Mediator Variables’ Influences towards Behaviors of e-Money Users

Arin Na Ranong, Faculty of Business Administration, Rajamangala University of Technology Rattanakosin, 96 Moo 3 Thanon Phutthamonthon Sai 5 Salaya, Phutthamonthon, Nakhon Pathom, Thailand 73170, Email: Arin.naranong@gmail.com

The objectives of this research is investigate the influences of four-parallel mediator variables of behavior intention, attitude, trust and perceived risk that transferred the influences of facilitating conditions to use behavior of e-Money users. The sample in this research is 500 of payment service users via e-Money of the Rabbit Line Pay service provider in Bangkok. According to the concept of Comrey & Lee (2013). The statistics applied in this research are including first descriptive statistics such as mean and second structural equation modeling (SEM) statistical analysis using PLS Graph 3.0. The results from the study show that the maximum mean of facilitating conditions is 4.00 with the standard deviation of 0.604, followed by behavior intention of the service users with the mean of 4.01 and the standard deviation of 0.601, and trust of the service users with the mean of 3.97 and the standard deviation of 0.679. For the analysis results of the four-parallel mediator variables of behavior intention, attitude, trust, and perceived risk that transferred the influences of facilitating conditions to use behavior of e-Money users, the behavioral intention and trust are factors that relate the influences of the facilitating conditions with the users’ behavior significantly.

Key words: Attitude, Behavior Intention, E-Money, Facilitating Conditions, Perceived Risk, Trust, Use Behavior

Introduction

Money is a medium for exchanging goods and services. When considering - the evolution of payment, money itself is a payment medium. It can be changed into a deposit account money transfer (Deposit Money), which a bank is a payment medium. The payment system is additionally developed as an Electronic Money System (e-Money), which enhances consumers’ convenience in payment (Bank of Thailand, 2013). Nowadays, modern technologies have influenced consumers’ daily lives, resulting in changing their lifestyles into
more online formats. The Electronic Transactions Development Agency (2018) has stated that during 2012 - 2017, Thai people used the internet to do more online activities than traditional or offline methods as high as 68%. Top five online transactions among Thai consumers is buying or paying for goods and services. Online channels for paying for goods and services are e-Wallet, internet banking, mobile banking, representing 82.8%.

According to the Bank of Thailand (2018), Thai consumers have spent through e-Money between 2013 – 2017 continuously increased at a rate of 16.18%, 21.17%, 34.50%, and 38.70%, respectively. The value of e-Money top-up has also continuously increased at a rate of 15.91%, 21.45%, 32.33%, and 41.71%, respectively. The government has also encouraged people to pay via e-payment system. It started with the transferring and receiving money through the "PromptPay" service. This service is one of the main projects that the government tried to push forward under the National e-Payment strategic plan and digital economy to support the economy stimulation and money production costs reduction. These made people more convenient to conduct financial transactions. Many countries have proclaimed the cancellation of using cash for trading or transactions and changed to e-Payment system instead (Ministry of Finance, 2016).

Regarding continual growth of Economics, new technologies have been created to respond consumers’ needs. Although marketing experts have adopted the Unified Theory of Acceptance and Use of Technology (UTAUT) to effectively forecast technological acceptance of consumers, this theory; however, still has some using limitations in particularly business organizations. Due to the mentioned limitations, Venkatesh, Thong, and Xu (2012) have developed the Modified Unified Theory of Acceptance and Use of Technology (UTAUT2) based on UTAUT theory focusing on the context of technological use among customers. They have studied consumers’ behavior intention. From the study of UTAUT2 theory, the facilitating conditions have direct and indirect effects on the behavioral intention variables to consumers’ behavior. Moreover, the behavioral intention is a mediator between the facilitating conditions and the use behavior. This causes ambiguity that the facilitating conditions have an exaggeratedly higher direct influence on the use of behavior than reality. This may not have much effect on the used behavior. There may be other factors or hidden mediators inserted in the path between facilitating conditions and their function which is to transmit such influence to used behavior resulting in changes in the relationship between variables. In other words, when a mediator is inserted between the independent and the dependent variables, the independent variable's direct influence on the dependent variable may decrease or dissolve (Judd & Kenny, 1984; MacKinnon et al., 2002).

Therefore, the facilitating conditions may cause the formation of the right attitudes, which can affect the purchase intention. According to the Theory of Planned Behavior (TPB) (Ajzen, 1991), trust factor influences the internet payment intention (Becerra & Korgaonkar, 2011; Limbu et al., 2012; Andrews & Bianchi, 2013; Goyal et al., 2013). The perceived risk factor is
another crucial variable and effects the behavior of consumers in that their purchasing decisions can be delayed and unacceptance as an effect of their concerns for their wrong decisions. Research indicates that perceived risk, perceived usefulness and perceived ease of use influence the internet payment intention (Davis, 1989; Tong, 2010; Sin et al., 2012; He et al., 2008; D'Alessandro et al., 2012; Simonian et al., 2012; Andrews & Bianchi, 2013). The perceived risk factor is one of the essential and exciting variables. The researcher has brought it as a part of the conceptual research framework. Therefore, it may be assumed that the function of the facilitating conditions is to transmit its influences via the behavioral intention, attitude, trust, and perceived risk into consumers’ behaviors.

This research, therefore, aims to answer the following research question: Do these functions; behavioral intention, attitude, trust, and perceived risk, transmit the influences of the facilitating conditions to used behavior of electronic users (e-Money)? (Research Questions)

Research Objectives

To investigate the influences of four-parallel mediator variables of behavioral intention, attitude, trust, and perceived risk that transfer the influences of facilitating conditions to the use behavior of e-Money users.

Expected Benefits

This research aims to achieve the following benefits:

(1) Entrepreneurs can use the information from this research to analyze various factors influencing the used behavior of electronic users (e-Money). It can be a guideline in planning and promoting suitable services for each customer.
(2) To use the information from the research as a guideline for business entrepreneurs to develop e-money transactions to create sustainable competitive advantages and has a positive effect on economic growth.

Research Scopes

In this research, the researcher studied the influences of the four-parallel mediator variables of behavioral intention, attitude, trust, and perceived risk of users who transferred the influences of facilitating conditions to use behavior of e-Money users. The population of the research sample is 500 users of e-Money service payment of Rabbit Line Pay service provider in Bangkok, according to the concept of Comrey & Lee (2013).
Literature Review

It was found that the concepts and theories related to Modified Unified Theory of Acceptance and Use of Technology (UTAUT2), attitude, trust, perceived risk, and used behavior can answer the research question as follows.

**Modified Unified Theory of Acceptance and Use of Technology (UTAUT2):** UTAUT is a theory that shows the acceptance pattern of the individual. It has been compiled and developed from an integration of eight theories of acceptable behaviors, including 1) Theory of Reasoned Action (TRA) 2) Technology Acceptance Model (TAM) 3) Motivational Model (MM) 4) Theory of Planned Behavior (TPB) 5) Model Combining the Technology Acceptance Model and Theory of Planned Behavior (C-TAM-TPB) 6) Model of PC Utilization (MPCU) 7) Innovation Diffusion Theory (IDT) and 8) Social Cognitive Theory (SCT) (Venkatesh et al., 2003). The integration of these eight theories is used to study the acceptance behaviors of new technology and to predict the acceptance behavior of the new technology of each individual in the business sector. The principle of UTAUT theory includes the study of the used behavior driven by behavioral intention. Influential factors towards behavioral intention consist of 1) Performance Expectancy (PE) 2) Effort Expectancy (EE) 3) Social Influence (SI) 4) Facilitating Conditions (FC). Specifically, for the facilitating conditions (FC), there are auxiliary variables/variables which have a direct relationship with the users’ behavior, which are gender, age, experience and voluntariness of use.

Although the Unified Theory of Acceptance and Use of Technology (UTAUT) can predict a technological acceptance effectively, it still has some limitations. Previous research shows that only sub-factors under the main factor was used but not the auxiliary variables/variables. Therefore, it is necessary to extend the scope of the theory to find salient factors to be able to be adapted to cover the study of intention and used behaviors of consumers’ technological use, which is the service target group. As a result, Venkatesh, Thong, and Xu (2012) have developed the Modified Unified Theory of Acceptance and Use of Technology (UTAUT2) from UTAUT theory to be more appropriate. It focuses on the more specification of the context of consumer technology use. Three main factors have been added, including hedonic motivation, price value and habit, to help reducing limitations and demonstrating the key factors that can provide a reliable and sufficient explanation of technological acceptance among users with auxiliary variables/variables such as gender, age, and experience. The principle of UTAUT2 theory studies the use of behavior that is driven by the behavioral intention, which consists of 7 main factors as follows.

- **(1)** Performance expectation (PE) is an individual's belief in the technological use. It helps increasing the efficiency of activities or operations for technological users.
- **(2)** Effort expectation (EE) refers to convenience and ease of technological use.
- **(3)** Social influence (SI) refers to an individual's perception that has provided an expectation or belief why an individual should use a new technology.
Facilitating conditions (FC) are an individual's belief that a pleasant organizational environment or infrastructure helps promote or facilitate the use both in terms of availability and suitability for users.

Hedonic motivation (HM) refers to fun, fondness, or satisfaction received from technological use. It is an essential factor determining the acceptance of technological use directly. Therefore, hedonic motivation is used to predict behavioral intention and consumer technological use.

Price value (PV) refers to the knowledge and skills of consumers (Cognitive tradeoff) regarding the benefits and costs to receive for that use. It focuses on the value in that the price factor is important to consumers.

Habit means a tendency of an individual to automatically express behaviors from prior learning and routine (experience) until it becomes accustomed to and become a personal habit.

Also, the facilitating conditions have direct effects on users’ behavior. This is consistent with a study by Mohammad et al. (2016) that facilitating conditions have a significant positive relationship with user behavior. Moreover, the facilitating conditions also have indirect effects on users’ behaviors. The behavioral intention is a mediator between the facilitating conditions and users’ behaviors. The relationship of each factor that affects the behavioral intention and used behaviors is different according to an acceptance of the technological use as shown in Figure 1: model of UTAUT2 theory.

![Figure 1: The modified unified theory of acceptance and use of technology (UTAUT2). Source: Venkatesh et al. (2012)](image)

Relevant research to the theory in the context of electronic transactions, Chen & Chiang (2013) found that factors affecting used intention are performance, expectancy, social influence, and facilitating conditions. According to a study by Tomas & Elena (2013), the habit, price-saving orientation, performance expectancy, and facilitating conditions affect the used intention. Moreover, Loo, et al. (2009) found that lacking intention of use is due to numeral reasons,
including a lack of performance expectancy or understanding of benefits, facilitating conditions or resources support from the and social influence or a motivation from social influences. It was evident that consumers require readiness, support, and assistance during their use on technology. However, according to the study of Adelyn et al. (2014), it was found that social influence, facilitating conditions, and price value will not affect an acceptance of use. Bryan et al. (2015) also found that behavioral intention is a positively influential behavior.

According to the UTAUT2 theory explained above, it can be used to study the factors that affect consumers’ behaviors of technological use. Therefore, entrepreneurs should be aware of the factors that affect the use and not use services of customers in each context. Such information could be a guideline to improve their marketing strategies to increase an efficient services to meet the demand of consumers.

Relevant Theories about Attitudes: Attitudes arise from a response towards the appearance of items or things can be positive or negative and either like or dislike (Lutz, 1991; Assael, 1993; Loudon & Bitta, 1993; Assael, 1998; Schiffman & Kanuk, 2007). Attitudes refer to the way an individual thinks, feels and acts on something towards an environment around them. Attitude consists of three components (Tricomponent attitude) (Lutz, 1991) as follows.

1. **Cognitive Component** is an attitude that reflects personal beliefs, opinions, knowledge and information.
2. **Affective Component** is a specific feeling that is associated with personal effects from an incentive or previous objects.
3. **Conative Component** is a behavioral intention based on particular knowledge, understanding, and feeling of individuals.

Relevant Theories about Trust: Parazuraman et al. (1991) stated that trust is an essential measure of customer relationships in business organizations. When people involve in an exchange of reliability and integrity, confidence is created. Trust; therefore, is essential to define an obligatory characteristics which show a relationship between customers and organizations (Morgan & Hunt, 1994). Geyskens et al. (1996) further supported that trust is a belief, expectation, or promise that sellers will not exploit the vulnerability of consumers for their benefits. For business competition in industry, it builds trust to create stable and long-lasting relationships with customers (Sekhon et al., 2014). Consumers need to have trust to increase their confidence in purchasing goods or co-conducting transactions. Service providers then can respond their customers’ needs. Trust; therefore, play an important role in electronic financial transactions to reduce users’ feeling about the risk, uncertainty, and uncontrollable (Lu et al., 2011; Zhou, 2013).

In terms of academics, trust means consumers’ perception and the business operators have to measures their consumers’ trust about their consumers’ data protection. An information about financial transactions through different channels will be protected and keep confidentially.
Business operators also need to ensure that their consumers’ information is accurate, complete, and up to date.

Relevant research found that trust is an essential and influential towards the used behavior (Mansur, 2019; Philile & Daniel, 2019; Emma et al., 2015). This shows that trust, safety, and reliability in use effect positively on the use of intention. That is to say consumers will contain a higher intention to purchase the sellers’ goods or services if they are trustworthy and confident in sellers. Consumers’ trust towards the sellers is further associated with ability, honesty, and benevolence (McKnight & Chervany, 2001; Pavlou, 2003; Rotchanakitumnuai & Speece, 2003).

**Relevant Theories about Perceived Risk:** The theory of perceived risk refers to the possibility of uncertainty, which results in success or fails development. This variable involves users’ concern if mistakes and no use acceptance may occurs when their decisions are made delayed and Peter & Ryan (1976) stated that perceived risk is psychological variable which predicts potential loss and may occur when tracking desired outcomes (Featherman & Pavlou, 2003). In other word, perceived risk is an individual's perception of uncertainty. It possibly occur in their participation in a specified activity (Forsythe et al., 2006; Littler & Melanthiou, 2006; Bland et al., 2007; Im et al., 2008). Heng, Hock-Hai & Bernard (2005) identified that this variable presents users’ risk attitudes, which are negative consequences and associated with confidence and intention. It can related to the following four categories, including perceived risk in economics actions, personal, and privacy.

In relation to a purchase of goods and services, the perceived risk depends on the proper security and personal information storage of customers. If the information of the organization and its goods or services is wholly presented, the perceived risk is low (Martin & Camarero, 2008; Tsai & Yeh, 2010). At present, an electronic commerce is increasing. Buyers and sellers are in a great distance and not a face to face trading, therefore, causing trading risks and barriers in making purchasing decisions (Cunningham et al., 2005; Park & Yoon, 2002). Dowling & Staelin (1994) found three additional information regarding the components of perceived risk as follows; product quality, refunds of goods or money, unsafe payment methods. This is consistent with Kim & Park (1999) study, who divided perceived risk into risks from payment methods and product delivery.

In electronic commerce, the perceived risk is considered as a barrier to consumers which involves financial risks, performance risk, product quality, legal, and transportation. In terms of an electronic payment (e-Payment), it can be an obstacle of goods purchase in that a buyer’s payment method - may cost a payment costs in relation to the safety of online payment (Gibbs et al., 2003; Liu & Hong, 2016). In this regard, McKechnie et al. (2006) studied the risk dimensions that lead to technological acceptance, including a financial risk, security risk and private information. According to McKechnie et al. (2006), these risks are explained as follows.
First, a financial risk means users’ belief about higher cost than a general market price. Second, a security risk means users’ beliefs in the loss of products and/or services. This presents their uncertainty towards the system insecurity. Last, private information may not be kept confidentially and/or violated users' personal information without users’ permission. The protection of consumers’ information is also related to the integrity of service providers. Pavlou (2003) supports that trust has a positive impact on the intention to use while perceived risk has a direct negative influence on the intention to use.

According to relevant research reviewed above, the researcher can summarize perceived risk as an awareness of uncertainty in security, storing personal information and incomplete and unclear information the buyers or users received. These causes can affect negative impacts leading to dissatisfaction and refuse to purchase particular goods or services. Therefore, perceived risk is one of the essential variables. The researcher then included this in the conceptual research framework.

**Relevant Theories about Use Behavior:** Use behavior refers to users’ behaviors in technological use. Venkatesh et al. (2003) stated that all related theories to behavioral intentions involve technological use behavior. The hypothesis was tested in their study and confirmed that the intentions directly influence the behavior. Gaitan et al. (2015) conducted a study on the use of internet banking of the elderly. It was found that behavioral intention is a factor preceding the elderly’s use of behavior. Habit is next directly and indirectly affects the intention of use of elderly. Luomala (2016) found that habit directly affects cashless payment behavior. The intention of use will affect the use behavior when removing the habit from consideration.

The researcher synthesizes and develops a conceptual research framework based on relevant research (Venkatesh, Thong and Xu, 2012; Lutz, 1991; Parazuraman et al., 1991; Pavlou, 2003; Venkatesh et al., 2003) and this research hypothesis, as illustrated in Figure 2 below.

![Conceptual framework](image-url)

**Figure 2: Conceptual framework.**
Hypothesis:

**Hypothesis 1 (H1):** Facilitating conditions have a significant influence on the behavioral intention.

**Hypothesis 2 (H2):** Facilitating conditions have a significant influence on the attitude.

**Hypothesis 3 (H3):** Facilitating conditions have a significant influence on the trust.

**Hypothesis 4 (H4):** Facilitating conditions have a significant influence on the perceived risk.

**Hypothesis 5 (H5):** Facilitating conditions have a significant influence on the use behavior.

**Hypothesis 6 (H6):** Behavior intention have a significant influences on the use behavior.

**Hypothesis 7 (H7):** Attitude have a significant influences on the use behavior.

**Hypothesis 8 (H8):** Trust have a significant influences on the use behavior.

**Hypothesis 9 (H9):** Perceived risk have a significant influences on the use behavior.

**Hypothesis 10 (H10):** Behavioral Intention is a mediated factor between Facilitating Conditions and Use Behavior.

**Hypothesis 11 (H11):** Attitude is a mediated factor between Facilitating Conditions and Use Behavior.

**Hypothesis 12 (H12):** Trust is a mediated factor between Facilitating Conditions and Use Behavior.

**Hypothesis 13 (H13):** Perceived risk is a mediated factor between Facilitating Conditions and Use Behavior.

The research hypothesis H10-H13 is known as an indirect effect. It is expected to answer to this research question of whether that behavioral intention, attitude, trust, and perceived risk can transmit the influence of facilitating conditions to use the behavior of electronic users (e-Money). If the results of any path of the indirect influence testing are significant, then the mediator, as defined in the conceptual research framework exists in the context of the study.
The path indirect influence testing appears as follows.

H10: $\beta_1\beta_6 \neq 0$ is the behavioral intention, which is the mediator between facilitating conditions and use behavior

H11: $\beta_2\beta_7 \neq 0$ is the attitude, which is the mediator between facilitating conditions and use behavior

H12: $\beta_3\beta_8 \neq 0$ is the trust, which is the mediator between facilitating conditions and use behavior

H13: $\beta_4\beta_9 \neq 0$ is the perceived risk, which is the mediator between facilitating conditions and use behavior

Indirect influence and indirect influence testing are also be used to explain which indirect path is the most important and the second most important.

Research Methodology

This research is a quantitative research based on a survey using a questionnaire. The following explains participants and methods relevant to this research.

Research Participants

The main participants of this research are payment service users of e-Money of the Rabbit Line Pay service provider in Bangkok in 2019. A total of 500 payment service users of e-Money of the Rabbit Line Pay service provider in Bangkok in 2019 participated in the survey. Then, they are divided into following two-stage sampling scheme as follows.

Stage 1: The primary sampling unit is the BTS users of 36 stations in total, which were divided into two routes, ten BTS stations were sampled.

Stage 2: The secondary sampling unit is sampled from BTS users with an equal allocation of 50 persons for each station that is 500 samples in total.

In this study, the researcher determined the sample size according to the path analysis, which was analyzed using the structural equation modeling (SEM) based on the Rule of Thumb. Comrey & Lee (2013) argued that a suitable sample should have at least 300 samples in terms of a confirmatory factor analysis. As such the sample size of 500 people fit well under this claim. The participant number of this research can be used effectively for a multivariate analysis. In order to facilitate an effective evaluation and analysis which causes the most
accurate data analysis, the researcher has determined the sample size for this study at 500 people.

Research Tools

This research employed a questionnaire using 48 adapted measures from various sources. After an accuracy and reliability checked, it has been reduced to 40 questions. From the repeated inspection of the research tool, the analysis results from the convergent validity, discriminant validity, and CR, the questions were reduced to 36 questions.

The facilitating conditions measures are modified from Adelyn et al. (2014); Gaitán, Peral & Jerónimo (2015); Guo, Huang & Craig (2015); Loo et al. (2009); Mohammad et al. (2016); Muhayiddin, Ahmed & Ismail (2011); Sheng-Chin Yu et. al (2012); Tomas & Elena (2013); Bryan et al. (2015); Venkatesh, Morris, Davis and Davis (2003); Venkatesh, Thong and Xu (2012); Yeh & Tseng (2017)

The Behavioral Intention measures are modified from Ajzen (2002); Dwivedi et al. (2017); Gaitán, Peral & Jerónimo (2015); Tai, Yi-Ming & Yi-Cheng Ku (2013); Venkatesh, Thong and Xu (2012)

The Attitude measures are modified from Bruner & Kumar (2000), Veer, Becirovic & Martin (2010)

The Trust measures are modified from Azmi, Ang & Talib (2016); Mansur (2019); Mayer, Davis & Schoorman (1995); Maqableh, Masa’deh, Shannak & Nahar (2015); McKnight & Chervany (2001); Pavlou (2003); Philile (2019); Rotchanakitumnuai & Speece (2003); Emma et al., 2015; Slade, Williams & Dwivdei (2013); Tsiakis & Stephanides (2005)

The Percieved Risk measures are modified from Chan & Lu (2004); Chin & Ahmad (2015); Featherman & Pavlou (2003); Gibbs et al. (2003); Lee (2019); Liu & Hong (2016); Luomala (2016); McKechnie (2006); Pavlou (2003); Slade, Williams and Dwivdei (2013); Tai, Yi-Ming, and Yi-Cheng Ku (2013)

The Use Behavior measures are modified from Gaitán, Peral and Jerónimo (2015); Jansorn, Kiattisin and Leelasat titham (2013); Luomala (2016); Venkatesh, Morris, Davis and Davis (2003); Venkatesh et al. (2012); Wu & Wang (2005)

The results of the tool quality inspection with corrected item-total correlation and average variance extracted (AVE), Cronbach's alpha, and composite reliability (CR) present that the corrected item-total correlation is between 0.685 and 0.973, which is higher than the lower limit of 0.20. The AVE is between 0.704-0.892, which is higher than the lower limit of 0.50 (Henseler et al., 2009). The results show that the tool has convergent validity. Furthermore, it
was found that the value of $\sqrt{\text{AVE}}$ is higher than the correlation between the related latent variables. This shows that the measure has discriminant validity. CR is in the range of 0.922 to 0.945, which is higher than the lower limit of 0.60 and is following Cronbach's alpha with a value of between 0.818 and 0.927, which is higher than the lower limit of 0.60 (Henseler et al., 2009). This result present a reliable measures.

An analytical process of an indirect influence involves the analysis of whether the path coefficient is very high when there is no mediator. If the value is more significant than 0.20, it is high (Chin, 1998). This means that there may be certain hidden factors and establish a connection between the cause and the result variable. The mediator is then inserted between the two variables, and the indirect influence is analyzed. If it is found that 1) Indirect influence is not statistically significant (that is accepted H: $\beta_{ij} = 0$) and the path coefficient decreases to 0, it means that the variable is not a mediator. 2) If it is significant (that is accepted H: $\beta_{ij} \neq 0$) and the path coefficient decreases to 0, it means that the variable is a full mediator 3) If it is significant (that is accepted H: $\beta_{ij} \neq 0$) and the path coefficient decreases but not to 0, it means that the variable is a partial mediator and may have other mediators (Piriyakul, 2015).

Data analysis

The researcher checked all responded questionnaire and inputted the data in a package software; SPSS, and structural model to use the data for statistical analysis, which are descriptive statistics and structural equation modeling (SEM) statistical analysis using PLS Graph 3.0 program.

Research Results Analysis

According to the questionnaire results, most participants are female. The participants’ age are mostly between 40-50 years (38.00%). Most of them graduated master’s degree (72.80%) and work in a company (45.50%). The majority of them has an average monthly income between 30,001 and 40,000 baht (30.50%). Most of them are married and lived together (54.80%).

The results from the latent variable analysis showed that the mean S.D. and C.V. of all indicators are very high, as shown in Table 1.
Table 1: Mean, standard deviation, and coefficient of variation of indicators in latent variables.

<table>
<thead>
<tr>
<th>latent variables</th>
<th>Mean</th>
<th>S.D.</th>
<th>C.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitating Conditions</td>
<td>4.00</td>
<td>0.604</td>
<td>0.15</td>
</tr>
<tr>
<td>Behavior Intention</td>
<td>4.01</td>
<td>0.601</td>
<td>0.15</td>
</tr>
<tr>
<td>Attitude</td>
<td>3.51</td>
<td>0.755</td>
<td>0.22</td>
</tr>
<tr>
<td>Trust</td>
<td>3.97</td>
<td>0.679</td>
<td>0.17</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>4.01</td>
<td>0.603</td>
<td>0.15</td>
</tr>
<tr>
<td>Use Behavior</td>
<td>4.09</td>
<td>0.621</td>
<td>0.15</td>
</tr>
</tbody>
</table>

According to an analysis of an indirect variable, there is a high average of using e-Money and Rabbit Line Pay at 4.09 and the participants had all intention of use (C.V. equals 0.15 and is lower than 0.3 means there is a low S.D.) In terms of behavior intention, perceived risk, trust and attitude, it is found that there is an average of using services equal 4.01, 4.01, 3.97 and 3.51 respectively. In addition, the participants shared a similar ideas (C.V. equals 0.15, 0.15, 0.17 and 0.22 respectively). Considering a Facilitating Conditions, it is found that users believe in its importance by representing an average at 4.00. They also share a similar ideas in C.V. equals 0.15. Results of overall structural equation modeling is analyzed using a regression analysis of the direct and indirect influences that affect the user behavior of the service users, as shown in Figure 3.
Figure 3: The relationship of the structural equation modeling of the facilitating conditions on the use behavior.

**Structural Equation Modeling Analysis Results**

Regression analysis of both direct and indirect influences towards users’ behaviors of the service users is applied to an analysis of the overall structural equation modeling.

Figure 3 shows the relationship between the structural equation modeling which is used to study the relationship between variables. The structural equation modeling is described as follows.

In relation to the factor that affects the overall Use Behavior (UB), it was found that several points, including (1) Behavior Intention (BI), Attitude (ATT), Trust (TR), Perceived Risk (PR)
and Facilitating Conditions (FC) have a direct influence on the Use Behavior (UB) at 0.567, 0.005, 0.145, 0.004 and 0.171 respectively; (2) Facilitating Conditions (FC) has an indirect influence on Use Behavior (UB) of 0.525.

In relevant of the factor that affects the overall Use Behavior (BI), it was found that Facilitating Conditions (FC) has a direct influence on Use Behavior (BI) at 0.727.

In terms of the factor that affects the overall Attitude (ATT), it was found that Facilitating Conditions (FC) has a direct influence on Attitude (ATT) at 0.703.

By looking at the factor that affects the overall Trust (TR), it was found that Facilitating Conditions (FC) has a direct influence on Trust (TR) at 0.735.

Lastly, the factor that affects the overall Perceived Risk (PR), it was found that Facilitating Conditions (FC) has a direct influence on Perceived Risk (PR) at 0.574.

The researcher has summarized the Relationship between the influential variable and the use behavior in Table 2.

Table 2: Relationship between the influential variable and the use behavior.

<table>
<thead>
<tr>
<th>Latent variables (LV)</th>
<th>R-Squared ($R^2$)</th>
<th>Effect</th>
<th>FC</th>
<th>PR</th>
<th>TR</th>
<th>ATT</th>
<th>BI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Behavior (UB)</td>
<td>0.664</td>
<td>DE 0.171***</td>
<td>0.004</td>
<td>0.145***</td>
<td>0.005</td>
<td>0.567***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IE 0.525</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TE 0.696</td>
<td>0.004</td>
<td>0.145</td>
<td>0.005</td>
<td>0.567</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE 0.727***</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.000</td>
</tr>
<tr>
<td>Behavior Intention (BI)</td>
<td>0.529</td>
<td>IE 0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TE 0.727</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE 0.703***</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.000</td>
<td>N/A</td>
</tr>
<tr>
<td>Attitude (ATT)</td>
<td>0.494</td>
<td>IE 0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TE 0.703</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE 0.735***</td>
<td>N/A</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Trust (TR)</td>
<td>0.540</td>
<td>IE 0.000</td>
<td>N/A</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TE 0.735</td>
<td>N/A</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE 0.574***</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Perceived Risk (PR)</td>
<td>0.329</td>
<td>IE 0.000</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TE 0.574</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Remark:  
DE = Direct Effect, IE = Indirect Effect, TE = Total Effect, N/A = Not Applicable  
* means \( p\)-value \( \leq 0.10 \) or \( t \geq 1.65 \)  
** means \( p\)-value \( \leq 0.05 \) or \( t \geq 1.96 \)  
*** means \( p\)-value \( \leq 0.01 \) or \( t \geq 2.58 \)
Table 3: Hypothesis testing summary.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path coefficients</th>
<th>t test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H 1 Facilitating conditions influence the behavioral intention.</td>
<td>0.727***</td>
<td>26.476</td>
<td>accepted</td>
</tr>
<tr>
<td>H 2 Facilitating conditions influence attitude.</td>
<td>0.703***</td>
<td>19.719</td>
<td>accepted</td>
</tr>
<tr>
<td>H 3 Facilitating conditions influence trust.</td>
<td>0.171*</td>
<td>2.994</td>
<td>accepted</td>
</tr>
<tr>
<td>H 4 Facilitating conditions influence the use behavior.</td>
<td>0.735***</td>
<td>23.679</td>
<td>accepted</td>
</tr>
<tr>
<td>H 5 Facilitating conditions influence the perceived risk.</td>
<td>0.574***</td>
<td>17.390</td>
<td>accepted</td>
</tr>
<tr>
<td>H 6 Behavior intention influences the use behavior.</td>
<td>0.567**</td>
<td>10.011</td>
<td>accepted</td>
</tr>
<tr>
<td>H 7 Attitude influences the use behavior.</td>
<td>0.145***</td>
<td>3.283</td>
<td>accepted</td>
</tr>
<tr>
<td>H 8 Perceived risk influences the use behavior.</td>
<td>0.004</td>
<td>0.094</td>
<td>rejected</td>
</tr>
</tbody>
</table>

Remark: * means p-value ≤ 0.10 or t ≥ 1.65  
** means p-value ≤ 0.05 or t ≥ 1.96  
*** means p-value ≤ 0.01 or t ≥ 2.58

Indirect Influence Analysis Results

The results of the structural equation modeling analysis are as follows.

Figure 4: Direct influence analysis.

Figure 5: Mediation influence analysis.
From Figure 4, the facilitating conditions have a substantial direct influence on the use of behavior. The path coefficient is higher than 0.20 and the statistical significance is \( |t| > 2.58, p < 0.01 \) (the upper number is the path coefficient and the lower number in the parentheses is the t-statistics). Facilitating conditions control the use of behavior. It is \( R^2 \) is as high as 0.947. The result is very high because it is higher than 0.260 as such it is considered as the upper limit (Cohen, 1992). These path coefficients and \( R^2 \) are presumably falsely high. There are perhaps other factors or mediators inserted in the path, which connect and transmit the influences of the facilitating conditions into consumer behaviors.

In terms of a structural equation modeling analysis, when inserted behavioral intention, attitude, trust, and perceived risk between the cause variable and the result variable (Fig. 5), it was found that the direct influence of facilitating conditions on use behavior decreased drastically. The path coefficient between facilitating conditions and use behavior decreased from 0.698 to 0.171. This is approximately 75.50 percent, which is still statistically significant.

This shows that facilitating conditions influence the use of behavior, which following kinds of literature, but are falsely high. This is because behavioral intentions, attitude, trust, and perceived risk may be the mediator that transmit the influence of cause factors to user behavior. This means that when consumers are encouraged or facilitated to be able to use both in terms of availability and suitability for users, it may lead to behavioral intention, attitude, trust, and perceived risk, then affecting use behavior, which was found to be very high.

Indirect influence testing according to the resampling method with the replacement of 1,000 sets (default number is 1,000 sets; the recommended number is 5,000 sets). In this case, \( n \) is equal to 500 units. The resampling with replacement may have repeated units, which is not considered false. After that, use each set of data for regression analysis by specifying dependent variables, independent variables, and mediators. The statistical processing results the path coefficient that approaches the mediator and standard error (SE) of 1,000 values each. That is, sorting the path coefficient's product follows the path that approaches and diverges from the mediator of 1,000 values in ascending order. Then the range of these values are considered whether the percentile 2.5 to percentile 97.5 covers 0. If it covered 0, the multiple value is not different from 0 at the 5% significance level (Piriyakul, 2015). The indirect influence analysis results using the INDIRECT program (Preacher & Hayes, 2008) are as follows.

Table 4: Results of the mediation effect of factor structure that influences the use behavior of users by the bootstrap method.

<table>
<thead>
<tr>
<th>Research Hypothesis</th>
<th>Effect</th>
<th>Boot SE</th>
<th>Boot LLCI</th>
<th>Boot ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>H10 Facilitating Conditions → Behavior Intention → Use Behavior</td>
<td>0.4577</td>
<td>0.0525</td>
<td>0.3532</td>
<td>0.5636</td>
</tr>
<tr>
<td>H11 Facilitating Conditions → Attitude → Use Behavior</td>
<td>0.0070</td>
<td>0.0352</td>
<td>-0.0625</td>
<td>0.0778</td>
</tr>
<tr>
<td>H12 Facilitating Conditions → Trust → Use Behavior</td>
<td>0.1141</td>
<td>0.0371</td>
<td>0.0415</td>
<td>0.1896</td>
</tr>
<tr>
<td>H13 Facilitating Conditions → Perceived Risk → Use Behavior</td>
<td>0.0015</td>
<td>0.0289</td>
<td>-0.0544</td>
<td>0.0581</td>
</tr>
</tbody>
</table>
From Table 4, the results of the indirect influence of behavioral intention. It is a factor that connects the influence of facilitating conditions to users’ behaviors. The lower bound (Boot LLCI) and the upper bound (Boot ULCL) coefficients are at the percentile confidence interval. The lower bound coefficient is 0.3532, and the upper bound coefficient is 0.5636, which does not cover 0. This indicates that behavioral intention is a mediator that connects the influence of facilitating conditions to users’ behaviors.

The results of the indirect influence of trust, it is a factor that connects the influence of facilitating conditions to user behavior. The lower bound (Boot LLCI) and the upper bound (Boot ULCL) coefficients are at the percentile confidence interval. The lower bound coefficient is 0.0415, and the upper bound coefficient is 0.1896, which does not cover 0. This indicates that the influence of trust is a mediator that connects the influence of facilitating conditions to users’ behaviors.

Therefore, it can be stated that behavioral intention and trust are hidden factors that may connect cause variables to users’ behaviors. This is because when inserted the behavioral intention and trust variables between the cause variables and the result factors, which is the user behavior, it was found that the path coefficient decreased drastically. Also, when testing the significance of the mediator influence, all four hypotheses were supported by empirical data (Table 4). It was found that the indirect influence of 2 paths is Hypothesis 10 (Behavior intention is the mediator between facilitating conditions and user behavior) and Hypothesis 12 (Trust is the mediator between facilitating conditions and user behavior) with statistical significance (p < 0.01). This indicated that even though the facilitating conditions play an essential role in creating use behavior when consumers are encouraged or facilitated to use it, time is necessary to create the behavior intention and trust first before the use behavior occurs.

Discussions

This research divides the discussion into each factor as follows.

(1) Facilitating Conditions: According to the research results, the facilitating conditions have a significant effect on the users’ behaviors of electronic service users. This is consistent with the UTAUT2 theory of Venkatesh, Thong and Xu (2012), who developed from the study of Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. It is also following the study of Mohammad et al. (2016), who found that the facilitating conditions have a significant positive relationship with user behavior to use e-commerce.

(2) Behavioral Intention: According to the research results, the behavioral intention has a significant effect on the user behavior of electronic service users. This is consistent with the research of Bryan et al. (2015), who found that the behavioral intention positively influenced behavior. It is also following the Theory of Planned Behavior, Organizational Behavior, and
Human Decision Processes of Ajzen (1991). Besides, the UTAUT2 theory of Venkatesh, Thong, and Xu (2012) indicated that behavioral intention is a mediator between facilitating conditions and user behavior.

(3) Trust: According to the research results, trust has a significant effect on the user behavior of electronic service users. This is consistent with the research of Daduk et al. (2019) who found that positive trust has a significant effect on user behavior in e-commerce, and the research of Philile (2019) who specified that the institution-based trust is significantly and positively associated with the use of mobile banking apps. Also, Giantari et al. (2013) found that trust is a mediator of experience and purchasing intention online.

(4) Attitude: According to the research results, the attitude has no significant effect on the use of behavior of electronic service users. This is not consistent with the concept of Ajzen (1991) who stated that the positive attitude towards consumers' behavior refers to how they developed an intention to carry out that behavior and the concept of Schiffman & Kanuk (2007), who stated that attitude is a tendency of learning to behave following the satisfaction with one thing. Moreover, a study by Taylor & Todd (1995) found that the more positive attitude about behavior, the more intention of them to perform that behavior. According to the research results that the attitude has no significant effect on the user behavior of electronic service users. Users may have a decent understanding and feeling about electronic services. Therefore, it does not affect the use of behavior.

(5) Perceived Risk: According to the research results, the perceived risk has no significant effect on the use of behavior of electronic service users. This is not consistent with the research of Vijayasarathy & Jones (2000); Liu & Wei (2003) and Park et al. (2005) who found that perceived risk can affect the online purchase intentions in the future. This will result in a higher purchase intention of goods in the future. According to this research, results that perceived risk has no significant effect on the user behavior of electronic service users. Users may understand and accept the risks that may occur. Therefore, it does not affect the use of the behavior of users.

Conclusions

It is questionable that facilitating conditions may not be the only factor that has a direct influence on user behavior. Previous research and relevant literatures indicate that behavioral intention, attitude, trust, and perceived risk may be the mediator that transmit the influence of a causal factor to users’ behaviors. However, some studies indicated that the behavioral, attention, trust, and perceived risk are factors that have mutual impact but they have not yet studied as the mediator factor. Empirical evidence of the cases when service users conduct electronic payment (e-Money) of the Rabbit Line Pay service provider, doubts regarding the roles of behavioral intention, attitude, trust, and perceived risk arises. This doubt is whether to believe that the customer will have use behavior of the Rabbit Line Pay, which is the electronic
money (e-Money) service provider after the consumer was encouraged or facilitated to be able to use. There must be a formation of behavioral intention, attitude, trust, and perceived risk before use behavior occurred.

The research was conducted in two steps. The first step is to analyze SEM, especially when there are only cause variable, which is the facilitating conditions, with a result variable, which is users’ behaviors. The second step is the analysis when the behavioral intention, attitude, trust, and perceived risk are the variables that connect the facilitating conditions to use behavior as an indirect influence of 4 paths in total. The data analysis was conducted from statistical processing using SmartPLS 3 program. The results of the analysis in step 1 found that the path coefficient was higher than the level considered the upper limit (Fig. 4) and statistically significant. It indicates that facilitating conditions have a direct influence on user behavior. However, because the value is exceptionally high, it is suspected that certain hidden factors connect both factors. As a result, the research has proceeded with Step 2, inserting the behavioral intention, attitude, trust, and perceived risk between the facilitating conditions and user behavior. The new analysis shows that the path coefficient, which is a direct influence, decreased by approximately 75.50 percent (Fig. 5). This indicated that behavioral intention, attitude, trust, and perceived risk might be the mediator, consistent with the doubt. The researcher then analyzed the indirect influence of all four paths using the INDIRECT program. It was found that only two paths of the indirect influences were statistically significant (Table 4). From the results, it can be concluded that the facilitating conditions are the cause factor that directly and indirectly influences through behavioral intention and trust in user behavior. This means that when consumers are encouraged or facilitated to use, it may have a particular time to form behavioral intention and trust before the use of behavior occurs. Besides, the reason why the direct influence remains significant after the mediator has been inserted indicates that there may not be a formation of behavioral intention and trust. This is because users may have experienced, have been facilitated to use, or already have trusted to service providers or other factors that may be hidden.

In terms of the policy, service providers may use encouragement or facilitation for users in any way because they all influence the use behavior. Because the total influence of the facilitating conditions is exceptionally high, this indicates that the service providers should pay attention to the facilitating conditions. However, users always need time to create behavioral intention and trust. Therefore, service providers must always consider creating behavioral intention and trust of users.
REFERENCES


