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THE INFLUENCING FACTORS AFFECTING CONSUMER'S INTENTION TO CONTINUOUS USE OF E-WALLET: A PROPOSED MODEL

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Abstract:

The purpose of this study is to review the relationship between perceived ease of use, perceived usefulness, attitude, subjective norm, perceived behavioural control, disconfirmation and user satisfaction and consumers' intention to continuous use. In specific, this study intends to propose a model to identify the influencing factors on this behaviour. This study also proposed a moderator variable which is perceived value. The hypothesis on the proposed framework of this study will be tested, taking the sample of consumers, to determine the factors that affect the continuous to use of e-wallet in Malaysia. The discoveries will be useful as reference for further studies on analysing or evaluating the use of e-wallet payment, to support the rapidly growing cashless society in Malaysia.

Keywords:

Electronic Payment System, E-Wallet, Intention To Continuous Use, Cashless Society

Introduction

In this industry 4.0 era, a massive drive to go digital seems to appear in a lot of aspects in our life. Malaysia digital economy is expected to contribute more than 21% to the GDP in 2022 compared to 18.5% in 2018 (Star, 2020). E-wallet facilitate digital payments, as well as store sensitive information for membership details, loyalty cards, debit/credit cards and encrypted

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shopping accounts (Dahlberg et al., 2018; Slade et al., 2013). Globally, e wallet transactions, an important ingredient in the digital payments ecosystem, were valued at USD594 billion in 2018 and are expected to grow to USD3,142 billion by 2022, at a growth rate of 32% (Zion Market Research, 2019). With the increase in demand of digital and cashless transactions worldwide, 70% of Malaysian consumers preferring to pay by using digital payments, an increase about 21% usage of digital payments compared to previous years (NST Business, 2019; Alalwan & Dwivedi, 2017).

E-wallet is a convenient cashless mode to make transfer/payment to people/merchants via smartphone, and it works by storing fund from the bank account either using the debit/credit card or online banking into e-wallet account which is available on a smartphone or computer (Bangla & Sancheti, 2018). Previously, Malaysian Government had planned to strongly encourage the usage of e-wallet and cut down cash circulation through the launch of 'e-tunai Rakyat' programmed early 2019 which bring a RM450 million digital stimulus to the e-wallet landscape of Malaysia (Oppotus, 2019). Under this programmed, the publics would get RM30.00 into their e-wallet application.

According to Bank Negara Malaysia Report (2019), there are more than ten e-wallet service providers operates in Malaysia and the most popular are Boost and Touch N Go' E-wallet which contribute around 50% consumption among Malaysian. This is probably due to the visible shifts in consumer education, social status, and awareness about the use of e-wallet services (Amoroso & Watanabe, 2012; Oliveira et al., 2016). Among e-wallets services that have been introduced to Malaysian market in recent years, Boost has continued to be the most popular option for Malaysian consumers that utilize e-wallet services, with more than half of e-wallet users using Boost throughout the year, peaking at 74% in Q2 2019.

Since consumers' awareness about e-wallet payment is growing very quickly, their changing perception and continuous use of e-wallet needs to be concerned. Otherwise, it may lead to a problem where e-wallet companies don't constantly improve their products and no longer emerging in the market. Therefore, it is important for company and many parties to evaluate factors underlying the reason for continuous use of e-wallet service from the point of view of consumers (Singh, Srivastava, & Sinha, 2017). These factors will help us understand why people choose the continuous use of e-wallet service in their transaction. This aims to support sustainable usage on a daily basis for all transactions, not just in certain occasion or period.

Although it was predicted that those internal and external factors would lead to high continuity rate on e-wallet, however the current situation is unlike what the industries have been expected. Regardless the growing trend of e-wallet in Malaysia (Dinh, et al., 2018), the adoption and continuity rate are still low and unsatisfying (Yuan, 2019). According to PwC Malaysia, the e-wallet industry is still in its infancy stage where many players are spending heavily to acquire customers and merchants. Its reported in the second half of 2018, by conducting a customer survey to gain insights knowledge regarding the mobile e-wallets in Malaysia and only 22% of the respondents were mobile e-wallet users (PwC Malaysia, 2018). Based on '2020 retails trend in Malaysia' showed that businesses adopting cashless payments as a way to reduce the cost of payments and streamline their operations with easier payment reconciliation (Malay Mail, 2020). Another prominent trend is that through cashless payments have enable merchants to easily incentivize their customers with digital loyalty programs such as cashback (Malay Mail, 2020).

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There are many studies that examine on the factors intention to continuous use m-payment and its other technologies like pre-adoption and 17 post-adoption continuance intentions (Gupta et al., 2020), security (Wu et al., 2019), antecedents of trust (Shao et al., 2019) and user satisfaction (Liao et al., 2007), however, it is still lack of empirical evidence about the relationship of few factors such as perceived usefulness, perceived ease of use, disconfirmation, subjective norm, perceived behavioral control and satisfaction affecting consumer's intention to continuous use of e-wallet (Gupta et al., 2020; Wang et al., 2019; Alalwan, 2020; Singh et al., 2020). Despite, human behavior is guided by the behavioral intentions as well as perceived behavioral control that determined the attitude of consumers to stay loyal with the products and services (Alalwan, 2020). Some variables such as user satisfaction and perceived value may be hard and challenging to investigate or analyze as its complex construct may differ among people, despites all those researches, not many studies on the factors behind the continuous use specifically on the e-wallet (Liao et al., 2007; Wu et al., 2019; Wang et al., 2019; Alalwan, 2020; Gupta et al., 2020). To the researcher's knowledge, there are less studies on intention to continuous use of e-wallet in Malaysia. Therefore, to answer the research's problems, the integration of three theories will be constructed into one framework which is Expectation Disconfirmation Model (EDM), Theory of Planned Behavior (TPB) and Theory Acceptance Model(TAM) to formulate and incorporate to this study.

To be specific, the population to be studied is among consumers in Malaysia, because most of the consumers showing strong awareness regarding on e-wallet services in Malaysia. This study aims to increase competitive differentiation and financial service sustainability for e-wallet provider, and also assist the government to support cashless society in terms of e-wallet usage in Malaysia.

Literature Review

To find the essential factors affecting consumer's intention to continuous use of e-wallet among consumers in Malaysia, researchers created summaries from findings and journals with topics that are related to the study. The review of literature is related to electronic payment, mobile payment, factors influencing behaviour intention, and cashless society. To ensure the current status of research in the field of digitization, the approach of literature taken from the latest year ranging from 2000 until 2020. This literature will assist researchers in creating the conceptual frameworks of factors that support the intention to continuous use of e-wallet in digital era.

Expectation Disconfirmation Model (EDM)

Expectation Disconfirmation Model (EDM) is described as the extent to which an individual believes that using the system will help to achieve job performance gains. The EDM holds that expectations, together with products/services performance, determine customer satisfaction (Oliver, 1980). In turn, this effect is mediated by the positive or negative disconfirmation with customer's expectations through product or services performance (Liu et al., 2020). To clarify how customer satisfaction can affect customer retention and loyalty, an application of expectation disconfirmation model explains the customer consumption decision in the post-purchase process (Liu et al., 2020; Lankton & McKnight, 2012; Spreng et al., 1996). According to the model, customer satisfaction is the only one requirement that determines a customer's intention to continuous use or repurchase. EDM is used as a theoretical model, popular in marketing literature, to analyze digital service failure classification and its consequences (Oliver, 1980). Some studies in information systems have highlighted the usage of EDM for

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analyzing behavior post- adoption (Mustafa et al., 2020; Lankton & McKnight, 2012; Venkatesh & Goyal, 2010).

Theory Planned Behaviour (TPB)

Theory of Planned Behavior (TPB) is a theory that extended from the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980) which is widely used in explaining the customer behavior (Ting et al., 2016; Ariffin & Lim, 2020). According to TRA, a person's actual behavior in performing a certain action is directly guided by his or her behavioral intention, which in turn is jointly determined by the subjective norm and attitude toward behavior (Ajzen & Fishbein, 1980). TPB is purposed to eliminated the limitations of the original model when dealing with behavior over which people have incomplete volitional control (Ajzen, 1991). In fact, TPB mainly focused on the perceived behavioral control that refers to individual perception of the ease to have a well control of the behavior and it is well related to the behavioral intention (Lai, 2017; Thakur & Srivastava, 2014). TPB well explained and being used to examine the continuous use of the technology such as mobile apps, digital payments, online services and many more (Alalwan, 2020; Zhu, Lan, and Chang, 2017). Past studies examine on factors affecting continuance of mobile payment using theory of planned behavior (Ariffin & Lim, 2020; Ting et al., 2016). TPB's ability to capture social and control factors through subjective norms and perceived behavioral control has been clearly emphasized in the IT/IS literature (Morris et al., 2005; Pavlou & Chai, 2002). Previous researchers found that TPB is a good tool to predict consumer's intention on mobile ordering apps (Alalwan, 2020; Wang et al., 2019).

Theory Acceptance Model (TAM)

The foundation of the proposed model leans on the technology acceptance model (TAM), as it is one of the most prominent models, which has been utilized to explore the acceptance of technology innovations in various contexts with strong predictive powers (Hu et al., 1999; Lim et al., 2011). TAM hypothesizes two particular principles in identifying a user's intention to use and adopt a specific technology (Davis et al., 1989). First, perceived usefulness (PU) is the degree to which the user believes that using such technology would enhance the user's performance on a task (Jen and Hung, 2015). Second, perceived ease of use (PEOU), is the degree to which the user believes that using such technology should be free of effort, i.e. easy to comprehend or operate (Jen and Hung, 2015; Lim et al., 2011). Thus, it is proposed that both PU and PEOU are predicted to positively affect the intention to use the mobile payment apps. While TAM has been a widely used and tested model in predicting user acceptance of a technology, and further research is needed for the model to be incorporated with new constructs in order to enhance its explanation and prediction of acceptance behavior (McFarland and Hamilton, 2006; Wu et al., 2007). Therefore, TAM posits that a user's behavioral intention to initially adopt an innovative information system is jointly determined by his/her attitude towards using the system and perceived usefulness, whereas attitude is a direct function of perceived usefulness and perceived ease of use (Gupta et al., 2020; Liao et al., 2007). Past studies found that TAM can effectively predict consumer's intention to use new technologies and applications (Lwoga & Lwoga, 2017; Buabeng-Andoh, 2018; Kim et al., 2010).

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Variables of Study and Hypothesis Development

Perceived Ease of Use

Perceived ease of use defined as the individual's perception that using a certain system is effortless or simply easy to do (Davis, 1989; Taylor & Todd, 1995a). For this reason, it is considered to be one of the qualities of greatest impact on the acceptance of a new technology (Moore & Benbasat, 1991). For Davis et al. (1989), the ease of use has a double impact on attitude, due to its self-efficacy and instrumentality. On the other hand, the improvements in the ease of use can also be instrumental, thus contributing to increased performance through usefulness, as proved by the TAM (Matemba & Li, 2018; Mun et al., 2017; Mutahar et al., 2017; Ramos-de-Luna et al., 2016). As for relationship of both factors in mobile payment environment such as e-wallet, previous researcher found that perceived ease of use was the greatest predictor of perceived usefulness and suggested that the easier to use the users feel mobile payment is, the more useful they feel mobile payment is (Kim et al., 2010). Perceived ease of use also influences a user's attitude while adopting e-wallet (Bagla & Sancheti, 2018).
H1: There is a positive and significant relationship between perceived ease of use and attitude

Perceived Usefulness

Perceived usefulness is defined as the potential consumer's subjective belief that using a particular system would enhance his or her job performance in an organizational context (Davis et al., 1989). In the mobile payment environment such as e-wallet, perceived usefulness will show that the use of a given technology might be useful for someone to achieve a particular result (Ariffin & Lim, 2020). Perceived usefulness also influences a user's attitude while adopting e-wallet (Bagla & Sancheti, 2018). For all of the above-mentioned reasons, perceived usefulness is proposed as one of the main factors that affect the intention to continuous use of mobile payment (C. Kim et al., 2010). In the present case, it is suggested that this will also be applicable to the use of a new payment tool. Therefore, given that the e- wallet payment is emerging within the existing payment systems, the usefulness it provides to the consumer will be closely related to its advantages.
H2: There is a positive and significant relationship between perceived usefulness and attitude.

Attitude

Attitude has a high correlation to the behavioral intention and tend to drive to the verbal response and overt actions (Ajzen, 1991). Attitudes can be predicted accurately by different kind of behavior (Ajzen, 1991). Furthermore, many prior studies on technology adoption consider the concept of attitude, reflecting favourable or unfavourable feelings about particular behaviour, as an important determinant influencing the intention to continuous use (Ting et al., 2016; I. L. Wu & Chen, 2005; H. Yang et al., 2017). Ting et al. (2016) and Liébana-Cabanillas et al. (2017) said that attitude toward the mobile payment positively affected the user satisfaction that lead to the behavioural intention to continuous use. Based on such prior research, this study defines attitude as the perceived level of positive feelings toward the use of e-wallet.
H3: There is a positive and significant relationship between attitude and user satisfaction.

Subjective Norm

Subjective norm was used to study on the consumer's intention to continuous use with defined as the perception of a person thought and opinion of the individual's action and decision making (Ajzen, 1991). The behavioral can be influencing from external and motivation to make

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according to the wishes of the references (Ajzen, 1991). Therefore, the subjective norm is an important variable to determine the continuous intention to continuous use and higher tendency of being influenced by peers on e-wallet services (Alalwan, 2020; Dwivedi et al., 2017; (Okumus et al., 2018). As according to previous studies, there are a lot of advertisement such as internet and mobile applications with constantly to influence mind of users (Jimenez & Sonia, 2017). It could also being argue that customers are more likely to be affected by those around them when judging their experience (satisfaction or dissatisfaction) of using ewallet (Alalwan, 2020). Indeed, the social approval that customers could have from others regarding the usage of e- wallet will enhance the social values captured in using such system and accordingly the level of customer satisfaction (Gallarza & Saura, 2006). Subjective norm was empirically proved to have a significant role in shaping the user's satisfaction with mobile social apps (Hsiao, Chang and Tang, 2016).

H4: There is a positive and significant relationship between subjective norm and user satisfaction.

Perceived Behavioural Control

Perceived behavioral control is the third variable under TPB that explained people's perception of ease or difficulty in performing the behavior interest. It is associated with the beliefs about the presence of control factors that may facilitate or hinder the performance of the behavior (Ajzen, 2002). Previous study argued that it is the beliefs of control (Ting et al., 2017; Liao et al., 2007) which is a significant factor to the intent behavior for consumers to perform online purchases (Khatimah & Halim, 2016) and have suggested that a good experience on the previous experience will lead the consumers to repurchase (Cobanoglu et al., 2015). Past studies found that perceived behavioral control was positively related to behavioral intention. Kim (2010), Deng, Mo, & Liu (2014), and Lu et al., (2015) showed that perceived behavioral positively influenced the intention to continuous use of mobile data services. Meanwhile, Ting et al. (2016) suggested that the higher the perceived behavioral control, the higher the continuing usage of mobile payment. Past study found that perceived behavioral control supports the argument that higher self-efficacy creates user confidence, which it turn to intention for reuse the applications such as e-learning (Hayashi et al., 2004), social networking (Wang et al., 2015), online banking (Susanto et al., 2016). Thus, for high involvement technologies like e-wallet the user's perceived behavioral control shaped a positive confirmation and resulting continuance intentions (Sharma et al., 2019).

H5: There is a positive and significant relationship between perceived behavioral control and consumer's intention to continuous use.

Disconfirmation

Disconfirmation is defined as the difference between a consumer's pre-purchase expectation and the post purchase performance of a product or services (Liao et al., 2007). Previous studies have undergone where disconfirmation would fall under three category which are; (1) negatively disconfirmed whenever the product or service performs below expectation; (2) confirmed whenever the product or services perform as expected; and (3) positively disconfirmed whenever the product or services outperform expectations (Liu et al., 2020; Oliver, 1980). Other literature indicates that an e-wallet's performance is evaluated based on prior basic expectations, driven by user's own experiences (Hossain & Quaddus, 2012). The satisfaction is primarily an outcome of the alignment between such expectations and confirmation through meaningful consumption experiences (Bhattacherjee, 2001). According

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to Ambalov (2018) also establishes the general relationship between disconfirmation and customer satisfaction.
H6: There is a positive and significant relationship between disconfirmation and user satisfaction.

User Satisfaction

User satisfaction refer to the performance of the products or services against their expectation (Slack & Singh, 2020). A consumer's continuance with product or service, like a mobile wallet, is primarily an outcome of satisfaction with its consumption, defined as the post-choice evaluative judgment of the overall performance (Westbrook & Oliver, 1991). A user's satisfaction with an e-wallet determines whether the individual will keep using it as the primary vehicle for digital payments (Wixom & Todd, 2005). Previous study using the EDM and TPB as a theoretical to analyze and validated the relationship between satisfaction and continuance intention on human behavioral as a result of positive finding including mobile applications (Hsiao et al., 2016; Tam et al., 2018), e-governance (Valaei & Baroto 2017), e- retail (Hsiao, 2018) and banking/payment services (Chen & Li, 2016; Susanto et al., 2016; Yuan et al., 2016).
H7: There is a positive and significant relationship between user satisfaction and consumer's intention to continuous use.

Perceived Value as Moderator

Perceived value is defined as the trade-off between what customers receive, such as quality, benefits, and utilities and what they sacrifice such as price, opportunity cost, transaction cost, time, and efforts (Cronin et al., 1997; Cronin et al., 2000; Keeney, 1999; Zeithaml, 1988).

Perceived value contributes to the loyalty of an e-business by reducing an individual's need to seek alternative service providers (Liu et al., 2019; Chang et al., 2009). When the perceived value is low, customers will be more inclined to switch to competing businesses in order to increase perceived value, thus contributing to a decline in loyalty (Liu et al., 2019; Chang et al., 2009). Past research found that perceived value was positively related to customer satisfaction and post-purchase intention in telecom industry in China (Wang et al., 2016). Perceived value has attracted interest in the literature because it is seen to be a key predictor of customer satisfaction and loyalty (Bressolles et al., 2015; Chang & Wang, 2011; McDougall & Levesque, 2000; Wang, 2014; Yang & Peterson, 2004). The relationship between customer satisfaction and customer loyalty appears strongest when the customers feel that their current e-business vendor provides higher overall value than that offered by competitors (Chang, Wang & Yang, 2015; Liu et al., 2019; Shimp & Andrews, 2013). H8: Customer perceived value strengthen the relationship between user satisfaction and consumer's intention to continuous use.

Proposed Conceptual Framework

The factors affecting consumer's intention to continuous use of e-wallet among consumers in Malaysia is the topic of this study and will be assessed regarding the extent that is adopted by using a proposed model consists of 7 independent variables, they are perceived ease of use; perceived usefulness; attitude; subjective norm; perceived behavioural control; disconfirmation; user satisfaction and one moderator which is perceived value. These independent variables lead to usage intention to continuous use as dependent variable. Based on these variables, the hypothesis H1, H2, H3, H4, H5, H6, H7 will be tested to determine

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either there is a positive relationship between these variables and the intention to use e-wallet and H8 either it give strong impact between satisfaction and intention to continuous use.

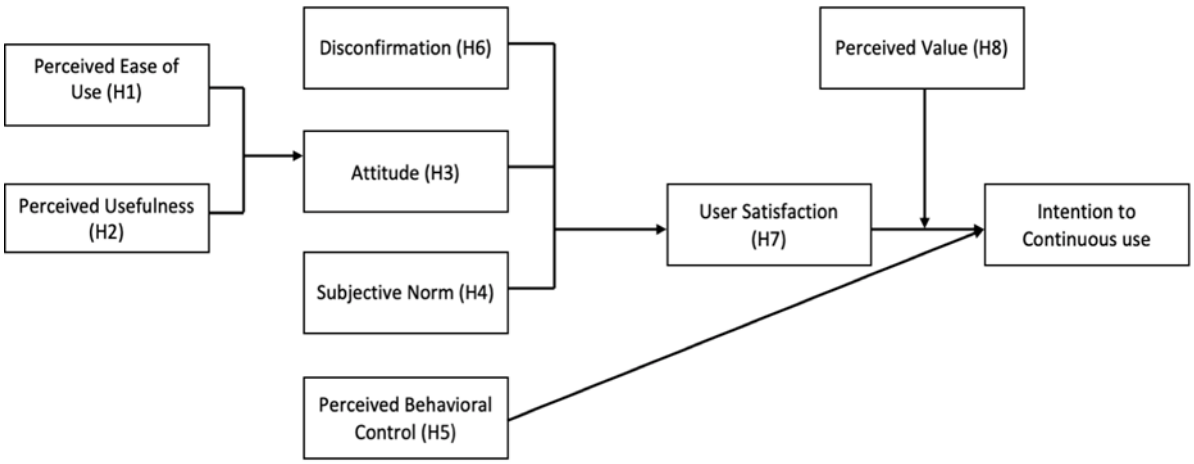

Figure 1: Proposed Conceptual Framework

Research Methodology

Data Collection and Sampling Procedures

This study focuses in Malaysia and who have an e-wallet and adopted or using the technology. This study is a quantitative study where a questionnaire will be used to gather data concerning the variables of interest. The unit of analysis in this study will be Malaysian consumers. The population for this study focuses on all districts in Malaysia. Data will be collected using online survey tools such as Google Form using the convenient sampling method. A self-administered survey will be distributed to a total of 300 respondents of Malaysian consumers. According to Sekaran (2016), the rule for determining the sample size is between 30 and 500; if the sample size is too large (more than 500), it may become a problem and it is easy to make Type II error, hence 200 is enough to help the research project. Type II error is the non-rejection of a false null hypothesis. In other words, we accepted the findings of our research, but we should actually reject them (Sekaran & Bougie, 2016). The link of online survey was sent out through social media platform, such as Facebook, WhatsApp, and e-mail to participants.

Measurement of the Variables

This study aims at establishing relationships between predictors (independent variables) and criteria variables (dependent variables). All of the measurement items in this study were adapted from the previous studies to ensure validity of the constructs, for example, Perceived Usefulness: "Using e-wallet improves my payment processing", "Using e-wallet makes it easier for me to conduct transactions", Perceived Ease of Use: "My interaction with e-wallet is clear and understandable", "I find e-wallet to be easy to use" (Gupta et al., 2020), Disconfirmation "My experience with using e- wallet was better than what I expected", "The service level provides by e- wallet was better than what I expected" (Liao et al., 2007; Gupta et al., 2020), Attitude: "Using e-wallet is a good idea", "I like the idea of using e-wallet to make payment", Subjective Norms: "People who are important to me prefer that I use the e-wallet", "I use e-wallet because of the influence from my friends", Perceived Behavioural Control: "I

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have the capability of using ewallet for making payments", "I have the confidence to use e-wallet for making payments" (Taylor & Todd, 1995; Yang et al., 2017), Satisfaction: "I am generally pleased using e-wallet", "I am very satisfied using e-wallet" (Liao et al., 2007; Gupta et al., 2020), Perceived Value: "The e-wallet provides value by offering discount/cashback offers", "The e-wallet saves time and effort by making payment faster" (Amoroso et al., 2012; Liu et al., 2019), Continuous Intention: "I intend to continue using the e-wallet in the future", "I will always use e-wallet in my daily life" (Liao et al., 2007; Gupta et al., 2020).

The questionnaire is made up of three sections. Section A is the screening questions to filter respondents aware or using the e-wallet services. Section B is to collect the socio-demographic profiles of the respondent which includes gander, ethnic, age, highest education level, employment, profession, monthly income, and how frequent respondents used e-wallet. Last section I section C to G measure the independent variables, antecedent variable, moderator variable and dependent variable of this study. The questionnaires incorporated a five-point Likert scale ranging from one to five, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Conclusion

The primary aim of this study is to identify the factors affecting consumer's intention to continuous use of e-wallet among consumers in Malaysia. The findings reveal that there are several factors that possess significant relationship towards e-wallet intention to continuous use, thus the researcher propose a new conceptual framework as per figure 1. The model will be examining people's continuous intention in using electronic payment instruments. After conducting synthesis research from various studies and literature, researcher modified the construct by integrated three theories which are Expectation Disconfirmation Theory (EDM), Theory Planned Behaviour (TPB) and Theory Acceptance Model (TAM) into this model. The researcher also adding one moderator variable which is perceived value in order to test either it provides strong impact between satisfaction and continuous intention of using e-wallet in Malaysia.

Implication of Study

By conducting this study, researcher will use the proposed conceptual framework to measure the factors affecting consumer's intention to continuous use of e-wallet among consumers in Malaysia. Due to the limited resource and time, this research will be applied generally for consumers located in Malaysia. Thereafter, the model will also be used to conduct comparative study between e-wallets, aims to deliver a better understanding of consumer preferences towards e-wallet services. In the future, the proposed model can be adopted to the results obtained in a wider and vary sampling frame; such as another generation group all- around Malaysia. The result of the study is beneficial for institutions such as e-wallet providers, government, and even the society, as part of analysing e-wallet payment system and evaluating sustainability of the cashless journey.

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