FACTORS INFLUENCING CONSUMERS'INTENTION TO USE E-WALLETS

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ABSTRACT

Abstract—The purpose of this research was to study factor influencing customers' intention to use electronic wallets among consumers in Bangkok. The sample group used in this research was 385 general consumers interested in using electronic wallets and living in Bangkok, selected by using multi-stage sampling method. The data collection used questionnaires that were examined the validity and reliability of the questionnaires. The statistics used in the data analysis were percentage, mean, standard deviation, and hypothesis was tested by using multiple regression analysis. The research results revealed that the component of technology acceptance in aspect of perceived usefulness, perceived ease of use, and attitude toward using positively affected actual using e-Wallet application which has consistent with the research hypothesis with statistical significance at F=21.354 and all variables can explain the variability of actual using e-Wallet application (R^2) accounted for 50.69 percent. When considering multiple regression coefficients in the form of a standard score, the aspect of perceived usefulness had the highest multiple regression coefficients ($\beta =.336$), followed by perceived ease of use ($\beta =.294$), and attitude toward using ($\beta=.186$), respectively. While technology acceptance in term of subjective norm has not affected intention to use e-Wallet application which has inconsistent with the research hypothesis.

Keywords—E-Wallets, Intention to use, Technology Acceptance Model

INTRODUCTION

At present, the development of technology has grown into the electronic or digital age. The trend of using WiFi and smartphones is growing and the number of users is increasing. The change of new innovations that help users to communicate more conveniently. Including finding new knowledge can be done easily through the entire online world is thus fully connected and free. As well as the development of finance, electronic devices have been used to pay for goods and services instead of cash, and instead of credit cards. People who use electronic money do not need high income or regular income as credit card holders, such as children, students or the general public, regardless of their income. Electronic money is becoming more and more widely used. This is considered a development of payment in Thailand that creates more convenience for Thai people. Including at present, enabling full use of 5G wireless communication, which has made the Thai financial system is changing. As well, the abolition of the cash system, deposit accounts, and the hassle of dealing with bank counters and high fees has led to electronic money as payment through various applications has made our smartphones the electronic wallet (Bank of Thailand, 2020).

The growth of the e-Money industry in Thailand with the trend continues to grow higher demonstrates the use of electronic money payment has become more popular among Thai consumers. Due to the increasing use of consumers and the entry of new entrepreneurs in both financial institutions and non-institutional groups and telecommunication operators who have the potential to build payment channels a new form of payment without the need to pay through banks or financial institutions in any way. Moreover, with the infrastructure of the e-Money industry that is more readily available than in the past, e-Money tends to be popular and grow in the future. This is coupled with support from government agencies through the National e-Payment Strategic Plan Driving Committee, which aims to make Thailand a truly cashless society, resulting in entrepreneurs in today's market having to protect their customer base and lead offer different strategies to maintain their customer base. In addition, retailers need to adapt to cope with the coming of technology of e-Money to increase competitiveness and in order to maintain the customer base and create loyalty in the end (Wattanasiripol, 2018).

Using an electronic wallet or e-Wallet on a mobile phone, consumers can use it instead of cash for swiping, transferring, paying for goods and services via the service provider's application. The application connects to users' bank accounts, credit cards, debit cards, all in one place. The use of e-Wallets comes from the need to reduce

the cost of using cash as well as the number of people. Many people do not have an account with a financial institution or do not have a credit debit card to make payments. The e-Wallet that are popular in Thailand include True Wallet, AirPay, Rabbit line pay, etc. The advent of e-Wallets has thus bridged the traditional payment gap of cash and credit cards, with a shift in mobile technology driven (Net-Aroon, 2018). However, in the process of paying for goods or services through a mobile phone wallet, the problem consumers face always have to do with having functionality that facilitates easy, stable and secure payments. But with the research and development of mobile internet connection, many of these problems have been eliminated, so users do not have to. It takes a lot of effort to use these technologies. The provision of mobile phone wallet services makes payment transactions convenient and easy, and more secure. As a result, consumers are recognizing mobile phone wallet services that are simpler, faster than traditional payment methods (Madan & Yadav, 2016).

Research studies on electronic payment systems continue to be popular and the factor of technology acceptance is another factor that should be discussed and studied by many researchers (Kariyapol & Kanthawongs, 2017; Kitisitichai, 2018; Thippanyawong, 2016; Thongdee, 2018). Because e-wallet service is a new technology and work on the basis of information technology. Users will understand the technology and be interested in accepting the technology to use it. It arises from perceived usefulness, perceived ease of use, attitude toward using and intention to use. The acceptance of each individual's technology is different. and affects the practical behavior (David, 1991; Kim, 2016).

From the background and importance of the problem, therefore, the researcher is interested in studying the consumer's service usage behavior and organizational image perception factors affecting the behavior of using the electronic wallet application service of consumers in Bangkok. The results of the study will be used as a guideline to formulate a good image strategy and development guidelines for digital wallet technology to better meet consumer demand and have better quality. This will ultimately affect the satisfaction and loyalty of consumers.

LITERATURE & THEORY

E-Wallet

E-Wallet or electronic wallet, sometimes called Mobile Wallet / Digital Wallet, is a system for paying goods as a service through an app or solution with a credit card or cash without having to contact the bank directly. It is a service that uses a mobile phone instead of your own wallet without having to carry cash anymore. The app developer or the owner of the app will act as an intermediary to contact and connect the system to the store when it is approved to use the service. It is a payment through a mobile phone or called Mobile Payment that is used via NFC (Near Field Communication) technology that is embedded next to a smart phone, just tap or scan the QR Code with the payment machine to pay. All payments will be made. It can be done automatically, we call that Tap and Pay, which can handle both the payment of goods and the accumulation of points each time the user is a member according to the terms of the owner's app (Bank of Thailand, 2020).

Acceptance of Technology

Acceptance of technology refers to the acceptance of individuals who will make decisions to fully adopt technology through the recognition process and learning until sure that the technology can definitely benefit. Therefore investment and acceptance are followed the timing of the adoption decision is indefinite, depending on the person and the nature of the technology. This research defines the components of technology acceptance according to the Technology Acceptance Model, or TAM, presented by Davis (1989). The principle of the Technology Acceptance Model is to study the factors that influence the acceptance or decision to use a new technology that users are likely to use it. The components of technology acceptance based on the TAM are as follows.

- Subjective norm is a factor that reflects individual beliefs about normative beliefs which arise from the influence of references in order to change behaviors, thoughts, and feelings which is one of the factors in predicting intention to act (Ajzen & Fishvien, 1980). The motivational factors influencing behavior are attitude, conformity and perception factors. Each person has different norms thus resulting in conformity with different reference groups. The reference group is the person who is important to that person, such as family, friends, or the media. It can be said that reference group conformity is the person's perception that the person who is important to them supports the behavior that causes the intention to do that behavior.

- Perceived usefulness refers to the awareness of the benefits arising from the use of the service users of the

E-Wallet application, which affects the benefits of using it, improve efficiency and performance. It is the belief or perspective to analyze and recognize the value or expected benefit of technology. If the benefits of technology match the needs of individuals, it will lead to further adoption and use of that technology. Including if using this new technology will make the work done better or finish faster which resulted in increased income. It is considered an extrinsic motivation.

      - Perceived ease of use refers to the level of belief and expectation of people who use information systems that can be learned easily without any effort much to learn or understand the system. Perceived ease-of-use is a key factor that users expect of the targeted technology to be simple and independent of effort. Perceived ease of use directly influenced attitude towards using and the intention to use. It was also found that perceived ease of use influenced perceived benefit.

      - Attitude toward using are the feelings, beliefs, and tendencies of a person's behavior towards any person or thing or idea as a way of evaluating feelings, beliefs, and behavioral tendencies. Attitudes towards behavior are influenced by a person's belief that any behavioral action will have a definite effect and the outcome is assessed (Kim, 2016). In addition, attitude toward using refers to how users perceive a technology based on perceived usability and perceived ease of use. This will directly affect the intention of use.

      - Intention to use refers to the possibility that the user will accept the technology and the user's intention to use the technology. This depends on the behavior of the individual's interest in using technology. They will be ready to use the technology as soon as there is an opportunity or attitude to use it in the future. Perceived usefulness and subject norm had a significant effect on intention to work. As well as attitude towards using and intention to use had a significant effect on actual using.

      - Actual using refers to the acceptance of the technology by its actual use with the intention of using it as a variable that affects the actual use of the user. According to a research study by Thakur (2013), it was found that service users show behaviors of using mobile phones to pay for goods and services when there is an intention to use a mobile phone to pay for products. As well as research of Kang (2014) was found that user intent affects the use of mobile applications. This indicates that intention is an important factor that causes actual usage behavior.

RELATED WORKS OR DISCUSSION

      Based on TAM's technology acceptance theory, the researcher determined that the conformity factor was based on the subjective norm, perceived usefulness, perceived ease of use, attitude toward using, intention to use and actual using e-Wallet application. According to a research study by Sriplawat (2009), it was found that conformity with reference groups is an important factor in making consumers more interested in services. This affects the acceptance and use of mobile banking services. This is consistent with the research of Kaewtan (2014) which found that conformity to referral groups through friends or acquaintances affecting the use of electronic payment services via mobile phones. Including if using this new technology will make the work done better or finish faster which resulted in increased income. It is considered an extrinsic motivation. The research by Kitisitthichai (2018), it was found that when users perceive the ease of use causing an attitude to use until it leads to the intention of using electronic wallets. In addition, the perception of users' ease of use affects their attitudes towards using mobile payments. This is in line with the research by Cha (2011) which found that differences in perceived ease of use affected the different intent of consumers to shop via the Internet. It was consistent with the research of Thippanyawong (2016) was found that attitudes in the use of e-Money affected the use and resulted in the behavior of actual use of e-Money via mobile phone in Thailand. Like the research of Kitisitthichai (2018) was found that the attitude of use affects the intention of using the electronic wallet in purchasing products of consumers in Bangkok. This is consistent with research by Thakur (2013) which found that when users intend to use their mobile phone to pay for goods and services, they will show behavior of using mobile phone when paying for goods and services. According to a research study by Thakur (2013), it was found that service users show behaviors of using mobile phones to pay for goods and services when there is an intention to use a mobile phone to pay for products. As well as research of Kang (2014) was found that user intent affects the use of mobile applications. This indicates that intention is an important factor that causes actual usage behavior.

METHODS

Population and sampling

The target population for this research study are consumers who have used electronic wallet service and live in the Bangkok metropolitan area. The sample of 385 was conduct to collect data by using multi-stage sampling method from target population. The researcher has sent the questionnaire online via social media such as Facebook, Line, etc. and distributed the questionnaire at various locations. An invitation to fill up the questionnaire was sent to members of the group who have used electronic wallets for payment until the required number of samples is reached.

Instruments and Data collection

The instrument used in this research was a questionnaire developed in accordance with the operational definitions which divided into 3 parts, consisting of demographic data, Acceptance of e-Wallet Technology opinions and actual using electronic wallet application. The estimation scale type of questionnaire was 5-level Likert's scale. The generated questionnaires were used to test the validity and reliability of the questionnaires before collecting data in order to obtain accurate research results and achieve the stated objectives. In this regard, the researcher will arrange for a pre-test with preliminary questionnaire of 40 sets. The results of the confidence check were the confidence values of each question were between 0.7-1.00 and got the total confidence of 0.821, which passed the reliability criteria (Hair et al., 2010). Additionally, the questionnaires generated were subject to content review from the advisor already. Therefore, it was concluded that the questionnaires could be used to collect data. The empirical data of 385 valid responses was collected through an online survey from consumers who have used electronic wallet application for payment.

Statistics and data analysis

Statistics used in data analysis, the researcher used descriptive statistics to describe the demographic characteristics such as frequency, percentage, mean and standard deviation. As well as the inferential statistical analysis was used to test research hypotheses by using Pearson correlation coefficient analysis and Multiple regression analysis.

RESULTS

Descriptive results

The demographic information of the samples were consumers who had decision to use electronic wallet application for payment, total of 385 samples. Most of responders accounted for 61.5 percent were female, 33.5 percent were aged between 31 and 40 years, 31.2 percent had marital status, 38.5 percent had the highest level of education at the bachelor's degree, 00.5 percent were state enterprise employees, 24.25 percent had average monthly income between 30,001-40,000 baht, and 42.75 percent had online shopping experience for more than two years.

The opinions about the acceptance of technology that affect the actual using electronic wallets of 385 respondents found that the overall aspect was at a high level. If considering each aspect, the most priority is perceived usefulness at a high level, followed by perceived ease of use, attitude toward using, intention to use, and subjective norm, respectively, at a high level in all aspects.

Hypothesis testing results

The correlation was analyzed between variables in the model, namely subjective norm, perceived usefulness, perceived ease of use, attitude toward using, and intention to use e-Wallet application. The results revealed that the correlation coefficient between all aspects of acceptance technology affecting the actual using e-wallets application, it was found that the correlation did not exceed 0.80 (Hair et al., 2010). Hence, all independent variables did not exceed the multiple relationship between the factors with multicollinearity which all independent variables can be used in the multiple regression analysis by using Enter method which all independent variables are entered into the equation at the same time. The analysis of acceptance technology affecting the actual using e-wallets application by using multiple regression analysis, had the statistics value as shown in Table 1.

Table 1 Multiple Regression Analysis of Factors Influencing Consumers' Intention to Use E-Wallets

Variables	b	β	t	p-value
Constant	1.140		5.173	.000**
Subjective norm	0.155	0.178	1.542	.138
Perceived usefulness	0.322	0.336	4.562	.000**
Perceived ease of use	0.285	0.294	3.984	.000**
Attitude toward using	0.177	0.186	2.011	.035*
R = .712, R² = .5069 S.E.=.061, F=21.354 a maximum Eigen value=5.458				

** Significant level at .01, * Significant level at .05

Table 1, the result of multiple regression analysis revealed that subjective norm, perceived usefulness, perceived ease of use, and attitude toward using can together predict actual using e-Wallet application with statistical significance at F=21.354. All variables can explain the variability of actual using e-Wallet application (R²) accounted for 50.69 percent. The test results accept the hypothesis that component of technology acceptance in term of perceived usefulness, perceived ease of use, and attitude toward using positively affected actual using e-Wallet application. When considering multiple regression coefficients in the form of a standard score, the aspect of perceived usefulness had the highest multiple regression coefficients (β=.336), followed by perceived ease of use (β=.294), and attitude toward using (β=.186), respectively. While technology acceptance in term of subjective norm has not affected actual using e-Wallet application which has inconsistent with the research hypothesis.

CONCLUSIONS AND FUTURE WORK

Conclusion and discussion

The study found that adoption of perceived technology benefits, perceived ease of use, and attitude towards use affects the actual use. Because the development of new innovations may affect the acceptance of the service users. Therefore, to create awareness among users of the benefits received. And the ease of use will make the service user have a good attitude and intend to use the service. This is consistent with the notion of David (1991) that the underlying concept of the technology adoption model identifies the reasons related to individual acceptance of the use of IT systems, emphasizing two key factors: the perception that perceived usefulness and perceived ease of use, which will result in attitude toward use, after which there will be interest in using information technology or intention to use and lead to decision making in actual use. In addition, the level of individual belief in the new systems or technologies can increase their productivity and directly affect their attitudes towards the use of technology. This is also consistent with the research of Thippanyawong (2016) found that the perceived benefits of using and perceived ease of use affects the attitude of using e-Wallet on mobile phones and the research of Thongdee (2018) found that the acceptance of technology in the aspect of perceived benefits, attitude towards use and perceived risks affecting the decision to use e-Wallet. Moreover, a study by Suthiwong (2018) found that the aspect of attitude toward using, perceived ease of use, and the perceived benefits from use affect the attitude of use. As well as the attitude toward using had the influence on intention to choose payment service via e-Wallet application and also found that the intention of using influenced the actual using of E-Wallet.

The results showed that the acceptance of e-Wallet technology in aspect of subjective norm did not affect the e-Wallet application usage among consumers in Bangkok. This is inconsistent with the research hypothesis and inconsistent with Fishbein and Ajzen's a Theory of Reasoned Action (TRA) (1980), which states that people will always consider the consequences of their actions before making decision. Therefore, before the behavior is performed, the person will show the intention to perform the behavior first. Attitude towards the behavior is one of the important factors in causing the intention to perform the behavior. Subjective norm is therefore a factor that reflects individual beliefs about normative beliefs. The individual person has different norms thus resulting in conformity with different reference groups. The reference group is the person who is important to that person, such as family, friends or the media. It can be said that reference group conformity is the person's perception that the person who is important to them supports the behavior that causes the intention to do that behavior intention.

As well as if reference group do not support it or do not want them to act that behavior will intend not to do that behavior. This indicates that there may be other perceptions regarding the use of the e-Wallet such as corporate image, trust in its use or the risk of its use. Therefore, users are not amenable to the reference group. This is consistent with the research of Sriplawat (2009), was found that conformity with reference groups was an important factor in making consumers more interested in services, which affected the acceptance and use of mobile banking services. This is consistent with the research of Kaewtan (2014) which found that conformity to referral groups through friends or acquaintances affecting the use of electronic payment services via mobile phones.

Recommendations and future work

Electronic wallet service providers can apply the information obtained from the results of this research for developing an application to be quality, ease of use, benefit from use, and has a standard security system including having good communication to create motivation and positive attitude towards using electronic wallet services. Electronic wallet service providers must create awareness among users of the ease of use by demonstrating that using the e-Wallet service does not require effort to access the service. The application can be done without effort and can use the service continuously with a clear function for use.

In addition, e-wallet providers should adopt innovations as a guideline for technology development and should focus on security to build confidence when choosing to use the application for online financial transactions. Establish a standard for e-wallets that will affect the intentions and practicality of users by developing a system with technology and safety standards. As well as publicizing through various channels with a good communication in order for users to know the correct information about electronic wallets and create a positive attitude about using e-Wallet services by making users feel that using e-Wallet services is a good experience, modern, interesting, convenient, and suitable for daily life spending.

For further research should be studied in conjunction with other relevant or expected factors influencing purchasing decisions in order to gain more insights covering all dimensions such as factors of marketing mix, brand image, service quality, acceptance of technology, and word-of-mouth marketing, etc. Moreover, it should study in other population groups or other areas to get broader and more comprehensive information.

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