Conceptual Model of Merchant Intention to use E-Money

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ABSTRACT

Electronic money (or electronic wallet) has been emerging payment platform these days. The advance of internet and technology makes it faster to penetrated market. The pandemic of covid-19 also plays role in encouraging the acceleration of the use of electronic money. This study was intended to build a conceptual model of merchant intention to use electronic money. The conceptual model was formulated based on previous studies in identifying intention antecedent in using electronic money. This research is expected to provide a model framework to provide a more complete prediction of the intention to use electronic money from merchant perspective.

Keywords: electronic money, UTAUT 2, intention to use, trust, risk perceived, merchant.

1. Introduction

Innovation in the financial sector that utilizes the use of information technology is financial technology (fintech). The purpose of fintech is to make the financial process more practical, safe, and modern because it is digital based. The implementation of FinTech in Indonesia is regulated through Bank Indonesia (BI) regulation No.19/12/PBI/2017.

Electronic money (e-money) is one of the fintech products in the financial sector. E-money is a means of payment that uses a computer network and the internet. E-money was introduced in Indonesia in 2009 through BI Regulation

Number 11/12/PBI/2009 dated April 13, 2009. Before the advent of e-money, Indonesians were introduced with debit cards (ATMs) and credit cards as non-cash payment instruments. Debit cards were first used in Indonesia in 1986 by two banks, namely Bank Hong Kong and Bank Niaga. Credit cards first entered Indonesia in the 1980s, introduced by Bank Duta which was at that time collaborated with VISA and Master Card International.

Statistical data from BI in May 2021 shows that the number of e-money cards in circulation is greater than the number of debit cards and credit cards. The number of e-money cards in May 2021 was 498.20 million units, debit cards totaled 222.89 million units, and credit cards totaled 16.67 million units. The increase in the use of e-money is not only seen in terms of the number of cards in circulation. The increase in the volume of shopping transactions using e-money also occurred in line with the increase in the number of cards in circulation. The latest data released by BI in May 2021 showed that the volume of shopping transactions using e-money was the most frequent transaction with a total of 450.41 million transactions. The volume of shopping transactions with debit cards is the second largest with a total of 74.85 million transactions. The volume of shopping transactions with credit cards was the least with a total of 23.11 million transactions.

Albeit having a high number of cards and a high volume of transactions, it does not mean that people can easily accept e-money as a payment method. There are many factors that can prevent sellers and consumers from using e-money. When viewed from the consumer side, the obstacles experienced in using e-money are limited merchants, limited transaction methods, expensive transaction fees, many choices of similar products, and socio-cultural factors, namely the habit of using payment methods other than e-money.

Evidently, yet many merchants haven’t adopted e-money in their transaction activities with consumers. This study aims to identify the factors that influence the intention to use e-money from the merchant side in Indonesia. So thus, it is interested to study the acceptance of merchants to e-money application. This research is part of research that is intended to answer this inquiry. In this first part, we intended to develop conseptual model to predict intention and loyalty to use of e-money users in Indonesia from the seller's perspective.

2. Literature Review

We may say not using e-money application means reluctant to use the technology. What does make people reluctant to technology? Reasons can be different from one person to another person, from one company to another company. Several issues were identified through survey as factor influencing people to use technology (such as Moerschell, 2009; Bergmann and Brough, 2007), A few models have been developed to studying the reluctant to use technology. Following, we discuss of technology acceptance model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT).

2.1 Technology Acceptance Model (TAM)

The acceptance of technology can be studied from user intention and behavior aspects. Extensive research has been done on technology acceptance based on user intention and behavior. Among them the most popular is Technology Acceptance Model (TAM), TAM was originated from Theory of Reason Action (Fishbein and Ajzen, 1975), TAM was first proposed by (Davis et al., 1989).

TAM was developed to build a theoretical explanation of why users accept or reject technology. The TAM theory states that a person's behavioral intention in accepting technology is determined by two beliefs, namely perceived usefulness, and perceived ease of use (Davis, 1989; Davis, et al, 1989), Perceived usefulness describes a person's level of belief that using a particular technology will improve performance. Perceived ease of use on the other hand is a person's level of belief that using a particular technology will be free from heavy work.

The internal variables in TAM are perceived ease of use (PEU), perceived usefulness (PU), attitude toward use (A) and behavioral intention to use (BI), The original TAM used BI as both a dependent variable and an independent variable, with BI being used as a dependent variable to test the validity of the variables PU and PEU and as an independent variable when predicting actual usage.

Although research indicates strong validity in the TAM, Chau (1996) and Mathieson (1991) pointed out that the TAM does not provide detailed information, but general opinions about the users and the system. Goodhue (1995) criticized the general nature of the TAM because of all the possible extensions to the model. A model with so many extensions would not be applicable to a single general theory for user evaluations. Further, TAM was evolved and modified by many researchers.

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

Many scholars have applied TAM and extended original TAM with other variables (such as Burton-Jones and Hubona, 2005; Heijden, 2003; Horton et al., 2001; Fenech, 1998; Gefen and Keil, 1998; Agarwal and Prasad, 1997; Chau, 1996; Adam et al., 1992), The modification is done with other consumer behavior variables and produced new model, such as Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), Social Cognitive Theory (SCT), etc. One of TAM extended is Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003),

Venkatesh et al. (2003) has condensed the 32 variables found in the existing eight models (TRA,C-TPB-TAM, TPB, MPCU, TAM, IDT, Motivational Model-MM and SCT) into four main effect and four moderating factors and formed UTAUT. Those four main effects are performance expectancy, effort expectancy, social influence, and facilitating conditions. Those four moderators are age, gender, experience, and voluntariness of use.

Performance expectancy is a person's level of confidence in increasing work performance (Venkatesh et al., 2003), In the context of electronic money, performance expectations can be interpreted as how the use of electronic money can provide advantages over other payment methods.

Several construction factors related to performance expectancy from different models are perceived usefulness (TAM/TAM2 and C-TAM-TPB), extrinsic motivation (MM), job-fit (MPCU), relative advantage (IDT) and outcome expectations (SCT), Effort expectancy is the extent to which a person will be able to use the system in technology easily (Venkatesh, et al., 2003), Users will

show willingness to use electronic money if electronic money is easy to use. In addition, users can judge whether electronic money is easy to use or not starting from the registration procedure.

Social influence is a factor in the perception of important/close people towards someone to use certain technologies (Venkatesh, et al., 2003), In real life, people has a tendency to collect more information than other people related to the product that will be/is being used. In the context of electronic money, users show a better willingness if more people recommend the use of electronic money to them, especially those who are important/close to them.

Facilitating conditions are the extent to which a person believes that the existing infrastructure will support him/her to use a technology (Venkatesh, et al., 2003), Hedonic motivation is the extent to which a person gets pleasure from the technology he is using. Furthermore, Venkatesh, et al. (2021) stated that people care not only about performance, but also the feelings they get from using a technology and found that hedonic motivation is the second strongest factor influencing behavioral intentions towards technology adoption.

In 2012 the UTAUT model was developed into UTAUT2 by adding three determinants of the purpose and use of information technology, i.e hedonic motivate, price value, and habit, with a focus on three moderating variables, i.e age, gender, and experience (Venkatesh et al., 2012), Price value is a person's perception of the costs he spends in using technology towards the perceived benefits (Dodds et al., 1991), The price value in this study can also be referred to as how valuable the technology used is compared to the costs incurred. When the perceived benefits outweigh the costs, consumers show a willingness to adopt a particular technology (Venkatesh, et al., 2012),

3. Model and Hypothesis Development

The increase in the use of electronic money in Indonesia indicates that society is moving towards a cashless society. This will be achieved by changing the form of the physical payment system to an e-payment system that is practical, cost-effective, and convenient. Focus of this study is to develop model of intention to use electronic money.

Intention is one of the behavioral factors in the decision-making process. Many researchers have proven that intention influences decision making (such as Giovanis et al., 2019; Aji et al., 2020; Ayudia and Wibowo, 2018; Shaikh et al. (2018); Adapa and Roy (2017); Mehrad and Mohammadi (2017); Tam and Oliveira, 2017; Muñoz-Leiva et al., 2017; Prayidyaningrum and Djamaludin, 2016; Blut et al., 2016; Shaikh and Karjaluoto, 2015; Farida and Ardyan, 2016; Çelik and Yilmaz, 2011; Oye et al., 2011; Phan and Daim, 2011), Intentions are influenced by many other factors.

Although electronic money penetration in the market as a mean of payment is very fast, not all consumers and merchant use it. Extensive research has been conducted in studying the acceptance of electronic money from the perspective of consumer in seller-buyer context. But from the merchant's perspective as for our knowledge, the research is very scarce.

The intention to use electronic money is the desire to make transactions using a payment system through electronic money. The indicator used to measure the variable of intention to use technology according to (Venkatesh et al., 2003) is the desire to use technology and the desire to use technology continuously. Electronic money is one of information technology product. Someone will be interested in using a new payment technology probably if the user believes that using the payment technology will improve their performance. It means user has an expectation on their performance which is influenced by adopting the technology.

Or the seller must use the electronic money because of the consumer suggestion or afraid in loosing a potential consumer. It means sellers might use electronic money because they are influenced by society. Even the seller might be interested to use electronic money since electronic money issuer provide supporting facilities to use electronic money. In addition to convenience, users also expect ease of use in transactions using electronic money (Chawla and Joshi, 2019),

There are many factors that drive the intention of sellers to use electronic money. Those reasons along with effort expectancy, hedonic motivation, and price value has been included in UTAUT 2 model. As has been developed and

verified by many scholars in various information technology product, UTAUT 2 is a proper model to measure the intention of seller in using electronic money.

We argue that the intention is not just influenced by performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, and price value as formulated in UTAUT 2. More important for a seller perhaps the risk and trust in using the information technologi. Perception of risk is an individual's subjective estimate to get the consequences of losses in receiving a desired outcome (Featherman and Pavlou, 2003), In every transaction, every action taken by consumers will be faced with a state of uncertainty. In other words, this concept deals with situations where buyers have to deal with the uncertainty of a new product involving both favorable and unfavorable outcomes (Vo and Nguyen, 2015),

From the explanation that has been put forward, it can be concluded that risk perception is the customer's assessment of the possibility of negative consequences that are likely to be received when using a product or service that he will consume. Risk perception is categorized in five dimensions as stated by Bhukya and Singh (2015), Those five dimensions are functional risk, financial risk, physical risk, psychological risk, and social risk.

Risks that arise as a result of transaction activities are also considered by users to transact using electronic money. Perceived risk perception has a significant influence on intention to use a product (Singh et al., 2020), The risk perception further influences the user's perception of satisfaction and recommendations for using electronic money (Singh et al., 2020; Priya et al., 2018….. stated that users who have adopted mobile payment applications are proven to want to recommend the application to others. Singh et al. (2020) using UTAUT 2 found that the perception of risk has an influence on the perception of satisfaction and consumer recommendations towards mobile wallet services in India. In addition, Priya et al. (2018) states that the perception of risk has a significant effect on consumers' intention to use.

One of the factors that influence the intention to use is trust. Consumer trust is all knowledge possessed by consumers and all conclusions that consumers make about objects, attributes, and benefits (Mowen and Minor, 2011), According to

Benamati et al., (2010) trust includes three dimensions, i.e *ability*, *integrity*, and *benevolence*. Capability means service providers have sufficient knowledge and skills to fulfill their duties. Integrity means service providers keep their promises. Virtue means service providers will look out for the interests of users, not just their own.

The trust factor is also a determining factor in influencing the intention to use electronic money (Shaw, 2014; Chawla and Joshi, 2019; Malik et al., 2019; Widodo and Murwatiningsih, 2019), According to Shaw (2014) trust affects consumers to use e-wallet. The use of e-wallet is significantly influenced by trust with regard to security and privacy factors. Another study conducted by Chawla and Joshi (2019) found that trust plays an important role in determining the intention to use e-wallet. This result is also supported by research conducted by Malik et al. (2019) which states that trust has a significant effect on usage interest. Widodo and Murwatiningsih (2019) further investigated the effect of trust on user satisfaction and loyalty. The study states that trust has a positive and significant effect on customer loyalty and customer satisfaction.

Based on arguments provided above, we proposed a research model that will be validated. The model is shown in Figure 1.

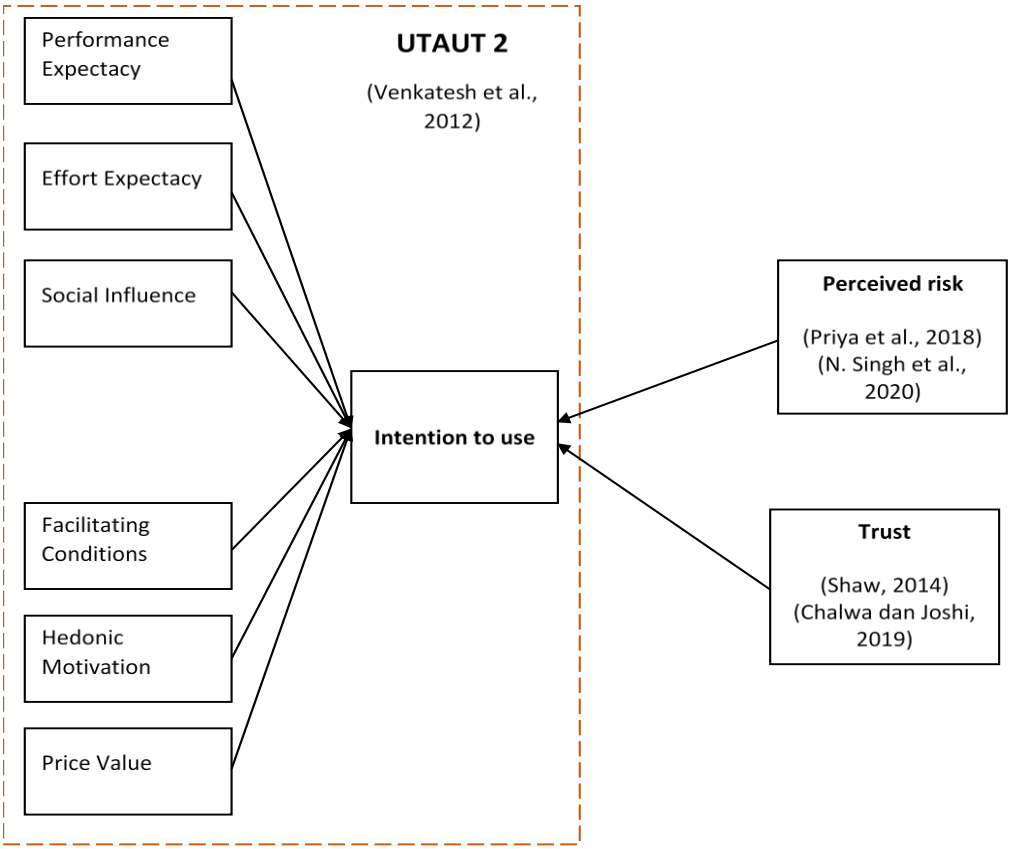

Figure 1. Proposed research model

We formulated eight hypotheses based on proposed research model as follows:

H_1: performance expectancy influence intention to use electronic money significantly

H_2: effort expectancy influence intention to use electronic money significantly

H_3: social influence intention to use electronic money significantly

H_4: facilitating condition influence intention to use electronic money significantly

H_5: hedonic motivation influence intention to use electronic money significantly

H_6: price value influence intention to use electronic money significantly

H_7: perceived risk influence intention to use electronic money significantly

H_8: trust influence intention to use electronic money significantly

4. Conclusion

We have reviewed important literatures related to intention behavior modeling, particularly in intention to use information technology products. Based on the literature reviewed, no research has been found that identifies the factors that influence the seller's decision to use electronic money. Existing research generally discusses from the consumer side.

This study will emphasize the disclosure of factors that influence the intention to use electronic money from the seller's side. Using existing literature, we developed the intention to use electronic money from seller perspective. The model was developed by adopting UTAUT 2 and enriched by adding perceived risk and trust. There are eight hypotheses that will be validated from the model developed.

The model validation next will be performed by collecting data from sellers. The research instrument will use a questionnaire that will be developed based on related previous studies. Open and close statements will be developed. The questionnaire will be placed online although in most cases the questionnaire distribution will be performed through face-to-face interviews.

The adequacy data will be determined prior to data collection. Non-probability sampling will be deployed in determining the sample quantity. Convenience sampling particularly will be used. Data collected further will be analysis using structural equation modeling.

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