

Some Factors Influencing Continuance Intentions to Use Electronic Money Consumers

Annisa Puspitasari^{a*}
Nur Khusniyah Indrawati^b
Raditha Hapsari^c

^aMagister Management Study Program, Faculty of Economics and Business Brawijaya University, Indonesia; ^{b,c} Faculty of Economic and Business, University of Brawijaya, Malang, Indonesia

Abstract

This study aims at examining the continued intention to use at electronics money consumer. Continued intention to use at electronics money consumer measured by security, trust, and customer satisfaction. This study obtained 162 respondents one of the largest citye in Indonesia, namely the greater city of Malang (including City of Malang, Malang Regency, and City of Batu). This study used SEM PLS and measured by SmartPLS 3.3.3. The result from this study are security and trust have a significant influence on the continued intention to use through consumer satisfaction as a mediation. The implication are the importance of increasing the sense of security, trust, and satisfaction of consumers so that they want to reuse electronic money; most consumers within the productive age who are very concerned about the security of electronic money and trusted electronic money institutions; most consumers are women; and it is also important to increase promotion, innovation, use of electronic money, to consumer loyalty of electronic money.

Keywords

Continuance Intention To Use; Security; Trust; and Consumer Satisfaction

Received: 17 January 2022; Accepted: 15 February 2022; Published Online: 30 April 2022

DOI: 10.21776/ub.apmba.2022.010.03.4

Introduction

Money that was originally only in the form of paper money and coins over time increased in variety, one of which was electronic money. Electronic money is one of the most commonly used means of payment today. Electronic money is issued by several issuers authorized by Bank Indonesia. MYNT E-Money, Flazz, Mobile Account, JakCard, Mandiri e-Money, Mega Cash, TapCash, Brizzi, Gopay, iSaku, SHOPEEPAY, OVO Cash, and Digicash are some of the electronic money issuers

(Bank Indonesia, 2019). A large number of electronic money issuers allow electronic money users to choose any electronic money.

The volume of electronic money transactions increases with each passing year. Transaction volume from 2012 to 2017 was below 1 billion transactions per year (Bank Indonesia, 2019). A significant increase in the volume of electronic money transactions occurred in 2018 of 2.9 billion transactions. One of the reasons for the

increase in the volume of electronic money transactions is that consumers intend to continue using electronic money.

This study obtained 162 respondents in Indonesia (including Kota Malang, Kabupaten Malang, and Kota Batu). The research was conducted in Indonesia, because a large number of electronic money consumers in Indonesia is balanced with the number of facilities. This study used SEM PLS and measured by SmartPLS 3.3.3.

This study aims to examine the continuance intention to use electronic money consumers in Indonesia, seen from the perceived security of electronic money by consumers, the trust of electronic money consumers, and consumer satisfaction with electronic money.

Some of the main problem formulations posed that to what extent security have a significant positive effect on the continuance intention to use?. Hypotheses are also developed to answer the research model posed on the next chapter.

Literature Review & Hypothesis

Literature Review

Electronic Money Concept

Electronic money according to Bank Indonesia Regulation (2009) No. 11/12/PBI/2009 article 1 paragraph 3 regarding payment instruments that meet the following elements, namely: issued based on the value of money which was deposited in advance by the holder to the issuer, the value of money is stored electronically in a medium such as a server or chip, used as a means of payment to merchants who are not issuers of the said electronic money, and the value of electronic money deposited by the holder and managed by the issuer is not a deposit as referred to in the law governing banking.

Security

Security is a preventive measure aimed at protecting information, ensuring guarantees and regulations function properly, and

avoiding threats (in the form of interference, injustice, fraud, and embezzlement) (Al-Sharafi, *et al.*, 2016; Damghanian, *et al.*, 2016; Zhao in Shao, 2019; Kotler *et al.*, 2020:535; Ooi, *et al.*, 2021). The indicators of the security variables are: Feel safe to transact using electronic money services (Johnson, *et al.*, 2018); Electronic money issuers take security measures to protect electronic money payments (Johnson, *et al.*, 2018); and confidentiality of information is protected in electronic money systems (Li, *et al.*, 2021).

Trust

Trust is the client's trust in the intention of the seller's ability to fulfill the client's needs and desires (Gul, 2014; Luhmann at Nguyen, *et al.*, 2021; Jamshidi, *et al.*, 2018). The following are indicators of trust: trusting electronic money issuers to recommend their products, it is the best (Poromatikul *et al.*, 2020); trust by being treated honestly by the issuer of electronic money in every transaction (Poromatikul *et al.*, 2020); belief that data sent through electronic money issuers are confidential (Lee and Kim, 2020); trusting electronic money issuers who are competent in handling transactions (Shao, *et al.*, 2019); believe in the quality of products sold by electronic money issuers (Zhao, *et al.*, 2019; Zhao, *et al.*, 2019; Gul, 2014; Geebren, 2021); and overall believe in electronic money (Poromatikul *et al.*, 2020; Geebren, 2021).

Consumer Satisfaction

Consumer satisfaction is the consumer's perception of how well products and services work for consumers, from dissatisfied, satisfied, and very satisfied (Kotler *et al.*, 2020:15; and Mazuri *et al.* in Rahi and Ghani, 2019). The following indicators of consumer satisfaction according to Rahi and Ghani (2019) are: satisfaction with the services received from electronic money (Geebren, 2021; Rahi and Ghani, 2019; Li and Shang, 2020; Yoon, 2010; Li, *et al.*, 2021; Selim, *et al.*, 2019); satisfied with the brand effect caused by electronic money (Gul, 2014); e-money

issuing websites provide satisfying public services that meet needs (Li and Shang, 2020); users of electronic systems tend to use new electronic money services (Li, et al., 2021); overall, satisfied with electronic money (Geebren, 2021; Rahi and Ghani, 2019; Lim, et al., 2018; Susanto, et al., 2016; Yoon, 2010); and transacting with electronic money is a wise choice (Susanto, et al., 2016).

Continuance Intentions To Use

Continuance Intentions to use occurs when people who have had previous product experience, then use the product, and engage with the product. (Bhattacharjee, 2001; Park, 2014; Lim, et al., 2018; and Nabavi, et al. in Rahi and Ghani, 2019). The following are indicators of continuance intentions to use, in the form of continuing to use electronic money in daily life (Shao, et al., 2019); continuance intention to use electronic money when needed (Zhao, et al., 2019); continue the use of electronic money with new provisions on regulations for issuing electronic money (Tomalin, et al., 2014); intend to recommend the use of electronic money to the closest people (Johnson, et al., 2018; Li and Shang, 2020; Poromatikul, et al., 2019); consider continuing the use of electronic money as the first choice for future payments (Johnson, et al., 2018; Shao, et al., 2019; Susanto, et al., 2016; Zhao, et al., 2019; Lee and Kim, 2020; Li and Shang, 2020).

Hypothesis

Consumers have a basic need for security (Wu, et al., 2020). Consumers use electronic payment technology further, if consumers feel safe (Johnson, et al., 2018). Rabaa'i and AlMaati (2021), Johnson, et al. (2018), Wu, et al. (2020), and Baabdullah, et al. (2019) found the effect of security on continuance intention to use. The existence of several findings on the effect of security on the continuance intention to use, raises the following hypothesis:

H1: Security has a significant positive effect on continuance intention to use.

Trust is very important in electronic payments (Chen and He, Huang, et al., in Poromatikul, et al., 2020). Trust from consumers is needed when consumers want to continue using services, by believing in the reliability and integrity of service providers (Lee and Choi in Lee and Kim, 2019). Poromatikul, et al. (2020), Lee and Kim (2020), Shao, et al. (2019), and Zhao, et al. (2019) found the effect of trust on continuance intention to use. The existence of several findings on the effect of trust on the continuance intention to use, raises the following hypothesis:

H2: Trust has a significant positive effect on continuance intentions to use.

Satisfaction is the condition of consumers who are affective towards certain services and thereby change consumer motivation (Mazuri, et al., 2017). When users' overall satisfaction with online payments increases, they will tend to use payment systems again (Bhattacharjee, 2001). Rahi and Ghani (2019), Lim, et al. (2018), Susanto, et al. (2016), and Li and Shang (2020) found the effect of consumer satisfaction on continuance intention to use. The existence of several findings on the influence of consumer satisfaction on the continuance intention to use, raises the following hypothesis:

H3: Consumer Satisfaction has a significant positive effect on continuance intentions to use.

Security in electronic payments is very decisive in achieving maximum online consumer satisfaction (Casaló, et al. 2008). The number of consumers transacting with online banks has reduced consumer concerns over security and privacy issues (Yoon, 2010). Yoon (2010), Valdez, et al. (2021), Mahmud, et al. (2016), and Li, et al. (2021) found the effect of security on consumer satisfaction. The existence of several findings on the influence of security on consumer satisfaction, raises the following hypothesis:

H4: Security has a significant positive effect on consumer satisfaction.

Increased trust in digital services, results in increased consumer satisfaction (Kar, 2020). It is important to develop trust that leads to high customer satisfaction, to ensure the success of the digital service (Geebren, et al., 2021). Kar (2020) researched mobile payment and digital service usage, finding the effect of trust on satisfaction. Kar (2020), Selim, et al. (2019), Gul (2014), and Geebren, et al. (2021) found the effect of trust on consumer satisfaction. The existence of several findings on the influence of trust on consumer satisfaction, raises the following hypothesis:

H5: Trust has a significant positive effect on consumer satisfaction.

Rabaa'i and AlMaati (2021), Johnson, et al. (2018), Wu, et al. (2020), and Baabdullah, et al. (2019) found the effect of security on continuance intention to use. Rahi and Ghani (2019), Susanto, et al. (2016), Lim, et al. (2018), and Li and Shang (2020) found the effect of satisfaction on continuance intention to use. Yoon (2010), Valdez, et al. (2021), Mahmud, et al. (2016), and Li, et al., (2021) found the effect of security on

satisfaction. The existence of several findings of the effect of security on the continuance intention to use through consumer satisfaction, raises the following hypothesis:

H6: Security has a significant positive effect on continuance intention to use through consumer satisfaction.

Poromatikul, et al. (2020), Lee and Kim (2020), Shao, et al. (201 and 9), and Zhao, et al. (2019) found the effect of security on continuance intention to use. Rahi and Ghani (2019), Susanto, et al. (2016), Lim, et al. (2018), and Li and Shang (2020) found the effect of satisfaction on continuance intention to use. Kar (2020), Selim, et al. (2019), Gul (2014), and Geebren, et al. (2021) found the effect of security on satisfaction. The existence of several findings of the effect of trust on the continuance intention to use through consumer satisfaction, raises the following hypothesis:

H7: Trust has a significant positive effect on continuance intention to use through consumer satisfaction.

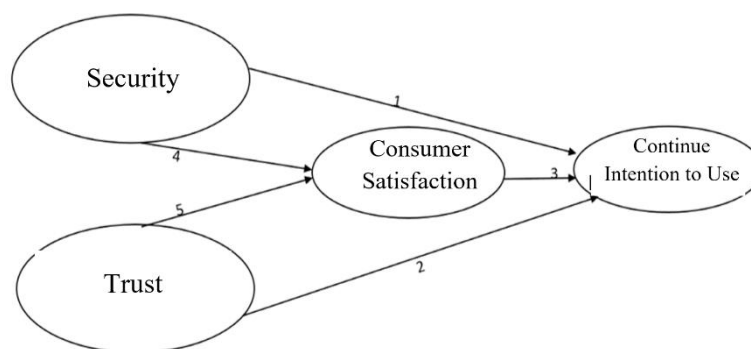


Figure 1. Conceptual Framework

Method

This type of research is quantitative and explanatory research. Sampling time at October 2021. The sampling technique in these studies uses non-probability sampling and purposive sampling. The sample was

162 respondents from 194 respondents. Using Google Forms for filling out the questionnaire. The data analysis method used descriptive analysis. The research model is PLS with SmartPLS 3.3.3 test equipment. For mediation testing using the theory of Hair, et al. (2019:745).

Results

Characteristics of Respondents

Based on table 1, most respondents aged 21-30 years, most users are women, work as

civil servants or private, the electronic money brand that is often used is OVO, with the most useful range less than four times a week.

Table 1. Characteristics of Respondents

No.	Characteristics of Respondents	Amount	%
1.	Respondent's Age		
	15 – 20 year	9	5,56%
	21 – 30 year	76	46,91%
	31 – 40 year	11	6,79%
	41 – 50 year	39	24,07%
	51 – 60 year	23	14,20%
	61 – 64 year	4	2,47%
	Total	162	100%
2.	Respondent's Gender		
	Male	61	37,65%
	Female	101	62,35%
	Total	162	100%
3.	Respondent's Status		
	Student	4	2,47%
	College student	23	14,20%
	Civil Servants/ Private Servants	83	51,35%
	Entrepreneur	39	24,07%
	Other	13	8,02%
	Total	162	100%
4.	Electronic Money Brands Frequently Used by Respondents		
	ShopeePay	36	22,22%
	Link Aja	11	6,79%
	Gopay	32	19,75%
	Flazz BCA	8	4,94%
	Brizzi	6	3,70%
	Dana	14	8,64%
	E - Money		
	Mandiri/Indomaret	8	4,94%
	OVO	41	25,31%
	Other (Apple Pay, Tap Cash)	2	1,23%
	Total	162	100%
5.	Electronic Money Brands Frequently Used by Respondents		
	Every day	32	19,75%
	Less than four times a week	49	30,25%
	Once a week	21	12,96%
	Less than four times a month	37	22,84%
	A year less than 8 times	19	11,73%
	Rarely (A year 2-3 times)	4	2,47%
	Total	162	100%

Test Outer Model On PLS

The outer model measures the effect of indicators with latent variables, using validity tests, reliability tests, and average variance extracted (AVE).

The validity test carried out is the convergent test and the discriminant test. Based on the convergent validity test, all items are declared valid when the outer loading value criterion is > 0.4 . The results of the divergent validity test, each item has the highest value on each variable compared to the value of cross-loading items on other variables. It can be concluded that each item is declared valid.

The reliability test on the construct used Cronbach's alpha, average variance extracted (AVE), and composite reliability (CR). The criteria for each test are: Cronbach's alpha (> 0.7), average variance extracted (AVE) (> 0.5), and composite reliability (CR) (> 0.7). Based on the reliability test, all variables are declared reliable.

Inner Model Test on PLS

Testing the inner model is intended to measure the proposed structural model including being accurate or predictive only, using the coefficient of determination test (R^2), predictive relevance (Q^2), and goodness of fit index (GoF).

The coefficient of determination test (R^2) serves to measure the level of variation of the change in the dependent variable. R^2 values 0.25, 0.50, and 0.75 for the target construct were considered weak, moderate, and substantial, respectively (Hair, et al., 2014:198).

Based on table 1, all constructs are substantial. The consumer satisfaction variable shows the R^2 test results of 0.775, with these values consumer satisfaction can be explained by the security and trust variables of 77.5% and 22.5% explained by variables outside the study. The variable of continuance intention to use shows the results of the R^2 test of 0.892 with that value

of consumer satisfaction can be explained by the variables of security, trust, and customer satisfaction of 89.2% and 10.8% is explained by variables outside the study. The predictive relevance test (Q^2) is to measure the value of observations from model parameters with predictable relevance. As a relative measure of predictive relevance (Q^2), values of 0.02, 0.15, and 0.35 respectively indicate that the exogenous construct has small, medium, or large predictive relevance for certain endogenous constructs (Hair, et al., 2014: 186). Here is the result of Q^2 :

$$Q^2 = 1 - (1 - R1^2).(1 - R2^2)$$

$$Q^2 = 1 - (1 - 0,775).(1 - 0,892)$$

$$Q^2 = 1 - (0,225).(0,108)$$

$$Q^2 = 1 - 0,0243$$

$$Q^2 = 0,9757$$

The value of Q^2 shows the number 0.9757, illustrating that the model has a predictive relevance of 97.57%. 2.43% is explained by variables outside the study. The results of the predictive relevance test (Q^2) show that the research model is a strong (large) model. Thus, the research model can be used for hypothesis testing.

The goodness of fit index (GoF) or what is called the quality GoF Index is for model evaluation, both measurement and structural. With GoF criteria: Small (0.10); Medium (0.25); and Large (0.36). Based on the table AVE and R^2 , the following are the results of the GoF calculation using the Tenenhaus et al formula. (2004): Goodness of fit index (GoF) or what is called the quality GoF Index is for model evaluation, both measurement and structural. With GoF criteria: Small (0.10); Medium (0.25); and Large (0.36). Based on the table AVE and R^2 , the following are the results of the GoF calculation using the Tenenhaus et al formula. (2004):

$$GoF = \sqrt{AVE \times R^2}$$

$$GoF = \sqrt{0,631 \times 0,8335} = \sqrt{0,525939}$$

$$GoF = 0,725216519392657 = 0,73$$

The calculation of the Goodness of Fit Index (GoF) above shows that the structural model in these studies generally has a strong (large) predictive value, as evidenced by the Goodness of Fit Index (GoF) value of 0.73, which means > 0.36 .

Hypothesis Test

Direct hypothesis testing is carried out by examining direct effects such as security on the continuance intentions to use, security on consumer satisfaction, trust in the continuance intentions to use, trust in consumer satisfaction, and consumer satisfaction with the continuance intentions to use. The criteria for testing the hypothesis are t-statistic > 1.96 , with a probability of less than 0.05 (significance 5%).

Table 2. Test Directly

	Path Coefficient	T Statistics	P Values	Description
Security -> Continuance Intentions to Use	0,564	10,172	0,000	Supported
Trust -> Continuance Intentions to Use	0,262	3,533	0,000	Supported
Customer Satisfaction -> Continuance Intentions to Use	0,211	3,242	0,001	Supported
Security -> Customer Satisfaction	-0,144	2,788	0,006	Not Supported
Trust -> Customer Satisfaction	0,984	24,666	0,000	Supported

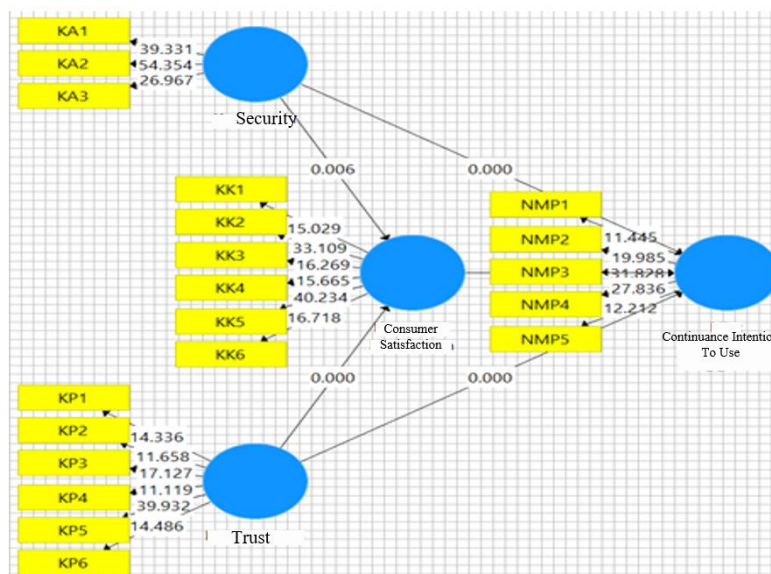


Figure 2. Direct Test

Based on table 2 and Figure 2 shows the test results directly. H1, H2, H3, H5, H7 are accepted, with t-statistic > 1.96 , with probability > 0.05 (significance 5%). Indirect hypothesis testing is carried out to test the effect of one variable on another through the mediating variable. Testing this hypothesis tests hypotheses such as security

against continuance intention to use through consumer satisfaction, and trust in continuance intention to use through consumer satisfaction. According to Solimun, et al. (2017) p-value with a highly significant value (0.01), a moderately significant value (0.0), and a low significant value (0.10).

Based on the table and review of theory & hypotheses, H4 and H6 were rejected. In contrast to the hypothesis that has a significant positive effect, the results of the study show a significant negative effect. A significant negative effect can occur because consumers feel that the security of electronic money does not meet consumer satisfaction expectations. Most of the respondents are of productive age who have jobs, if they feel that the security they experience does not meet their expectations, they will include it in the list

of transactions whose security is not satisfactory.

Mediation Test Results

Mediation testing can determine whether the construct includes full mediation or partial mediation. The results of the mediation test in table 9 show the effect of security and trust on the continuance intention to use through consumer satisfaction is partial mediation. The following is table 3 which shows the results of the mediation test.

Table 3. Indirect and Mediation Test Results

	Path Coefficient	T Statistics (O/STDEV)	P Values	Description	Result
Security -> Customer Satisfaction -> Continuance Intentions to Use	-0,030	2.316	0.021	Partial Mediation	Not Supported
Trust -> Customer Satisfaction -> Continuance Intentions to Use	0.207	3.391	0.001	Partial Mediation	Supported

Discussion and Implication

Discussion

In hypothesis 1, security has a significant positive effect on the continuance intention to use. The results of the hypothesis test state that safety has a significant positive effect on the intention to continue using, then hypothesis 1 is accepted. The first factor that supports safety has a significant positive effect on the continuance intention to use, is the theory previously proposed. The results of this hypothesis test are supported by the theory of Wu, et al. (2020) which says that consumers have a basic need for security. The results of this hypothesis test are supported by the theory of Johnson, et al. (2018) which says that consumers will use electronic payment technology further, if consumers feel safe. The second factor is the supporting results of previous studies. Rabaa'i and AlMaati (2021), Johnson, et al. (2018), Wu, et al. (2020), and Baabdullah, et al. (2019) found a significant effect of security on the intention to continue using a significant. In hypothesis 2, trust has a significant positive effect on the continuance intention

to use. The results of the hypothesis test state that trust has a significant positive effect on the intention to continue using, then hypothesis 2 is accepted. The first factor that supports trust has a significant positive effect on the continuance intention to use, is the theory previously proposed. The results of this hypothesis test are supported by the theory of Chen and He, Huang, et al., in Poromatikul, et al. (2020) who say that trust is very important in electronic payments. The results of this hypothesis test are supported by Lee and Choi's theory in Lee and Kim (2019) which says that trust from consumers is needed when consumers want to continue using services, by believing in the reliability and integrity of service providers. The second factor is the supporting results of previous studies. Poromatikul, et al. (2020), Lee and Kim (2020), Shao, et al. (2019), and Zhao, et al. (2019) found a significant effect of trust on continuance intention to use.

In hypothesis 3, consumer satisfaction has a significant positive effect on the continuance intention to use. The results of the hypothesis test state that customer

satisfaction is significantly positive on the intention to continue using, so hypothesis 3 is accepted. The first factor that supports significant positive consumer satisfaction on the continuance intention to use, is the theory previously proposed. The results of this hypothesis test are supported by the theory of Mazuri, et al. (2017) which says that consumer satisfaction occurs when the consumer's condition is affective to certain services and thus changes consumer motivation. The results of this hypothesis test are supported by the theory of Bhattacharjee (2001) that when the overall satisfaction of consumers with online payments increases, they will tend to use the payment system again. The second factor is the supporting results of previous studies. Rahi and Ghani (2019), Lim, et al. (2018), Susanto, et al. (2016), and Li and Shang (2020) found a significant effect of consumer satisfaction on the intention to continue using.

In hypothesis 4, security has a significant positive effect on consumer satisfaction. The results of hypothesis testing state that security has a significant negative effect on consumer satisfaction, so hypothesis 4 is rejected. The first factor that contradicts the results of the hypothesis test is the theory previously stated. The results of this hypothesis test contradict the theory of Casaló, et al. (2008) who said that the security of electronic payments is very decisive in achieving maximum online consumer satisfaction. The results of this hypothesis test are in contrast to Yoon's (2010) theory which says that many consumers transact with online banks, reducing consumer concerns over security and privacy issues. The second factor is the results of previous studies which are contrary to the results of hypothesis testing. Yoon (2010), Valdez, et al. (2021), Mahmud, et al. (2016), and Li, et al. (2021) found security had a significant positive effect on consumer satisfaction.

In hypothesis 5, trust has a significant positive effect on consumer satisfaction. The results of the hypothesis test state that

trust has a significant positive effect on consumer satisfaction, so hypothesis 5 is accepted. The first factor that supports trust has a significant positive effect on consumer satisfaction, is the theory previously stated. The results of this hypothesis test are supported by the theory of Kar (2020) which says that increased trust in digital services results in increased consumer satisfaction. The results of this hypothesis test are supported by the theory of Geebren, et al., (2021) which says that it is important to develop trust that leads to high customer satisfaction, to ensure the success of the digital service. The second factor is the supporting results of previous studies. Kar (2020), Selim, et al. (2019), Gul (2014), and Geebren, et al. (2021) found that there was a significant effect of trust on consumer satisfaction.

In hypothesis 6, security has a significant positive effect on the continuance intention to use through consumer satisfaction. The results of the hypothesis test state that trust has a significant negative effect on consumer satisfaction, so hypothesis 6 is rejected. The first factor that contradicts the results of the hypothesis test is the theory previously stated. The results of this hypothesis test contradict the theory of Casaló, et al. (2008) who said that the security of electronic payments is very decisive in achieving maximum online consumer satisfaction. The results of this hypothesis test are contrary to the theory (Yoon, 2010) which says that many consumers transact with online banks, making consumers' concerns over security and privacy issues less. The results of this hypothesis test contradict the theory of Wu, et al., (2020) which says that consumers have a basic need for security. The results of this hypothesis test are contrary to the theory of Johnson, et al. (2018) which says that consumers will use electronic payment technology further, if consumers feel safe. The results of this hypothesis test contradict the theory of Mazuri, et al. (2017) which says that consumer satisfaction occurs when the consumer's condition is affective to certain services and thus changes consumer

motivation. The results of this hypothesis test contradict the theory of Bhattacharjee (2001) which says that when consumers' overall satisfaction with online payments increases, they will tend to use payment systems again. The second factor is the results of previous studies which are contrary to the results of hypothesis testing. Yoon (2010), Valdez, et al. (2021), Mahmud, et al. (2016), and Li, et al. (2021) found security had a significant positive effect on consumer satisfaction. Rahi and Ghani (2019), Lim, et al. (2018), Susanto, et al. (2016), and Li and Shang (2020) found that consumer satisfaction had a significant positive effect on the intention to continue using. Rabaa'i and AlMaati (2021), Johnson, et al. (2018), Wu, et al. (2020), and Baabdullah, et al. (2019) found safety had a significant positive effect on continuance intention to use.

In hypothesis 7, trust has a significant positive effect on the continuance intention to use through consumer satisfaction. The results of the hypothesis test state that trust has a significant positive effect on the continuance intention to use through consumer satisfaction, so hypothesis 7 is accepted. The first factor that supports trust has a significant positive effect on consumer satisfaction, is the theory previously stated. The results of this hypothesis test are supported by the theory of Mazuri, et al. (2017) which says that consumer satisfaction occurs when the consumer's condition is affective to certain services and thus changes consumer motivation. The results of this hypothesis test are supported by the theory of Bhattacharjee (2001) that when the overall satisfaction of consumers with online payments increases, they will tend to use the payment system again. The results of this hypothesis test are supported by the theory of Kar (2020) which says that increased trust in digital services results in increased consumer satisfaction. The results of this hypothesis test are supported by the theory of Geebren, et al., (2021) which says that it is important to develop trust that leads to high customer satisfaction, to ensure the

success of the digital service. The results of this hypothesis test are supported by the theory of Chen and He, Huang, et al., in Poromatikul, et al. (2020) who say that trust is very important in electronic payments. The results of this hypothesis test are supported by Lee and Choi's theory in Lee and Kim (2019) which says that trust from consumers is needed when consumers want to continue using services, by believing in the reliability and integrity of service providers. The second factor is the supporting results of previous studies. Rahi and Ghani (2019), Lim, et al. (2018), Susanto, et al. (2016), and Li and Shang (2020) found that consumer satisfaction had a significant positive effect on the intention to continue using. Kar (2020), Selim, et al. (2019), Gul (2014), and Geebren, et al. (2021) found that trust had a significant positive effect on consumer satisfaction. Poromatikul, et al. (2020), Lee and Kim (2020), Shao, et al. (2019), and Zhao, et al. (2019) found that trust had a significant positive effect on continuance intention to use.

Practical Implications

1. Based on the results of hypothesis testing, these results indicate that consumers intend to use electronic money, because of a sense of security, trust, and satisfaction from electronic money.
2. Based on the results of hypothesis testing, these results indicate that consumers are not satisfied with the security of electronic money and consumers do not want to associate security with consumer satisfaction.
3. Based on the results of hypothesis testing, these results indicate that when consumers believe in electronic money, then consumers are satisfied with electronic money.
4. Based on the answers of respondents of productive age (mostly 21-30 years old) and working (as civil servants, private employees, and entrepreneurs), pay

attention to electronic money in terms of security, believe when offered electronic money, and are satisfied when using electronic money.

5. Based on research, female consumers use electronic money more than men. This could be due to the influence of the COVID-19 pandemic, online shopping, food delivery, and online motorcycle taxis.

Theoretical Implications

This research has implications for the development of theories of security, trust, consumer satisfaction, and intention to continue electronic money in Indonesia. This study becomes an additional reference if the next researcher wants to examine the safety and trustworthiness of the continuance intention to use through consumer satisfaction (indirectly), or directly.

Conclusions, Limitations, And Recommendations

Conclusions

This study is about testing hypotheses related to things that affect consumers' continuance intention to use electronic money in Indonesia (including Malang City, Malang Kabupaten, and Batu City). The variables discussed are security, trust, consumer satisfaction, and the continuance intention to use electronic money. The data used primary data, 162 people were selected as respondents. Testing using PLS with SmartPLS 3.3.3. Here are some conclusions that can be drawn, namely:

Security in this study, proved to have a significant positive effect on the continuance intention to use electronic money consumers. The results of this study prove that consumers who intend to continue using electronic money, of course, already feel the security of the issuer of electronic money and from law enforcement. Consumer trust in this study,

proved to have a significant positive effect on the continuance intention to use electronic money among consumers. The results of this study prove that consumers who intend to continue using electronic money, of course, already trust the issuer of electronic money and the products they offer. Consumer satisfaction in this study, proved to have a significant positive effect on the continuance intention to use electronic money among consumers. The results of this study prove that consumers who intend to continue using electronic money, of course feel a sense of satisfaction when consumers use electronic money.

Security in this study, proved to have a significant negative effect on consumer satisfaction with electronic money. The results of this study prove that consumers who feel satisfaction with electronic money do not feel the security of electronic money. Trust in this study, proved to have a significant positive effect on consumer satisfaction with electronic money. The results of this study prove that consumers who are satisfied with electronic money feel that electronic money can be trusted.

Security on the continuance intention to use through consumer satisfaction has been proven to have a significant negative effect on the object of electronic money consumers. The results of this study prove that when they intend to continue using electronic money, consumers do not feel security when consumers feel satisfaction. The results of the study indicate that there is partial mediation, which proves that security on the continuance intention to use has a significant effect even though consumer satisfaction is not included in the model. Trust in the continuance intention to use through consumer satisfaction has been proven to have a significant positive effect on the object of electronic money consumers. The results of this study prove that when they intend to continue using electronic money, consumers feel confidence when consumers feel satisfaction. The results of the study indicate that there is partial mediation, which proves that trust in the continuance

intention to use has a significant effect even though consumer satisfaction is not included in the model.

Based on the answers of respondents of productive age (mostly 21-30 years old) and working (as civil servants, private employees, and entrepreneurs), pay attention to electronic money in terms of security, believe when offered electronic money, and are satisfied when using electronic money. Based on research, female consumers use electronic money more than men. This could be due to the influence of the COVID-19 pandemic, online shopping, food delivery, and online motorcycle taxis. Based on the results of the respondent's description, it shows that Indonesia is a place where consumers intend to continue using it, because the number of electronic money consumers is proportional to the number of electronic money facilities. Based on the results of the respondent's description above, it proves that the brand most often used by consumers is OVO. Followed by ShopeePay, Gopay, Dana, Link Aja, Flazz BCA, E-Money Mandiri, Brizzi, and others. The results of this respondent's description prove that consumer preferences vary in choosing electronic money brands, depending on the number of facilities and functions.

Limitations

1. This study has not consider the latest types of electronic money in 2022 because when the research was carried out, the electronic money had not been published.
2. This study has not considered electronic money consumers who object to filling out the questionnaire, because they have moved their residence.

Recommendations

1. It is necessary to consider the latest types of electronic money in 2022. Future researchers (theoretically) need to develop the use of the latest electronic money and consider variables to study

such as ease of use, innovation, and quality (services, systems, and information). Practitioners need to consider using the latest electronic money, if their business is related to electronic money.

2. It is necessary to consider consumers who do not mind filling out the questionnaire. Future researchers (theoretically) need to consider further whether consumers who live in the area, but when the research is in another area. Therefore, consumers can be asked whether they are available to fill out the questionnaire or not.
3. If practitioners such as electronic money issuers want to increase the sustainability of the use of electronic money, then safe, trust, and satisfaction points are needed that are suitable between electronic money issuers and consumers.
4. Practitioners such as electronic money issuers need to pay attention to the distribution of electronic money consumers, what they are used for, and feedback from consumers for electronic money.

Notes on Contributors

Annisa Puspitasari is a student from the Marketing Magister Management Program, Faculty of Business and Economics, Brawijaya University.

Nur Khusniyah Indrawati is a lecturer and researcher from the Faculty of Business and Economics, Brawijaya University. Her areas of expertise are small business finance, corporate budgeting, financial research, banking management, entrepreneurship, and business ethics.

Raditha Dwi Vata Hapsari is a lecturer and researcher from the Faculty of Business and Economics, Brawijaya University. Her areas of expertise are Entrepreneur marketing, business marketing management, and brand selling management.

References

- Al-Sharafi, M. A., Arshah, R. A., Abo-Shanab, E. A., dan Elayah, N. (2016). The effect of security and privacy perceptions on customers' trust to accept internet banking services: An extension of TAM. *Journal of Engineering and Applied sciences*, 11(3), 545-552.
- Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (M-Banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, 44, 38-52.
- Bank Indonesia. (2009). Peraturan Bank Indonesia Nomor: 11/12/PBI/2009 Tentang Uang Elektronik (Electronic Money). Retrieved from https://www.bi.go.id/elicensing/helps/PBI_111209-Emoney.pdf.
- Bank Indonesia. (2019). Siaran Pers: Pemerintah dan Bank Indonesia Sepakati 12 Program Sinergi Dorong Elektronifikasi Transaksi Pemerintah. Retrieved from https://www.bi.go.id/id/ruang-media/siaran-pers/Pages/SP_280519.aspx.
- Bank Indonesia. (2020). Sistem Pembayaran (Uang Elektronik). Retrieved from https://www.bi.go.id/id/peraturan/sistempembayaran/Pages/pbi_111209.aspx.
- Bank Indonesia. (2020). Sistem Pembayaran Informasi Perizinan Uang Elektronik. Retrieved from <https://www.bi.go.id/id/sistem-pembayaran/informasi-perizinan/uangelektronik/penyelenggara-berizin/Contents/Default.aspx>.
- Bhattacharjee, A. (2001). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision Support Systems*, 32 (2), 201-214.
- Casaló, L., Flavián, C., dan Guinalú, M. (2008). The role of perceived usability, reputation, satisfaction and consumer familiarity on the website loyalty formation process. *Comput. Human Behaviour*, 24, 325-345.
- Damghanian, H., Zarei, A., Kojuri, S., Ali, M. (2016). Impact of Perceived Security on Trust, Perceived Risk, and Acceptance of Online Banking in Iran. *Journal of Internet Commerce*, 15(3), 214-238.
- Geebren, A., Jabbar, A. dan Luo, M. (2021). Examining the role of consumer satisfaction within mobile eco-systems: Evidence from mobile banking services. *Computers in Human Behavior*, 114, 106584.
- Gul, R. (2014). The relationship between reputation, customer satisfaction, trust, and loyalty. *Journal of Public Administration and Governance*, 4(3), 368-387.
- Hair, J.F., Black, W. C., Babin, B. J., Anderson, R. E. (2019). *Multivariate Data Analysis*, Eighth Edition. Cengage. Hampshire, United Kingdom.
- Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling*. Sage. Thousand Oaks, CA.
- Jamshidi, D., Keshavarz, Y., Kazemi, F., & Mohammadian, M. (2018). Mobile banking behavior and flow experience: An integration of utilitarian features, hedonic features and trust. *International Journal of Social Economics*.
- Johnson, V. L., Kiser, A., Washington, R., dan Torres, R. (2018). Limitations to the rapid adoption of M-payment services: Understanding the impact of privacy risk on M-Payment services, *Computers in Human Behavior* 79: 111-122.
- Kar, A. K. (2020). What Affects Usage Satisfaction in Mobile Payments? Modeling User Generated Content to Develop the Digital Service Usage Satisfaction Model, *Information Systems Frontiers*, 1-21.
- Kotler, P., Armstrong, G., Harris, L. G., He, H. (2020). *Principles Of Marketing*, Global Edition 8th ed. Pearson Education Limited. Harlow.
- Lee, J. M. dan Kim, H. J. (2020). Determinants of adoption and continuance intentions toward Internet-

- only banks. *International Journal of Bank Marketing*, Vol. 38, No. 4 p. 843-865.
- Li, F., Lu, H., Hou, M., Cui, K., Darbandi, M. (2021). Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality. *Technology in Society*, 64, 101487.
- Li, Y. dan Shang, H. (2020). Service quality, perceived value, and citizens' continuous-use intention regarding e-government: Empirical evidence from China. *Information & Management*, 57(3), 103197.
- Lim, S. H., Kim D. J., Hur Y., dan Park K. (2018). An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous to Use Mobile Fintech Payment Services. *International Journal of Human-Computer Interaction*, 35(10), 886-898.
- Mahmud S. M. H., Kabir M. A., Salem O. A. M., dan Fernand K. N. G. (2016). The comparative analysis of online shopping information platform's security based on customer satisfaction. *International Conference on Computer Science and Network Technology (ICCSNT)*, p. 157-161.
- Mazuri, A.G., Samar, R., Norjaya, M.Y. dan Feras, M.A. (2017). Adoption of internet banking: extending the role of technology acceptance model (TAM) with E-Customer service and customer satisfaction. *World Applied Sciences Journal*, 35 (9).
- Nguyen, D. M., Chiu, Y. T. H., & Le, H. D. (2021). Determinants of Continuance Intention towards Banks' Chatbot Services in Vietnam: A Necessity for Sustainable Development. *Sustainability*, 13(14), 7625.
- Ooi, S. K., Ooi, C. A., Yeap, J. A., dan Goh, T. H. (2021). Embracing Bitcoin: users' perceived security and trust. *Quality & Quantity*, 55(4), 1219-1237.
- Park, J. H. (2014). The effects of personalization on user continuance in social networking sites. *Information Processing and Management*, 50 (3): 462-475.
- Poromatikul, C., De Maeyer, P., Leelapanyalert, K. dan Zaby, S. (2019). Drivers of continuance intention with mobile banking apps. *International Journal of Bank Marketing*, Vol. 38, No. 1 p. 242-262.
- Rabaa'i, A. A., dan AlMaati, S. (2021). Exploring the determinants of users' continuance intention to use mobile banking services in Kuwait: Extending the expectation-confirmation model. *Asia Pacific Journal of Information Systems*, 31(2): 141-184.
- Rahi, S. dan Ghani, M. A. (2019). Integration of expectation confirmation theory and self-determination theory in internet banking continuance intention. *Journal of Science and Technology Policy Management*, Vol. 10, No. 3 p. 533-550.
- Selim, N.I.I.B., Zailani, S., Aziz, A.A. dan Rahman, M.K. (2019). Halal logistic services, trust and satisfaction amongst Malaysian 3PL service providers. *Journal of Islamic Marketing*.
- Shao, Z., Zhang, L., Li, X., dan Guo, Y. (2019). Antecedents of Trust and Continuance Intention in Mobile Payment Platforms: The Moderating Effect of Gender. *Electronic Commerce Research*, Vol. 33, No. 100823.
- Susanto, A., Chang, Y. dan Ha, Y. (2016). Determinants of continuance intention to use the smartphone banking services: An extension to the expectation-confirmation model. *Industrial Management & Data Systems*, Vol. 116, No. 3 p. 508-525.
- Tenenhaus, M., Amato, S., & Esposito Vinzi, V. (2004). A global goodness-of-fit index for PLS structural equation modelling. *In Proceedings of the XLII SIS scientific meeting* (Vol. 1, No. 2, pp. 739-742).
- Tomalin, D. A., Ansons, T. L., Reich, T. C., Sakamoto, Y., Davie, R., Leboe-McGowan, J. P., dan Leboe-McGowan, L. C. (2014). Airport security measures

- and their influence on enplanement intentions: Responses from leisure travelers attending a Canadian University. *Journal of Air Transport Management*, 37: 60-68.
- Valdez, J. L. E., Gallardo, V. D., dan Ramos, E. E. A. (2021). Online buyers and open innovation: Security, experience, and satisfaction. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), p.37.
- Wu, D., Moody, G. D., Zhang, J., dan Lowry, P. B. (2020). Effects of the design of mobile security notifications and mobile app usability on users' security perceptions and continued use intention. *Information & Management*, 57 (5): 103235.
- Yoon, C. (2010). Antecedents of customer satisfaction with online banking in China: The effects of experience. *Computers in Human Behavior*, 26 (6): 1296-1304.
- Zhao, J. D., Huang, J. S., dan Su, S. (2019). The effects of trust on consumers' continuous purchase intentions in C2C social commerce: A trust transfer perspective. *Journal of Retailing and Consumer Services*, 50, 42-49.

