AN INVESTIGATION INTO CONSUMERS' PERCEPTIONS OF ELECTRONIC PAYMENT IN MALAYSIA

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Information of Article

Article history:

Received :

Revised :

Accepted :

Available online :

Keywords:

Electronic Payment

Customers' Perceptions

E-Wallet Usage

Online Payment Behaviour

Malaysia Digital Payment Systems

ABSTRACT

The purpose of this study is to examine how consumers view electronic payment system. The researcher has chosen to examine five factors that might affect consumers perception towards electronic payment. Benefit, ease of use, self-efficacy, trust, and security. This study has advanced knowledge for it has provided information on the current state of e-payment acceptance and use, particularly among Malaysians. The significant factors identified are beneficial to the policy maker, banking institutions, online transaction facilities providers, and software developers as they develop strategies directed at increasing e-payment acceptance and use.

1. INTRODUCTION

1.0 Purpose of Study

In view of the promising growth of e-payment in Malaysia, this study aims to discover the factors influencing perception towards electronic payment (e-payment) from the Malaysian consumers' perspective. In this research, we will be discussing about background of this study, the problem statement, research question, research objective, scope of this study, and the significance of this study. The goal of this research is to look at the factors that may affect consumer perception of e-wallet and online payments.

1.1 Background of the study

Electronic payment (e-payment) has grown in popularity as a method of making online purchases. Electronic commerce (e-commerce) has produced new financial needs that, in many circumstances, cannot be met successfully by traditional payment methods, such as vouchers, discounts on certain merchant or the E-pemula. E-pemula is an initiative by the Government of Malaysia to encourage cashless transactions among Malaysian youths aged 18-20 years old full-time university students. The rise of the internet has aided the adoption of this payment instrument (Sumanjeet, 2009). Since then, several e-payment systems and vendors have evolved, gradually increasing in sophistication as e-commerce transactions have become more sophisticated.

In Malaysia, there are two primary electronic payment systems: the substantial value payment system (SIPS), which includes the real-time electronic transfer of funds and securities system (RENTAS), and the retail payment system, which is divided into three categories. Retail payment systems are the first type, followed by retail payment instruments (e.g. credit card, charge card, debit card, e-money), and retail payment channels (e.g. shared automated teller machine (ATM) network, e-debit, Interbank GIRO, financial process exchange, and direct debit) (e.g. ATM, internet banking, mobile banking, and payment). In 2011, these payment systems supported transactions of RM49.5 trillion (USD15.9 trillion), approximately 58 times Malaysia's gross domestic product

(GDP) (Central Bank of Malaysia, 2012). In terms of e-payment transactions per capita, there were 49 in 2011, compared to 14.3 in 2003, and more than 80% of retail payment transactions were completed electronically in 2011. (Central Bank of Malaysia, 2012).

Consumers benefit from e-payments primarily in terms of convenience and decreased transaction costs. Customers can access and manage their transactions from anywhere using the web-based user interface. This is backed up by a rapid expansion of broadband services and a high penetration rate. More than half of Malaysia's 28 million people (14.9 million) utilise the internet, with broadband, personal computer (PC), and mobile penetration rates of 17.5, 44, and 93.9 percent, respectively. Telecommunications businesses and banking institutions have been able to provide internet and mobile banking services as a result of these improvements.

1.2 Problem Statement

E-payment, like other e-environments like electronic banking (e-banking), electronic buying (e-commerce), and electronic learning, requires an internet connection to function (e-learning). E-payment is one of the key activities of e-banking because it refers to financial transaction (Kalakota and Whinston, 1997; Zhang and Jasimuddin, 2012). It could also be used as a primary payment method for e-shopping, but not necessary for e-learning or some e-services if other methods of payment are available. While e-wallets provide a wide range of benefits to users, their continued use has both negative and good consequences for different users. Pollitt (2011) points out some of the negative consequences of this form of online transaction in terms of security concerns, noting that there are currently multiple internet scam cases building up at police stations as a result of the system's use. This could also be due to a lack of knowledge on how to use the platform.

Customers choose to use the system even though they have little information about its safety, but they do so nonetheless because of its beneficial benefits such as flexibility and convenience, as well as its ease of use when making payments to points of sale because it saves them a lot of time (Chan, 2018). Cashless transactions, or E-wallets, are a technology that has been extensively recognized and adopted in practically every facet of society and business, from consumers to sellers. Electronic payment, according to (Roy & Sinha, 2014), is a platform for making payments for goods and services purchased online over the internet. Consumers and sellers are facing a problem as a result of the Covid-19 outbreak, where there are unprecedented public fears regarding viral transmission via payment. The media has been inundated with questions about the safety of using cash, according to central banks. The number of internet searches for "cash" and "virus" is at an all-time high. (2020, Auer, Cornelli, and Frost).

1.3 Research Question

Based on the problem that have been identified, five research questions are formulated.

- Do benefits exert a significant influence on consumers' perceptions of e payment in Malaysia?
- Does trust exert a significant influence on consumers' perceptions of e payment in Malaysia?
- Does self efficacy exert a significant influence on consumers' perceptions of e payment in Malaysia?
- Does ease of use exert a significant influence on consumers' perceptions of e payment in Malaysia?
- Does security exert a significant influence on consumers' perceptions of e payment in Malaysia?

1.4 Scope of Study

This paper decided to conduct our research in Kota Kinabalu, Sabah because of the resources we have at our disposal. Due to the fact of Covid-19, Kota Kinabalu, Sabah have started using more e-wallet payment method. Thus, it is more practical to conduct our sampling here because we are able to connect with a wide range of people with different unique characteristics.

This paper targeted teenagers, young adults, and adults in Kota Kinabalu to give a wide range of peoples with different backgrounds to give us a thorough and clear view of the Malaysian perception of e payment. E payment is widely known to people of all age groups except for senior citizens. In Malaysia, almost everyone owns a smartphone. The younger generation, on the other hand, is more likely to own a smartphone than the elder group. Only 30% of respondents aged 65 and up have a smartphone, according to a survey on smartphone ownership. Digital connectedness, including smartphone ownership, appeared to be influenced by income and education. According to a survey, about 95 percent of respondents with a tertiary education or more and a monthly income of at least 5,000 Malaysian ringgit possessed a smartphone. (Joschka Müller, 2021). Younger generations do tend to use the internet more and are more often open to new methods of payment in Malaysia.

1.6 Significance of the Study

The purpose of this research is to delve into the primary elements that influence consumers' perception of e payment in Malaysia. The major five variables impacting consumers' perception of e payment, namely benefit, trust, self efficacy, ease of use, and security, were chosen for the study in order to investigate their effects on consumers' perception of e payment in Malaysia. This research offers insights from a conceptual, organisational, and academic standpoint. From an organisational standpoint, this study will be extremely beneficial to e wallet service company because it will provide information on the elements that influence consumers' perception of e payment. Furthermore, the company will be able to understand the consumers' needs and perspectives as a result of the survey conducted for the purpose of this study, and with the help of the research findings, they will be able to take appropriate steps to improve their products and services in order to ensure consumers' satisfaction and retain their attention to e payment methods. From the academic standpoint, this study can prove helpful to the current or next generations, currently there is still very few research that have been done on e payment. This paper goal is also for it is to help students become more interested in this topic so that they can do their own research about this topic.

2. REVIEW OF LITERATURE

2.1 Theory

The theory of planned behaviour (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), made necessary by the original model's limitations in dealing with behaviours over which people have incomplete volitional control. According to the theory of planned behaviour (Ajzen, 1991), attitudes, subjective norms, and perceived behavioural control all three play a role in determining intents, which in turn influence behaviours. Depending on the degree to which a behaviour is truly controlled by the individual and the degree to which perceived behavioural control is an accurate indicator of actual behavioural control, external influences may also directly force or prevent behaviours, regardless of the intention.

2.2 Factors affecting consumers’ perceptions of e payment

There are five factors in theory of planned behavior model that can influence consumers’ perception of e-payment, which is attitude towards the benefit, trust, self efficacy, ease of use, and security.

2.2.1 Benefits

Benefits are cited by Chou et al. (2004) as a key factor in the acceptability and use of e-payment systems. Similar findings were made by Eastin (2002), who examined four aspects of e-commerce (online shopping, banking, investing, and e-payment systems)

and discovered that perceived convenience and financial advantages influence adoption choices before they are made. According to Gerrard and Cunningham (2003), the perceived economic benefits of implementing e-payment also include fixed and transaction expenses. Transaction costs are those that customers and merchants pay each time they do a business transaction, whereas fixed costs are those associated with deploying payment equipment like card readers and payment software (Chou et al., 2004). Users can therefore take advantage of low costs while engaging in online transactions because they just have to pay a little fee to their individual banks for the services used (Gerrard and Cunninghamm, 2003; Sonia San-Martin et al., 2012; San-Martin and Lo'pez-Catala'n, 2013).

The data on e-payment usage in Malaysia demonstrate that there are various factors contributing to Malaysians' view that using e-payment is preferable to using cash. For instance, Malaysia's high proportion of handy credit use compared to revolving use demonstrates how popular credit cards are as a form of transactional e-payment. There are two main sources of this allure. First, using a credit card helps people reduce their cash holdings so they can invest their money in higher-yielding ventures. Second, consumer demand for utilising credit cards has skyrocketed, largely as a result of how convenient it is to make purchases using credit cards. Compared to cash and checks, credit cards have two transactional advantages. First off, unlike cash, credit cards eliminate the need to keep cash reserves large enough to cover daily expenses. Second, credit cards provide several additional benefits that cash cannot. (Zywicki, n.d.).

Other key benefits of e-payments include time and money savings in addition to offering customers a practical method of payment that includes users' capacity to spend, store, and transport a currency value through the payment systems (Chakravorti, 2003). But it's still unclear whether electronic payments result in time and money savings. According to Kim et al. (2009), learning how to use the internet and new technologies might take a lot of time, making the decision to implement e-payments costly.

2.2.2 Trust

The effect of trust is a decreased perception of risk, which encourages the adoption of e-payments. Trust is defined as a function of the level of risk involved in financial transactions (Yousafzai et al., 2003). According to past research, clients' desire to engage in e-commerce transactions and money transfers online is significantly influenced by their level of trust (Friedman et al., 2000; Gefen, 2000, 2003; Hoffman et al., 1999; Jarvenpaa et al., 2000; Wang et al., 2003). In fact, trust has long been a driving force behind buyer-seller transactions that provide customers high hopes for fulfilling exchange partnerships (Peha and Khamitov, 2004). Because of this, many researchers contend that trust is crucial for comprehending behavioral patterns and economic transactions, which impacts how customers perceive e-payment systems and, ultimately, how successful their adoption is (Abrazhevich, 2001; Chou et al., 2004; Tsiakis and Sthephanides, 2005). (Chau and Poon, 2003; Kniberg, 2002; Lim et al., 2006).

Because there is little assurance that an online vendor will refrain from unfavourable, unethical, and opportunistic behaviour like unfair pricing, presenting inaccurate information, disseminating personal data, and engaging in purchase activity without prior permission, it is crucial for customers to have trust in internet environments (Gefen, 2000). As a result, due to the high level of uncertainty and risk involved in the majority of online transactions, the importance of trust in e-payment is increased (Zhou, 2011). Because of this, trust is prioritised over security, according to Kniberg (2002). In fact, according to Kniberg, customers and merchants are more inclined to utilise an unreliable payment system from a trusted company than one that is reliable. Therefore, it may be said that trustworthiness is essential for the success of electronic payments (Abrazhevich, 2004). It would be very challenging for e-payment to become widely used without a sufficient system that users can rely on (Lim et al., 2006).

2.2.3 Self efficacy

Bandura (1986) said that one's experience of personal mastery is the source of one's self-efficacy. These self-efficacy beliefs emerge in response to four information sources. There are four of them: verbal persuasion from peers, coworkers, and relatives; prior experience (success and failure); vicarious experience (observing others' accomplishments and failures); and affective state (emotional arousal such as anxiety). Self-efficacy is a person's understanding of and faith in his or her own abilities to complete a task (Dory et al., 2009). So, according to Bandura (1986, 1997), one's impression of their abilities to do a task will improve the likelihood that the activity will be successfully performed.

Self-efficacy has been demonstrated to have a considerable beneficial impact on perception and behavioural intention to use information systems (IS) in numerous research (Hill et al., 1986, 1987; Luarn and Lin, 2005). As a result, users with higher self-efficacy tend to use more communication media and functions, whereas users with lower self-efficacy could only be able to do a limited number of tasks (Burton-Jones and Hubona, 2006; Li et al., 2011). According to Venkatesh and Davis (1996), users' judgments of any system's usability are closely correlated with their level of computer self-efficacy (Chan and Lu, 2004). Self-efficacy in the context of electronic payments refers to the assessment of one's aptitude for using electronic payment systems. It has had a significant role in determining how users view e-banking.

2.2.4 Ease of use

Numerous studies have shown that making a technology more user-friendly can increase its perceived usefulness (Legris et al., 2003; Venkatesh and Davis, 2000; Wang and Li, 2011). According to Flavian and Guinaliu (2006), trust levels are favoured by a computer system's usability. This is due to the fact that improved usability lowers the possibility of error, which is important when offering financial services online. Additionally, improved usability promotes lower search costs (Bakos, 1997) and a better understanding of the tasks and information on a website. As a result, Guriting and Ndubisi (2006) discovered that perceptions of usability had a considerable beneficial impact on Malaysians' behavioural intentions to use online banking services and, consequently, e-payments there.

The availability of customer interaction is a significant factor that draws consumers to the delivery of e-payments, according to Ainscough and Luckett (1996). According to Gerrard and Cunningham (2003), the ability of an innovation to meet users' needs using various features available on a bank's website will attract both users and non-users to the bank's website. Examples include the provision of interactive loan calculators, exchange rate converters, and mortgage calculators. Navigation of websites would be improved by high-quality designs, graphics, or colours, as well as a tendency to present a positive picture of the bank (Jayawardhena and Foley, 2000; Pikkarainen et al., 2004). Hoffman and Novak (1996) contend that download speed is an additional crucial factor in customer happiness. Users must download a programme in order to observe the demonstration because it is typically only available in brief glimpses on websites.

According to Mohd Khalaf Ahmad and Al-Zu'bi (2011), the majority of individuals believe that downloading content from the internet can introduce unwanted viruses and take up disc space. Slow response time following any e-interaction frequently causes a delay in service delivery and leaves customers wondering whether or not the transaction was successful (Jun and Cai, 2001). For these reasons, Abrazhevich (2001) comes to the conclusion that attracting users' acceptance of e-payment requires a successful design of e-payment systems from the user's perspective.In summation, content, design, bank image and management, speed, and other factors play a significant role in perceived ease of use, which in turn affects how consumers view e-payment systems.

2.2.5 Security

Security, in general, refers to a set of processes and systems that ensure the information's confidentiality, integrity, and origin (Tsiakis and Sthephanides, 2005). Security for e-payments can be divided into three categories. They are legal, transactional, and systems security. This is such that e-payments may only be regarded as secret when every step of the transaction process is able to meet users' demands and expectations for security (Baddeley, 2004). The perception of payment methods and methods for storing and transmitting information are considered secure in the context of the internet (Lim et al., 2006). It speaks about the technical features that guarantee integrity, confidentiality, authentication, and relationship non-recognition. On this point, the three fundamental security procedures used to assure confidentiality, authentication, and integrity are encryption, digital signatures, and checksum/hash algorithms (Flavian and Guinaliu, 2006).

According to Sathye (1999), security presents a substantial barrier to using online banking, which has an impact on the utilisation of e-payment systems. This is accurate because, despite consumers' tremendous confidence in the bank they have chosen, their faith in technology is still low. Users typically desire control over the types of data collected and the purposes for which their data is used (Kobsa, 2001, 2002). Because of these factors, security may influence whether or not people choose to adopt e-payment systems (Abrazhevich, 2004).

3. METHODOLOGY

This section discusses the research framework, hypotheses, research approach, research design, sample size, instrumental design, data validity, data collection method, and data analysis method in detail.

3.1 Hypothesis Development

Hypotheses in this study are developed based on the research objective discussed in chapter 1. Hypotheses explaining the relationship between each variable will be explained as below.

3.1.1 Benefits

Some studies (Chou et al, 2004) identify benefits as the important driver for e- payment system approval and use. Accordingly, when users are involved in online transactions, they enjoy the benefit of low cost as they only need to pay a nominal fee for the service used to their respective banks (Gerrard & Barton Cunningham, 2003; San Martín et al, 2012; San-Martin & López-Catalán, 2013). Some studies (Kim et al, 2010) debate that e-payment adoption may be costly in terms of spending time to learn how to use the internet and the new technology.

H1. Benefits will have a positive influence on consumer perception towards electronic payment.

3.1.2 Trust

The degree of danger in a financial transaction is determined by trust, and trust greatly lowers perceived risk, which encourages users to join e-payment platforms (Yousafzai et al, 2003). Previous research has shown that consumers' intentions to use online banking and conduct e-commerce transactions are highly influenced by their level of trust (Gefen, 2000; Wang et al, 2003). In fact, trust has long been the driving force behind transactions that give customers hope for a positive buyer-seller relationship throughout the exchange (Peha & Khamitov, 2004). Because it affects how consumers perceive electronic payments, many research agree that

trust is crucial for understanding user behaviour in economic exchanges (Chou et al, 2004; Lim et al, 2006; Tsiakis & Sthephanides, 2005).

H2. Trust will have a positive influence on consumer perception towards electronic payment.

3.1.3 Self-efficacy

Based on his or her own competence and talents, self-efficacy clarifies a person's belief in and comprehension of their ability to carry out a task (Dory et al, 2009). In fact, according to several studies (Bandura, 1997), people's confidence in their talents will boost their capacity to execute activities successfully. Self-efficacy has a favourable impact on the perceived intention to utilise information systems since it is described as the consumer's perception and understanding of their potential to execute tasks utilising new technology (Oh, 2016). (Luarn & Lin, 2005). As a result, users with greater levels of self-efficacy used a variety of functions and communication channels, whereas users with lower levels of self-efficacy could only be able to do a limited number of activities (Li et al, 2012).

H3. Self-efficacy will have a positive influence on consumer perception towards electronic payment.

3.1.4 Ease of use

The ease of use was extended to users' perceptions that utilising a particular technology wouldn't involve a lot of work (Davis, 1989). It has been extensively discovered that perceived ease of use is strongly related to intention and how it affects perceived usefulness. Although outside the scope of the problems with the current TAM extension, additional research has started to model the antecedents of perceived usability (Arora & Sahney, 2018). The ability a user applies to a topic that is more likely to be approved by customers is referred to here as a task. It is thought that ease of use directly influences one's intention to employ a technology (Barnett, Pearson, Pearson, & Kellermanns, 2015; Siregar, Wardaya Puspokusumo, & Rahayu, 2017).

H4. Ease of use will have a positive influence on consumer perception towards electronic payment.

3.1.5 Security

Security, in general, refers to a collection of policies and practises that ensure the confidentiality, accuracy, and reliability of information as well as their source (Tsiakis & Sthephanides, 2005). Security is a notion associated to payment and methods for storing and transferring information in the context of the internet (Lim et al, 2006). System, legal, and transactional security are the three subcategories that make up security. Because of this, an electronic payment can only be considered secret if all stages of the transaction process can meet the expectations of the user. According to certain research (Flavián & Guinalu, 2006), basic security mechanisms including digital signatures, encryption, and checksum algorithms are employed to ensure confidentiality, integrity, and authenticity. Additionally, they discover that security issues with online banking could hinder the development of e-payment systems. Additionally, users desire more and more control over the data that is gathered and how it is used (Kobsa, 2002). Security may therefore have an impact on users' decision to utilise e-payment systems for these reasons (Abrazhevich, 2001).

H5. Security will have a positive influence on consumer perception towards electronic payment.

3.2 Methodology

The questionnaire was designed based on Factors affecting consumers' perception of electronic payment by Wendy Ming-Yen Teoh, Siong Choy Chong, Binshan Lin, & Jiat Wei Chua, and modified the questions to better suit our target candidates. It utilizes the 5-point Likert scale, from strongly disagree to strongly agree. Furthermore, all of the respondents will be asked if they've met a minimal requirement of 18 and above.

3.3 Research Design

We have approached this study with a quantitative method because of the type of data we gained through our questionnaire. All of the data we have gathered primary data can be made into statistics which we can use to aid our research. This study is correlation oriented as it aims to investigate the relationship and importance of benefits, trust, self-efficacy, ease of use, & security with consumers perception of electronic payment.

3.4 Sampling Design

The sampling target for this study for adult consumer age 18 - 50 above in the area of Kota Kinabalu, Sabah. People in this group are the target for their perception of e-payment as this group of age are capable of using e-wallet, according to findings discovered by Ming-Yen Teoh (2013). This research is using non-probability sampling technique where convenience sampling is used because of sample accessibility to this research. This study is conducted in Kota Kinabalu, Sabah because it's the capital city of Sabah; therefore, productive workforce all across the states is located in this city. There are over 3.9 million population in Sabah based on the adjusted Population and Housing Census of Malaysia 2019 (Malaysia Department of Statistic, 2019). The sample size for this study was determined to be fifty. It is estimated by using a method proposed by Hair, Hult, Ringle and Starstedt (2013), where ten times the largest number of indicators used to measure a single construct.

3.5 Instrument Design

The questionnaire is adapted from a previous study because the measurement items have been tested and validated to minimize unwanted errors in this study. A list of measurement items for each variable will be presented in table 3.1 along with sources.

Section A of the questionnaire gathers the respondent's demographic which includes gender, marital status, age, race, education, monthly income and job status. Section B of the questionnaire consists of measurement items in benefit, trust, self-efficacy, ease of use, & security. A five-point Likert scale will be used to gather data for this study. The scale ranged from Strongly Disagree (1) to Disagree (2) to Neutral (3) to Agree (4) to Strongly Agree (5). Section C of the questionnaire will be used to gather data on usage pattern, behaviour and buying behavior.

3.5.1 Measurement items for consumers' perceptions of e payment

There are five measurement items for consumer perception of electronic payment. The measurement item for it will be presented in the table below. The data will be collected using 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). [See Table 1]

Table 1: Measurement Items for consumer perception of electronic payment

No.	Consumers' perceptions of electronic payment	Source
	An e payment system is better than traditional payment channels	(Wendy Ming-Yen Teoh, Siong Choy Chong, Binshan Lin & Jiat Wei Chua, 2013)
	E payment system is much more efficient than traditional payment channels	(Teoh et al., 2013)
	I will choose the trusted e-payment system to make transaction	(Teoh et al., 2013)
	I feel that a user-friendly e-payment system will influence me to adopt the system	(Teoh et al., 2013)
	I would see myself using the e-payment for handling my point of sale purchases	(Zuroni Md Jusoh, Teng Yee Jing 2019)

3.5.2 Measurement Items for Trust

There are five measurement items for trust. The measurement item for trust will be presented in the table below. The data will be collected using Likert scale from 1 (strongly disagree) to 5 (strongly agree). [See Table 2]

Table 2: Measurement Items for Trust

No.	Trust	Source
	I trust on the ability of an e-payment system to protect my privacy	(Teoh et al., 2013)
	I trust on e-payment system that will not lead to transaction fraud	(Teoh et al., 2013)
	Confidential information is delivered safely to customers	(Teoh et al., 2013)
	I feel the risk associated with e-payment system is low	(Teoh et al., 2013)
	Feel safe during the transaction through e payment	Wen et al. (2011)

3.5.3 Measurement Items for Self-efficacy

There are total 5 measurement items for self-efficacy. The measurement item for self-efficacy will be presented in the table below. The data will be collected using a Likert scale from 1 (strongly disagree) to 5 (strongly agree). [See Table 3]

Table 3: Measurement Items for Self-efficacy

No.	Self-efficacy	Source
	I will only use an e-payment system if I heard it before	(Teoh et al., 2013)
	The comments of other people will influence my intention to use an e-payment system	(Teoh et al., 2013)
	I will use an e-payment system when my friends introduce it to me	(Teoh et al., 2013)
	I think that I could use the e-payment system well if I wanted to.	(Zuroni Md Jusoh, Teng Yee Jing 2019)
	I think that using e-payment system would be entirely within my control.	(Zuroni Md Jusoh, Teng Yee Jing 2019)

3.5.4 Measurement Items for Benefit

There are 5 measurement items for benefits. The measurement item for benefits will be presented in the table below. The data will be collected using Likert scale from 1 (strongly disagree) to 5 (strongly agree). [See Table 4]

Table 4: Measurement Items for benefits

No.	Benefits	Source
	It saves my time and cost for using an e-payment system	(Teoh et al., 2013)
	E-payment system is convenient for me	(Teoh et al., 2013)
	The billing and transaction process are accurately handled	(Teoh et al., 2013)
	Speed of e-payment system flow is faster than traditional payment system	(Teoh et al., 2013)
	I find that it is easier to conduct my financial transaction	(Teoh et al., 2013)

3.5.5 Measurement Items for ease of use

There are 5 measurement items for ease of use. The measurement item for ease of use will be presented in the table below. The data will be collected using Likert scale from 1 (strongly disagree) to 5 (strongly agree). [See Table 5]

Table 5: Measurement Items for ease of use

No.	Ease of use	Source
	The structure and contents of the web site are easy to understand	(Teoh et al., 2013)
	Learning to use an e-payment is easy	(Teoh et al., 2013)
	E-payment makes payment easier than before.	(Zuroni Md Jusoh, Teng Yee Jing, 2019)
	I would find e payment easy to use	(Warkentin, 2007)
	I would find e payment flexible to interact with	(Warkentin, 2007)

3.5.6 Measurement Items for security

There are total 5 measurement items for security. The measurement item for security will be presented in the table below. The data will be collected using Likert scale from 1 (strongly disagree) to 5 (strongly agree). [See Table 6]

Table 6: Measurement Items for security

No.	Security	Source
	I am concerned about my security when using an e-payment system	(Teoh Et al, 2013)
	Matters of security have significant influence on me in using an e payment system	(Teoh Et al, 2013)
	No identification of two parties by each other.	(MHPIS, 2002; Manchad, 2006)
	Guide against unauthorized access to peoples' data	(MHPIS, 2002; Manchad, 2006)
	Guide against exploring peoples' identity.	(MHPIS, 2002; Manchad, 2006)

3.6 Data Collection Method

This data for this study will be collected via distribution to the target respondent through Google Form. Distribution of questionnaires will be conducted using a convenience sampling method as mentioned in the early discussion. Respondents that are qualified as adult aged 20 - 50 above and have purchasing power will be given a questionnaire and informed that all information that is collected by this questionnaire is classified and will be used only for the intention of research. Respondents are free to forfeit from answering the questionnaire at any moment if they do not feel comfortable in continuing. This study will be conducted in Kota Kinabalu areas.

3.7 Data Analysis Method

The data gather from questionnaire distribution will be code into SPSS software before conducting the analysis of Partial Least Square (PLS) and Structural Equation Model (SEM) using SmartPLS version 2.0 software. SmartPLS software will be used to measure the relationship between independent variable (attitude, subjective norm & perceived behavioural control) and dependent variable (purchasing intention). The analyses that will be conducted includes Latent Variable Correlations, T-Statistics, Composite Reliability (CR), Average Variance Extracted (AVE), PLS Algorithm, Cross Loading, and structural model.

3.8 Validity

The content validity for this research is based on deriving the research question from previous studies. Face validity in this study is confirmed where supervisors point of view is applied in analyzing and determining whether the measurement item have the capability and accuracy in measuring the variables in this study. Exploratory factor analysis will be used to analyze how well the result of this research is aligned with the theory that is proposed in this study, this is to confirm the construct validity of this research.

3.9 Reliability

Cronbach's Alpha is the most common test of internal consistency reliability for various measurement instruments. It indicates how the item complement with each other in the measurement for the variables ranges between zero and one value. According to Sekaran and Bougie (2010) Cronbach's Alpha close to 1.0 is highly reliable, considered good for 0.8 and acceptable for 0.7, lower than 0.6 is considered poor.

4. DATA ANALYSIS

4.1 Profile of Respondents

A total of 38 questionnaires were distributed and 31 questionnaires are valid for data processing. The demographic information is shown in Table 7.

Table 7: Demographic Profile of the Respondents

Item	Profile	Description	Frequency	Percentage
1	Gender	Male	14	45.2 %
		Female	17	54.8 %
2	Marital Status	Married	5	16.1 %
		Single	25	80.6 %
		Widowed	1	3.2 %
3	Age	18	6	19.4 %
		19 - 30	19	61.3 %
		31 - 40	3	9.7 %
		50 or above	3	9.7 %
4	Ethnic	Malay	3	9.7 %
		Chinese	23	74.2 %
		Indian	1	3.2 %
		Others	4	12.9 %
5	Education level	O level	6	19.4 %
		A level	1	3.2 %
		Diploma	8	25.8 %
		Degree	8	25.8 %
		Post graduate	8	25.8 %
6	Monthly income	1,500 - 2,000 RM	18	58.1 %
		2,000 - 4,000 RM	7	22.6 %
		4,001 - 6,000 RM	3	9.7 %
		6,001 - 8,000 RM	1	3.2 %
		8,001 - 10,000 RM	1	3.2 %
		More than 10,000 RM	1	3.2 %
7	Job Status	Employed	15	48.4 %
		Self-employed	4	12.9 %
		Homemaker	1	3.2 %
		Student	10	32.3 %
		Unemployed	1	3.2 %

4.2 Consumers' Perceptions of E-wallet Usage Pattern

About 48.4% of respondents who use e-wallet daily and 41.9% use it only once a week, while 9.7% of people use it once a month and there is no respondents who never use e-wallet. For method of use 6.5% of respondents use e wallet in restaurants and online, 9.7% use it in shopping mall, while 77.4% of respondents uses e wallet on all, whether its online restaurant shopping malls or bills. 90.3% of respondents spend 5 minutes on their e wallet, while only 9.7% of people use it for 5 - 10 minutes. Regarding the channels of top up for their e wallet 80.6 % top up on mobile phone, 12.9% top up using network/Internet, and only 6.5% does it by ATM. 67.7 % of respondents were fully aware of how e payments works and 32.3% of people were partially aware of it. For e wallet experience, 41.9% of respondents finds e wallet an excellent experience while 45.2% of people finds the experience good and 12.9% of respondents finds it average. What do people keep in mind while using e wallet, 41.9% were using e payment for the benefit of discount and 12.9% were using it for premium offers, 45.2% of respondents were in it for the cash back. In terms of preferred e wallet service 35.5% uses boost, 45.2% uses grabpay, 16.1% uses shopeepay, while only 3.2% of respondents uses touch n' go. [See Table 8]

Table 8: Consumers' Perceptions of E-wallet Usage Pattern

Item	Profile	Description	Frequency	Percentage
1	Frequency Of Usage	Daily	15	48.4%
		Once a week	13	41.9%
		Once a month	3	9.7%
2	Method of Use	Restaurant	2	6.5%
		Shopping mall	3	9.7%
		Online	2	6.5%
		All	24	77.4%
3	Time spent on e payment	5 minutes	28	90.3%
		5 - 10 minutes	2	9.7%
4	Channels of E payment Top-up	ATM	2	6.5%
		Network/Internet	4	12.9%
		Mobile phone	25	80.6%
5	Are you aware regarding the functionality of E-wallets?	Fully aware	21	67.7%
		Partially aware	10	32.3%
6	E-wallet Experience	Excellent	13	41.9%
		Good	14	45.2%
		Average	4	12.9%
7	What do you keep in mind when you use E-wallet?	Discount	13	41.9%
		Premium Offers	4	12.9%
		Cash Back	14	45.2%
8	Preferred E-wallet	Boost	11	35.5%
		GrabPay	14	45.2%
		ShopeePay	5	16.1%
		Touch n' go	1	3.2%

4.3 Convergent Validity

Convergent validity refers to the degree where multiple items that are used to measure the same concept are not conflicted. Hair et al. (2010) suggested that factors loadings, composite reliability and average variance extracted (AVE) must be used in order to assess convergence validity. [See Table 9]

Table 9: Measurement Model

Construct	Item	Loading	AVE	CR
Consumer Perception of e payment	CPEP1	0.823	0.620	0.889
	CPEP2	0.900		
	CPEP3	0.584		
	CPEP4	0.754		
	CPEP5	0.839		
Benefit	B1	0.950	0.678	0.912
	B2	0.911		
	B3	0.656		
	B4	0.704		
	B5	0.854		
Trust	T1	0.967	0.728	0.912
	T2	0.956		
	T3	0.811		
	T5	0.635		
Ease of use	EOU1	0.804	0.582	0.872
	EOU2	0.743		
	EOU3	0.914		
	EOU4	0.759		
	EOU5	0.547		
Security	S1	0.665	0.566	0.838
	S3	0.719		
	S4	0.798		
	S5	0.818		

Figure 1: Measurement Model

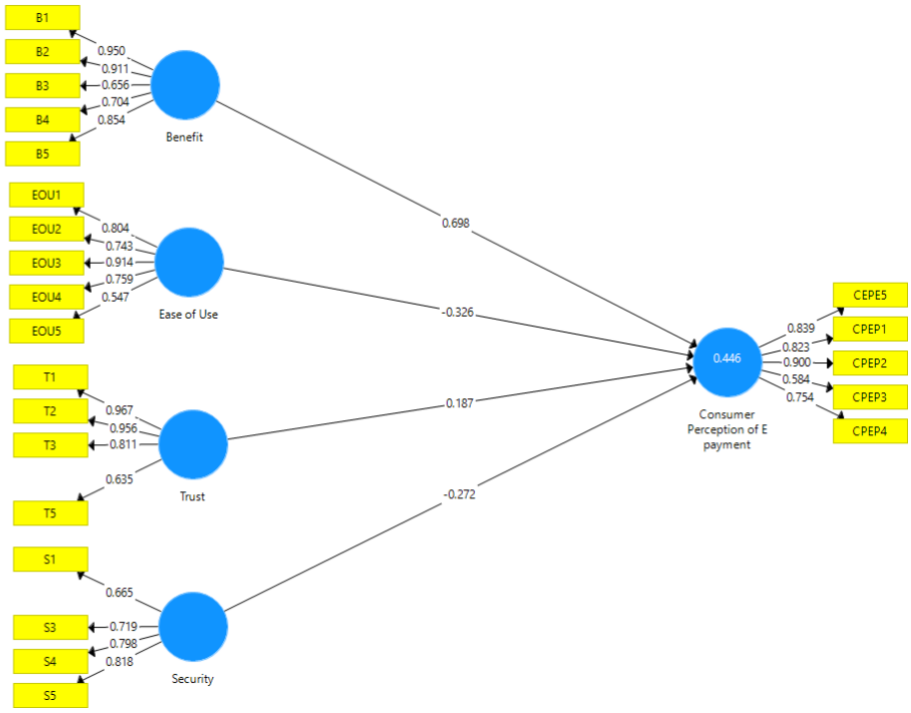
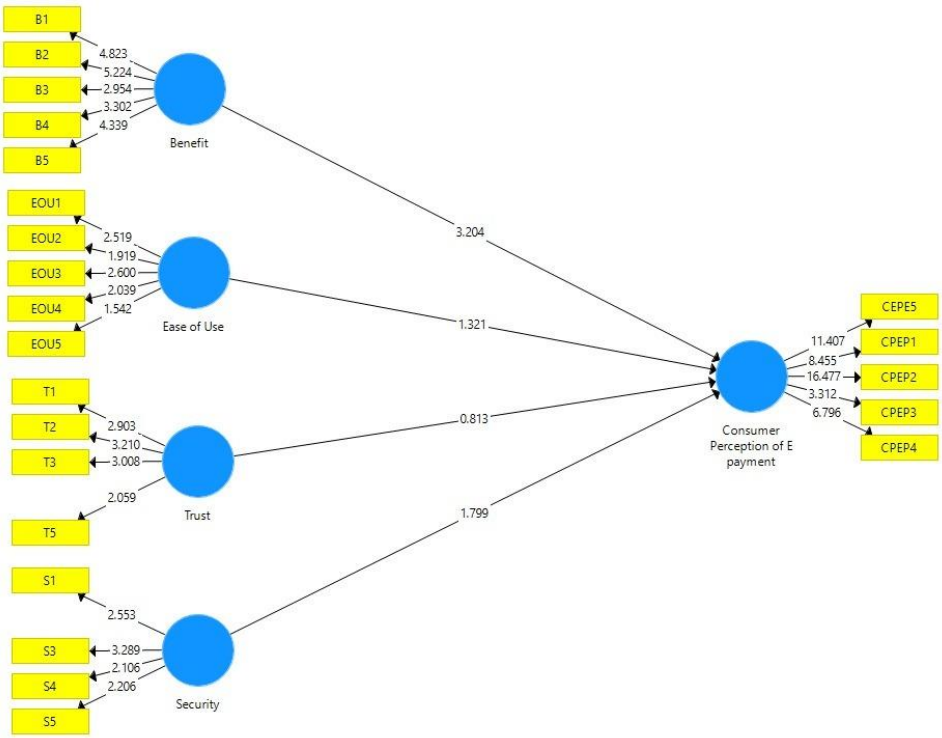


Figure 2: Structural Model



The loading for each measurement should exceed 0.5 (Fornell & Larcker, 1981). 30 measurement items were used in this study**.** 5 measurement items are used for security and trust, but 1 for each iv were removed because of weak loading, the items that were removed were 'Matters of security have significant influence on me in using an e payment system' and 'I feel the risk associated

with e-payment system'. 5 measurement items are used for self efficacy, but 4 measurements has weak loading therefore self efficacy was cut as a measurement item.

AVE is comparable to the proportion of variance explained in factor analysis. AVE ranges from 0 and 1, according to Bagozzi and Yi (1988); Fornell and Larcker (1981) AVE must exceed 0.5 to suggest that it has sufficient convergent validity. Based on the table 4.3, all of the variables of AVE are exceeding 0.5. The value of composite reliability is between 0 and 1. Based on the table 4.3, the composite reliability for all variables is exceeding 0.7 which means it indicates sufficient convergence or internal consistency.

4.4 Cross Loading

From table 4.4, we can see that the loading of an indicator on its assigned latent variable is higher than the loadings on other latent variables. [See Table 10]

Table 10: Cross-Loading of the items

Items	Benefit	Consumer perception of E payment	Ease of use	Security	Trust
B1	**0.950**	0.544	0.668	-0.237	0.224
B2	**0.911**	0.610	0.574	-0.202	0.167
B3	**0.656**	0.214	0.604	-0.123	0.407
B4	**0.704**	0.277	0.509	-0.156	-0.146
B5	**0.854**	0.467	0.728	-0.231	0.103
CPEP 1	0.513	**0.823**	0.131	-0.357	0.057
CPEP2	0.446	**0.900**	0.174	-0.399	0.338
CPEP3	0.455	**0.584**	0.391	-0.154	0.138
CPEP4	0.286	**0.754**	0.161	-0.186	0.103
CPEP5	0.458	**0.839**	0.231	-0.265	0.291
EOU1	0.478	0.080	**0.804**	-0.003	0.025
EOU2	0.426	-0.039	**0.743**	0.021	-0.024
EOU3	0.711	0.261	**0.914**	-0.199	0.035
EOU4	0.476	0.016	**0.759**	-0.025	-0.066
EOU5	0.359	0.126	**0.547**	-0.133	0.216
S1	-0.164	-0.323	-0.036	**0.665**	-0.258
S3	-0.351	-0.254	-0.339	**0.719**	0.125
S4	-0.060	-0.233	-0.058	**0.798**	0.361
S5	-0.094	-0.174	-0.184	**0.818**	0.356
T1	0.118	0.298	0.070	0.097	**0.967**
T2	0.289	0.208	0.177	0.101	**0.956**
T3	0.103	0.051	0.153	0.280	**0.811**
T5	0.050	0.050	-0.112	0.165	**0.635**

4.5 Discriminant Validity

Fornell and Larcker (1981) stated that a latent variable of the same indicator should be better than the variance of other latent variables. The AVE of a latent variable must exceed the squared correlations between latent variable and all other variables. From table 4.5, the squared AVE for each latent variable among the same indicator is higher than the variance of other latent variable. [See Table 11]

Table 11: Discriminant Validity

Variable	Benefit	CPEP	Ease of use	Security	Trust
Benefit	**0.823**				
CPEP	0.558	**0.787**			
Ease of use	0.733	0.259	**0.763**		
Security	-0.238	-0.349	-0.198	**0.753**	
Trust	0.184	0.245	0.107	0.130	**0.853**

4.6 Hypotheses Testing

This section will discuss whether hypotheses that are form in this study is supported or not supported. [See Table 12]

Table 12: Hypotheses Testing

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	(STFEV)	*t*-Value	Decision
H1	**B-> CPEP**	0.698	0.582	0.229	3.043	Supported
H2	**EOU-> CPEP**	-0.326	-0.124	0.251	1.299	Not supported
H3	**S-> CPEP**	0.272	-0.244	0.158	1.718	Supported
H4	**T-> CPEP**	0.187	0.126	0.238	0.784	Not supported

***P < 0.01, *P < 0.05*

H1: There is a positive relationship between Benefit and Consumer perception of e payment.

Based on the table 4.6, the interaction between benefit and consumer perception of e payment is 3.043. This shows that there is significant relationship between benefit and consumer perception of e payment at 95 percent level. Therefore hypothesis H1 is supported.

H2: There is a positive relationship between Ease of use and Consumer perception of e payment.

Based on the table 4.6, the interaction between ease of use and consumer perception of e payment is 1.299. This shows that there is no significant relationship between ease of use and consumer perception of e payment at 95 percent level. Therefore hypothesis H2 is not supported.

H3: There is a positive relationship between Security and Consumer perception of e payment.

Based on the table 4.6, the interaction between security and consumer perception of e payment is 1.718. This shows that there is significant relationship between security and consumer perception of e payment at 95 percent level. Therefore hypothesis H3 is supported.

H4: There is a positive relationship between Trust and Consumer perception of e payment.

Based on the table 4.6, the interaction between trust and consumer perception of e payment is 0.784. This shows that there is no significant relationship between trust and consumer perception of e payment at 95 percent level. Therefore hypothesis H4 is not supported.

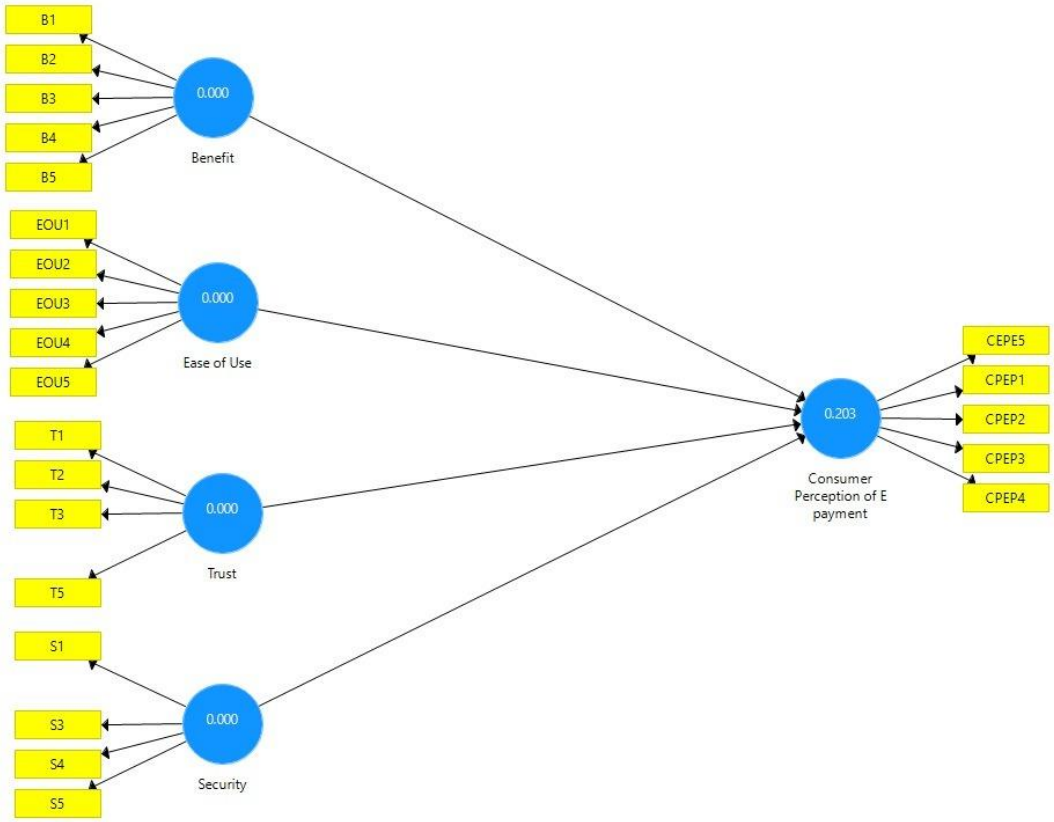
4.7 Blindfolding Analysis

According to Hair et al. (2016), Q2 value should be included in explaining predictive relevance. The Q2 value is obtained by using blindfolding analysis, blindfolding procedure is only applied to a reflective measurement model (Hair et al., 2016). According to Fornell and Cha (1994) a Q2 value of > 0 shows that there is predictive relevance while a value of < 0 indicates the model lacks predictive relevance. Based on the information of table 4.8 all measurement item is shown to have a predictive relevance. [See Table 13]

Table 13: Q2 Value

Variable	Q2
Consumer perception of E payment	0.203

Figure 3: Blindfolding Analysis



5. DISCUSSION AND IMPLICATIONS

5.1 Relationship between Benefits and consumers' perception towards e-payment

Based on the data collection and analysis done in the previous chapter, the t-value between benefits and consumer perception toward e-payment is 3.043 which indicates that it is significant and is a supported hypothesis The finding in this study is consistent with the predicted hypothesis and supported by Teoh et al. (2013). Sabah continued to struggle to draw in investment for industrial development due to inadequate infrastructures. Reduced output, along with poorer investment and consumption, would lead to lower GDP growth and increased unemployment in the absence of a supportive environment (i.e., the availability of local technology, trained labour, an effective supply chain, and alluring incentives). In response, Sabah's unemployment rate continues to be the highest in the nation, rising from 5.8% in 2019 to 8% in 2020. Sarawak saw an increase in the rate from 3.1% in 2019 to 4.3% in 2020. Due to Sabah low income/wages averaging from 1,200 - 1,500RM People naturally leans towards how much benefit can e-payment can give even a 5 rm discount voucher can proof to be useful.

5.2 Relationship between perceived ease of use and consumers' perception towards e-payment

Based on the data collection and analysis done in the previous chapter, the t-value between ease of use and consumer perception toward e-payment is 1.299 which indicates that it is not significant and is not a supported hypothesis The finding in this study is not consistent with the predicted hypothesis and supported by Teoh et al. (2013). Based on the data analysis and survey the respondents of Kota Kinabalu thinks that ease of use is not that important due to the fact that Malaysian attitude towards a website have been severely altered. Malaysians are so used to bad websites and slow internet online they have practically gotten used to using a bad website, thus ease of use is not a significant hypothesis.

5.3 Relationship between security and consumers' perception towards e-payment

Based on the data collection and analysis done in the previous chapter, the t-value between security and consumer perception toward e-payment is 1.718 which indicates that it is significant and is a supported hypothesis The finding in this study is consistent with the predicted hypothesis and supported by teoh et al. (2013). According to Tsiakis and Sthephanides, 2005, Security, in general, refers to a set of processes and systems that ensure the information's confidentiality, integrity, and origin. Security for e-payments can be divided into three categories. They are legal, transactional, and systems security. Respondents in Kota Kinabalu are severely concern about the security of e-payment due to things like malicious applications targeting online banking transactions have also increased dramatically in past few years. Worms, Trojans, viruses, phishing, pharming, spoofing, man-in the middle, denial of service attack, transaction poisoning and spamming are the most common threats. A total of 11,367 cases of cyber crime were reported from January to July this year (2022) compared to 18,510 cases of commercial crime in the same period last year (2021), said Commercial Crime Investigation Department (CCID) Deputy Director (cybercrimes and multimedia) Senior Assistant Commissioner Victor Sanjos.

5.4 Relationship between trust and consumers' perception towards e-payment

Based on the data collection and analysis done in the previous chapter, the t-value between trust and consumer perception toward e-payment is 0.784 which indicates that it is not significant and is not a supported hypothesis The finding in this study is not consistent with the predicted hypothesis and supported by Teoh et al. (2013). The effect of trust is a decreased perception of risk, which encourages the adoption of e-payments. Trust is defined as a function of the level of risk involved in financial transactions (Yousafzai et al., 2003). According to respondents in Kota Kinabalu, they do not trust e payments system, but choose to use it anyways due to the convenience of it. There is said to be a lot of fraud and scams.

5.5 Conclusion for Data Analysis

There is a positive relationship between benefit and consumer perception towards e-payment. As for ease of use and trust have negative relationship with consumer perception towards e-payment. Benefit has the strongest relationship as it achieved 3.043 due to the fact that Malaysian think that benefits out weights all other factors and trust has the weakest relationship to purchasing intention with 0.784 because Malaysians are likely to not trust e-payment service, but still use it anyways due to the major benefits that it gives.

5.6 Implications of the study

In terms of analyzing the five aspects of a single environment, this study has filled in some of the gaps left by earlier studies. In particular, coming from a nation where e-payment use has demonstrated promising growth, it has improved the mainstream literature on e-payment acceptance. The validated instrument makes it possible to perform comparable research across economies to see whether the results are consistent or inconsistent. Overall, the results support the importance of each of the five factors examined, allowing for practical implications in terms of efforts to increase the use of e-payments. In particular, it proposes that in light of the potential growth rate, Malaysian banks and online transaction facility providers should constantly improve their e-payment services. It is critical that the services offered live up to customer expectations. According to Bohle et al. (2000), in order to surpass cash as the preferred means of payment, e-payment techniques must demonstrate their worth in a lot more real-world applications. The advocates of e-payment systems must maintain a competitive environment where new products and services can be developed while lowering transaction costs for customers and enterprises. On this front, the results may act as a road map for service providers to follow as they create effective strategies to improve e-payment systems. The features that are added to services must be explained in order to raise or create consumer awareness.

Benefits and security seem to be important factors, therefore banking institutions, companies that offer online transaction services, and software developers should pay them more attention. These qualities need to be taken into account in any improvements to the current e-payment system. In particular, programmers must collaborate with the strategy team to identify the main and supplementary benefits that will be offered to consumers in addition to making sure that the systems have helpful contents and clear instructions. Bank representatives may have a role in educating and informing customers about e-payment options. Information like payment terms and conditions, warranties, and return guidelines must be included in this. Demonstrations using video presentations could be made at bank branches or to the general public to highlight the features and user-friendliness of e-payment systems in order to increase confidence and improve information quality.

Additionally, based on the user feedback gathered, operating processes must be regularly reviewed. It's important to recognise the value of security and trust. To ensure the security and reliability of the systems, it is vital for policymakers, banking organizations, online transaction facility providers, and software developers to work together. In order to safeguard consumers, the government should continue to uphold stability and fiscal integrity through regulating e-payment systems. To retain trust and confidence, banking institutions and suppliers of online transaction facilities must make sure the system is always safe. When creating the e-payment functionalities, the software designers must have these in mind.

5.5 Limitations of the Study

As thorough as a study can be, will still come with a handful of limitations. The method used in this study can be easily tampered with. For example, candidates may answer randomly if they are either in a rush or could not care for the study. Being a voluntary process, candidates may lose interest or answer without properly understanding the question. Moreover, the questionnaire is anonymous, this could lead to uncertainties such as, if a specific demographic of people do not return the survey, the result can be skewed. As for the range of our survey, we could only take a sample of the adults in Kota Kinabalu and the majority of our respondents consist of one ethnic group. There is also time factor, which in this case the researcher only had a few months time to gather information.

5.6 Recommendations

For further study, the scope should be expanded to other major cities in Malaysia such as Kuala Lumpur, Penang, Johor and others to properly represent the whole of Malaysia. Furthermore, a more personal approach such as a more detailed survey which consist of better questions for our respondents to the survey may yield results with higher accuracy. For more accurate analysis, future researcher can try to acquire data from e-payment service company such as boost, grab and etc.

5.7 Conclusion

The purpose of this study was to look at the factors that influence consumer perception towards electronic payment in Kota Kinabalu, Malaysia. Based on a review of the literature, the researchers chose five characteristics to evaluate their effects on consumer perception towards electronic payment: benefit, ease of use, self-efficacy, trust and security. This study was conducted based on the Factors affecting consumers' perception of electronic payment: an empirical analysis, developed by Teoh et al (2013). The information for the study was gathered by survey questionnaires administered to a group of friends in Malaysia who were chosen at random. Apart from ease of use, self efficacy, and trust. the study's findings suggest that two of the independent factors, benefit and security has a substantial impact on consumer perception towards electronic payment in Malaysia.

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