value. This was particularly an issue if one of the parties did not really need the thing to be exchanged. This barter system was eventually replaced with commodity currency, which still uses goods, but the goods must be generally accepted as a medium of exchange as well as a standard of value used in the exchange of goods by the public. Due to the ever-increasing human needs and the inefficient use of barter and commodity money, society has developed a more efficient and measurable medium of exchange, namely money. According to Rollin G. Thomas in the book *Our Modern Banking and Monetary System* (1942), money is a tool to pay for goods or services and to pay off debts. Over time the form of money continues to evolve. Cash provides convenience in transactions. In line with economic and technological developments, however, the use of cash is considered

impractical for larger transactions because it is difficult to obtain and carry large amounts of physical money. In addition, carrying cash is considered unsafe because of the prevalence of theft, robbery, and counterfeiting, which makes people afraid to store or carry large amounts of cash. These obstacles eventually led to innovation in creating a more practical and efficient non-cash payment instrument known as electronic money, or e-money.

Bank Indonesia (BI) noted that electronic money transactions grew by 49.06% year on year, to a value of 305.4 trillion in 2021. The increasing number of electronic money issuers from non-bank institutions (financial technology, or fintech) is also believed to increase the growth rate of electronic money. The e-wallet is a form of e-money. This digital payment service (fintech payment) is increasingly popular along with the rising use of smartphones. In Indonesia, there are many application-based financial services that are now becoming popular. For public payment transactions. E-wallet is a growing trend, and many start-ups are involved in developing and developing this business. This e-wallet system is understood as a system in which money is deposited into the e-wallet account, and then can be used to shop at merchants who have collaborated with said system.

The use of e-wallet as an alternative to non-cash payment instruments shows that there is considerable potential to reduce cash use. E-wallet offers transactions that are faster and more convenient than cash, especially for transactions of small value. Transactions can be made easier, cheaper, and more secure, both for consumers and for traders. This then encourages the growth of e-wallet over time. The growth phenomenon in the use of e-wallet is an interesting thing to study. In this case, it is related to what factors drive consumers' intentions to initially use cash but want to switch to using e-wallet.

However, there are obstacles in the use of electronic money (e-wallet) in Indonesia, one of which is related to risk factors. Risk is divided into 5 (five) dimensions, namely Performance Risk, Social Risk, Time Risk, Financial Risk, and Security Risk (Featherman, 2003). Bauer (1960) defines risk as uncertainty about the possible consequences of using a product or service. This implies that a person's perceived level of risk and their own tolerance for risk taking are factors that influence a person's attitude in making decisions to perform or not to perform certain behaviors. In Indonesia, e-money (of which the e-wallet is a part) is not guaranteed by the Indonesia Deposit Insurance Corporation (IDIC). This is because it is not regulated in the IDIC Law, even though with the very rapid development of e-money (e-wallet), there should be an institution that guarantees that consumers who use e-money (e-wallet) can claim stored e-money (e-wallet). In case a problem occurs later (Anisah Zhafirah Siregar, 2020). There is a risk that all money is lost when the user loses the card or device used to store e-money (e-wallet) (Wibowo & Rosmauli, 2015). Utami and Kusumawati (2017), explained that security influences interest in using e-money (e-wallet). Wiagustini et.al (2017) also concludes that one of the barriers to the use of electronic money is the unavailability of electronic money in small shops such as Micro, Small and Medium Enterprises which have a role in creating jobs, participating in tax revenues, facilitating the distribution of goods. Produced goods contribute to the development of human resources and the business world. Ramadhan et.al (2016) found that the benefit variable had no effect on interest in using electronic money. Phonthanukitithaworn et.al (2016) states that convenience has no effect on behavioral intentions.

Based on the above discussion in relation to the previous literature, there is sufficient evidence that the topic raised is still far from being completed. There are still many inconsistent/ contradictory findings and unresolved arguments on the topic in question.

II. Review of Literature

The success of technology acceptance by the public in terms of the use of non-cash transactions can be measured by its development. The Technology Acceptance Model (TAM) is an information system theory that contains the decision-making process concerning whether a technology is acceptable or not to users, and as a consideration for implementing new technology (Nyoman et.al, 2021). TAM is one of the theoretical models that is useful for determining the level of acceptance of user information technology toward a new information system. Davis (1989) in Pratiwi (2016) states that TAM functions to estimate and describe how a technology user can accept and use.

2.1 Perceived Usefulness

In TAM, Davis (1989) explains that perceived usefulness is a measure of a person's belief that technology can help improve the results of their activities (performance). This study measures this variable by modifying the research instrument from Fatona et.al (2020) which includes productivity, effectiveness, and performance of an activity, the level of importance of the activity, and overall usefulness.

Perceived Usefulness refers to a person's level of trust in a technology as it is worthwhile in daily activities. Previous research on perceived usefulness explains the level of user confidence, when they engage with the system, to see how they can improve their work performance (Syahril et.al, 2019). Usability will determine attitudes toward use which will affect interest in using it. This is supported by previous research which found that usability has a significant impact on attitudes to use (Chuang et al., 2016; Jiwasiddi et.al, 2019; Suyanto et.al, 2019). Previous studies have also shown that Usability also directly influences Behavioral Intention to Use (Syahril et.al 2019).then they will not use it. Based on the above arguments, this study proposes the following hypothesis:

H1: Perceived usefulness has a positive and significant relationship with Attitudes toward Use

2.2 Perceived Ease of Use

In this factor, the user's perception of the system's convenience will be determined. For this study, convenience is about practicality and user expectations that fintech can be used without difficulty (Yani et al. in Syahril & Rikumahu, 2019). Since fintech aims to provide an easy way to make transactions without extra effort, Indonesians expect to experience this convenience. When they encounter this, they are more likely to have a positive attitude towards use and have an intention to continue to use it. Previous research has also shown that Perceived Ease of Use affects Attitudes Toward Use (Chuang et al., 2016; Fernando, 2019; Jiwasiddi et.al, 2019).

Perception of ease of use according to To and Trinh (2021) is how far a person believes that using a technology system will be free of effort. If someone thinks that using the system is easy, then that person will use it. Conversely, if someone does not believe and thinks the system is difficult to use, that person will not use it (Mawardani and Dwijayanti, 2021). Although the effort spent by each person is different, in general information technology must be easy to use (Marey and Purwanto, 2020) in Raninda et.al (2022). The indicator of perceived ease of use according to To & Trinh (2021) is how far someone believes that e-wallet can save time, whether it is clear and easy to understand, and ease to use. Based on the above arguments, this study proposes the following hypothesis:

H2: Perceived ease of use has a positive and significant relationship with Attitude toward Use.

2.3 Perceived COVID-19 Risk

Risk perception is the perception of uncertainty and the consequences that will be faced after carrying out certain activities (Hsu & Chiu, 2004; Pavlou, 2001); in this context, it is the user's personal measure of the losses that may be experienced due to using e-money, as a potential consequence of the e-wallet. The measurement of this variable modifies the research instrument of Diphtha (2017) which includes risks in terms of economic, personal, organizational performance, and privacy risks. Kim et.al (2008) defines perceived risk as consumer confidence in the negative potential of online transactions. While Lim (2003) defines perceived risk as the extent to which individuals believe that when making payments for goods or services via the internet, they will experience losses.

The COVID-19 pandemic has affected 200 countries in the world, one of which is Indonesia. The Indonesian economy in 2020 contracted by 2.1% (Bappenas, 2021). This effect was not only limited to Indonesia; the decline in economic growth depended on regulatory policies in each country (Mckibbin & Fernando 2020). The changes that occurred are not only economic but also social. Many policies by the government will have a positive or negative impact on a country. This pandemic has also changed the global economic situation, one example of which is the growth of increased spending. Based on the above arguments, this study proposes the following hypothesis:

H3: Perceived COVID19 Risk has a positive and significant relationship with Attitude toward Use.

2.4 Attitude toward Use and Intention to use

Attitude is a person's level of preference for e-wallet it is a cognitive state that influences the use of e-wallet (Ajzen, 1989). The positive attitude towards e-wallet is stronger when the user has an immediate and positive response in the experience of using it. This gives a high possibility of using e-wallet in their daily life (Kadir et.all, 2022).

Tsai's research (2010) shows that there is a close correlation between attitude and intention. Ooi et al. (2011) found a positive and significant relationship between attitudes and behavioral intention to explain the adoption or continued use of mobile banking. Research conducted by Deb and David (2014) empirically determined that attitude has a positive influence on behavioral intention. This is in line with the snail research (2016); Bangkara and Neem (2016) and Aulina (2018) in Eka Aulia (2020) prove that attitude toward using has a positive influence on intention to use. Based on the above arguments, this study proposes the following hypothesis:

H4: Attitude Toward Using has a positive and significant relationship with Intention to Use

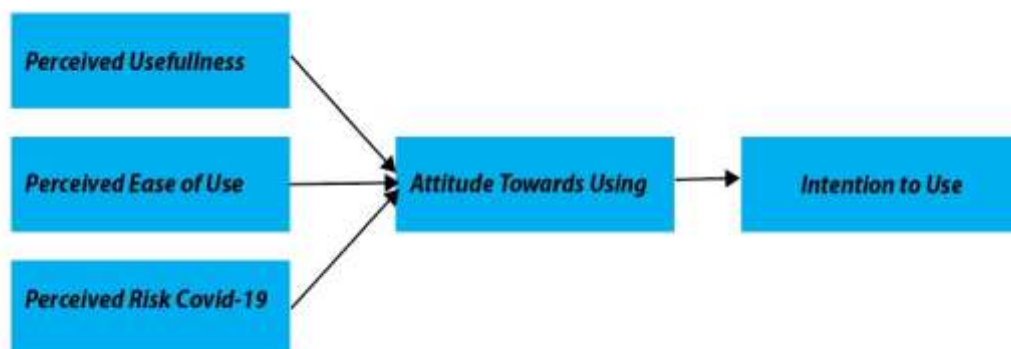


Figure 1. Theoretical framework

III. Research Method

This study uses quantitative methods with survey strategy research. This method was chosen because the research was conducted to determine the factors that influence the growth of e-wallet usage in Indonesia through the collection of data and information with a relatively small sample. The factors that influence this research is based on the Minimal Extent of Research Interference, because this research takes place naturally or with minimal disturbance of normal activities. For the study setting, a field study is used because it raises data and problems that exist in the field or research location. Data collected from e-wallet users was carried out over a period of 30 days to see the factors that influence the growth of e-wallet usage with one shot time using data taken in the same period from various relevant sources. The unit of analysis studied on e-wallet users is individually.

The population of e-wallet users is 167,200,000 of the total population of 267,700,000 people in Indonesia. As for this study using the Slovin technique (1960) to obtain the number of samples. The number of samples used in this study was 400 respondents. Data collection was done using both primary and secondary methods. Primary data used the closed-ended question method, because data related to the phenomenon under study can be collected quickly in a short amount of time and the answers are as dense as possible. The questions given are easier to understand and interpret and the answers given are relevant to the topic. Secondary data were used for review of relevant literature on variables and theories, and were collected from journal articles, books, texts, internet, and relevant publications.

IV. Result and Discussion

The distribution of questionnaires was done using *Google Forms*. The number of responses was 400 respondents who were users of *e-wallet*. This questionnaire is divided into two parts, namely, demographic questions of respondents, and questions using the variable *Intention to Use e-wallet*, *Attitude Toward Use*, *Perceived Covid-19 Risk*, *Perceived Ease of Use*, and *Perceived Usefulness*. After collecting the data, the next step was processing using Smart-PLS 4.0.

From the data processed, the respondents' answers relating to demographics were as follows:

Table 1. Respondent demographic distribution data

Demographic	Frequency	Percentage
Gender		
Man	209	52%
Woman	191	48%
Total	400	100%
Age		
26-35 years old	174	44%
17-25 years old	93	23%
36-45 years old	76	19%
>45 years old	57	14%
Total	400	100%

Marital Status		
Married	222	55.50 %
Unmarried	169	42,25 %
Widowed	9	2,25 %
Total	400	100%
Education		
SMA/SLTA	168	42,25 %
S1	207	51,75 %
S2	25	6,00 %
Total	400	100%
Monthly Income		
<Rp 5.000.000	197	49,25 %
Rp 5.000.000- Rp 10.000.000	125	31,25%
Rp 10.000.000- Rp 30.000.000	66	16,50 %
> Rp 30.000.000	12	3,00 %
Total	400	100%
How often to use E-wallet		
1-5 times in 1 month	146	36,5 %
6-10 times in 1 month	105	26.25 %
11-20 times in 1 month	71	17,75 %
>20 times in 1 month	78	19,5 %
Total	400	100%

The demographic table of respondents shows that the percentage of men who took part in the survey was higher than that of women, with 209 men (52%) and 191 women (48%). The total respondents are 400 people. Most respondents are aged between 26-35 years with a total of 174 people (44%), followed by 93 respondents aged between 17-25 years (23%), 76 respondents aged 36-45 years (19%), and 57 respondents aged above 45 years (14%). Regarding marital status, most respondents were married, numbering 222 people (55.5%), followed by 169 people who were not married (42.25%), and respondents who were widowed were nine people (2.25%). Based on educational demographics, most respondents have a high school/high school education, numbering 168 people (42.25%), followed by 207 respondents who have a bachelor's degree numbering 207 (51.75%), and 25 respondents have a master's degree (6%). Concerning monthly income, the data shows that respondents earning below Rp. 5,000,000 were 197 people (49.25%), followed by respondents earning between Rp. 5,000,000-Rp. 10,000,000 totaling 125 people (31.25%), followed by respondents earn Rp 10,000,000-Rp 30,000,000 as many as 66 people (16.5%), while respondents with income above Rp 30,000,000 are 12 people (3%). Based on the frequency of e-wallet usage, it shows that there are 146 people (36.5%) who use it 1-5 times in one month, then 105 (26.25%) who use it 6-10 times in one month, followed by 71 people (17.75%) used 11-20 times in one month, while 78 people (19.5%) used it more than 20 times in one month.

4.1. Validity and Reliability

The outer model test is the measurement model testing phase which aims to prove the validity and estimate the reliability of indicators and constructs. Some of the requirements that must be met are:

- a) Load factor indicator must be more than 0.7
- b) Reflective construct Average Variance Extracted (AVE) must be more than 0.5
- c) The square root of AVE must be greater than the correlation between constructs
- d) Cronbach Alpha must be more than 0.7 and composite reliability must be more than 0.7

According to Siregar (2014), the validity test shows the extent to which a measuring instrument can measure what it wants to measure; it also involves concepts from the theoretical level to the empirical level (indicators).

Convergent Validity Value is the value of the loading factor on the latent variable with its indicators. Used to test the validity of each indicator in a variable. The measure of individual reflection is said to be high if it has a correlation > 0.7 with the construct to be measured, meaning that the indicator is valid for measuring the constructs made. However, for the development stage of the measurement scale, a loading value of > 0.5 is considered sufficient, meaning that it meets the requirements.

Table 2. Convergent Validity and Reliability

<i>Variable</i>	<i>Item</i>	<i>Outer Loading</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>	<i>Average Variance Extracted (AVE)</i>
<i>Attitude Toward (AT)</i>	AT1	0,840	0,873	0,913	0,725
	AT2	0,855			
	AT3	0,888			
	AT4	0,822			
<i>Perceived Ease of Use (PE)</i>	PE1	0,871	0,898	0,925	0,713
	PE2	0,887			
	PE3	0,882			
	PE4	0,809			
	PE5	0,765			
<i>Perceived Risk Covid-19 (PR)</i>	PR1	0,732	0,774	0,851	0,591
	PR2	0,645			
	PR3	0,829			
	PR4	0,851			
<i>Perceived Usefulness (PU)</i>	PU1	0,822	0,813	0,851	0,728
	PU2	0,843			
	PU3	0,893			
<i>Intention to Use (IU)</i>	IU1	0,847	0,882	0,919	0,738
	IU2	0,897			
	IU3	0,851			
	IU4	0,841			

From the table of outer loading values above, all items or indicators of the outer loading value are > 0.5 even though they are still < 0.7 . The Outer Loading value limit > 0.5 is still acceptable if the validity and reliability of the construct meet the requirements and the model is still newly developed. Based on the validity of the outer loading, all items or indicators are valid. Construct Reliability is measuring the reliability of the latent

variable construct. The value that is considered reliable must be > 0.70 . Construct reliability is the same as Cronbach alpha. Based on Construct Reliability, it is stated that all items or indicators are reliable.

Table 3. Discriminant Validity Fornell-Larcker Criterion

	Attitude Toward Using	Intention to Use	Perceived Ease of Use	Perceived Risk COVID-19	Perceived Usefulness
<i>Attitude Toward</i>	0,852				
<i>Intention To Use</i>	0,820	0,859			
<i>Perceived Ease of Use</i>	0,789	0,723	0,844		
<i>Perceived COVID-19 Risk</i>	0,711	0,690	0,557	0,768	
<i>Perceived Usefulness</i>	0,757	0,661	0,744	0,561	0,853

Based on the table above, all the roots of the AVE (Fornell-Larcker Criterion) of each construct are greater than their correlation with other variables. Variable Attitude Toward AVE (0.852) is greater than the correlation (0.820, 0.789, 0.711, 0.757). Variable Intention to Use AVE (0.859) is greater than the correlation (0.820, 0.723, 0.690, 0.661). Variable Perceived Ease of Use AVE (0.844) is greater than the correlation (0.789, 0.723, 0.557, 0.744). The Variable Perceived Covid-19 Risk AVE (0.768) is greater than the correlation (0.711, 0.690, 0.557, 0.561). And lastly, the variable Perceived Usefulness AVE (0.853) is greater than the correlation (0.757, 0.661, 0.744, 0.561).

4.2 R Square

The coefficient of determination (R Square) is a way to assess how much an endogenous construct can be explained by an exogenous construct. The R Square value is expected to be between 0 and 1. If the R Square value is 0.67 it indicates that the model is strong, if 0.33 indicates moderate and 0.19 indicates a weak model (Ghozali & Latan, 2015).

Table 4. Results of R^2 of Endogenous Variables

Latent Constructs	R Square Value	Evaluation Criteria by Cohen (1988)
<i>Attitude Toward</i>	0,758	Substantial
<i>Intention To Use</i>	0,672	Substantial

AT affects IU by 0.758 or 75.8%, it can be explained that the item construct is exogenous. IU on AT affects 0.672 or 67.2% %, it can be explained that the item construct is exogenous. Each shows a value > 0.67 which means the model is strong.

4.3 Hypothesis Testing

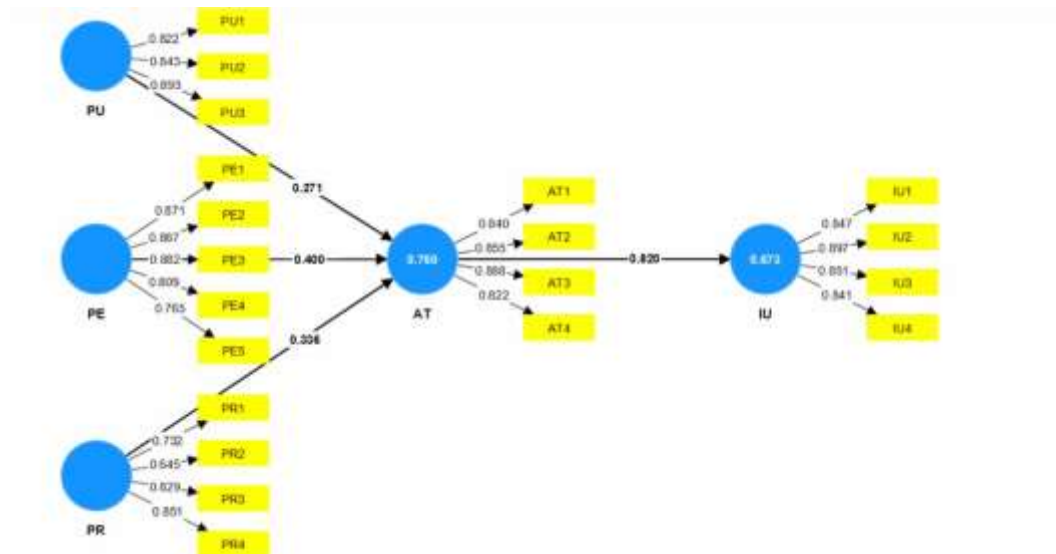


Figure 2. Model Structure

To evaluate the proposed model, a bootstrapping nonparametric resampling approach with 5000 subsamples was used. The results of the complete structural model are shown in Figure 2.

Table 5. Summary of the Direct Effect

Hypothesis	Relationship	Path Coefficient	Standard Deviation	T-Statistic	P Values	Result
H1	PU → AT	0,820	0,020	45,499	0.000	Supported
H2	PE → AT	0,400	0,098	3,781	0.000	Supported
H3	PR → AT	0,336	0,71	5,465	0.000	Supported
H4	AT → IU	0,271	0,130	2,377	0,018	Supported

1. H1: The direct effect of Perceived Usefulness on Attitude Toward is 0.820, which means that if Attitude Toward increases by one-unit, Perceived Usefulness can increase by 82%. This influence is positive. ($\beta = 0.820$, $t = 45.99$, $p < 0.05$), then the hypothesis H1 is accepted.
2. H2: The direct effect of Perceived Ease of Use on Attitude Toward is 0.400, which means that if Attitude Toward increases by one-unit, Perceived Ease of Use can increase by 40%. This influence is positive. ($\beta = 0.400$, $t = 3.781$, $p < 0.05$), then H2 is accepted.
3. H3: The direct effect of Perceived Covid-19 Risk on AT is 0.336, which means that if Attitude Toward increases by one-unit, Perceived Covid-19 Risk can increase by 33.6%. This influence is positive. ($\beta = 0.336$, $t = 5.465$, $p < 0.05$), then H3 is accepted.
4. H4: The direct effect of Attitude Toward on Intention to Use is 0.271, which means that if Attitude Toward increases by one unit, Intention to Use can increase by 27.1%. This influence is positive. ($\beta = 0.271$, $t = 2.377$, $p < 0.05$), then H4 is accepted.

V. Conclusion

This study aims to examine the effect of Perceived Usefulness, Perceived Ease of use, Perceived Risk of COVID-19 and Attitude Toward Using on Intention to Use E-Wallet. The following conclusions can be drawn:

1. There is a positive and significant effect of the Perceived Usefulness variable directly on Attitude Towards Using, thus the first hypothesis can be accepted. The presence of Perceived Usefulness felt by E-wallet users will have a positive impact on Attitude Toward Using E-wallet.
2. The results of this study are in line with Chuang et al. (2016), Jiwasiddi et al. (2019), Kurniawan & Suyanto (2019) which states that usability will determine attitudes toward use which will affect interest in using it.
3. There is a positive and significant effect of the Perceived Ease of Use variable directly on Attitude Toward Using, thus the second hypothesis can be accepted. Perceived Ease of Use felt by E-wallet users, it will have a positive impact on Attitude Toward Using E-wallet.
4. The results of this study are in line with Chuang et al. (2016), Fernando (2019), Jiwasiddi et al. (2019), which states that Perceived Ease of Use affects Attitude toward use
5. There is a positive and significant effect of the Covid-19 Perceived Risk variable directly on Attitude Toward Using, thus, the third hypothesis is accepted. Therefore, with the Perceived Risk of COVID-19 felt by E-wallet users, it will have a positive impact on Attitude Toward Using E-wallet.
6. The results of this study are in line with Aji et al. (2020) which states that the use of e-wallet during this pandemic is considered to provide benefits and increase the use of e-wallet because it avoids the spread of disease via aerosol droplets
7. There is a positive and significant effect of the Attitude Toward Using E-wallet variable directly on the Intention to Use, thus the fourth hypothesis is accepted. So, the presence of Attitude Toward Using E-wallet perceived by E-wallet users will have a positive impact on Intention to Use E-wallet. The results of this study are in line with Tsai (2010), Lin (2011), Deb & David (2014), Bangkara & Neem (2016), Aulina (2018) which state that there is a close correlation between Attitude Toward Using and Intentions.

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