Jurnal Keuangan dan Perbankan, 22(2):335–349, 2018
http://jurnal.unmer.ac.id/index.php/jkdp

Alfalia Citra Ayudya (Indonesia), Amin Wibowo (Indonesia)

The Intention to Use E-Money using Theory of Planned Behavior and Locus of Control

Article history:
Received: 2017-11-21
Revised: 2018-03-01
Accepted: 2018-04-13

Alfalia Citra Ayudya[1], Amin Wibowo[2]

[1]Bank Indonesia Representative Office Special Region of Yogyakarta
Jl. Panembahan Senopati No.4-6, Yogyakarta, 55121
[2]Department of Management Faculty of Economics and Business Universitas Gadjah Mada
Jl. Sosio Humaniora No.1, Bulaksumur, Yogyakarta, 55281

✉ Corresponding Author:
Amin Wibowo:
Tel. +62 274 548 510
E-mail: aminwibowo@ugm.ac.id

Abstract

Along with technological developments in the payment system, the role of cash as a means of payment began to be replaced by a more efficient and economical form of non-cash payment such as electronic money. However, the use of electronic money in Indonesia has not increased, and the percentage of users of it is far behind compared with other countries. This study aims to apply Theory of Planned Behavior (TPB) with Locus of Control (LOC) as a moderating variable in the context of the use of electronic money. The community of DIY consisted of 1 municipality, and 4 districts were selected as the sample of this study. The results of this study indicate in general that the variable attitude to behavior as well as control of perceptive behavior have a positive effect on the intention of using electronic money while subjective norms are not proven to significantly affect the intention. However, especially for the respondents who live in the village, the subjective norm variable actually affects the intention of using the electronic money, while the variable control of perceptive behavior does not affect the intention. Locus of Control (LOC) is not proven to moderate the existing variables in Theory of Planned Behavior with the intention of using electronic money.

Keywords: Attitude; E-Money; Locus of Control; Perceived Behavioral Control; Subjective Norm; Theory of Planned Behavior

JEL Classification: D91; O33; P25

Citation: Ayudya, A. C., & Wibowo, A. (2018). The Intention to use e-money using theory of planned behavior and locus of control. *Jurnal Keuangan dan Perbankan,* 22(2), 335-349. https://doi.org/10.26905/jkdp.v22i2.1691.

Abstrak

Seiring dengan perkembangan teknologi dalam sistem pembayaran, peranan uang tunai sebagai alat pembayaran mulai digantikan oleh bentuk pembayaran non tunai yang lebih efisien dan ekonomis antara lain uang elektronik. Namun demikian penggunaan uang elektronik di Indonesia tidak kunjung mengalami peningkatan dan persentase penggunanya jauh tertinggal dibandingkan dengan negara lain. Penelitian ini bertujuan untuk menemukan faktor yang mempengaruhi niat menggunakan uang eletronik dengan dengan menggunakan pendekatan Theory of Planned Behavior (TPB) *dengan* Locus of Control (LOC) *sebagai variabel moderasi. Sampel penelitian ini dipilih masyarakat DIY yang tersebar di 1 kotamadya dan 4 kabupaten. Hasil dari penelitian ini menunjukkan secara umum bahwa variabel sikap terhadap perilaku serta kontrol perilaku persepsian berpengaruh positif terhadap niat menggunakan uang elektronik sedangkan norma subyektif tidak terbukti secara signifikan berpengaruh terhadap niat. Namun, khusus untuk responden yang tinggal di desa, variabel norma subyektif justru berpengaruh terhadap niat menggunakan uang elektronik, sementara variabel kontrol perilaku persepsian tidak berpengaruh terhadap niat.* Locus of Control (LOC) *tidak terbukti memoderasi variabel yang ada dalam* Theory of Planned Behavior (TPB) *pada niat menggunakan uang elektronik.*

Kata Kunci*: Sikap; Uang Elektronik;* Locus of Control*; Kontrol Perilaku Persepsian; Norma Subyektif;* Theory of Planned Behavior

ISSN: **2443-2687** (Online)
ISSN: **1410-8089** (Print)

The development of information technology along with the increasing degree of competition between banks has encouraged the banking and nonbank sectors to be more innovative in providing various non-cash payment service alternatives in the form of transfer and payment systems using electronic card payments which are safe, fast and efficient, and which are of a global nature (Santomero & Seater, 1996). In 1990, DigiCash introduced a payment tool called electronic money (e-money).

Electronic money has several advantages such as the practicality and ease in making transactions. The ease of such transactions can lead to lower transaction costs and in turn stimulate economic growth (Dias, 2001). Although electronic money is considered to have many advantages, Indonesia has not seen an increase in its use. According to Worldbank data in the Global Financial Inclusion Index (2015), the number of Indonesian adult residents who have accounts in the bank has only reached 36.1 percent and only 2.9 percent of transactions using electronic payments (Table 1). The value is of course very small when compared to the population of Indonesia. Thomas (2013) also states that the percentage of non-cash transactions (cheques and payments) in Indonesia is below 1 percent, while Singapore has reached 61 percent.

To encourage the use of non-cash transactions, Bank Indonesia and the government launched the Non-Cash National Movement (GNNT) on August 14, 2014. GNNT aims to increase public awareness of the use of non-cash instruments, thereby gradually encouraging more people to use them (Less Cash Society or LCS) in conducting transactions for their economic activities. In terms of efficiency, the movement is able to restrict the budget allocated each year for printing money.

Studies related to a cashless society and/or e-money in Indonesia has been conducted by some researchers, for example, Wulandari et al. (2016) and Trinugroho et al. (2017), but these studies have rarely examined why a person is or is not using e-money. Bearing in mind these phenomena, it is necessary to know what factors influence the intention of an individual to use electronic money. This study primarily uses the Theory of Planned Behavior model (TPB) which explains the most dominant variables affecting the intention to use the electronic money, and it also incorporates locus of control as a variable that allegedly moderates the relationship between independent variables and dependent variables.

According to TPB theory, a person's behavior can be predicted from intent, where intent can be predicted from attitudes toward behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). If we can find out reasons behind the behavior of people who use the electronic money, then policymakers, electronic money publishers, and traders can develop strategies to increase the use of electronic money. This theory is applied to study the behavior of electronic money usage by a society which can also be referred to as consumers of electronic money. This theory has also been widely used to predict consumer behavior, such as, among others, the behaviors related to credit card use (Ruth-

Table 1. Adult Financial Inclusion Data (Age over 15 years)

Description (population 15+)	Indonesia	Average Country in East Asia and Pacific	Average middle-income country	World country average
Have an account at the bank	36.1	69.0	42.7	61.5
Have an account at a bank with a village domicile	28.7	64.5	40.0	56.7
Use electronic payment instruments	2.9	11.8	3.1	16.7
Have a Mobile Account	0.4	0.4	2.5	2.0

erford & DeVaney, 2009), internet banking (Adityasto & Baridwan, 2012), mobile banking (Luarn & Lin, 2005), Sukuk (State Shariah Securities), investment (Warsame & Ireri, 2016), online shopping (Lin, 2007), and many more. This study aims to find the factors that influence the intention to use the electronic money by using the approach of TPB with LOC as a moderating variable.

HYPOTHESES DEVELOPMENT

TPB was developed from Theory of Reasoned Action (TRA) by adding a construct called Perceived Behavior Control (PBC). The addition of PBC is intended to explain intentions and behaviors that are not only influenced by the subjective attitudes and norms of a person but also influenced by the ease (or difficulty) that someone faces in engaging in the behavior (Ajzen, 2002). TPB is based on the assumption that humans are rational beings and use various relevant information systematically.

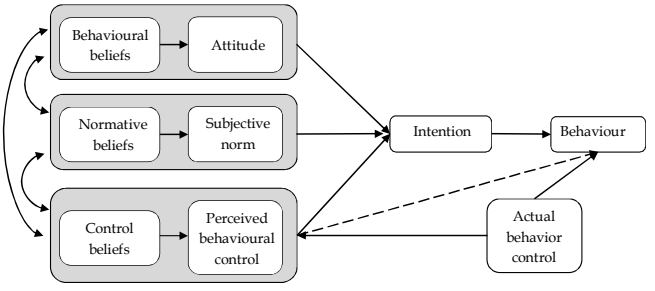

Figure 1. Theory of Planned Behavior

Figure 1 shows that the intention to engage in behavior according to the TPB model is caused by three independent variables. The first is the attitude towards the behavior by which a person judges whether something is beneficial or not beneficial. Second is the social factor called subjective norm which refers to the perceived social pressure to engage or not engage in an action. The third variable is the level of perceived behavioral control, which refers to the perception of the ease or difficulty in engaging in a behavior, and is assumed to reflect past experiences in anticipation of obstacles (Ajzen, 1991).

According to TPB, attitude is the first construct of behavioral intention which is defined as a person's general feeling about favorableness (positive attitude) or unfavorableness (negative attitude) to a behavior (Ajzen, 1991; Ajzen & Fishbein, 2005). Kotler & Armstrong (2012) state that an attitude makes a person have a tendency in his mind about likes or dislikes regarding an object or idea, so attitude can encourage someone to behave consistently concerning the object or idea. In terms of the use of electronic money, the more positive a person's attitude toward electronic money, the stronger the person's intention to use it, while the weaker the positive attitude of someone regarding electronic money, the less intention there is to use electronic money. By having the attitude that using electronic money is an easy thing, then the intention to use electronic money increases. Therefore, the hypothesis that can be proposed in this study is as follows:

H_1: attitudes about the use of electronic money have a positive effect on the intention to use electronic money

The subjective norm is the second construct in TPB which is interpreted as a person's perception of social pressure to engage or not engage in a behavior (Ajzen, 1988). One's perception of the social pressures of others who are important around them can affect intentions. If the important people who become role models have a positive attitude towards electronic money, then it is very likely that the person will make adjustments to the intention to use the electronic money, and vice versa. Therefore, it is suspected the greater the influence of subjective norms with regards to the use electronic money, the stronger the possibility one will use electronic money. The stronger the assumption that the majority of people who are important to him think that trading using electronic money is the right choice, and then the stronger the intention of the

person to use electronic money will be. In this regard, the research hypothesis that can be proposed in this study can be described thus:

H_2: subjective norms have a positive effect on the intention to use electronic money

In the TPB model, there is one determinant of intention that is not found, namely perceived behavior control. Ajzen (1988) includes the determinant of this perception control measure to predict behavioral intentions that are not under one's full control. Perceived behavioral control is the perception of the ease or difficulty in engaging in the behavior and is assumed to reflect experience and anticipation of obstacles.

The ability of a person to control his behavior will be greater, in line with the greater the resources and opportunities he has in order to anticipate the obstacles that occur (Ajzen, 1988). The greater the of one's perceived behavior control, the stronger one's will to engage in certain behaviors (Ajzen, 1988). In other words, the higher one's perceived behavior control by using the electronic money, the stronger will be the person's intention to use electronic money and vice versa. The stronger a person feels that using electronic money is easy, the stronger the intention to use electronic money. Therefore the hypothesis that can be proposed in this research is described as follows:

H_3: perceived behavior control positively affects the intention to use electronic money

The addition of LOC as a moderating variable in the TPB model is based on the opinion of Ajzen (1991) who argues that there are external factors that indirectly affect intentions. These factors are personality characteristics and situational factors. LOC is one variable of individual personality characteristics, so the LOC is suspected to have a role in influencing the intention to use electronic money.

LOC is defined as the degree to which the individuals believe that the results (i.e., events occurring in their lives) depend on their personal behavior or characteristics (Rotter, 1966). LOC is a person's self-control in terms of acting or not acting (Trevino, 1986). People who have a high internal locus of control believe that their behavior and actions are determined by events in their lives. Someone with an internal locus of control believes that they are in control of what happens to them. Conversely, a person possessing an external locus of control believes that chance, fate, and the other things determine what happens to them. A person with an external locus of control believes that what happens to them is controlled by outside forces such as good fortune, luck, and opportunity (Trevino, 1986). Based on the argument, the next three hypotheses are:

H_{4a}: the locus of control moderates the relationship between attitudes toward behavior towards the intention to use electronic money

H_{4b}: the locus of control moderates the relationship between subjective norms against the intention to use electronic money

H_{4c}: the locus of control moderates the relationship between the perceived behavior controls toward the intention to use electronic money

METHODS

The population of this study is the community of users of electronic money in Indonesia. The choice of the Special Region of Yogyakarta as the location takes into account the plurality of the people, the level of education, and the existence of towns and villages in accordance with the objectives of the study. The study was conducted between February and March 2017. The sampling was conducted using the convenience sampling method. The sample selection in this method is the people who are willing to fill out the questionnaire. This method has its limitations, which are the possibility of bias and the

difficulty in drawing a meaningful conclusion from the results obtained (Ferdinand, 2006). However, the advantage is the convenience of easily operated sampling.

The questionnaire for this research was distributed to the people of Special Region of Yogyakarta spread over 1 municipality and 4 districts. These were grouped in terms of domicile: residence away from the city center and residence close to the city center. Of the 300 questionnaires distributed, all were returned, but only 262 were completed, and 250 questionnaires could be used in data processing research. With a sample of 250 people, this study has met the required criteria for sampling (Hair et al., 2010). Prior to the dissemination, the questionnaires were first used in a pilot test to assess the reliability and validity of the questions. In addition to using a quantitative method, this study also uses an interview method conducted simultaneously at the time of filling out the questionnaires.

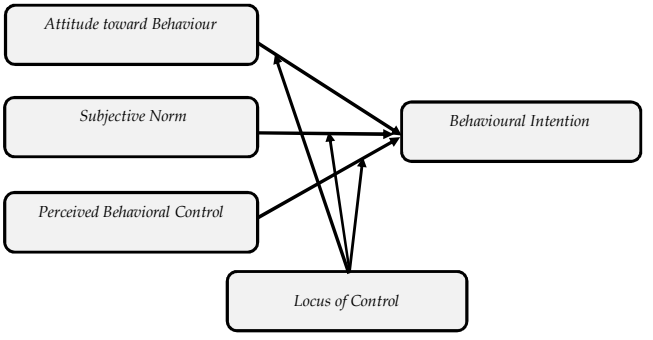

Figure 2. Research Conceptual Framework

In accordance with the theoretical basis that has been presented, the research design and hypothesis are presented in Figure 2.

The research instrument used in this study is a questionnaire developed from the Ajzen questionnaire (1991). The study used the Likert scale, ranging from 1 to 5, which is a scale interval that moves from the most desirable (favorable) to the least desirable (unfavorable). Examples of questions for the intention variable include: "I intend to use the electronic money" and "I think using electronic money is practical." Examples of questions for the attitude variable for the respondent are "Using electronic money is beneficial to me" and "I think using electronic money is trendy/keep up with the times." Examples of questions for the subjective norm variable are, "Most people who matter to me think that trading using electronic money is the right choice" and "Most people who matter to me want me to trade using electronic money." Examples of questions for the perceived behavior control variable are: "For me to use electronic money is easy" and "I have the knowledge to use the electronic money."

The measurement instrument used for the locus of control was developed from the internal-external locus of control scale developed by Spector (1988). With locus of control measurements, a higher score indicates an external locus of control and a lower score indicates an internal locus of control. Eight (8) internal locus of control questions were composed with reversed scores on questions 1, 2, 3, 4, 7, 11, 14, and 15. So the scores for these question should be reversed, which is necessary to assess the consistency of the respondents. An example question for this variable is "I think that many people are able to do their job well if they try earnestly" and "Getting the job I want is a matter of luck (good fortune)".

To determine the direction and extent of the influence of independent variables on dependent variables, multiple linear regression analysis is used. Regression with regard to the dependent variable is the intention to use the electronic money, and independent variables are attitudes toward behavior, subjective norms, and perceived behavior control. The regression equations are arranged as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

With these definitions,

Y : the intention to use electronic money;

X_1 : attitude towards electronic money usage behavior;

X_2 : subjective norms opposed to electronic money;

X_3 : perceived behavior control with regard to electronic money;

a : constant;

e : error;

$\beta_1 \beta_2 \beta_3$: regression coefficient of independent variables.

To find out whether the Theory of Planned Behavior in the use of electronic money is moderated by Locus f Control variables, we use the moderated regression analysis following the approach of Baron & Kenny (1986). If the independent variable is given X notation, the moderator variable is given Z notation, and the dependent variable is given Y, then the Y notation is re-directed to X, Z, and XZ. The moderator effect is indicated by a significant influence of XZ while X and Z are controlled. The moderated regression equation is as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = a + \beta_1 X_1 + \beta_4 X_4 + \beta_5 X_1 X_4 + e$$

$$Y = a + \beta_2 X_2 + \beta_4 X_4 + \beta_6 X_2 X_4 + e$$

$$Y = a + \beta_3 X_3 + \beta_4 X_4 + \beta_7 X_3 X_4 + e$$

With these definitions:

Y : the intention to use electronic money;

X1 : attitude towards electronic money usage behavior;

X2 : subjective norms as opposed to electronic money;

X3 : perceived behavior control with regard to electronic money;

X4 : locus of control;

e : error;

X_1X_4 : attitude interactive variable with regard to electronic money usage behavior and locus of control;

X_2X_4 : subjective interactive variable with regard to the use of electronic money and locus of control;

X_3X_4 : interactive variable of perceived behavior control with regard to the use of electronic money and locus of control

RESULTS

Validity and Reliability Tests

To be able to ensure that the questionnaire can measure a concept, its use as an instrument must be validated. Validity tests were performed using measurements from Keizer-Meyer-Oklin Measure of Sampling Adequacy (KMO), Bartlett's Test of Sphericity, and factor analysis. Factor analysis is a data reduction technique and is also used to determine whether items use the same construct. The decision-making value is if the KMO value is above 0.5 which means factor analysis can be used. The significance value from Bartlett's Test of Sphericity is less than 0.05 indicating that a variable corresponds to the structure of other variables within the factor. During factor analysis, factors with less than one eigenvalue will be rejected, and factors with more than one eigenvalue will be maintained for further analysis. The value of factor loadings indicates the extent of the correlation between a question indicator and its variables. The reliability of measurement indicates the extent to which such measurements can be made without bias (error free) and therefore ensures consistent measurements across time and diverse questions in the instrument. The method for measuring the reliability of the instrument is to use Cronbach's Alpha (α). A construct is said or a reliable variable if it gives a Cronbach Alpha value > 0.60.

In the process of measurement, some research questions were considered not to have met the validity and reliability test criteria as seen in the results in Table 2.

Table 2 shows that all validity and reliability criteria are met, so further analysis of the collected data can be performed.

Descriptive Data

Table 3 shows that, of the 250 questionnaires that could be processed, male respondents are more numerous than female respondents. The majority of respondents were aged 21-30 years, followed by respondents aged 31-40 years, and a small proportion was aged less than 20 years. Bachelor degree-educated respondents dominate the sample, and very few respondents have an only elementary education. As for the respondents' domicile, the sample was balanced between urban and rural dwellers. Among the 250 respondents, there is a balance between the number who have used electronic money and those who have never used electronic money.

Table 3 shows that there is a greater intention to use electronic money among male respondents than women. In terms of age, the respondents with the greatest intent to use electronic money were between the ages of 21 and 30, a group known as Generation Y which is very familiar with social media and easily affected by technological developments, which are characteristics that decrease in the higher age groups. As for the respondents' level of education, it appears that the higher the level of education, the higher the intention to use electronic money.

Meanwhile, with regard to domicile groups, those living close to the city center have greater intention to use electronic money than those living away from the city center or in rural areas. Of the 250 respondents, 127 (50.80 percent) had used the electronic money, and 123 (49.20 percent) had never used electronic money. The majority of respondents (94 people or 37.60 percent) knew about electronic money from print and electronic media, and 42 respondents (16.80 percent) did not know about electronic money. The data obtained also shows that not everyone who knew about electronic money had used it, because only 42 people did not know about electronic money, while 123 people had never made a transaction using electronic money.

The results of the processed primary data descriptive statistics (Table 4) show that the dependent variable of intention correlates positively and significantly with all independent variables, and does not correlate positively and significantly with the locus of the control variable. The variable of attitude to the use of electronic money correlates positively and significantly with the subjective norm variable and the perceived behavior control variable and does not correlate with the locus of the control variable. The subjective norm variable is positively and significantly correlated with perceived behavior control and is not correlated with the locus of control. The perceived behavior con-

Table 2. Validity and Reliability Test Results

Variable	Validity				Reliability	
	Keiser-Meyer-Oklin Measure of Sampling Adequacy	Critical Value	Bartlett's Test of Sphericity	Critical Value	α value	Critical value
Intention to use E-Money	0.746	>0.50	0.000	<0.05	0.903	>0.60
Attitudes toward behavior	0.834	>0.50	0.000	<0.05	0.885	>0.60
Subjective norm	0.610	>0.50	0.000	<0.05	0.709	>0.60
Perceived Behavior Control	0.710	>0.50	0.000	<0.05	0.802	>0.60
Locus of Control	0.851	>0.50	0.000	<0.05	0.768	>0.60

trol variable is negatively correlated and significant with the locus of control.

Multiple Linear Regression Analysis

According to the joint calculation of the effect of attitudes on the use of electronic money, subjective norms regarding electronic money and the control of perceptions of electronic money simultaneously affect the intention to use electronic money. This shows that attitudes toward the use of electronic money behavior, subjective norms against electronic money and the perceived behavior control with regard to electronic money together affect the intention to use electronic money.

Table 3. Data Description of Respondent

Description	Number	%	Mean Intention	Mean Attitudes toward Behavior	Mean Subjective Norm	Mean Perceive Behavior Control
Gender						
• Male	155	62.00	3.67	3.76	3.57	3.65
• Female	95	38.00	3.54	3.54	3.41	3.59
Age						
• < 20 year	12	4.80	3.33	3.62	3.22	3.31
• 21-30 year	91	36.40	3.66	3.70	3.45	3.73
• 31-40 year	83	33.20	3.65	3.68	3.53	3.80
• 40-50 year	37	14.80	3.64	3.63	3.58	3.30
• > 50 year	27	10.80	3.51	3.69	3.67	3.35
Education Level						
• Elementary	5	2.00	3.27	3.56	3.93	3.07
• Junior HS	13	5.20	3.56	3.57	3.62	3.36
• Senior HS	88	35.20	3.64	3.72	3.57	3.55
• Diploma	24	9.60	3.49	3.51	3.39	3.50
• Bachelor	110	44.00	3.67	3.71	3.46	3.76
• Postgraduate	10	4.00	3.47	3.54	3.50	3.80
Domicile						
• City/close to downtown	125	50.00	3.80	3.81	3.58	3.87
• Village/away from downtown	125	50.00	3.45	3.55	3.45	3.39

Table 4. Statistic Descriptive

Variable	Mean	SD	Correlation Coefficient							
			1	2	3	4	5	6	7	8
Age	2.9040#	2.9040	1							
Education	4.0040#	1.1599	-.221**	1						
Domicile	1.5000#	0.0501	.271**	-.404**	1					
Intention	3.6211	0.7107	-.011	.038	-.248**	1				
Attitudes	3.6452	0.6558	0.033	-.024	-.145*	.635**	1			
Subjective Norm	3.5104	0.6668	.130*	-.103	-.098	.523**	.694**	1		
PBC	3.6294	0.7025	-.157*	.197**	-.342**	.534**	.634**	.532**	1	
LOC	2.4821	0.4485	.245**	-.254**	.249**	-.095	-.037	.090	-.141*	1

Note:
PBC= perceived behavior control; LOC= locus of control
** = significant at < 0.01; * = significant at < 0.05
#= measurements of age, education, and domicile variables use a nominal scale that is intended to distinguish only

The partial test (t-test) provided the results displayed in Table 5. The analysis shows that: (1) one of the three control variables (i.e., domicile) has a significant effect on the intention to engage in the behavior (Model 1); (2) attitudes toward behavior and perceived behavior control proved to have a significantly positive effect on intention while subjective norms were not proven to positively affect intentions significantly (Model 2). Thus hypothesis 1 and hypothesis 2 are supported by the data, while hypothesis 3 is not supported by the data.

Table 5. Regression Results

Variable	Model 1	Model 2
Age	0.053	0.015
Education	-0.068	-0.021
Domicile	-0.290**	-0.133
Attitudes		0.428**
Subjective Norm		0.125
Perceived Behavior Control		0.157*
R^2	0.069	0.453
ΔR^2	0.069	0.384**
F-Value	6.068**	56.941**

Note: ** =significant at < 0.01; * =significant at < 0.05**Partial Moderation Test**

The results of the partial calculation of the moderation effect of the LOC variable on the intention to use electronic money are presented in Tables 6, 7, and 8. The calculation results show that the LOC variable does not moderate the effect of attitudes on the intention to use electronic money (Table 6).

The calculation results show that the LOC variable does not moderate the influence of the subjective norm on the intention to use electronic money (Table 7).

The calculation results show that the LOC variable does not moderate the influence of perceived behavior control on the intention to use electronic money (Table 8).

DISCUSSION

According to the hypothesis test, the intention to use electronic money is known to be influenced by attitude and perceived behavior control, but it is not proven to be significantly influenced by

Table 6. LOC Moderation Test on Relationship Attitudes and Intentions

Variable	Model 1	Model 2	Model 3
Attitudes	0.635**	0.632**	0.676*
Locus of Control		-0.071	-0028
Attitudes x Locus of Control			-0.062
R^2	0.403	0.408	0.408
ΔR^2	0.403**	0.005	0.000
F-Value	167.419**	85.106**	56.526**

Note: ** = significant at < 0.01; * = significant at < 0.05

Table 7. LOC Moderation Test on Relationship Subjective Norm and Intention

Variable	Model 1	Model 2	Model 3
Subjective Norm	0.523**	0.536**	0.541*
Locus of Control		-0.143	-0.138
Subjective Norm x Locus of Control			-0.008
R^2	0.273	0.294	0.294
ΔR^2	0.273**	0.020**	0.000
F-Value	93.395**	51.445**	34.158**

Note: ** = significant at < 0.01; * = significant at < 0.05

subjective norms. In general, this suggests that the intention to use electronic money is more influenced by internal factors in individuals (attitudes toward behavior and perceived behavior control) and not from factors external to the individual (subjective norms). The results of this study are in accordance with previous research conducted by Khatimah & Halim (2016) which states that the attitudes positively affect the intention to use the mobile electronic money. This study is also in accordance with the results of research by Shih & Fang (2004) which states that attitudes affect the intention to use internet banking. The results of this study showed that the attitude of a person towards the behavior (using the electronic money) has a positive effect on the intention to use electronic money.

The results of this study are in accordance with research by Ramayah (2007) which states that perceived behavior control has a positive and significant influence on the intention to conduct online trading and also supports the research of Warsame & Ireri (2016) which states that perceived behavior control has a positive and significant influence on the intention to decide to invest in Sukuk (State Sharia Securities). However, this study is not in line with the research conducted by Aboelmaged & Gebba (2013) which states that perceived behavior control has no effect on the intention to adopt mobile banking and the research of Shih & Fang (2004) which states that perceived behavior control does not significantly affect the intention to use internet banking.

The results of this study are not in accordance with the research of Aboelmaged & Gebba (2013) which states that subjective norms affect the intention to adopt mobile banking, but this study does support the research Shih & Fang (2004) which states that subjective norms do not significantly affect the intention to use internet banking, or Lin's research (2007) which states that subjective norms do not significantly positively affect the intention to engage in online shopping. The results of this study indicate that the views and opinions of important people around the respondents, which can also be referred

Table 8. LOC Moderation Test on Relationship Perceived Behavior Control and Intention

Variable	Model 1	Model 2	Model 3
Perceived Behavior Control (PBC)	0.534**	0.531**	0.256
Locus of Control		-0.020	-0.275
PBC x Locus of Control			0.351
R^2	0.285	0.286	0.288
ΔR^2	0.286**	0.000	0.002
F-Value	99.052**	49.428**	33.186**

Note: ** = significant at < 0.01; * = significant at < 0.05

Table 9. Regression Result City vs Village

Description	City Domicile			Village Domicile		
Dependent Variable: Intention	β	t	Sig.	β	t	Sig.
Attitude	0.397**	3.779	0.000	0.488**	4.573	0.000
Subjective Norm	0.014	0.148	0.882	0.217*	2.200	0.030
Perceived Behavior Control	0.212*	2.340	0.021	0.058	0.646	0.519

Note: ** = significant at < 0.01; * = significant at < 0.05

to as social pressure, regarding the use of electronic money do not significantly affect a person's intentions to use it. This is understandable since not all people know about electronic money, so respondents do not feel that the important people around them encourage the use of electronic money.

The results of testing of the hypotheses are consistent with previous research showing that attitude variables in TPB are consistently related to intentions in various empirical studies, whereas subjective norms often fail to predict intentions in a lot of the consumer research that has been conducted (Shih & Fang, 2004; Jezewska-Zychowicz & Pilska, 2006; Lin, 2007).

Meanwhile, the locus of control does not moderate any relationship between attitude variables, subjective norms and perceived behavior controls and the intent to use electronic money. The results of this study are not fully in accordance with the research by Respati (2011) which states that the LOC strengthens the influence of subjective attitudes and norms on managers regarding their intention to cheat in the presentation of financial reports. These findings also do not support the opinion of Ajzen (1991) which states that the LOC is an external variable that can directly or indirectly influence the relationship between attitudes toward behavior, subjective norms, and perceived behavior control. The existence of a LOC which is an aspect of belief within a person is not proven to affect attitudes toward behavior, subjective norms, and perceived behavioral controls regarding the use of electronic money.

Additional Analysis of the Domicile Variable (Urban v Village)

From the regression analysis of control variables to the dependent variable, it can be seen that the domicile variable significantly influences the behavioral variable of intention to use electronic money. Additional tests were conducted on respondents who live close to the city center and away from the city center and these obtained different regression results. The results of the tests are presented in Table 9, and they show that for respondents who live in the city, attitude and perceived behavioral control have a positive and significant influence on the intention to use electronic money. Meanwhile, subjective norms do not significantly influence the intention to use electronic money. The test results are similar to the main test results from this study. Meanwhile, for respondents who live in rural areas, variable attitude and subjective norms have a positive and significant effect on the intention to use electronic money. Meanwhile, the variable of perceived behavioral control does not significantly influence the intention to use electronic money.

The results of the study with the respondents in the rural areas and the urban areas resulted in different findings. The subjective norm variable actually has a significant effect on the intention to engage in the behavior (using the electronic money), while the perceived behavior control does not significantly influence the intention to engage in the behavior. Researchers have concluded that the sociology of urban and rural areas are different. Consequently, a different approach is needed if the program to increase the use of electronic money will continue to be applied.

A positive attitude toward the behavior creates confidence and a belief that this action is not a bad thing, but instead, quite the contrary (Dalton, 2010). The use of electronic money, the ease of its use, the low risk, and how it is a trend in modern life, convince respondents that the use of electronic money is something positive.

The subjective norm is operationalized as the individual's perception of what the "other important people" think about what the individual should do with respect to a particular behavior. If the important people who become role models have a positive attitude toward electronic money, then it is very likely that the person will make adjustments to their

intention to use the electronic money, and vice versa. For the urban communities, this variable does not significantly affect the intention to use electronic money, and this may be because, for them to behave in a certain way does not depend on others, or they do not consider what others think when they do certain behaviors, as they are more assertive, and interact more based on economic interests rather than personal factors. But this is not the case for rural communities who have close and deep relationships and consider the role model to influence their behavior.

The variable of perceived behavior control or beliefs related to the ease of engaging in the behavior (using the electronic money). This belief is usually obtained based on information from others or experiences when performing similar behaviors. The more information is obtained, the stronger individual beliefs about this control are (Ajzen, 1991). The significant influence of this variable on the intention for the urban respondents is in line with the Gopi & Ramayah (2007) study which stated that the perceived behavioral control had a positive and significant impact on the intention to trade online and also supported Warsame & Ireri's (2016) research which stated that perceived behavioral control has a positive and significant influence on the intention of deciding to invest in *Sukuk* (State Sharia Securities). For urban communities, it is easy and simple to use electronic money because the information, experience and the environment provide easy facilities for the repeated use of electronic money when they engage in transactions. This is in accordance with the study by Trinugroho et al. (2017) which states that people's readiness to use electronic money is influenced by the availability of infrastructure, education level, and income level.

For rural communities unfamiliar with the advances in electronic money technology, the opposite result is found and this is in accordance with the study by Aboelmaged & Gebba (2013) which suggest that perceived behavioral control has no effect on the intentions of adopting mobile banking and the research of Shih & Fang (2004) which states that the perceived behavior control does not significantly affect the intention to use internet banking. Those who live in rural areas do not have enough information and experience, so perceiving the use of electronic money is not something easy and simple.

According to Ajzen (2011), strategies to change behavior can be conducted with individual approaches, such as through counseling or therapy sessions, or group approaches through campaigns through mass media or public service advertisements. Of course, the greater the scope to be achieved the greater the cost that is incurred. When viewed in terms of the descriptive analysis, not everyone knows about electronic money, because of the 250 respondents there were 42 people who still did not know about it, and from 250 respondents who researched there were 123 people who have still never made a transaction using electronic money. This shows that facilities that do not support the conducting of transactions using electronic money were encountered in this study.

Through interviews with some respondents, it was found that the reluctance to use electronic money was triggered by the number of electronic money cards that must be owned to conduct transactions: for example, to make a transaction on the toll road, only cards from Bank Mandiri from used; to make a transaction in Trans Studio, a card from Bank Mega is used, and so on. So the public must have many cards to conduct transactions. The same complaint is also made by the merchants who must provide a lot of different electronic money reader machines which is, of course, inefficient. It is expected that the government's plan to establish the National Payment Gateway (NPG) that will combine the electronic money payment system in one platform will be one solution to the problem.

For the practical implications and policies to raise awareness that using electronic money is better and more efficient than using cash, it is neces-

sary to continue educating people and disseminating information. Education also needs to be provided from an early age, for example, inserted in the curriculum of primary and secondary schools. In addition to the government, education must also be provided by the agents of e-commerce, operators, and financial companies to increase the intention to use electronic money in Indonesia.

In addition, the government's breakthrough in providing social assistance in non-cash forms like food aid is also expected to be a tool to introduce electronic money. Distribution of assistance in non-cash form through electronic accounts in media combo cards (which can be used for electronic money and also used as debit cards) called Prosperous Family Card (KKS) is expected to introduce electronic money and other banking services to the beneficiary communities which are less capable and unbanked.

Another thing that can be done is to force people to use electronic money. This requires courage on the part of local leaders (mayors, district heads, and governors) to establish areas with non-cash facilities that force visitors or users to use the electronic money, such as tourist areas, transportation facilities as is already the case with Trans-Jakarta. It should be recognized that this is the most effective way of increasing the use of electronic money.

In addition to these matters, it is necessary to formulate a roadmap for the development of electronic money mutually agreed between policymakers, in this case Bank Indonesia (BI) as the policymaker for the payment system, the Financial Services Authority (OJK) as the policy maker of banking and finance industry, as well as government at both the central and regional levels. This roadmap should consider the carrying capacity of infrastructure, supporting facilities, and community readiness to accept electronic money.

The results of separate tests on the respondents with different domiciles obtained different results; this indicates that the ways to improve the intention to use electronic money among people living close to the center of the city should be different from the ways used with people living far from city center. In a community domiciled far from the city center, the strategy undertaken, in addition to improving the positive attitude toward electronic money, is to conduct electronic money campaigns so that the prevailing norm becomes one who sees the of use electronic money as being a good and positive thing. Subjective norms are a part of social factors; the term refers to the perceived social pressure to perform or not to perform an action. Influential figures in rural areas put pressure on rural communities to behave in certain ways, therefore communication with and dissemination of information to people who are considered influential figures or role models will have a lot of influence on villagers with regard to the use of electronic money.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the results that have been described previously, it can be concluded that attitudes toward behaviour with regard to electronic money and the perceived behavioural control with regard to electronic money have a positive effect on the intention to use electronic money, meaning that the higher the attitude toward the use of electronic money and the perceived behavioural control, the greater the intention to use electronic money. Subjective norms are not proven to significantly influence the intentions of urban communities to use the electronic money, but they do have a significant effect on rural communities. LOC is not proven to significantly moderate attitudes toward behavior, subjective norms and perceived behavioral control over the intention to use electronic money.

Suggestions

According to the results of the research, if the numbers of people engaging in the cashless society

is to continue increasing, the variables that influence the intention to use electronic money, namely attitudes and perceived behavioral control (for urban communities), and subjective attitudes and norms (in village communities) need to be improved. In addition, policymakers can formulate strategies to increase the use of electronic money including, among others, realizing the government's plan to establish the National Payment Gateway (NPG) which will combine an electronic money payment system in one platform and is expected to be one solution to the problem of the amount of electronic money that must be owned by the community. The second suggestion is that information is disseminated starting from an early age for example inserted in the curriculum of primary and secondary education. In addition to the government, education must also be provided by the agents of e-commerce, operators, and financial companies to increase the intention to use electronic money in Indonesia. The third suggestion is that the government needs to make breakthroughs in terms of providing social assistance and other top down funds in a non-cash form; this is expected to be a tool to expose people to electronic money especially, especially the underprivileged and unbanked. The fourth suggestion is forcing people to use the electronic money by setting up an area with non-cash facilities that then forces visitors or users to use the electronic money, such as tourist areas, or with transport facilities like what has already been done by Trans-Jakarta. This can be done by the local government and to do so require courage and willingness on the part of regional leaders. The fifth suggestion is to use a different strategy for people who live far from the city centers, because in this group it is not proved that perceived behavioral control (PBC) significantly affects intention, whereas subjective norms actually influence intention significantly. The strategy that must be carried out for these community groups, in addition to improving the positive attitude toward electronic money, is to conduct a campaign to shape a norm that is accepted by the general public that electronic money is better than cash. The sixth suggestion, subsequent research can expand the coverage of Java and outside Java respondents to get a complete picture of the intention of using the electronic money, as well as complement the study with qualitative studies to deepen the more specific reasons for the intention of using electronic money.

REFERENCES

Aboelmaged, M. G., & Gebba, T. R. (2013). Mobile banking adoption/ : An examination of technology acceptance model and theory of planned behavior. *International Journal of Business Research and Development*, *2*(1), 35–50.

Adityasto, E., & Baridwan, Z. (2012). Minat perilaku dalam pengadopsian internet banking: Theory decomposed of TPB. *Jurnal Ilmiah Mahasiswa FEB*, *1*(2).

Ajzen, I. (1988). *Attitudes, Personality, and Behavior*. Milton Keynes: Open University Press.

Ajzen, I. (2011). Behavioral interventions - Design and evaluation guided by the theory of planned behavior. *Social psychology for program and policy evaluation*, 74–100.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179–211.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1. *Journal of Applied Social Psychology*, *32*(March), 1–20.

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. *The Handbook of Attitudes*, 173–221.

Bank Indonesia. (2006). *Operasional e-money* [online]. Retrieved from: http.//www.bi.go.id/id/publikasi/sistem-pembayaran/riset/Documents/4a79ad4a8dbe4ebca2c0f86a5a2f1c69KajianEMoney.pdf. October 10, 2016.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social the moderator-mediator variable

distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182.

Dalton, D. W. (2010). *A More Comprehensive Whistleblower Model: An Expansion of the Schultz et al. (1993) Model*. Texas: Texas Tech University.

Dias, J. (2001). *Digital Money: Review of Literature and Simulation of Welfare Improvement of This Technological Advance*. State University of Maringa.

Ferdinand, A. (2006). *Metode Penelitian Manajemen*. Semarang: Universitas Diponegoro Press.

Gopi, M., & Ramayah, T. (2007). Applicability of theory of planned behavior in predicting intention to trade online: Some evidence from a developing country. *International Journal of Emerging Markets*, *2*(4), 348–360.

Hair, J. F., Wolfinbarger, M., Bush, R. P., & Ortinau, D. J. (2010). *Essentials Marketing Research*. New York: McGraw-Hill Education.

Jezewska-Zychowicz, M., & Pilska, M. 2006. Psychosocial determinants of using vitamin and mineral supplements among students. *Polish Journal of Food and Nutrition Sciences*, *15*(2), 167.

Khatimah, H., & Halim, F. (2016). The effect of attitude and its decomposed: Perceived behavioral control and its decomposed and awareness on intention to use e-money mobile in Indonesia. *Journal of Scientific Research and Development*, *3*(1), 39-50.

Kotler, P., & Armstrong, G. (2012). *Principles of Marketing*. New York: Pearson Prentice Hall.

Lin, H. -F. (2007). Predicting consumer intentions to shop online: An empirical test of competing theories. *Electronic Commerce Research and Applications*, *6*(4), 433–442.

Luarn, P., & Lin, H. -H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in human behavior*, *21*(6), 873–891.

Ramayah, M. G. T. (2007). Applicability of the theory of planned behavior in predicting intention to trade online. *International Journal of Emerging Market*, *2*(4), 348-360.

Respati, N. W. T. (2011). Pengaruh locus of control terhadap hubungan sikap manajer, norma-norma subyektif, kendali perilaku persepsian, dan intensi manajer dalam melakukan kecurangan penyajian keuangan. *Jurnal Akuntansi dan Keuangan Indonesia, 8* (2), 123-140.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied*, *80*(1).

Rutherford, L., & DeVaney, S. A. (2009). Utilizing the theory of planned behavior to understand convenience use of credit cards. *Journal of Financial Counseling and Planning*, *20*(2), 48–63.

Santomero, A. M., & Seater, J. J. (1996). Alternative monies and the demand for media of exchange. *Journal of Money, Credit, and Banking*, *28*(4), 942–960.

Shih, Y. -Y., & Fang, K. (2004). The use of a decomposed theory of planned behavior to study Internet banking in Taiwan. *Internet research*, *14*(3), 213–223.

Spector, P. E. (1988). Development of work locus of control scale. *Journal of Occupational Psychology, 61*, 335-340.

Thomas, H. (2013). Measuring progress toward a cashless society. *Mastercard Advisor Analysis, 1*(1-5).

Trevino, L. K. (1986). Ethical decision making in organizations: A person-situation interactionist model. *Academy of Management Review*, *11*(3), 601–617.

Trinugroho, I., Sawitri, H. S. R., Toro, M. J. S., Khoiriyah, S., & Santoso, A. B. (2017). How ready are people for cashless society? *Jurnal Keuangan dan Perbankan*, *21*(1), 105-112.

Warsame, M. H., & Ireri, E. M. (2016). Does the theory of planned behavior (TPB) matter in Sukuk investment decisions? *Journal of Behavioral and Experimental Finance*, *12*, 93–100.

World Bank. (2015). *Global financial inclusion index database*. Retrieved from: http://microdata.worldbank.org/index.php/catalog/global-findex/about. December 30, 2017.

Wulandari, D., Soseco, T., & Narmaditya, B. S. (2016). Analysis of the use of electronic money in efforts to support the less cash society. *International Finance and Banking, 3*(1).