The Factors that Affecting Consumer Intention to Utilize the Electronic Payment System in Malaysia

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Abstract

The Fourth Industrial Revolution digitizes Malaysia's payment system. Nothing is easy when it comes to the payment method except the electronic payment system. Most Malaysian consumers are not ready to embrace the electronic payment system. This paper aims to recognize factors affecting the consumer's intention to utilize the electronic payment system. Literature demonstrates that factors such as attitude, subjective norms, perceived ease of use, perceived usefulness and perceived security have an effect on the intention of customers to utilize the electronic payment system. The quantitative analysis was used by 394 respondents from all over Malaysia. Research findings show that attitude, subjective norms, perceived usefulness and perceived security have a significant relationship with customer's intention to utilize the electronic payment system but the perceived ease of use does not have a significant relationship with consumer intention to utilize the electronic payment system. The result also shows that perceived usefulness has the strongest influence on consumer intention to utilize the electronic payment system in Malaysia.

Keywords: Intention Factors; Electronic Payment System

1. Introduction

The electronic payment system has become a general transaction mechanism that replaces traditional consumer payment methods, especially online transactions, when paying goods and services. As reported by Junadi & Sfenrianto (2015), an online payment tool called an e-payment system creates a rapid payment system that can effectively replace conventional payment systems. People can now make payments using credit card, m-payment, and debit cards instead of traditional payment methods. The cashless payment mechanism can be used to make payment using the internet without cash, also known as e-payment. E-payment becomes popular worldwide today. E-payment system is created to minimise customer effort to withdraw cash by using a weekly commercial bank automated teller machine. The aim of e-payment was to make it easier for customers and reduce total transaction costs, which retailers and consumers bear. An online e-payment platform helps customers to handle online transactions without going to a bank. Internet access allowed consumers to buy goods and services using online payment tools. E-payment users must have active

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communication service in a smartphone system to ensure the successful transaction, and retailers must ensure that the payment terminal machine does not disconnect during the transaction.

In addition, e-payment systems steadily expand and support the economies of countries. According to the Malaysian Central Bank (2017) report, e-payment systems in Malaysia funded GDP amounted to over RM 16 billion in 2017. The Central Bank of Malaysia's description of 2017 showed a rise in retail payment transactions for electronic money and credit card. Malaysian is a developing country and the interesting innovations are currently happening and in these few years the rate of adoption of e-payment systems will increase.

Based on statistics provided by Fintechnews.my (2018), the total amount of e-money transactions was just 0.23 percent of the total amount of transacting e-payments, the entire transaction amount of e-money is much lower than internet banking, 95 percent of e-payment transactions or even credit cards, which accounts for just 2.8 percent of e-payment transactions. The statement indicates that virtually all Malaysians use e-money for payments for small transactions.

Youth and Sports minister Khairy Jamaluddin (2017) said Malaysia will become a cashless society before 2050. Although it is now thirty years out, Malaysians are not yet for digital payment. There are many factors which impede the choice of e-payment system by Malaysians. Luarn & Lin (2005) proposes study, that reduced education and trust in the use of the e-payment system is an obstacle to adoption. Hataiseree (2008) said some people still use cash in their regular transactions because they don't feel confident they are using e-payments. Although 63 percent of Malaysia's debit cardholders continue to be relatively low on regular e-payment expenses as consumers are still heavily dependent on money. The survey by The Nielson Company (US) (2019) found that 93 percent of Malaysians choose cash for dinner; 90 percent use cash for everyday needs; 89 percent use hard cash for public transport; and 81 percent use cash for diesel.

The Central Bank of Malaysia must apply an efficient e-payment policy, which has been laid down in the 2011-2020 financial sector as the preferable tool for transactions in Malaysia. The findings in this study offer Malaysian insights into which factor the intent to use the electronic payment system directly influences. These studies would identify the critical factors that affect consumer intention to utilize the electronic payment system and allows Central Bank of Malaysia to evaluate these factors. Malaysia government need to apply an effective strategy to make e-payment as prefer medium for transaction in Malaysia, which stated in Financial Sector Blueprint 2011-2020. The findings in this study will provide Malaysian perception on which factor will directly affect the intention to utilize the electronic payment system.

2. Literature Review

2.1. Definition of E-Payment

It is necessary to allow transferring funds via a traditional payment system, to have banking information, banking tools, and interbank money transfer systems. Payment is known as exchanging funds or money by using the transfer mechanism from a payer to a payee. A payment system allows a company and customers to encourage exchanging funds. The payment which completes electrically is known as the electronic payment. E-payment described as a payment process that electronically began, controlled, and acknowledged the payee. Using the e-payment process, the recipient handles, allocates and receives funds via the electronic payment structure.

The e-payment system is known as the transfer of funds involve the electronic communication platform. The e-payment method includes direct credit or depositing money directly from the account. E-payment categories like any transaction payment made without paper money or cheque (Hord, 2005). In this research,

e-payment involves exchanging cash between two people via electronic payment devices. E-payment also helps a customer to view and control a transaction; an Internet network transaction.

2.2. Malaysia's e-Payment System

E-commerce increases e-payment need, the availability of e-payment removes traditional cash-based payment process. For example, the needs of new e-payment method are growing year after year. The original online e-payment system should meet the needs of online retailers and e-commerce. Transfer of payment from a spender to a seller via online e-payment. E-payment helps users to monitor their online banking account and make online transactions (Alsaleh, Alarifi, Alshaikh & Zarour, 2015). There are five types of retail transaction devices based on Central Bank Malaysia's statement, including credit card, debit card, and e-money. Malaysia's key e-payment systems include retail payment system and robust value payment system SIPS. The SIPS comprehensive value payment system includes automated real-time transfer of funds and RENTAS securities. The first category of retail payment system, which includes direct debit, automated teller machine, cheque clearing system, financial process exchange, e-debit, and Interbank GIRO. Wholesale payment devices and the fourth payment system are included in the second category. Malaysia has five retail payment infrastructure and three retail payment networks.

2.3. Factors of Intention to Utilize the Electronic Payment

2.3.1. Attitude

Based on a study conducted by Fan, Shao, Li, & Huang (2018), attitude is a fundamental influence on the actions of others, everyone can define their attitude in any matter and issue. The definition of attitude depends on the other knowledge source. As Hill, Fishbein, & Ajzen (1977) stated, an attitude refers to someone who reacts to an object, attitude, someone, and institute with a great or bad mark. Attitude as interpersonal emotions reflecting whether he/she agrees or disagrees with something. Additionally, mindset causes people to behave in positive or poor ways. Attitude may define as an assessment because it contains an assessment aspect.

According to Bugembe (2010), the primary impact of using information technology or applications depends on an individual's attitude. This statement confirms past research by Oney, Guven, & Rizvi (2017), which claimed that the attitude of a consumer will influence perception and overall purpose. Many social psychologists and social scientists have also used attitude assessments to assess the anticipation of social activity for reliable outcomes (Erkan and Evans, 2016). Based on previous studies, social activity was also used to determine how an individual performs. In addition, the cognitive aspect was used to measure the person's emotional attitude and how one feels to study what a person thinks (Al-Lamy et al 2018).

The essence of attitude to technology adoption can be determined by a person (Lai, 2017). If a person understands the desires and needs of technology, he or she adopts the technology to achieve pleasure (Ramos-de-Luna et al., 2016). If customers have easy access to information and services, they will enjoy more using the technology or system. Innovation such as simplicity and usability were critical in improving the user's attitude to technology (Ramos-de-Luna et al. 2016). In order to affect the user's attitude towards technology significantly, technology must include confidence, sophistication and testing (Sánchez & Hueros, 2010). Thus, the hypothesis to be examined is:

H1: There is a significant relationship between a consumer's attitude and intention to utilize the electronic payment system in Malaysia.

2.3.2. Subjective Norms

Ajzen & Fishbein (1980) research mentioned that subjective norms involve two dependent components, which include normative belief and motivation to comply. Personal belief on how people whom they want them to or not to perform the behaviour, motivation to meet is the motivation of fulfilling other's thoughts is known as normative belief. In addition, subjective norms described the perception of the consumer or person that people approve the behaviour he should or should not conduct (Ramos-de-Luna et al. 2016). Subjective norms known as individuals choose to or not to obey the actions and normative beliefs of others (Montano & Kasprzyk, 2008). As explained by Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva (2014), subjective norms categorise to two influences, which include interpersonal factors and external factors. The professional evaluations and opinions or mass media consider external factors; the interpersonal factors include the forces from family members and friends.

According to Ajzen (2002), injunctive norms defined as individual's personal beliefs that what they need to do. Because others prefer to accept good actions and disapprove of undesirable activities, injunctive criteria often have high inconsistency. In order to balance the injunctive laws, people typically do so through others during the social gathering known as the belief in descriptive norms .Thus, the hypothesis to be examined is:

H2: There is a significant relationship between consumer's subjective norms and intention to utilize the electronic payment system

2.3.3. Perceived Ease of Use (PEOU)

PEOU can influence a user's intention to implement new technologies on the basis of the TAM model (Szajna, 2008). PEOU requires issues of usage, easy to understand and easy to navigate. PEOU also provides the consumer's view of used information technology. This means that a technology system which is considered to be more user-friendly than others would increase usage. PEOU is a tool that uses a particular system to minimise user effort (Taherdoost, 2018). PEOU can be used to learn about the job and modern knowledge systems (Al-Gahtani, 2016). The consumer will benefit from the quick adaptation of the system and the ease of control information technology (Vinitha & Vasantha, 2017).

PEOU has been influenced by daily buying practises. Excellent connectivity is a key factor impacting the intention to use new technology (Vinitha & Vasantha 2017). The sluggish internet and more response time on the Internet are a result of research by Krol, Rahman, Parkin, De Cristofaro, & Vasserman, (2017), leading users to confuse whether the transaction takes place or not.

In conclusion, PEOU is a very important factor in the implementation of the e-payment system; it will affect the purpose of the customer directly in e-payments. Thus, the hypothesis to be examined is:

H3: There is a significant relationship between consumer's perceived ease of use and intention to utilize the electronic payment system in Malaysia.

2.3.4. Perceived Usefulness (PU)

Consumer perception of new technology implementation improves performance, often described as perceived usefulness. In e-banking research it was seen that perceived usefulness was significant and was used mostly by researchers (Lai, 2017). Perceived usefulness describes the application of new technology to improve job efficiency (Ayo, Adewoye & Oni, 2010). The consumer's perceptions of the outcome after the practise are known as perceived usefulness (Renny, Guritno, & Siringoringo, 2013). Perceived usefulness is depending on the consumer's understanding of purposeful and functional aspects (Chang & Wu, 2012).

If the latest information technology solution enhances the productivity and efficiency of an individual, the individual willing to adopt it. The efficiency of the information technology system is determined by certain factors like usability, although other research indicates that usability factors directly affect user satisfaction. The e-payment system can provide quick navigation and make it possible for e-payment systems to be

implemented faster. Perceived usefulness as a consideration for the consumer to consider e-payment while purchasing e-commerce goods and services (Barkhordari et al., 2017). Thus, the hypothesis to be examined is:

H4: There is a significant relationship between consumer's perceived usefulness and intention to utilize the electronic payment system in Malaysia.

2.3.5. Perceived Security

Security is described as an unauthorised or unlawful modification or destruction of information, which includes accidental and deliberately exposed protected data. Perceived security defines the user personal view on the protection safeness (Kim, Tao, Shin, & Kim, 2010). Consumers are most likely to hesitate to use a technology where the level of perceived security is too low (Masihuddin, Khan, Mattoo, & Olanrewaju, 2017). This, also supported by Rouibah, Lowry, & Hwang (2016) claim that the security statements, can influence user perceptions of security. System developer should provide consumers with more detail, such as security policy statements, data protection, and privacy statements (Barkhordari et al., 2017).

Some of the research shows the significance e-payment system in transfer processes such as encryption, modification and authentication, which will affect the confidentiality and honesty (Teoh, Chong, Lin & Chua, 2013). The reliability of security statements will affect the purpose of consumers (Vinitha & Vasantha, 2017). Both phases of e-payment systems operation should be private, which can fulfil the needs of customers and privacy concern. A study was done by Ozkan, Bindusara, & Hackney (2010) proven security issues will affect the adoption of e-payment systems directly. Generally, people refuse to use e-payment if there were data breaches. By upgrading and creating a higher level of security, consumers could more likely to use e-payment system. Thus, the hypothesis to be examined is:

H5: There is a significant relationship between consumer's perceived security and intention to utilize the electronic payment system in Malaysia.

3. Methodology

Five independent variables will be examined in this study to assess if these are the factors that influence the intention of customers to use the the electronic payment system. For this study, the quantitative approach was chosen as it is more suitable to use due to the broad sampling size of 394. The survey was conducted with 394 respondents to determine the relationship between independent variable and dependent variable, which is fitting for this study and questionnaire.

The questionnaire was divided into three sections, Part A, Part B and Part C. Part A addresses the demographic information of respondents and uses the nominal scale to collect data. Meanwhile, it includes 5 independent variables in Part B that consist of attitude, subjective norms, perceived ease of use, perceived usefulness and perceived security. Each variable has 5 questions and uses the Likert scale to encourage respondents to give the survey's exact opinion. Part C answers the questions relating to the dependent variable relating to intention to utilize the electronic payment system. There are 5 questions in this section and the nominal scale is used for calculation.

In order to produce a result, SPSS has been used to analyse data for this study. Univariate analysis (Descriptive Analysis), reliability test, normality test, and multivariate analysis (Multiple Linear Regression) are the data analysis approaches used for data analysis using SPSS.

4. Data Analysis

4.1. Descriptive Analysis

Data was obtained from 400 sets of questionnaires that were distributed across Malaysia to the respondents. However, only 394 or 98 percent were eligible and able to use the distributed questionnaire. Sex, age, race, monthly allowance and wage, state and country, heard and used before e-payment are personal details about this study. 225 (57.1 percent) male and 169 (42.9 percent) female were among the respondents. According to age, the profile of respondents is from the range between the ages of 18 to 59 and above. Three races were available in this sample, consisting of Malay 308 (52 percent), followed by Chinese 83 (39.8 percent), Indian 27 (6.9 percent) and others 5 (1.3 percent). The majority of respondents below RM1,000 categories with 152 (38.6 percent) in terms of monthly allowance and wage, followed by respondents with a range between RM1,000-RM2,000 with 88 (22.3 percent), 85 (21.6 percent) range between RM2,001-RM3,000, 54 (13.7 percent) range between RM3,001-RM5,000 and a limited range of RM5,001 and above 15 (3.8%) respondents. As for the state and country, the majority of respondents came from 156 (39.6 percent) in the Southern Region of Malaysia, 115 (29.2 percent) in the Central Region, 65 (16.5 percent) in the Northern Region, 47 (11.9 percent) in the East Coast Region, and 11 (2.8 percent) in Sabah and Sarawak. While for heard and used before e-payment, most of respondents with 391(99.2 percent) heard about e-payment and 3(0.08 percent) respondents does not heard about e-payment. However only 366(92.9 percent) use e-payment before and 28(7.1percent) did not use e-payment before.

4.2. Correlation Analysis

Pearson Correlation test was conducted to examine the correlation between independent variables (attitude, subjective norms, perceived ease of use, perceived usefulness and perceived security) and dependent variable (intention to utilize the electronic payment system). Table 1 summarizes the result of the correlations.

Table 1: Correlations

		Attitude	Subjective Norms	Perceived Ease of Use	Perceived Usefulness	Perceived Security	Intention
Attitude	Pearson Correlation	1	.761[**]	.385[**]	.825[**]	.648[**]	.801[**]
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Subjective Norms	Pearson Correlation	.761[**]	1	.255[**]	.766[**]	.561[**]	.788[**]
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Perceived Ease of Use	Pearson Correlation	.385[**]	.255[**]	1	.411[**]	.583[**]	.363[**]
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Perceived Usefulness	Pearson Correlation	.825[**]	.766[**]	.411[**]	1	.656[**]	.847[**]
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Perceived Security	Pearson Correlation	.648[**]	.561[**]	.583[**]	.656[**]	1	.648[**]
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Intention	Pearson Correlation	.801[**]	.788[**]	.363[**]	.847[**]	.648[**]	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

All variables are significantly related to the intention to utilize the electronic payment system, as shown in Table 1. It showed from the result that perceived usefulness has the highest correlation value with 0.847,

which is significant at level 0.01 (2 tailed). The perceived ease of use, however, has the lowest correlation value of 0.363, which is significant at level 0.01.

4.3. Multiple Regression analysis

The simultaneous effects of independent variables (attitude, subjective standards, perceived ease of use, perceived usefulness and perceived security) on the dependent variable (intention to use the the electronic payment system) were examined in this study using multiple regression analysis.

Table 2: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.884[a]	.782	.779	.26791

The result for multiple regression for the intention to utilize the the electronic payment system was summarised in Table 2. The result showed that the value of R-square is .782, explaining that the five independent variables would explain 78.2 percent of the variation in the intention to utilize the the electronic payment system. There is therefore an significant relationship between attitude , subjective norms, perceived ease of use , perceived usefulness and perceived security (all the independent variable) and the intention to utilize the electronic payment system (dependent variable).

4.4. Empirical Results

Table 3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	.179	.128		1.395	.164
	Attitude	.193	.049	.180	3.911	.000
	Subjective Norms	.261	.040	.263	6.566	.000
	Perceived Ease of Use	-.011	.022	-.015	-.490	.625
	Perceived Usefulness	.427	.047	.431	9.147	.000
	Perceived Security	.118	.039	.109	2.994	.003

Table 3 showed that the coefficient estimation of attitude (Beta= 0.180; p= 0.000), subjective norms (Beta= 0.263; p= 0.000), perceived usefulness (Beta= 0.431; p= 0.000) and perceived security (Beta= 0.109; p= 0.003) were all proposed determinants substantially linked to the intention to utilize the the electronic payment system. The p-value is greater than 0.05 only for perceived ease of use (Beta= -0.015; p=0.625) and the beta coefficient is not statistically important, so there is no significant connection to the intention to utilize the the electronic payment system. The positive or negative effect of the predictors on the dependent variable is expressed by the sign of the regression standardised estimate (Beta). It should also be noted that attitude, subjective norms, perceived usefulness and perceived security have a positive influence on the intention to utilize of the the electronic payment system. However, it has a negative impact on the intention to utilize the the electronic payment system for perceived ease of use. The regression equation is described below, based on the table above:

Intention= 0.179 + 0.193 Attitude + 0.261 Subjective Norms - 0.011 Perceived Ease of Use + 0.427 Perceived Usefulness + 0.118 Perceived Security

5. Discussion and Research Implications

The outcome of this study indicated that variables such as attitude, subjective norms, perceived ease of use, perceived usefulness, and perceived security have a notable impact on the purpose of using the electronic payment system in Malaysia. The theoretical model used in this study includes theory of reasoned action (TRA) for simple comprehension, the theory of planned behaviour (TPB) for the determination of the subjective norm and attitude of the consumer. Furthermore, the Technology Acceptance Model (TAM) is also used to assess perceived ease of use, perceived usefulness and perceived security. For more than 15 years, these three theoretical models have been used to determine the determinant for the acceptance of the information system (Kim, Ferrin & Rao, 2009).

The study shows that attitude has a significant positive relationship with intention to utilize the electronic payment system. This indicates that consumers have already been introduced to the e-payment system before and feel that e-payment is beneficial and easy, that they are able to accept it and use it to replace conventional paper money payment methods in everyday life. Most consumers only use an e-payment system that is trusted and user-friendly. Between subjective norms and intention to utilize the electronic payment system, there is a significant positive relationship. Subjective norms are the power of kin, friends, family, social and professional. When they subsequently feel the social strain and also the influences of the elderly or relatives, individuals may accept new technologies. For the perceived ease of use, there is no significant relationship between consumer's perceived ease of use and intention to utilize the electronic payment system. Results show that the respondent gets frustrated when using e-payment, most of the respondent disagrees that e-payment system is simple to use. While the perceived usefulness has significant positive relationship with intention to utilize the electronic payment system as most respondents agree that the e-payment system is a useful payment method which minimises the time spent on payment, flexible for the consumer to make a payment, and allow faster usage of the mobile application. Moreover, perceived security has significant positive relationship with intention to utilize the electronic payment system as perceived security is the most important concern in the consumer's perspective to utilize the e-payment system daily.

6. Conclusion and Research Contribution

As a conclusion, four out of five independent variables, including consumer's attitude, subjective norms, perceived usefulness, perceived security, are proven to have a significant relationship with the intention to utilize the electronic payment system. The positive coefficient from the study results indicates that all factors are positively related.

In this study, perceived usefulness is the most significant factor which influences consumer's intention to utilize the electronic payment system. It has been proved that perceived usefulness is the most important factor to convince consumers to use the electronic payment, consumer more prefer to use the electronic payment if can reduce payment time and effort. The financial institution or banking sector need to collaborate and build more the electronic payment infrastructure to reduce and make it convenient to the consumers. Infographics on the benefit and usefulness of the electronic payment should be created to attract more consumers to use the e-payment system.

The payment system plays important in enhancing the national economy, e-payment also as known as the flow of financial resources. Malaysia is a developing country, as well as a producer of oil; the country's economy is reliant on the oil industry and has fastest-growing ICT industry among ASEAN countries, and the

banking system in Malaysia is currently facing the most significant convergence of industries. Cashless transactions society had to become a trend which cannot be avoided, the revolution and the evolution of payment system creating cashless culture. Before that, humans using system barter, metal coins than using paper money on the transaction.

The outcome of this study will act as supportive data for specific authorities such as marketer and financial institution to develop an appropriate strategy in promoting e-payment among Malaysia. Other than that, to ensure the financial institutions, government, e-payment service provider, and e-payment applications creator also need to understand the main challenge and problem meet by Malaysian consumers in using the e-payment system. The highest purchasing power in Malaysia is the youth generations; this study will more focus on this segment of the consumer.

Thus, the electronic payment security should also not be ignored. Malaysia government need to action by continuing to maintain and improve financial security by introducing a new and up-to-date policy. Malaysia's the electronic payment facility and service providers and financial institutions should continuously improve the e-payment facility to fulfil the needs of consumers and encouraging the growth rate. Furthermore, Malaysia government need to apply an effective strategy to make e-payment as prefer medium for transaction in Malaysia, which stated in Financial Sector Blueprint 2011-2020. This research provided better insight for academicians, governments, financial institutions, electronic payment service providers and programmers to formulate a strategy to enhance the adoption and use of electronic payment system.

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