Malaysian Intention to Use e-Wallet: Forthcoming Expectation in Cashless Transactions

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KEYWORDS:
Intention to use e-wallet
Unified Theory of Acceptance and Use of Technology (UTAUT)
Technology Accepted Model (TAM)

ABSTRACT
This research intended to explore the intention to use of e-wallets among Malaysian. The influential factors consist of perceived usefulness, perceived ease of use, perceived trust, social influence, facilitating conditions, and lifestyle compatibility using the technology accepted model (TAM) and the unified theory of acceptance and use of technology (UTAUT). Population of this research are general consumers who used e-wallet in Malaysia. The research acquires 146 respondents and data collection was established using the application of Google Form. Data analysis were facilitated by SPSS application to measure the relationship between variables. Result portrays that there is strong correlation between facilitating conditions, lifestyle compatibility, perceived usefulness, perceived trust, perceived ease of use, social influence towards intention to use e-wallet. The highest correlate value is facilitating condition while social influence yield the lowest correlation value.

Contribution/Originality: This study is one of few studies which investigate Malaysian intention to use e-wallet in Covid-19 pandemic setting. The application TAM and UTAUT model under this setting portray a huge potential and contribution in determining future trends and applicability of existing cashless transaction for future market niche.
1. Introduction

The growth of e-commerce is happening around the world especially developed countries. However, the development of e-commerce could be hindered by major discrepancies between online and offline e-commerce transactions. E-wallet is a method of payment that does not require the use of physical cash or money. This enables the seller to receive the customer’s payment by using the seller’s special two-dimensional quick-response code, also known as (QR) code. Example of cashless transactions consist of Grab Pay, Boost, Touch n Go E-wallet, Alipay, and Favepay (Soegoto & Tampubolon, 2020). Covid-19 pandemic in 2020 blasted worldwide society with strict new norms requirement and Malaysia faced similar restriction. Physical contact through cash transaction may open a fatal risk as pandemic scenario in Malaysia have worsen amidst the increasing of new cluster and COVID-19 new deadly variance (Aji et al., 2020). Minimal physical interaction among consumers and seller may escalate trust issue within transaction. However, electronic payment has become more trustworthy as the number of suppliers and the scale of their distribution networks has grown in tandem with the adoption of online services (Yang et al., 2021). E-wallet as a solution may provide a safety transaction not just health safety but a much safer electronic transaction via recognizes online services. The UTAUT is a critical theory to understanding how people in organizations intend to use technology and it established the first conceptual model to evaluate a variety of technology adoptions (Martins et al., 2014). Technology Adoption Model, or TAM, is one of the most widely used models for computer, application, and technology acceptance. The concept describes how users’ intentions to use technology are influenced by their attitudes toward it. It is extremely likely that the user’s perceptions influence the variability in these attitudinal and behavioral characteristics (Intarot, 2018). Additionally, using the unified theory of acceptance and use of technology (UTAUT) and technology accepted model (TAM), this study investigated the impact of perceived usefulness, perceived ease of use, social control, facilitating condition, lifestyle compatibility, and perceived trust on the intention to use E-wallets (Yang et al., 2021).

2. Literature Review

2.1. Technology Acceptance Model

Davis (1989) created the Technology Adoption Model, or TAM, as one of the most widely used models for computer, application, and technology acceptance. The concept describes how users’ intentions to use technology are influenced by their attitudes toward it. It is extremely likely that the users’ perceptions influence the variability in these attitudinal and behavioral characteristics (Intarot, 2018). Additionally, using the unified theory of acceptance and use of technology (UTAUT) and technology accepted model (TAM), this study investigated the impact of perceived usefulness, perceived ease of use and perceived trust.

2.2. Perceived Usefulness

An assumption of using device would increase job efficiency is referred as perceived usefulness (Lwoga & Lwoga, 2017). Perceived usefulness assesses a person’s conviction that using a system will help him or her perform better at work (Corkindale, Ram, & Chen, 2018). In other words, it is users’ cognitive expectation of the system’s efficiency. As a result, customers assume that using such system would enable them to achieve their financial and lifestyle goals while also improving the efficiency in performing various transactions. Furthermore, Perceived Usefulness has been known to have a positive impact on the intention to use e-payment in ambiguous circumstances (Yang et al., 2021).
This usefulness could be enhanced by the addition of other services to ensure that consumers enjoy using e-wallets as an alternative payment method, especially during COVID-19 pandemic. Perceived usefulness has been shown to be a good predictor of customer behavior intention in previous studies (Intarot, 2018). The digital infrastructure contributes to the information distribution system, increasing the impact of the system's perceived utility on technology adoption intentions. The perceived usefulness has a big influence on how people feel about using something. Other considerations, such as external influences, have been considered in the acceptance of technology in the past.

2.3. Perceived Ease of Use

Perceived ease of use is a significant to determine consumer's attitude and action intention to use a technology (Chawla & Joshi, 2020). Perceived ease of use (PE) has a significant impact on a customer's decision to buy. A study explained that many consumers defined their experience with the e-wallet apps as simple (Yang et al., 2021). Consumer’s perceived ease of use of E-wallets can be influenced by previous purchasing experiences. As a result, perceived ease of use represents the ease with which a technology can be used to access a website and make an online purchase (Grover et al., 2019). These findings suggest that e-wallet providers, such as banks and online stores, should concentrate on latest technologies that allow users to conduct transactions quickly and easily. Consumers perceive e-wallets as simple to use, save time and cost.

2.4. Perceived Trust

Consumers will continue to use an application to buy goods until they have gained confidence in a system or a service provider. Recognizing the potential to create confidence by leveraging the consumer's established knowledge will increase the consumer's purchasing intent. As a result, perceived trust in a mobile payment system is critical in boosting business profits (Wong & Mo, 2019). Because of the perceived risk and uncertainty prevalent in online transactions, trust plays a larger role in online market development than it does in traditional offline markets. While a lack of trust may be a reason why people avoid shopping online, it is also the primary concern for many people who do (Kim et al., 2017).

2.5. Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT model was created by extending the well-known Technology Acceptance Model (TAM) (Lim et al., 2019). The primary benefit of UTAUT is that it demonstrates greater factor strength. Researchers frequently employ UTAUT to explain the acceptance of IS and IT. This is the most comprehensive form of TAM, created specifically for the IS setting. Both theories and other TAM's variations have profited from its explanatory strength. Up to 70% of the diversity in behavioral intentions may be explained using this paradigm (Dillon, 2006). The idea has been praised for its capacity to educate and provide insight into the different aspects that influence a users' willingness to accept new technology (Lim et al., 2019).

2.6. Social Influence

The concept of social impact (SI) has been used to measure consumers' willingness to use mobile payment (Peng et al., 2017). Family members, associates, co-workers, and
neighbors are all possible influencers for customers to use AEW (Yang et al., 2021). As a result, SI refers to the impact of environmental factors on consumers’ decisions to buy or sell new goods (Karjaluoto et al., 2019). The use of an e-wallet not only provides a sense of security, effectiveness, and efficiency in transactions, but it also has a social impact that could increase the use of electronics application. People who have become accustomed to using electronic money will increase the number of electronic uses in the future (Soegoto & Tampubolon, 2020). Similarly, Martins et al. (2014) discovered that social power influenced web users’ intentions to use Internet services. Chaouali et al. (2016) claimed that social influence influenced everyone’s attitude toward using new innovative products through technology services. Social influence, the second most important determinant of consumer intentions, is critical for encouraging consumers’ intentions to use e-wallets because it can help consumers in developing countries develop emotional and logical perspectives (Chaouali et al., 2016).

2.7. Facilitating Condition

Factors and technological infrastructure that enhance mobile banking such as training on how to use mobile banking or a consumer’s capacity and resources have been described as facilitating conditions (Chawla & Joshi, 2020). According to Hossain et al. (2017), facilitating conditions have a substantial positive effect on customers’ intent to buy a product. Consumers are believed to become more likely to use e-wallets under facilitating conditions (for example, having internet-enabled smart phone, knowledge of how to use mobile wallet services; provider acceptance of mobile wallet services, etc.) exist (Patel, 2016). Consumers will continue using service providers’ facilities that facilitate purchases and transactions because they have experienced the convenience of using them. Yang et al. (2021) facilitating conditions can increase a consumer’s desire to use an e-wallet with an online platform. According to Tarhini et al. (2016), enabling conditions enable users to creatively use the e-learning framework, allowing them to become smart and constantly update new menus in the app. Furthermore, Peñarroja et al. (2019) found that enabling conditions had a positive impact on the knowledge-sharing actions of people who used technology in the digital age. These results show that when enabling conditions occur, customers are more likely to engage in virtual communities. It is said that the facilitating condition is a technological advancements tool that helps users to use e-wallet (Intarot, 2018).

2.8. Lifestyle Compatibility

It can be defined as a natural congruence of ideals and lifestyle choices. Compatibility is vital for the spread of new technologies since it reduces the risk of utilizing them incorrectly. The degree to which mobile banking is aligned with consumers’ values, experiences, lifestyles, and preferences might be described as LC (Lin, 2011). Users prefer to link themselves with like-minded firms who utilize comparable technological platforms, hence LC is thought to be crucial for any new technology’s acceptance. Users may, for example, seek advice from friends, peer groups, superiors, family, and relatives with whom they are compatible (Chawla & Joshi, 2020). This element of lifestyle compatibility is critical to reducing the potential for technology to be incompatible with a user’s meaning, experiences, lifestyle, and preferences (Lin, 2011). As a result, lifestyle compatibility influences one’s actions and can be used to predict consumers’ behavioral intentions (Shaw & Sergueeva, 2019). In a similar vein, Herrero et al. (2014) and Yang et al. (2021) found that lifestyle compatibility with technology, which is linked to prior knowledge and value, has a direct effect on e-wallet adoption.
2.9. Intention to Use E-wallet

The exponential growth of digitalization and internet is accelerating the transition of globalization and payment systems from manual to online transactions (Andrew, Ambad & Tan, 2019). As a result, internet users have become dependent on electronic money (e-money) for transactional purposes. Digital wallets and online transactions have solved problems such as cash management and long-distance transactions to date. Technically, e-wallet platform is an effective method for various payment types, and can be recharged using any mode of transaction by another similar system with money in its wallet (Yang et al., 2021). According to Aji, Berakon and Husin (2019), the intent to use an e-wallet is a measure of the strength of one’s desire to buy a product. Consumers to an extent believe that using e-wallet improves performance such as perceived utility, perceived ease of use, perceived danger, social impact, price and trust. Advances in this emerging technology have had a significant impact on consumers, especially in terms of managing their transactions and purchases. As an impact of this growth trend, behavioral intention has been found to have a positive impact on the adoption of electronic e-wallet (Andrew, Ambad & Tan, 2019). A study done by Ming and Jais (2022) showed that the attitude toward the usage of e-wallet was correlated by perceived usefulness, government support, the perceived risk, and social influence. Besides that, families, peers and the environment have also influenced consumer intention to use e-wallet continuously (Ariffin et. al, 2021). Furthermore, a study uses UTAUT model to describe the adoption and use of mobile money services that influence customers’ behavioral intentions, such as social influence, habits and facility conditions (Tusyanah, Wahyudin & Khafid, 2021). The UTAUT is a central paradigm for understanding the predictors of human actions against future adoption or rejection of technology (Yang et al., 2021). It is an extension of the Theory of Reasoned Action. Thus, this study suggests the decomposition of TAM and UTAUT towards the intention to use e-wallet. The framework shown in Figure 1 is adopted from Yang et al. (2021).

Figure 1: Conceptual Framework

Source: Yang et al. (2021)
3. Methodology

This study gathered qualitative data within the study parameter. The target population of this research will be Malaysian citizen and sample to focus on consumers that use e-wallet in their daily application. Total Malaysian population resident are 33.42 million and a minimum sample size of 138 were derive and determine through power calculation. As the analysis has no sample frame, thus the technique of non-probability sampling will be used. Due to large effected size for Malaysian population, it is convenient and safe to perform data collect during covid-19 pandemic through google form application. Purposive sampling is used for this study to identify the qualify respondents for this study and to eliminate respondent who does not fit the requirement.

4. Result

4.1. Reliability Analysis

Cronbach’s alpha tests was used to determine the reliability of multiple-question Likert scale surveys. The Cronbach’s alpha result is shown in Table 1. Referring to Sekaran and Bougie (2013), Perceived Usefulness, Social Influence and Facilitation Conditions have good reliability. While Perceived Ease of Use, lifestyle Compatibility, Perceived Trust and Intention to use e-wallet are highly reliable.

<table>
<thead>
<tr>
<th>Item</th>
<th>Item (N)</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness (PU)</td>
<td>5</td>
<td>0.861</td>
</tr>
<tr>
<td>Perceived Ease of Use (PE)</td>
<td>6</td>
<td>0.909</td>
</tr>
<tr>
<td>Social Influence (SI)</td>
<td>5</td>
<td>0.881</td>
</tr>
<tr>
<td>Facilitating Conditions (FC)</td>
<td>5</td>
<td>0.889</td>
</tr>
<tr>
<td>Lifestyle Compatibility (LC)</td>
<td>4</td>
<td>0.903</td>
</tr>
<tr>
<td>Perceived Trust (PT)</td>
<td>6</td>
<td>0.940</td>
</tr>
<tr>
<td>Intention to use e-wallet (IEW)</td>
<td>6</td>
<td>0.945</td>
</tr>
</tbody>
</table>

4.2. Demographic Profile

The questionnaire was designed consisting of demographic profile and questionnaire for each item. Demographic profile comprises of several elements which are gender, age group, education, employment status and states. 146 respondents participated in the survey. There was 110 female respondents (75.3%) and 36 male respondents (24.7%). The highest respondents in age group are 20 to 29 years old which is 73.3% and followed by 40 and above with 17.8%. The age group below 20 years old is 4.8% and the least is from age 30 to 30 years old with 4.1%. Education group shows that majority respondents was a bachelor holder 74%. While the second highest of education is diploma with 17.1% and 4.8% are from high school. The lowest value came from master holder with only 4.1%. Respondents’ employment status indicates majority of students with highest percentage of 58.9% compared to the worker which is 41.1%. State data shows that
47.3% respondent that responded to the survey was from Kelantan. Selangor with 17.8%, Johor with 8.9% and followed by Perak and Wilayah Persekutuan with 4.8% respectively.

4.3. Pearson Correlation Analysis

Pearson correlation analysis was conducted to test if there are any significant relationship between intention to use E-wallet and perceived trust, lifestyle compatibility, facilitating conditions, social influence, perceived ease of use and perceived usefulness. The objective of this research is to examine the relationship between these variables. Table 2 shown the result of Pearson Correlation between TAM and UTAUT attributes with intention to use E-wallet.

Table 2: Pearson Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>IEW</th>
<th>PT</th>
<th>LC</th>
<th>FC</th>
<th>SI</th>
<th>PE</th>
<th>PU</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEW</td>
<td>1.000</td>
<td>.693*</td>
<td>.759*</td>
<td>.764*</td>
<td>.523*</td>
<td>.656*</td>
<td>.696*</td>
</tr>
<tr>
<td>PT</td>
<td>1.000</td>
<td>.650</td>
<td>.692*</td>
<td>.594*</td>
<td>.596*</td>
<td>.632*</td>
<td></td>
</tr>
<tr>
<td>LC</td>
<td>1.000</td>
<td></td>
<td>.812*</td>
<td>.646*</td>
<td>.680*</td>
<td>.742*</td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>1.000</td>
<td></td>
<td></td>
<td>.662*</td>
<td>.684*</td>
<td>.768*</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td>.387*</td>
<td>.580*</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.769*</td>
<td></td>
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<tr>
<td>PU</td>
<td>1.000</td>
<td></td>
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</tbody>
</table>

Referring to Table 2, analysis of 146 respondent shows that there was a significant positive relation between perceived trust and lifestyle compatibility, facilitating conditions, social influence, perceived ease of use and perceived usefulness towards the Intention to use E-wallet (r=0.696, 0.656, 0.523, 0.764, 0.759, 0.693) respectively. Facilitating conditions and lifestyle compatibility shown a high correlation coefficient value. These depict that better facilitating, the higher the intention to use E-wallet. Similarly, the higher lifestyle compatibility, the stronger intention for the respondent to use E-wallet.

There was a positively significant relationship between perceived trust and lifestyle compatibility, facilitating conditions, social influence, perceived ease of use and perceived usefulness with respective coefficient value (r=0.650, 0.692, 0.594, 0.596, 0.632) at the 0.000 level. These results portray that the higher lifestyle compatibility, facilitating conditions, social influence, perceived ease of use and perceived usefulness, the higher the intention to use E-wallet. Positive coefficient relationship between lifestyle compatibility and facilitating conditions, social influence, perceived ease of use and perceived usefulness (r=0.612, 0.646, 0.680, 0.742) and significant at 0.000 level. Result shows that lifestyle compatibility was highly correlate with facilitating condition. It depicts that the higher the lifestyle compatibility, the higher the facilitating conditions.

There was positive relationship between facilitating conditions and social influence, perceived ease of use and perceived usefulness (r=0.662, 0.684, 0.768) at 0.000 level. A slightly high coefficient value between facilitating conditions and perceived usefulness compare to perceived ease of use and social influence was noted. This imply that the higher facilitating condition, the higher the perceived usefulness. Social influence shown a positive relationship with perceived ease of use and perceived usefulness (r=0.387, 0.580) significant at 0.000 level. Coefficient strength between social influence and perceived ease of use shows a slight lower compare to perceived usefulness. However, both are significant at 0.000 level. Lastly, perceived ease of use and perceived usefulness
was positively correlate \((r=0.769)\) at 0.000 level. The result portrays that the higher perceived ease of use, the higher perceived usefulness. Overall result can be visualize as the relationship become stronger, the more significant for correlation coefficient values.

5. Discussion

Intention to use e-wallet has found to be positively correlate with perceived trust and lifestyle compatibility, facilitating conditions, social influence, perceived ease of use and perceived usefulness. Facilitating conditions correlation coefficient towards lifestyle compatibility yield the highest value which indicate that good facilitating condition in term of technology infrastructure and access to technology advancement does positively influence the respondent lifestyle in using e-wallet. Majority of the respondent are age group of 20-29 years old which imply that young generation are adapting well with e-wallet usage as option to cashless transaction medium. Young respondent does not show any barrier in intention to use e-wallet as they are referred as technology savvy. Additionally, this portray that Malaysia infrastructure and technology are sufficient to support respondent intention to use e-wallet. Perceived ease of use has become one of the important elements that significantly influence respondent intention to use e-wallet as e-wallet application is user friendly and easily navigate by user. Pandemic Covid-19 as push factor has highlight the advantages in e-wallet application where cashless transaction has gradually become an important norm to prevent pandemic infection rate as well as to minimize physical contact during business transaction. Although there was no inverse correlation coefficient value yield from the analysis, the lowest correlate value yield by social influence towards perceived ease of use indicate that user friendly cashless transaction application such as e-wallet is sufficient enough to attract end user intention. Hence, social influence from respondent peer or family circle may contributes in a small scale.

6. Conclusion

Findings and data extracted from this study has provided a new perspectives on Malaysian intention to use e-wallet. As Covid-19 has reach towards endemic phase, the result yield during Covid-19 movement control order (MCO) has shed some light in understanding consumers intention to use e-wallet during pandemic phase. As new market segment open due to pandemic situation where consumer choose to have minimal physical business transaction and eliminate direct physical contact through cashless transactions, there are possibility that the trend may not continue after Malaysia have reach endemic phase. It is a question whether cashless transaction such as e-wallet were able to continue the same momentum as it had during pandemic and even after the endemic phase. Additionally, service provider for cashless transactions should take the opportunity to improve their application and services. Technology friendly application should not only cater for the young generation but it should involve older generation. Although perceived trust was not an issue among consumer, it is important for the service provide to increase their transactions security and network from any potential cyber criminal risk and hazard. As a conclusion, cashless transaction application similar to e-wallet will have much potential to be accepted by Malaysian consumers. New ideas, theme, great purchase reward and flexible application feature or setting that could be customise according to individual needs might be the future trends. Hence, future research on cashless transaction should expand their research scope on others cashless transaction product, new market segment in cashless transaction and influence of
endemic or post Covid-19 setting toward the continuation of cashless transaction product.

Acknowledgement

Part of this article was extracted from an undergraduate dissertation submitted to University Teknologi MARA Cawangan Pulau Pinang.

Funding

This study received no funding.

Conflict of Interests

The authors declare no conflict of interest in this study.

References


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