

# Consumer Intention to Adopt E-Money

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## ABSTRACT

The focus of the study was to examine: (1) the effect of performance expectations on e-money behavioral intention; (2) the impact of expectation effort on e-money behavioral intention; (3) the influence of social influence on e-money behavioral intention, and (4) the effect of facilitating condition on e-money behavioral intention. Descriptive quantitative research was used in this research. The population in the research setting was residents of Padang who have used e-money before. The sample was taken by using purposive sampling method. The number of sample was 223 people. Data was obtained through distributing online and offline questionnaires to people in Padang City. The analytical method used is quantitative descriptive analysis through internal models and external models. The findings revealed that performance expectancy, facilitating conditions, and effort expectancy have a significant and positive effect on e-money behavioral intentions and social influence have a positive and insignificant effect on e-money behavioral intention.

**Keywords:** Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, E-Money.

## 1. INTRODUCTION

Currently, the development of technology has grown rapidly. Characterized by technological developments in various fields, the marketing field which develops technology in the payment system. The payment system is carried out using cash, but along with the development of technology the payment system can be done in a non-cash manner. This technological development will increase competition between companies engaged in payment.

Based on Bank Indonesia Regulation No. 11/12 /PBI /2009 regarding e-money, there are three categories of payment instruments based on the tools used for transactions, namely: 1) paper based, 2) card based, 3) Electronic based. Based on the instruments above, the central topic or content at this time is an electronic-based payment instrument or commonly known as e-money. The existence of banks and enterprises that participate in the e-money system, including from the banking side, Bank Central Asia (BCA), Bank Mandiri, Bank Negara Indonesia (BNI), Bank National Nobu (NOBU), Bank Rakyat Indonesia (BRI), and Bank Mega, demonstrates the rapid development of e-money. However, the rapid

development of the e-money system is not the same as the increasing number of users. Data from Bank Indonesia, until 2020 there were 41 e-money providers.

From Bank Indonesia data, it shows that there are a lot of electronic payment instruments developing in Indonesia, including in the city of Padang. The data also shows the number of issuers engaged in electronic payments, which means offers from electronic money systems because the increasing demand for electronic money has implications for the use of electronic money. The more companies that offer e-money systems, it will also provide a lot for prospective and e-money users.

With the presence of an electronic transaction system, it can provide good benefits to the community by reducing cash growth, and can create a trend in society to reduce cash payment transactions, which is called the trend of less cash society in making payment transactions.

This means that practically, e-money has many benefits, including saving time, effort, and storage space. So if, people have used e-money they don't need to carry cash in cash and waiting for the return of shopping money doesn't take a long time. Users can also feel safe using e-money, because they avoid mistakes or negligence in transactions.

Previously, several researchers had used the UTAUT model in their research. Abrahao et al. [1] who applied the UTAUT model to determine interest in use of e-payments, found that effort expectancy (EE), performance expectancy (PE), and social influence (SI) had a positive influence on behavioral intention (BI) of e-payment. Applied the UTAUT model to mobile banking found that in addition to effort expectancy, performance expectancy, and social influences that influence a person's interest in use, facilitating conditions can also influence behavioral intention[2].

## **2. LITERATURE REVIEW**

### **2.1. E-Money**

There are several types of money in circulation, namely: Commodity Money, Token Money, Standard Money, Fiat Money, Fractional Money, Receipt Money, Paper Money, Coins & Coinage, Fiduciary Money, Commercial Bank Money, and Electronic Money (E-money)[3]. According to Bank Indonesia Regulation Number: 20 / PBI / 2018 E-money, issued based on the value of money previously deposited by the holder and electronically in a medium such as a server or chip.

According to Rahmiati et al. [4], e-money is a means of payment that uses electronic media, namely computer networks and also the internet or money packaged into the digital world. In Indonesia, e-money was introduced between 2007 a to 2009 and classified into server and chip-based [5]. The e-money innovation has become a much easier business transaction as a result of new technology which has a strong impact on business activities [6].

### **2.2. Unified Theory Acceptance and Use of Technology (UTAUT)**

Unified Theory Acceptance and Use of Technology (UTAUT) is known as a technology acceptance model (TAM) developed[7]. The UTAUT model itself is compiled based on previous technology acceptance models such as “the Theory of Reason Action (TRA) model, Motivation Model (MM), Theory Acceptance Model (TAM), Theory of Planned Behavioral (TPB), Combined TAM & TPB, Model of PC Utilization (MPTU), Innovation Diffusion Theory (IDT) and Social Cognitive Technique (SCT) to obtain a unified view of the acceptance of the latest technology [7]”.

UTAUT has proven to be more successful than other theories in explaining up to 70 percent of variant intention [7]. This model is compiled and used to conduct research on the behavioral of technology users and technology acceptance models.

### **2.3. Antecedents of Behavioral Intention**

Four elements directly influence UTAUT, namely: performance expectations, effort expectations, social influences, and facilitating situations [7]. They are effort expectancy (EE), performance expectancy (PE), social influence (SI), and facilitating conditions (FC). Performance expectancy (PE) is described as a person's belief that employing a system will help them achieve better results at work [7]. Performance expectancy are the most powerful factor in influencing the use of technology or information systems [7]. Therefore, it is expected that performance expectations have a positive effect on behavioral intentions. Previous studies have proven that performance expectations have a significant effect [1], [5], [7], [11].

The level of convenience of consumers when utilizing e-payment digital systems in online transactions on e-commerce sites is referred to as effort expectation. It also related to systems that are easy to understand and use without particular expertise [7]. Effort expectancy is the right factor to predict interest in using new technology [10]

The effect felt by other influential people that encourages consumers to adopt electronic money in transactions is referred to as social influence. Other people who are important are meant for families, couples and organizations [7]. Environmental effects, such as volunteers, as well as other contexts between individuals or influence on organizations, all play a role in social influence. [12].

Facilitating conditions is the level individuals believe that an organization and infrastructural support in the use of system [7]. This construct also refers to an individual's perception of resources and support for a behavioral [9]. The relationship between facilitating conditions and behavioral intention, the researchers conducted research and found that facilitating conditions had a direct effect on behavioral intention [13].

Based the theoretical discussion above, the following assumptions were purposed:

- H1: Performance expectancy (PE) has significant effect to behavioral intention (BI).
- H2: Effort expectancy (EE) has significant influence to behavioral intention (BI).
- H3: Social influence (EE) has significant influence to behavioral intention.
- H4: Facilitating conditions (FC) has significant effect to behavioral intention (BI).

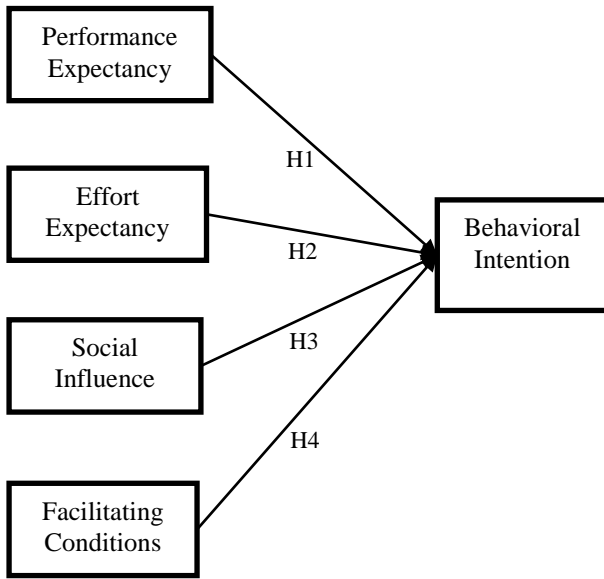


Figure 1. Proposed Research Model

### 3. METHOD

The research was carried out in Padang City, West Sumatra Province. Participants of this survey who have used e-money. The number of samples was 223 respondents. Data collection was carried out by online and offline surveys. A survey instrument was designed based on previously relevant research to test the concept indicated in Figure 1. The item for the UTAUT construction was selected from Venkatesh [7]. Individual responses were measured using a 5-point Likert scale ranging from "strongly disagree" to "strongly agree."

Variance-based Structural Equation Modeling (VB-

SEM) was used to test the research model. The method chosen to estimate SEM is partial least squares (PLS) and the Smart PLS 3.0 software is used to evaluate the proposed research model. Two stages of assessment were applied in this study, measurement and structural modeling.

The first step, the assessment of reflective measurement model verifies the reliability of the reflective internal consistency of constructs through the reliability of the composite and Cronbach alpha, which should have a value greater than 0.7 [14]. For testing convergent validity, the analysis was carried out using the mean variance extract (AVE), with a minimum value of 0.5. Finally, discriminant validity score was assessed by the cross-load value method to verify that the square root of AVE was greater than the correlation between research constructs.

The second stage, the structural model evaluation, began with calculating the coefficient of determination ( $R^2$ ) in the relationship between the exogenous construct and the endogenous construct to determine how much of the variability is explained by the dependent variables.

### 4. RESULT

#### 4.1. Measurement Model

Composite reliability (CR) and Cronbach alpha are (CA) used to assess internal consistency, whereas Average Variance Extracted (AVE) is used to evaluate convergent validity in reflective measurement models. Discriminant validity is also tested based on cross loading value during the evaluation.

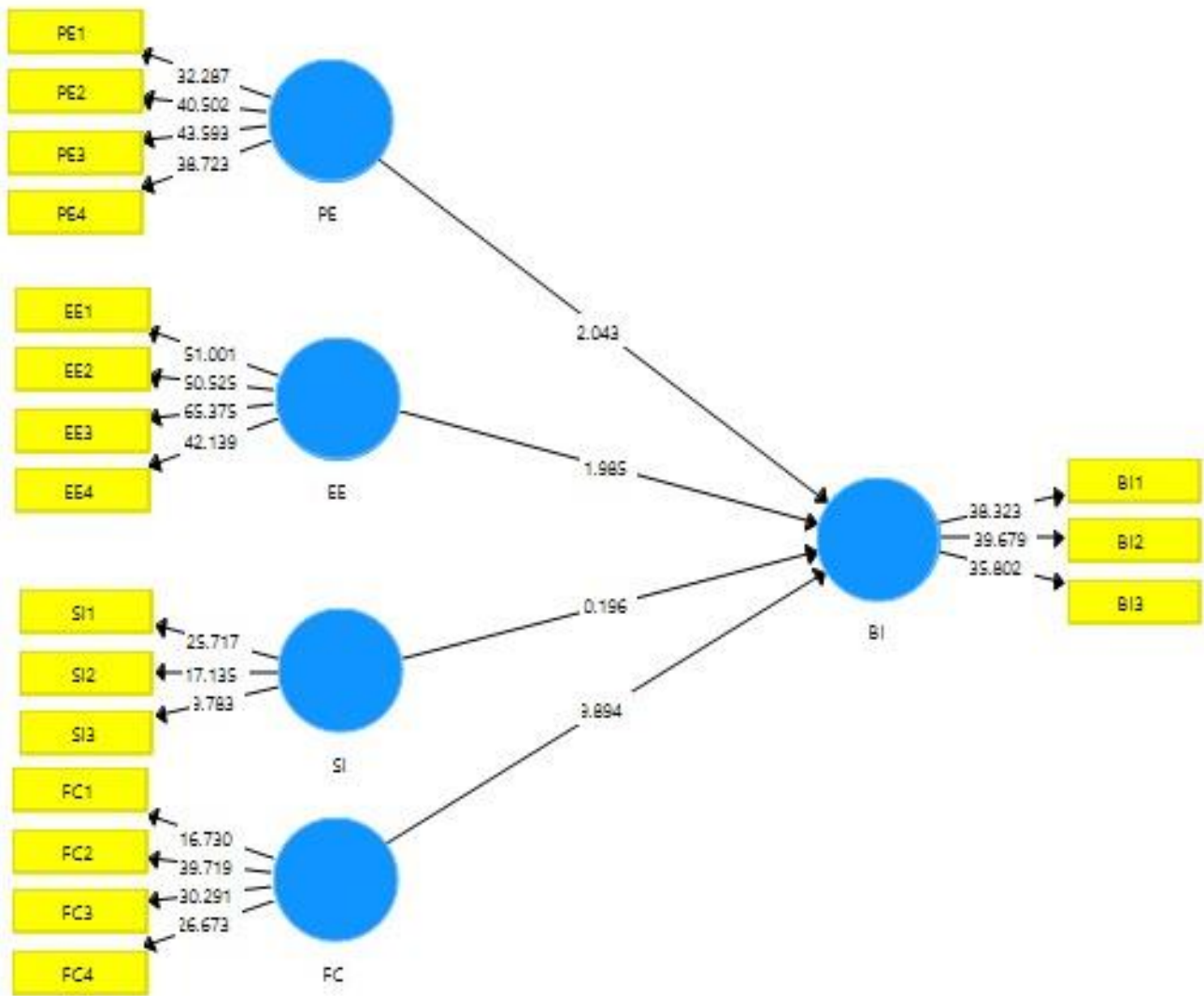


Figure 2. Measurement Model

Figure 2 present the measurement model result. Both internal consistency criterias, composite reliability (CR) and cronbach alpha (CA) are above 0.70 (minimum CR is above 0.80 and minimum CA is above 0.70) indicating the scales have internal consistency.

**Table 1.** Construct reliability and validity

Variables	Cronbach's Alpha	rhoA	Composite Reliability	AVE
PE	0,871	0,875	0,911	0,720
EE	0,904	0,905	0,933	0,776
SI	0,743	0,755	0,856	0,666
FC	0,840	0,842	0,893	0,675
BI	0,815	0,820	0,890	0,729

The convergent validity was tested using AVE. If the AVE is more than 0.5, it means that the construct or latent variables contribute for more than half of the variance in the indicators. AVE was used to test the convergent validity [15].

**Table 2.** Discriminant Validity Result

	PE	EE	SI	FC	BI
PE	<b>0,849</b>				
EE	0,746	<b>0,881</b>			
FC	0,411	0,417	<b>0,816</b>		
SI	0,654	0,694	0,427	<b>0,822</b>	
BI	0,658	0,682	0,386	0,797	<b>0,854</b>

Discriminant validity was tested based on cross loading. Specifically, an indicator's outer loading on the construct should be greater than any its cross loading on the other construct. Table 2 indicates outer loading of each construct (in bold) is higher than correlation on other construct.

**4.2. Structural Model**

The structural model was evaluated by using R square (R<sup>2</sup>) and path significance levels between the construct. Table 3 shows the result of the R<sup>2</sup> test.

**Table 3.** R Square and R Square Adjusted

	R Square	R Square Adjusted
<b>BI</b>	0,677	0,672

The R-square on the behavioral intention (Y) variable is 0.677, which means that the behavioral intention construct is explained by performance expectancy, social influence, effort expectancy, and facilitating conditions constructs with a percentage of 67.7%. While the remaining 32.3% is explained by other constructs outside of this study.

**Table 4.** Result of Hypotheses Testing

	Original Sample	Sample Mean	T Statistics	P Values
PE> BI	0,156	0,160	2,104	<b>0,036*</b>
EE> BI	0,159	0,153	2,104	<b>0,036*</b>
SI > BI	0,007	0,007	0,221	<b>0,825</b>
FC> BI	0,582	0,584	10,841	<b>0,000**</b>

\*sig at 0.05 level; \*\*sig at 0.01 level

Performance expectancy (PE), effort expectancy (EE), and facilitator condition (FC) are statistically significant in explaining behavioral intention (BI). The finding confirms that the hypotheses H1, H2, and H4. Social influence (SI) is not statistically significant in explaining behavioral intention. Consequently H3 is not confirmed.

**5. DISCUSSION**

The research model explained 67.7% of the variance of behavioral intention (BI). The results of this study reveal that social influence has no effect on behavioral intention of e-money. This finding is supported by previous studies [16], [13]. Respondents do not consider social influence as important factors in the behavioral intention of electronic money, because the development of this technology makes the people to everything electronic a necessity. This mean that opinion of influential people and of those in a social circle do not have significant effect on one'behavioral intention to use e-money. The same result also found in [18], social influence was not determinant factor of behavioral intention to use in the context of ERP software training, contrary to previously research reported by [1], [5], [7], [9], [11], [17]

Performance expectancy (PE) shows a positive and significantly to behavioral intention (BI) of e-money. The higher performance of e-money that is felt by the community, the more positive attitudes will be for the community itself and will result in them using e-money in transactions. This finding is also supported by previous research [1], [7], [9], [10]

Effort expectancy (EE) has a positive and significant effect to behavioral intention (BI) of e-money. This is because e-money is easy to learn, understandable, easy to use, and easy to be skilled for users in transactions. The same result reported by previous research [5], [7], [12], [18], [19].

The results also found that facilitating conditions had a positive impact on behavioral intention. This finding is supported by previous studies [5], [9]. E-money users feel that e-resources, money's knowledge, and suitable technology are all crucial to customer use

the technology. Study by [20] found the same result for e-money usage in Micro, Small, and Medium Enterprise (MSME) context.

## 6. CONCLUSION

This research provides strong support for UTAUT to predict the use of electronic money. The findings in this study may complement the existing literature because the researchers extended the UTAUT model and evaluated the influence of system usage on individuals. These findings show that behavioral intention (BI) is strongly effected by the important construct namely, performance expectancy (PE), effort expectancy (EE), and facilitating conditions (FC).

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