CONTINUANCE INTENTION TO USE E-WALLETS IN MALAYSIA AFTER OUTBREAK OF COVID-19

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Abstract: This study aims to examine the factors that influence the continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19. This study integrates the Unified Theory of Acceptance and Use of Technology (UTAUT) model with two unique variables (government support and physical distancing). There are 296 questionnaires collected from e-wallet users, and analysed through Multiple Linear Regression to verify the research model and hypotheses. The findings reveal that physical distancing is the most decisive factor influencing users to use e-wallets after the outbreak of COVID-19 in Malaysia. Social influence, facilitating conditions, government support significantly affect the continuance intention while effort expectancy is found to be insignificant in this study. This study developed an extended model to enrich future studies relating to e-wallets in a special situation. The finding provides suggestions for government agencies and e-wallet providers to seize the opportunity arising from the continuance intention of Malaysians to use e-wallets.

Keywords: E-wallets, UTAUT model, government support, physical distancing, Malaysia, COVID-19

INTRODUCTION

The COVID-19 pandemic has sounded a wake-up call for citizens around the world, including Malaysians. Citizens are advised to keep social distancing of at least one metre away from others and apply online transactions to break
chains of virus transmission (Ministry of Healthy Malaysia, 2020). South Korea, China, and the United States have commerced banknotes and coins quarantine, suggesting concerns over the virus spread by banknotes and coins (Hall, 2020). A scientific study found that the COVID-19 virus can remain infectious on the surface of banknotes for at least twenty-eight days (Kelleher, 2020). The World Health Organization (WHO) also recommended using digital payments whenever possible (Brown, 2020). The pandemic has made the growth of e-payment inevitable, and one of the alternatives to physical cash is e-wallets. All transactions can be done efficiently and safely at users’ fingertips, which is an essential function during the lockdown period. Hassan, Paynet, and Yunus (2020) stated that the total number of active users of GrabPay, Touch ‘n Go (TNG) eWallet, and Boost e-wallets are greater than 30 million in Malaysia.

The Malaysian Reserve (2020) reported that the use of e-wallets rises during the first nationwide lockdown, Movement Control Order (MCO 1.0) period. In the wake of the pandemic, the cashless lifestyle is about to hit the mainstream in Malaysia (The Paypers, 2020), which has been a challenging task in 2018 (Azmi, 2018). Oppotus (2020) revealed that the campaigns rolled out by the government: e-Tunai Rakyat and e-Penjana have also led to a surge in the use of e-wallets in Malaysia, as well as the eBelia initiative for 2 million Malaysian youths on June 1, 2021 (Fintech News Malaysia, 2021). The campaigns have provided eligible e-wallet users with attractive incentives, vouchers, and cashback during the COVID-19 pandemic while promoting cashless awareness and spending among Malaysians. Malaysia is now expected to achieve strong growth in e-wallets, which is consistent with Bank Negara Malaysia’s goal of transforming the country into a digital economy and a cashless society (Hoh, 2021). Surprisingly, the pandemic has become a turning point for cashless transactions in Malaysia.

CASH PAYMENT VERSUS DIGITAL PAYMENT IN MALAYSIA

Despite cash remaining predominant in most retail transactions, Malaysia has great potential to become a cashless society, as stated by Bank Negara Malaysia in 2018 (M.B. Ibrahim, personal communication, April 11, 2018). According to the Netizen eXperience (2020) survey on the preferred payment means of Malaysians, many respondents tend to make cash transactions (29.3 %) most of the time after the enforcement of the Movement Control Order 1.0; closely followed by E-wallets (28.6 %). Convenience, no-contact, and incentives have motivated Malaysians to use e-wallets (Business Today, 2021). Another earlier
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A study by Visa Consumer Payments (2017) found that digital payments in Malaysia are consistently growing rather than relying on only cash payments. Driven by the pandemic, Malaysia is found to be the highest e-wallets usage region in Southeast Asia (Wong, 2020).

**PROBLEM STATEMENT**

Malaysia continued to face several lockdown extensions in late 2021 (Cho, 2021). Since Malaysia’s daily infections are getting worse, the government has continually tightened both business and shopping restrictions. To stimulate more local spending during the lockdown period, the government has actively put forward economic stimulus packages, including digital payment incentives for millions of citizens (Yusof, 2021). Birruntha (2020) pointed out that the number of people using e-wallets during MCO 1.0 has seen a sharp rise due to the awareness of the means to prevent virus spread. One might think that the intention of using e-wallets will remain after the outbreak. Malaysia was reported by MasterCard Impact Study 2020 to have e-wallets usage of 40 %, which is the highest among the South-East Asia countries (Bernama, 2020). Before the pandemic, only 8 % of Malaysians were using mobile wallets as of the beginning of 2019 (Roy, 2019). Cash payments in Malaysia have fallen sharply by 64 % since the COVID-19 (Bernama, 2020), indicating that Malaysians are receptive of going cashless. As the pandemic is still ongoing, the research is limited by insufficient and pandemic-associated information. This study is essential in the context of Malaysia due to its outperformance as a leader in e-wallets usage in Southeast Asia. In addition, there are research gaps in investigating the continuance intention of using e-wallets in the presence of COVID-19.

**RESEARCH OBJECTIVES**

This research aims to investigate the factors that influence continuance intention of e-wallets users after the COVID-19 outbreak. In this regard, it is necessary to research to give better insights as decision-making information. Five specific objectives are outlined as below:

1. To determine the relationship between effort expectancy and continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19.

2. To determine the relationship between social influence and continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19.
3. To determine the relationship between facilitating conditions and continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19.

4. To determine the relationship between government support and continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19.

5. To determine the relationship between physical distancing and continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19.

DEFINITION OF TERMS

1. **E-wallet**: According to New Straits Times (2020), e-wallet refers to a smartphone application that can load money into the virtual wallet account, enabling users to pay for goods and services, along with securing transactions through PINs or personal identity.

2. **Government support**: Government support refers to e-wallet incentives, a value of money credited by the government of Malaysia to encourage safe and contactless spending during the pandemic. For example, ePENJANA RM50, eTunai RM50, and eBelia RM150 (MyPF, 2020; Fintech News Malaysia, 2021).

3. **Continuance intention**: Han, Wu, Wang, and Hong (2018) stated that continuance intention is when the users continue to use a specific product or service that they have already been using before on a long-term basis.

4. **Physical or social distancing**: A survey explained physical distancing as keeping a distance of at least 1 metre away from others in public places, which effectively reduces the risk of getting infected with COVID-19 (Institut Penyelidikan Tingkahlaku Kesihatan, 2020).

LITERATURE REVIEW

**Unified Theory of Acceptance and Use of Technology (UTAUT) model**

The research is based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model designed by Venkatesh, Morris, Davis, and Davis (2003) as shown in Figure 1. Venkatesh et al. (2003) summarised the UTAUT into four core components: performance expectancy, effort expectancy, social influence, and facilitating conditions, together with four moderators, namely,
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gender, age, experience, and voluntariness of use. The UTAUT model has been developed over time under different context. It was widely applied in the research literature to examine user acceptance of technology. Extensive past research based on the UTAUT model has been conducted and changes have been made to bring variables according to the research background.

Figure 1: Original Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh et al., 2003, p. 447)

In this study, are two additional variables are added, which are government support and physical distancing. These variables are critical considerations for continuance intention to use e-wallets after the COVID-19 outbreak.

**Performance Expectancy (PE) Towards Continuance Intention to use (CIU)**

Performance expectancy is the degree to which users believe and expect that using technology would improve their transaction efficiency (Davis, 1989; Venkatesh et al., 2003) and add value to task performance (Wei, Luh, Huang, & Chang, 2021). In other empirical studies by Basri (2018); Savic and Vasić (2019); and Merhi, Hone, and Tarhini (2019), performance expectancy has been consistently believed to have a significant effect on users’ behavioural intention to use technologies. In the presence of COVID-19, Chayomchai, Phonsiri, Junjit, Boongapim, and Suwannapusit (2020); Revathy and Balaji
(2020); and Wei et al. (2021) found positive results of performance expectancy on mobile payment usage. In this regard, the present study will not repeatedly test the performance expectancy factor by virtue of unanimously supported researches.

**Effort Expectancy (EE) Towards Continuance Intention to Use (CIU)**

Venkatesh et al. (2003) described effort expectancy as the degree of ease linked to the use of the system. According to Wei et al. (2021), effort expectancy is the degree of complexity that would affect customers’ intention to use such technology. In previous studies, researchers have obtained positive results in terms of effort expectancy on behavioural intention of using technologies. For example, Rosnidah, Muna, Musyaffi, and Siregar (2019) surveyed on mobile payment for Indonesian millennials; Basri (2018) surveyed on the adoption of mobile banking in India; and Wei et al. (2021) surveyed on mobile payment adoption for generation Y and Z in Taiwan. Interestingly, Revathy and Balaji (2020) came to a different finding that effort expectancy was insignificant to intention to use mobile payments in India during the COVID-19 lockdown. Based on the above studies, the present research hypothesis is that:

**H1**: A significant relationship exists between effort expectancy and continuance intention to use e-wallets after the outbreak of COVID-19.

**Social Influence (SI) Towards Continuance Intention to Use (CIU)**

Social influence is explained by Venkatesh et al. (2003) as the degree to which people who can influence the users, believe that she or he should use the system. The behaviour or decision-making of users would be influenced by others such as family, friends, or social media (Davis, 1989). Catherine, Geofrey, Moya, and Aballo (2017) have empirically shown that social influence was a major predictor of the behavioural intention of banking services adoption. Basri (2018); and Savic and Vasić (2019) verified that social influence is positively correlated with behavioural intention to use mobile banking adoption in India and Central Serbia. A recent Taiwanese study stated that recommendations from people around the users and the supports from relevant service providers will encourage or affect decision to use (Lin, Lin, & Ding, 2020). Zhao and Bacao (2021) revealed that social influence could be the recommendations and supports from users’ social relations, demonstrating its impact on technology adoption, especially during the COVID-19 pandemic. This research makes the following hypothesis:
H2: A significant relationship exists between social influence and continuance intention to use e-wallets after the outbreak of COVID-19.

Facilitating Conditions (FC) Towards Continuance Intention to Use (CIU)

Facilitating conditions are the degree to which users believe that appropriate technical and organisational infrastructure would meet the needs of technology users (Davis 1989; Venkatesh et al., 2003). Thompson, Higgins, and Howell (1991) described facilitating conditions as to where guidance, specialised instruction concerning the system or assistance were available to the users when facing any system difficulties. However, a study from Bangkok, Thailand, found that facilitating conditions did not influence the decision to use mobile payment (Dong, 2018). While some researchers supported that facilitating conditions in using technology, for instance, mobile payments or mobile banking has positive effects on behavioural intention (Catherine et al., 2017; Rosnidah et al., 2019). The findings demonstrated that the environment, resources, information and communication technology (ICT) infrastructure were key factors supporting users in using mobile banking. Another recent study on the adoption of technology (i.e. Islamic digital banking services) during the COVID-19 pandemic found that facilitating conditions were positive and significant on behavioural intention. Accordingly, the hypothesis is made as followed:

H3: A significant relationship exists between facilitating conditions and continuance intention to use e-wallets after the outbreak of COVID-19.

Government Support (GS) Towards Continuance Intention to Use (CIU)

The Organization for Economic Co-operation and Development (OECD) (2020) emphasised that government support is the most beneficial measure a country can take in a crisis. The Malaysian Government has initiated numerous financial measures in response to the pandemic, including Economic Stimulus Package, National Economy Recovery Plan (PENJANA), PRIHATIN Package, and more. According to Birruntha (2020), continuance initiatives or financial supports by the government is believed to be a key driver in the increased e-wallet usage among Malaysians. Tan, Ooi, Chong, and Hew (2014), as cited by Dawi (2019), stressed that future research regarding mobile payment adoption should consider government support in order to propose a better research model. In contrast, an e-banking study in Colombia concluded that government support did not significantly affect the users’ acceptance (Sánchez-
As the scale of COVID-19 expands, the government of Malaysia is promoting the adoption of e-wallets with attractive incentives, including e-wallet money to millions of Malaysians (New Straits Times, 2020; Ministry of Finance Malaysia, 2020). According to Aji, Berakon, Maizaitulaidawati Husin, and Tan (2020), government support for e-wallets might influence e-wallets usage during the pandemic. Accordingly, the hypothesis is proposed as below:

**H4:** A significant relationship exists between government support and continuance intention to use e-wallets after the outbreak of COVID-19.

**Physical Distancing (PD) Towards Continuance Intention to Use (CIU)**

Physical distancing or social distancing is strongly advised by the World Health Organization (WHO) to mitigate unnecessary contacts by replacing payment with safe, online transactions (World Health Organization, 2021). According to the International Labour Organization (ILO) (2020), physical distancing would more or less affect the socio-economy in Malaysia. In fact, physical distancing has threatened offline retail businesses, compelling them to adopt an online business model for survival. Physical distancing reduces in-person visits and encourages going online, which is believed to leave a long-lasting effect in the digital realm. This study hence proposes to take this new parameter into consideration. Aji et al. (2020) discovered that the perceived risk of COVID-19 significantly influenced users’ intention to use e-wallets, and it has a negative correlation with the intention to use physical cash in Malaysia. Mastercard study has proven this statement, where up to 40% of Malaysians use e-wallets instead of other payment methods, it may even remain a permanent trend after the pandemic to prevent virus from spreading (Mastercard, 2020). With the occurrence of COVID-19 and enforcement of prevention measures, the determinants of continuance intention to use e-wallets have changed, swifting a significant number of consumers to contactless payments for daily purchases. Therefore, the fifth hypothesis is:

**H5:** A significant relationship exists between physical distancing and continuance intention to use e-wallets after the outbreak of COVID-19.

**Research Model**

Based on the above hypotheses development, the research model of this study is furnished in Figure 2 below.
RESEARCH METHODOLOGY

Research Design

Quantitative approach is used in this study to collect primary data by distributing online questionnaires to sample respondents in Malaysia. This method is more appropriate for determining factors that sway the continuance intention of using e-wallets numerically and statistically (Yauch & Steudel, 2003). Malaysia is intentionally chosen because of scarce pandemic-related research on e-wallets. Deduction approach begins with an existing theory, then proposes research questions or hypotheses (Melnikovas, 2018). Accordingly, the UTAUT model is followed in this study, and data collection is to verify the hypotheses. The time frame that has been chosen is cross-sectional, which collect data at a single point of time without retrospective follow-up. A cross-sectional study is good at generating data quickly, relatively inexpensive, and less time-consuming for the researchers (Wang & Cheng, 2020).

Population

Malaysians aged above 18 years are the target population in this study. Malaysians are chosen due to the soaring growth of the Malaysian digital market during the COVID-19 pandemic, becoming a country that was acknowledged as the highest e-wallet adoption in Southeast Asia, at the forefront of other regions (Hoh, 2021). It is believed that the unprecedented movement restrictions are affecting the social life of Malaysians. The pandemic has prompted Malaysian consumers to accelerate the adoption of e-wallets, bringing the usage rate to 60% by the end of 2020, compared with only 15% in early 2019 (Oppotus, 2020).
Sampling Technique and Sampling Size

Samples are cost-effective and convenient for researchers, also able to draw inferences about populations (Scribbr, 2021). The sample for this study will be individuals who are the eligible and registered e-wallet users. A non-probability sampling: convenience sampling technique is used to gather primary data from the sample. There are many past studies of e-wallet usage used convenience sampling (Dong, 2018; Revathy & Balaji, 2020; Teoh, Melissa, Hoo, & Lee, 2020). In this regard, data collection is carried out through a social networking platform, which is the most convenient way to gather data from a wide range of citizens (Dudovskiy, 2018). Up to January 2021, only 60% of 32.5 million Malaysians are e-wallets users (Worldometers, 2021; Celcom, 2021). According to Tabachnick and Fidell (1996), as cited in VanVoorhis and Morgan (2008), provided statistical rules of thumb to guide the selection of sample sizes, given that a sample size of 200 was fair, and 300 was considered good. A total of 296 sets valid questionnaires are collected from the respondents to reach conclusion that can generalise to the population of interest.

Research Instrument

Self-administered questionnaire is used to collect data from e-wallet users in Malaysia. Sudman, Greeley, and Pinto (1965) described the self-administered questionnaire as an efficient data collection procedure than individual interviews. The online survey, Google Form is published on the social network platform to reach a broad range of citizens. Since the research is conducted during the COVID-19 pandemic, an online survey is more appropriate because it allows the researcher to collect data in a limited time and adherence to the Standard Operating Procedures (SOPs). The questionnaire distribution started in mid-May 2021, and were collected in early June 2021.

To ensure that the respondents can understand the statements, the questionnaire is designed in three languages: English, Malay, and Chinese, because Malaysia is a multi-ethnic country. Facebook has been chosen because it is the most popular social media platform among Malaysian users, with an active social media user base of 25 million (Statista, 2020). Section I consists of the demographic profiles of respondents; the dichotomous and category scale are used. Section II consists of effort expectancy, social influence, facilitating conditions, government support, physical distancing, and continuance intention to use e-wallets. These constructs are measured by adopting or adapting questions from various previous researches (Venkatesh, 2003; Han et
Pilot Test

The pilot study aims to test the reliability and feasibility of questionnaire that is intended for larger-scale research. According to Cronbach (1970); and Bujang, Omar, and Baharum (2018), Cronbach’s alpha is to estimate the reliability of questionnaire responses, put differently, the degree of consistency. If the Cronbach’s alpha value of the items is within 0.5 to 0.7, the level of internal consistency is acceptable, and alpha value is more than 0.7, it is considered a good level. In this study, social influence with a Cronbach’s alpha of 0.65258 is still within an acceptable level of reliability, agreed by empirical studies like Ursachi, Horodnic, and Zait (2015) and Sekaran (2003). Except for the social influence, other variables are considered to have good reliability. According to the recommendation of a statistical researcher on the sample size of pilot study, the flat rule of thumb is suitable for every situation, and the famous number is often thirty (Machin, Campbell, Tan, & Tan, 2018). In this study, the sample size of 35 is collected by applying the flat rule of thumb. The results of pilot test are exhibited in Table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort Expectancy (EE)</td>
<td>0.86356</td>
<td>3</td>
</tr>
<tr>
<td>Social Influence (SI)</td>
<td>0.65258</td>
<td>3</td>
</tr>
<tr>
<td>Facilitating Conditions (FC)</td>
<td>0.74748</td>
<td>3</td>
</tr>
<tr>
<td>Government Support (GS)</td>
<td>0.76793</td>
<td>3</td>
</tr>
<tr>
<td>Physical Distancing (PD)</td>
<td>0.88803</td>
<td>3</td>
</tr>
<tr>
<td>Continuance Intention to use (CIU)</td>
<td>0.91717</td>
<td>5</td>
</tr>
</tbody>
</table>

DATA ANALYSIS AND RESULTS

Demographic Profile of Respondents

There are 296 sets of complete questionnaires received in this study. A total of 158 respondents (53.4 %) are female, and 138 are male respondents (46.6 %). Most respondents are young adults between 18 to 24 years old, account for 132 respondents (44.6 %) and only 9 respondents (3 %) are 69 years old and above. Students are the largest group of respondents, with 123 people (41.6 %), while the respondents who are currently working account for 105 people
(35.5 %). Meanwhile, 140 (47.3 %) of respondents came from the central region: Selangor, Kuala Lumpur, Putrajaya, and Negeri Sembilan. There are 63.5 % of respondents who have registered or used e-wallets for more than a year, which means that they might have a certain experience of using e-wallets. Only 13.9 % are newbies to e-wallets and have registered or used for less than 6 months. There are 165 respondents (55.9 %) holding only 1 or 2 e-wallets.

Descriptive Analysis

Based on Table 2, there are positive opinions on the statements associated with effort expectancy, facilitating conditions, government support, physical distancing, and continuance intention to use e-wallets. All mean are higher than 4.0, indicating that on average, the respondents agreed that the four variables above influence the continuance intention to use e-wallets in Malaysia after the COVID-19 outbreak. The respondents are willing to use e-wallets after the outbreak and would also recommend their family and friends to use e-wallets. On the flip side, there are moderate opinions on the statements associated with social influence. One of mean is lower than 4.0, showing that on average, respondents neutrally think that social influence has an impact on the continuance intention to use e-wallets in Malaysia after the COVID-19 outbreak.

<table>
<thead>
<tr>
<th>Statement/Code</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE1.</td>
<td>4.34459</td>
<td>0.77427</td>
<td>Agree</td>
</tr>
<tr>
<td>EE2.</td>
<td>4.40203</td>
<td>0.75724</td>
<td>Agree</td>
</tr>
<tr>
<td>EE3.</td>
<td>4.36824</td>
<td>0.76549</td>
<td>Agree</td>
</tr>
<tr>
<td>SI1.</td>
<td>4.14189</td>
<td>0.81834</td>
<td>Agree</td>
</tr>
<tr>
<td>SI2.</td>
<td>4.00676</td>
<td>0.90944</td>
<td>Agree</td>
</tr>
<tr>
<td>SI3.</td>
<td>3.57770</td>
<td>1.15011</td>
<td>Neutral</td>
</tr>
<tr>
<td>FC1.</td>
<td>4.13176</td>
<td>0.86722</td>
<td>Agree</td>
</tr>
<tr>
<td>FC2.</td>
<td>4.11486</td>
<td>0.87157</td>
<td>Agree</td>
</tr>
<tr>
<td>FC3.</td>
<td>4.17230</td>
<td>0.85611</td>
<td>Agree</td>
</tr>
<tr>
<td>GS1.</td>
<td>4.28716</td>
<td>0.75597</td>
<td>Agree</td>
</tr>
<tr>
<td>GS2.</td>
<td>4.28716</td>
<td>0.77370</td>
<td>Agree</td>
</tr>
<tr>
<td>GS3.</td>
<td>4.48311</td>
<td>0.64811</td>
<td>Agree</td>
</tr>
<tr>
<td>PD1.</td>
<td>4.39865</td>
<td>0.74324</td>
<td>Agree</td>
</tr>
<tr>
<td>PD2.</td>
<td>4.37162</td>
<td>0.72981</td>
<td>Agree</td>
</tr>
<tr>
<td>PD3.</td>
<td>4.39189</td>
<td>0.73309</td>
<td>Agree</td>
</tr>
<tr>
<td>CIU1.</td>
<td>4.39865</td>
<td>0.68633</td>
<td>Agree</td>
</tr>
</tbody>
</table>
Reliability Test for Full Data

Table 3 below depicts the Reliability test results for the full data.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach's alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort Expectancy (EE)</td>
<td>0.88332</td>
<td>3</td>
</tr>
<tr>
<td>Social Influence (SI)</td>
<td>0.63598</td>
<td>3</td>
</tr>
<tr>
<td>Facilitating Conditions (FC)</td>
<td>0.70923</td>
<td>3</td>
</tr>
<tr>
<td>Government Support (GS)</td>
<td>0.76089</td>
<td>3</td>
</tr>
<tr>
<td>Physical Distancing (PD)</td>
<td>0.82412</td>
<td>3</td>
</tr>
<tr>
<td>Continuance Intention to use (CIU)</td>
<td>0.86785</td>
<td>5</td>
</tr>
</tbody>
</table>

The reliability analysis tests the reliability (Cronbach, 1970) of three core variables in the UTAUT model as well as two additional variables, government support and physical distancing, to fit in the current context. Effort expectancy is the most reliable construct compared to others. Most constructs are reliable since the majority values obtained are greater than 0.7 (Bujang et al., 2018), and one acceptable variable. For social influence, as long as the value is above 0.5, it is still considered acceptable (Sekaran, 2003). Social influence (SI) being the construct with the lowest degree of reliability. A study suggested that alpha value is affected by the length of the scale items. The items that are less than five items, resulting in a low-reliability coefficient (Hinton, Brownlow, McMurray, & Cozens, 2004).

Pearson’s Correlation Coefficient analysis

Table 4 below provides the results of the Pearson Correlation Analysis.

Correlation analysis is to determine that there is a statistically significant correlation between the pairs of variables with the probability of 99%. Values that range between 0.7 and 1.0 indicate a strong positive linear relationship, as mentioned by Ratner (2009). At 99% probability, no strong correlation is found between the variables. While moderate correlation existed in every pair of variables ranging from 0.3 to 0.7. Based on Table 4, it can be concluded that the correlation among the variables is less than 0.90, which therefore proves that there is no multicollinearity or redundancy issue.
Table 4: Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>EE</th>
<th>SI</th>
<th>FC</th>
<th>GS</th>
<th>PD</th>
<th>CIU</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE</td>
<td>1</td>
<td>0.55192**</td>
<td>0.62884**</td>
<td>0.67148**</td>
<td>0.54021**</td>
<td>0.58304**</td>
</tr>
<tr>
<td>SI</td>
<td>0.55192**</td>
<td>1</td>
<td>0.57079**</td>
<td>0.49168**</td>
<td>0.42147**</td>
<td>0.55726**</td>
</tr>
<tr>
<td>FC</td>
<td>0.62884**</td>
<td>0.57079**</td>
<td>1</td>
<td>0.64185**</td>
<td>0.50031**</td>
<td>0.61066**</td>
</tr>
<tr>
<td>GS</td>
<td>0.67148**</td>
<td>0.49168**</td>
<td>0.64185**</td>
<td>1</td>
<td>0.66650**</td>
<td>0.63792**</td>
</tr>
<tr>
<td>PD</td>
<td>0.54021**</td>
<td>0.42147**</td>
<td>0.50031**</td>
<td>0.66650**</td>
<td>1</td>
<td>0.64762**</td>
</tr>
<tr>
<td>CIU</td>
<td>0.58304**</td>
<td>0.55726**</td>
<td>0.61066**</td>
<td>0.63792**</td>
<td>0.64762**</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
EE. Effort expectancy.
SI. Social influence.
FC. Facilitating conditions.
GS. Government support.
PD. Physical distancing.
CIU. Continuance intention to use e-wallets.

Multiple Linear Regression

Table 5: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0.76025a</td>
<td>0.57798</td>
<td>0.57070</td>
<td>1.94496</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), EE, SI, FC, GS, PD

Table 6: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1502.428</td>
<td>5</td>
<td>300.486</td>
<td>79.433</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>1097.031</td>
<td>290</td>
<td>3.783</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2599.459</td>
<td>295</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: CIU
b. Predictors: (Constant), PE, EE, SI, FC, GS, PD

Table 7: Parameter Estimates

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept (Constant)</td>
<td>3.94171</td>
<td>0.91848</td>
<td>4.2916</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.11379</td>
<td>0.08176</td>
<td>1.39178</td>
</tr>
<tr>
<td>Social Influence</td>
<td>0.25890</td>
<td>0.06574</td>
<td>3.93807</td>
</tr>
<tr>
<td>Facilitating Conditions</td>
<td>0.27492</td>
<td>0.08008</td>
<td>3.43317</td>
</tr>
<tr>
<td>Government Support</td>
<td>0.24370</td>
<td>0.10247</td>
<td>2.37821</td>
</tr>
<tr>
<td>Physical Distancing</td>
<td>0.51550</td>
<td>0.08166</td>
<td>6.31311</td>
</tr>
</tbody>
</table>

b. Dependent Variable: Continuance Intention to Use
Multiple linear regression analysis is carried out to predict continuance intention to e-wallets after the outbreak of COVID-19 from effort expectancy, social influence, facilitating conditions, government support, and physical distancing.

Table 5 indicates that the R square value is 0.57798, which indicates that 57.8% of the variation in continuance intention to use (CIU) can be interpreted by all five variables, effort expectancy (EE), social influence (SI), facilitating conditions (FC), government support (GS), and physical distancing (PD). Based on Table 6, it can be considered that as the p-value is lower than 0.05, the F-value, 79.433 is therefore significant.

Table 7 shows that social influence (SI) (p-value=0.00010), facilitating conditions (FC) (p-value=0.00068), government support (GS) (p-value=0.01805), and physical distancing (PD) (p-value=<0.0001) have significant and positive effects on the continuance intention to use (CIU) as the p-value is less than 0.05. However, effort expectancy (EE) is insignificantly associated with continuance intention to use e-wallets as its p-value is more than 0.05, which is 0.16506. Thus, Hypotheses 2, 3, 4 and 5 are supported, while Hypothesis 1 is not supported. The summary of hypotheses is shown in Table 8.

As a result, the multiple linear regression equation can be formed as followed: CIU = 3.94171 + 0.11379 EE + 0.25890 SI + 0.27492 FC + 0.24370 GS + 0.51550 PD

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>P-values</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: A significant relationship exists between effort expectancy and continuance intention to use e-wallets in Malaysia after outbreak of COVID-19.</td>
<td>0.16506</td>
<td>Not significant. H1 is not supported.</td>
</tr>
<tr>
<td>H2: A significant relationship exists between social influence and continuance intention to use e-wallets in Malaysia after outbreak of COVID-19.</td>
<td>0.00010</td>
<td>Significant. H2 is supported.</td>
</tr>
<tr>
<td>H3: A significant relationship exists between facilitating conditions and continuance intention to use e-wallets in Malaysia after outbreak of COVID-19.</td>
<td>0.00068</td>
<td>Significant. H3 is supported.</td>
</tr>
<tr>
<td>H4: A significant relationship exists between government support and continuance intention to use e-wallets in Malaysia after outbreak of COVID-19.</td>
<td>0.01805</td>
<td>Significant. H4 is supported.</td>
</tr>
<tr>
<td>H5: A significant relationship exists between physical distancing and continuance intention to use e-wallets in Malaysia after outbreak of COVID-19.</td>
<td>&lt;0.0001</td>
<td>Significant. H5 is supported.</td>
</tr>
</tbody>
</table>
DISCUSSION

This study confirmed four-fifths of the hypotheses, which indicates that this study demonstrates an appropriate model for explaining the continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19. The UTAUT model has been utilised. Considering the unique characteristics of the research background, it is combined with other concepts considered essential for the study, such as government support and physical distancing.

Among the findings, only effort expectancy construct (Hypothesis 1) is not supported. The correlation between effort expectancy and continuance intention to use e-wallets is not significant. Effort expectancy turned out to be less important than other variables for determining mobile payment adoption in the presence of COVID-19. Before the outbreak, e-wallets are not a novelty in the minds of users. Figure 3 shows that e-wallets have been introduced into the Malaysian market as early as 2017 (Oppotus, 2019). It is believed that contemporary users have the basic skills and experience of using smartphones and applications. The data collected from the sample further proved that most e-wallets users have been using it for more than a year. Therefore, irrespective of the easiness of learning and using e-wallets, effort expectancy does not affect users’ continuance intention to use after the outbreak.

![Figure 3: Entry of each e-wallet in Malaysia (Oppotus, 2019).](image-url)

Meanwhile, social influence construct has a significant positive relationship with continuance intention to use e-wallets in Malaysia after the outbreak, as
stated in Hypothesis 2. It is in accordance with the findings of past studies that have empirically shown that social influence is the crucial factor leading to the behavioural intention to adopt mobile payments. When family and friends around users suggest, support, or use e-wallets, users will follow the behaviour, as well as advertisements and guidance from the media will also contribute to the same result. After the outbreak, consumers are spending more time at home; thus, internet streaming and usage in Malaysia have driven significant growth by spending 4.8 hours online per person in a day (Sunbiz, 2020). Information sharing and exchanging between individuals would be inevitable during the lockdown period, making social influence matters.

It has been shown that facilitating conditions are positively associated with the continuance intention to use e-wallets after the outbreak, being the second strongest relationship. Hypothesis 3 is supported, suggesting that when facilitating conditions are excellent and the continuance intention of e-wallet usage tends to be higher. Against the COVID-19 pandemic, the users’ continuance intention could be determined by other perception related to inherent benefits, for example, providing multichannel supports for facilitating transaction processes during the pandemic. Furthermore, the living or working environment can also become an element that supports users to use e-wallets, thereby establishing continuance intention after the outbreak in Malaysia. That is, users will continue to use e-wallets when this payment method is available everywhere around the users, and they can get help from other people or e-wallet providers when they have difficulties in using e-wallets.

Furthermore, this study confirmed Hypothesis 4 on government support. This construct has a significant positive effect on explaining continuance intention to use e-wallets after the COVID-19 pandemic. The possible reason is that users are aware of the actions taken by the government during the pandemic, especially in the welfare aspect. The finding provides strong evidence to support the view that government support can be one of the factors to promote the use of e-wallets by Malaysians, thus highlighting the influence of government financial incentives in the growing e-payment market. Relatively speaking, domestic e-wallet service providers would have the potential to become a full-fledged financial system under active government intervention and citizen participation.

Specifically, under the pandemic, continuance intention to use e-wallets is also determined by physical distancing, as mentioned in Hypothesis 5. Physical distancing has the most significant positive impact on continuance intention to
use e-wallets. The physical distancing policy by the country is found to induce the shift to the continuance intention. Owing to the COVID-19 outbreak, users have to keep their distance from others. Hence, the use of e-wallets is one of the safe payment methods, which in turn significantly influences the continuance intention. For people who stay at home, the plight is that physical cash seems to be of little use for payment of transactions, and electronic payments have become a lifesaver for consumers at this time, and it is believed to be a continuing trend in the post-pandemic.

**Theoretical Significance and Practical Significance**

This study contributes to theoretical development and serves as a reference to future technology adoption models in a particular context. This study is of great significance for examining continuance intention to use e-wallets after the outbreak of COVID-19. There is a lack of research on government support construct, while physical distancing construct is absent from the determination of previous studies. However, one of the constructs in the original model, effort expectancy is found to be not significant in this study. Physical distancing is found to be the strongest factor in using e-wallets. This study developed an extended model to enrich future studies relating to e-wallets in a special situation.

This study gives an overview to local small and medium entrepreneurs (SMEs) who are interested in expanding electronic payment methods in Malaysia. The present study delivers information on the likelihood of Malaysians to adopt e-wallets after the outbreak. This study also enhances the existing knowledge and fosters an understanding of how this situation changes the payment habits of users in Malaysia. The pandemic and lockdown have had a severe impact on society at large, and cash payment dropped sharply. As the study shows, factors such as social influence and facilitating conditions can establish users’ continuance intention when e-wallets are accessible everywhere and supported by their surroundings and close relations.

The findings of this study could provide suggestions to government agencies and e-wallet providers who are promoting e-wallet services to seize the opportunity arising from the continuance intention of Malaysians to use e-wallets. The constructs relating to government intervention, such as government support and physical distancing are seen as the key drivers in this study. The study indicates that relevant policymakers should take advantage of the e-wallets feature, such as contactless payment, to implement appropriate
policies, measures or benefits to encourage greater continuance intention of safe payment method, such as e-wallets in Malaysia.

Limitations and Recommendation for Future Study

There are a number of limitations underlying this study that ought to be expressed. Firstly, the samples are obtained through convenience sampling during a specific period of the COVID-19 pandemic. This may lead to deviations in the results. The distribution of the sample is younger than expected. Most of them are between 18 to 24 years old. The study would be more valid and precise if the sample is evenly distributed according to different age groups or gender. In addition, this study ignores the core moderators, such as gender, age, experience, and voluntariness. Future studies may consider using quota or stratified sampling to collect data (Davis, 1989; Venkatesh et al., 2003). Secondly, there are also controversies about the small number of scale items in the questionnaire because the reliability of the construct is low. Hence, future studies are suggested to have at least five items for each construct to obtain a good level of reliability (Hinton et al., 2004; Tavakol & Dennick, 2011). Thirdly, due to the limited research regarding the COVID-19 outbreak and e-wallets usage in Malaysia, interested future research could explore more variables related to this particular context, where applicable.

CONCLUSION

This research determines the significance of relationship between four independent variables and continuance intention to use e-wallets in Malaysia after the outbreak of COVID-19. The research model provides vast explanatory power to elucidate that factors are reasonably changed due to the existence of the COVID-19. Continuance intention to use e-wallets are not determined by effort expectancy, while other constructs in the UTAUT model, such as social influence and facilitating conditions, are significant in facilitating users’ continuance intention. This study also confirmed new causalities and found that government support and physical distancing are significant towards explaining users’ continuance intention to use e-wallets in Malaysia under the COVID-19 situation. This extended UTAUT model could support future studies and researchers who intend to carry out topics related to technology adoption. Entrepreneurs, e-wallet service providers, and government agencies could get valuable information from the findings to develop a relevant strategy for enhancing users’ continuance intention to use e-wallets.


Continuance Intention to Use E-Wallets in Malaysia after Outbreak of Covid-19


