

COVID 19: E-wallet acceptance among low-income Malaysians using UTAUT Theory

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To Link this Article: <http://dx.doi.org/10.6007/IJARBS/v13-i8/18164> DOI:10.6007/IJARBS/v13-i8/18164

Published Date: 23 August 2023

Abstract

This study aims to examine the influencing factor of performance expectancy, effort expectancy, and social influence on the acceptance to use e-wallet among the B40 group which is the low-income group in Malaysia by utilizing the unified theory of acceptance and use of technology (UTAUT). Due to the noticeable increase of cashless and contactless transactions during Covid19, the usage of e-wallet has been increasing tremendously. However, to align with the government's intention to reach the cashless society and contactless payment, a small spread acceptance among individuals, especially the low-income community or B40, makes it very difficult to realize the efforts of the government. Thus, this research will help in creating a new model for the government to use as a guideline to achieve a high level of acceptance of e-wallet usage among B40 even when they are facing financial difficulty.

Keywords: Performance Expectancy, Effort Expectancy, Social Influence, E-wallet.

Introduction

Consumer consumption is a crucial factor in societies during the Covid19 outbreak. The evolution of digitalization through the Internet has increased the flow of payment systems from manual to online transactions. Moreover, cashless payment has made life easier for people to gain a sustainable competitive advantage. In accordance, the introduction of an "e-wallet" allows an individual to link their debit or credit cards to make any transactions. Consequently, it has been pointed out that payments made using e-wallet through mobile applications are more convenient, faster, and beneficial as it saves time and money. Besides that, consumers gain a sense of comfort and security during the transactions (Liébana-Cabanillas et al., 2014). To be specific, e-wallets simplify purchasing and selling transactions using smartphone apps, which enables one to complete online shopping without hassle.

Malaysian government classified the population into three main groups based on their household income groups in Malaysia namely, B40 (low income) represents the bottom 40% of income earners, M40 (average income) the middle 40%, and T20 (high income) the top 20%. On the other hand, the Household Income & Basic Amenities Survey 2019 reported that the income threshold for Malaysia's B40 group (2.91 million households) was RM4,849. In other words, households earning below RM4,850 per month in 2019 were considered B40 (CompareHero.my, 2020). Thus, B40 is one of the most important groups in contributing to economic balance. Thus, it is an important consideration for the B40 community to fully support the government's progressive move to accelerate the acceptance of e-wallets.

Nevertheless, the acceptance rate for using e-wallets among Malaysians is still low at 12% in 3Q2018 at the beginning of its introduction; but the trend of acceptance gradually increased to 60% in 3Q2020 during the Covid-19 pandemic (Oppotus, 2021). Consequently, the e-wallet usage rate increased from 38% 4Q2019 to 63% 1Q2020 after the perks of the e-Tunai Rakyat campaign of RM30 was given on 15 January 2020 and returned to a staggering 49% in 2Q2020. In addition, the use of e-wallets shows a drastic increase again due to the Government funding the e-Penjana Campaign in late 3Q2020. However, the small spread of acceptance among individuals, especially the low-income community makes it very difficult to realize the efforts of the government. Since the income earned by the low-income groups is only enough for survival, consequently leads to a lack of acceptance to use digital technology (Lee et al., 2003). The purpose of this study is to look at the factors that influence the B40 groups' willingness to use and accept e-wallet transactions. In this regard, the unified theory of acceptance and use of technology (UTAUT) was proposed as a conceptual model for evaluating e-wallet acceptance. Furthermore, it's worth looking into factors like performance expectancy, effort expectancy, and social influence of e-wallet usage during this outbreak and sees how technology might alleviate money transfer process barriers and expand economic development gains. Moreover, if the low-income community is still unable to adopt the modern technology, innovation, and infrastructure offered by the government and e-wallet providers, the B40 group will be left behind, and the Sustainable Development Goals will be neglected.

Literature Review

UTAUT Theory

In the current era of IR 4.0, the rise of the e-wallet as the main mode of payment in this digital century is expected to substitute cash expenditure shortly. The digital market has swiftly become the major form of online transaction because of its simplicity and ease of use (Ajmera, 2020). As a result, e-wallet providers must recognize the significance of assessing users' perceptions of e-wallets in affecting behavioral outcomes such as intention, retention, and repurchase loyalty. Addressing the acceptance and use of technology by different professionals has been a hot topic of dispute among scholars which presents several theories to explain the relationship between acceptance and use of technology. The theory of planned behavior is the most well-known theory, and it has been used by most researchers to investigate the individual adoption behavior of information systems. According to this theory, intentions to conduct behavior-based on diverse consumer positions can be accurately predicted by considering attitudes, social influence, and perceived behavioral control. After addressing this theory of planned behavior, it was then extended to the Theory of UTAUT by (Venkatesh et al., 2003), which was built from eight different acceptance theories which is

Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Technology Acceptance Model (TAM), The Model of PC Utilization (MPCU), Diffusion of Innovations Theory (DOI), Motivational Model and Social Cognitive (MM- SCT), and C-TAM-TPB (Ahmad et al., 2019; Ajzen & Fishbein, 1975)

From the consumer's perspective, the UTAUT theory emphasizes the essential factors and circumstances in estimating planned behavior to use technology. The four key UTAUT characteristics that determine one's behavioral intention to use technology such as e-wallet are performance expectancy, effort expectancy, social influence, and facilitating conditions (Ahmad et al., 2019). Customers' performance expectations describe how much they will benefit from using technology to complete tasks, but their effort expectations describe how easy it will be for them to use technology. In the meantime, social influence refers to how strongly customers believe that important people in their lives, such as family and friends, believe they should adopt a particular technology. Finally, customers' perceptions of the resources and assistance available to carry out the desired behavior are represented by facilitating conditions. According to UTAUT theory, performance expectancy, effort expectancy, and social influence motivate behavioral intention to use technology, whereas behavioral intention and enabling conditions determine technology usage. In assessing whether to use technology, this method considers individual variations such as age, gender, and experience. This theory has been used in various research on consumer adoption of information and communication technology (ICT) in the Industrial Revolution 4.0 (IR 4.0), including mobile phones, e-wallets, and internet banking, as well as virtual technology for online purchase intention.

Similarly, UTAUT provides a chance to discover the many elements that influence user acceptability of new technology [10]. As a result, the current study looked at different constructions of consumer intention to adopt e-wallets via the lens of UTAUT to better understand customer intention as a mediating variable in the adoption of e-wallets, as well as being influenced by age, gender, and education (Yang et al., 2021).

Behavioral Intention

Behavioral Intention can be defined as a person's subjective probability course of action that individual aims to achieve (Ajzen, 2012). Referring to this, the utilization of e-wallets is expected to expand widely in Malaysia (Ahmad et al., 2019; Kamis et al., 2022). Scholars posit a positive and significant relationship between the intention to accept new technology use (Faqih & Jaradat, 2015; Jaradat, 2013)

Performance Expectancy

UTAUT (Unified Theory of Acceptance and Use Technology) is a research model that seeks to explain user interest in using information technology and subsequent user behavior. UTAUT includes four major constructs that are a direct driver of usage and behavioral intention which are performance expectation, effort expectancy, social influence, and facilitating condition (Venkatesh et al., 2003). According to Venkatesh et al., performance expectation in UTAUT is often used to assess the degree to which consumers believe a system, such as new mobile technology, would improve their daily lives. The extent to which adopting technology would aid customers in executing activities asserts the term performance expectation. Furthermore, performance expectation refers to the degree to which customers believe that using the

system will help them reach their job performance (Chua et al., 2018). In addition, most people are more inclined to accept new technology if they feel it would help them accomplish their jobs better (Chowdhury & Chakraborty, 2017). There are five different aspects from several models into performance expectations, including relative advantage, extrinsic motivation, perceived usefulness, job-fit, and result expectations (Venkatesh et al., 2003). These concepts are like performance expectation, which is concerned with an individual's perceptions of using a technological system to increase their work performance, and the research findings have examined the matter. To be more explicit, performance expectancy is a circumstance in which people are more likely to adopt new technology if they believe it will assist them in their work. Customers' perceptions of how adopting an electronic payment system will assist and benefit them in completing online payments with efficiency, safety, and convenience were also considered (Venkatesh et al., 2019).

Effort Expectancy

The effort expectancy (EE) refers to the way the system is used efficiently. It includes users interacting with the system, understandably, and is easy to use (Blut et al., 2022). There is a positive relationship between EE and a user's behavioral intention to use an NFC mobile wallet (Shin & Lee, 2021). Compared with other payment systems such as cash, debit cards, and credit cards, mobile payment systems are easier to use and more convenient (Gupta et al., 2020). On the other hand, in the study on factors influencing acceptance of the JoMoPay system among public sector employees in Jordan, found no evidence of the significant influence of EE on acceptance of the JoMoPay system (Al-Okaily et al., 2020). The reason is employees believe that the system is difficult to use and requires a lot of work. Similarly, EE not significantly influencing the acceptance of e-Wallet among Malaysians (Abdullah et al., 2020).

Social Influence

Social influence (SI) is a circumstance in which a person is motivated to utilize e-money services by external factors such as family and friends. Individuals' perceptions of e-money services and their intention to use them are influenced by other people's opinions and reactions (Susanto et al., 2016). SI positively affects behavioral intention to use e-wallets (Jin et al., 2020; Sukaris et al., 2021) and e-commerce (Abdull Rahman et al., 2022). Individuals are easily influenced and believed by advice or feedback from their friends, relatives, and other people who surround them in the early stages of using technology (Phan et al., 2020). These findings were in line in which SI can affect consumers' mindsets on the use of new innovative products through technology services (Yang et al., 2021). Any positive word-of-mouth recommendations made by family, friends, peer groups, and virtual communities on social networking media prove to be greater motivators for people trying out any new technology or information system (Murari et al., 2020).

The usage of electronic transactions was rapidly increased during the COVID-19 lockdown period. Based on BNM annual report 2020, e-wallet transactions have increased by 131% compared to the same period last year. SI is one of the factors to encourage e-wallet usage. The awareness and importance of e-wallet usage conditions have been educated by peers, friends and family members to avoid physical cash transactions during the pandemic (Daragmeh et al., 2021).

The influence of Performance Expectancy toward acceptance of E-wallet (B40)

In the study on Consumer Model of Elements Affecting Willingness to Use Payment System in Indonesia that the five factors which are culture, perceived security, performance expectation, effort expectancy, and social influence all had a favorable impact on the desire to adopt an e-payment system in Indonesia (Ardiansah et al., 2020). Several academics believe that performance expectation has a major impact on the adoption and subsequent use of information systems and mobile devices (Al Khasawneh & Shuhaiber, 2013). Meanwhile UTAUT model's external variables has been discovered that performance expectancy was the most important predictor of the desire to utilize mobile payment systems (Al-Saedi et al., 2020). The performance expectancy had a substantial effect on the desire to utilize the e-payment system in his study (Chua et al., 2018). According to another research, one of the factors of desire to utilize mobile payments is performance expectation (Kuo, 2020). One of the most important indicators of desire to utilize mobile payments was performance expectancy (Slade et al., 2015). However, the performance expectancy was only the third most important determinant of desire to utilize Mobile commerce services in Jordan (Faqih & Jaradat, 2015). Next, the performance expectation in UTAUT is often used to assess how much a system, such as a new mobile technology, might improve a consumer's everyday life (Venkatesh et al., 2003). They discovered that in the original model, performance expectancy is the most powerful variable in determining desire to use. It's similar to the TAM theory of perceived usefulness. Users can utilize the mobile payment system to make payments regardless of their location or time. It is a more convenient method of payment because all transactions may be completed using a smartphone with no additional restrictions. As a result, it has gained popularity in recent years. It has the potential to be an important element in adoption because it provides users with several benefits (Tenk et al., 2020). Even though it has significant relation between PE toward acceptance of E-wallet but there are not, yet any prove the significant relation between PE toward acceptance of E-wallet among low-income user (B40). As we know, users' attitudes and behavior are typically influenced by their income bracket. Prior research has looked at how technology adoption, such as the usage of an e-wallet service, is affected by user income levels.

Users with lower income levels are more concerned about product pricing and are more selective about what they purchase, and their opinion is that the price of a specific product is excessive in comparison to the product's perceived usefulness (Albashrawi, 2017). High-income users, on the other hand, would purchase high-quality products online using cutting-edge technology and an Internet connection. This disparity in technology access also leads to different degrees of concern among users, with low-income users experiencing significantly more uneasiness. As a result, users' technology usage, adoption, and comprehension are influenced by their financial level. The high-income e-wallet users usually perceive reduced risks while making online purchases, whereas lower socioeconomic users separate themselves from online transactions as they cannot afford it (Yang et al., 2021). It is reasonable to expect that as income grows, perceptions of ease of use, efficiency, convenience, and confidence in technology adoption will influence user intentions. Similarly, the technology anxiety reduces as user income rises, support the above premise (Lee et al., 2010). Users in high-income groups are regular users of communication technologies, and as a result, they have a high level of confidence with technology. However, since the cost of mobile phones and Internet technology has decreased, an increasing number of users from lower socioeconomic categories have begun to use online services, which may have an impact on e-wallet acceptance among low-income users (Kasirye & Masum, 2021).

The influence of effort expectancy toward acceptance of E-wallet (B40)

E-wallets should be compatible with any basic mobile phone operating system and user-friendly. This will help its users to use the e-wallet continuously, particularly for lower-income groups. Lower-income groups are often concerned with owning technology as they cannot withstand the possible financial loss which then contributed to their low purchasing power (Botchey et al., 2020). Next, EE has been shown to have a significant effect on mobile payment adoption for Bangladesh's bottom of the BOP pyramid (Hossain et al., 2019). The customers' life satisfaction, internet literacy, perceived usefulness, and perceived ease of use have significantly influenced customers' intentions to use M- internet adoption behavior (Rahman et al., 2018).

The influence of Social Influence toward acceptance of E-wallet (B40)

Social Influence was found positive and significant to influence adoption intention to reduce the risk of getting involved in the m-payment service (Hussain et al., 2019). However, consumers' intention among low-income earner to use m-commerce in Equardo, did not have a significant relationship between social influence and acceptance of mobile commerce (Dakduk et al., 2020). Nevertheless, social influence was found to have a significant direct effect but income as a moderator effect is not significant to an individual's intention to use mobile payment systems (Lisana, 2021).

Research Framework

Using the Unified Theory of Acceptance and Use of Technology (UTAUT), this study proposed the acceptance of using an e-wallet among the B40 group, which is a low-income group in Malaysia, based on the discussion above. Cashless payments have made it easier for people to establish a long-term competitive advantage [1]. As a result, it has been stated that payments made through e-wallet via mobile applications are more convenient, faster, and beneficial because time and money (Yang et al., 2021). E-wallets simplify purchases and transactions through the use of smartphone apps, allowing one to complete online shopping without difficulties (He et al., 2018). The B40 group is one of the most important contributors to economic balance. In this regard, the B40 community must continue to support the government's proactive initiative to enhance the adoption of e-wallets. As a result, the purpose of this study is to examine the factors that influence B40 groups' willingness to use and accept e-wallet transactions.

The element proposed is performance expectancy as the degree to which customers believe that utilizing the system would help them achieve their job performance (Chua et al., 2018). In addition, most people are more inclined to accept new technology if they feel it would help them accomplish their jobs better (Hiteshi Ajmera, 2020). Therefore, it is important to analyze the expectancy of B40 customers in using the e-wallet transaction method.

The next element is effort expectancy which was found that there is a positive relationship between effort expectancy and a user's behavioral intention to use an NFC mobile wallet (Shin & Lee, 2021). E-wallets should be compatible with any basic mobile phone operating system and user-friendly (Teng & Khong, 2021). This will help its users to use the e-wallet continuously, particularly for lower-income groups.

The final element is a social influence that positively affects behavioral intention to use e-wallets (Jin et al., 2020; Sukaris et al., 2021). On the other hand, Individuals are easily influenced and believed by advice or feedback from their friends, relatives, and other people

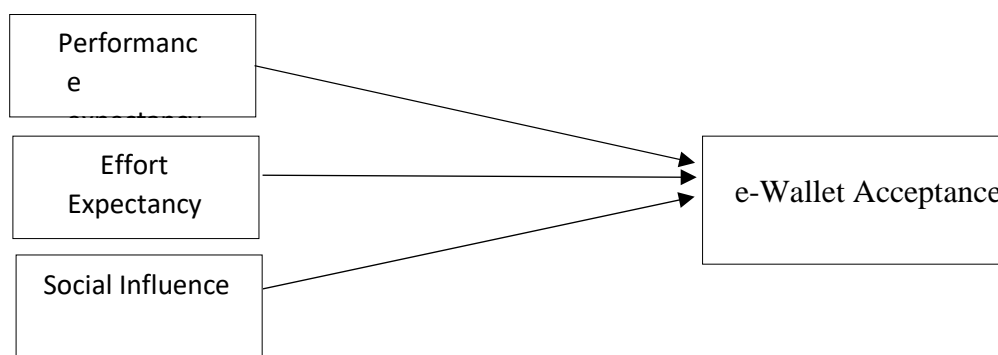
who surround them in the early stages of using technology (Phan et al., 2020). Similarly, social influence can affect consumers' mindsets on the use of new innovative products through technology services (Yang et al., 2021). Next, social influence was found to have a significant direct effect but income as a moderator effect is not significant to an individual's intention to use mobile payment systems (Lisana, 2021).

Based on these explanations, three hypotheses have been proposed together with the framework.

H1: There is a significant relationship between performance expectancy towards acceptance of e-wallet.

H2: There is a significant relationship between effort expectancy towards acceptance of e-wallet.

H3: There is a significant relationship between social influence towards acceptance of e-wallet.



Methodology

This study mainly focuses on the quantitative method. Questionnaires were used to gather data. Before the main study was conducted a preliminary study was performed to identify disruptions and shortcomings. This was conducted to determine which scales are more appropriate for measurement. A 5-point Likert scale was used to measure E-wallet acceptance among the B40 users. The scale was composed of the statements (1) 'strongly disagree', (2) 'disagree', (3) 'neither agree nor disagree', (4) 'agree', and (5) 'strongly agree'. On the sampling method, the research includes respondents from the Klang Valley. About 109 respondents' data has been collected. The people that did the survey questionnaires were allowed to share the questionnaire's link on their social networking pages with people that were in their contact lists and many more participants were reached in this way. The analysis has been done using the SPSS version to run the reliability analysis, correlation analysis, and multiple linear regression.

Result and Discussion

This part displays the results of the data analysis performed using the method described in the previous section. It is indeed divided into the following sections: a demographic profile, a reliability analysis, and hypothesis testing. The analysis' findings included a set of conclusions about the relationship between performance expectancy, effort expectancy, and social influence on e-wallet acceptance among Malaysian low-income people. The mean value of each of the variables was determined by processing the data through SPSS version 26, which revealed the students' responses to Performance Expectancy, Effort Expectancy, Social

Influence, and Acceptance. The hypotheses were tested using correlation and multiple regression analysis on variables. A total of 109 people answered the questionnaires and returned it with complete responses. Table 1 presents the demographic characteristics of the respondents.

Table 1
Demographic profile of the respondents

Item	N	%
Gender		
Male	27	24.8
Female	82	72.5
Age		
18-25	85	78.0
26-35	17	15.6
36-45	4	3.7
46-55	2	1.8
above 56	1	0.9
Race		
Malay	108	99.1
Other	1	0.9
Religion		
Muslim	109	100
Employment Status		
Government	9	8.3
Private	14	12.8
Own business	4	3.7
Student	79	12.8
Retired	1	0.9
Unemployed	1	0.9
Other	1	0.9
Education		
STPM/Matrix	25	22.9
Bachelor's degree	78	71.6
Frequency using Electronic Wallet		
Very Frequently	23	21.1
Frequently	28	25.7
Occasionally	34	31.2
Rarely	20	18.3
Very Rarely	4	3.7

Table 1 shows the gender representation of the respondents who were selected to respond to their acceptance on *e-wallet* among Malaysian low income. Most of the respondents were females which represented 82 respondents (75.2%) while the remaining is male which 27 respondents (24.8%). In terms of age distribution, most of the respondents were 18 to 25 years old (78%), followed by 26 to 35 years old (17%), 36 to 45 years old (3.7%), 46 to 55 years

old (1.8%) and above 56 (0.9%). For the racemajority of respondents were Malay, which was 99.1% while 0.9% were other. Next, for the religion 100% of respondents were Muslim.

Based on employment status the highest respondents come from a student (72.5%) followed by private (12.8%), government (8.3%), own business (3.7%), and (0.9%) for retired, unemployed, and others. For the respondents' education level, around 71.6% or 78 were bachelor's degrees, followed by STPM/Diploma/Matrix (22.9%). The remaining respondents were Master (4.6%) and others (0.9%). Next for the transaction using electronic wallet the highest transaction is by touch n go wallet which is(20.2%) followed by touch and go wallet, Maybank Pay and Grab Pay (11.0%) and the lowest is others'transaction which is (0.9%). Lastly, for frequency using electronic e-wallet transactions the highest comes from occasionally which is (31.2%) followed by frequently (25.7%), very frequently (21.1%), rarely (18.3%), and very rarely (3.7%).

Reliability Analysis

Cronbach's Alpha was computed for each independent and dependent variable in addressing reliability. This test was executed to verify the consistency of variables before further analysis was carried out.

Table 2

Reliability Analysis

Variables	Reliability CoefficientAlpha
<i>Independent Variable</i>	
Performance ExpectancyEffort expectancy	0.938
Social Influence	0.892
	0.880
<i>Dependent Variable</i>	
<u>Acceptance</u>	<u>0.667</u>

As shown in Table 2, all the three variables achieved a score of above 0.7 for their Cronbach's Alpha where Performance Expectancy reported the highest value (0.938), followed by the independent variable Effort Expectancy (0.892) and Social Influence (0.880). The dependent variable represented by Acceptance reached the Cronbach's Alpha value of 0.667. In conclusion, all variables above were reliable and proceeded to hypothesis testing.

Hypotheses Testing

Three hypotheses were proposed based on the objective of this study. Each hypothesis is restated below and the result of statistical analysis for testing them is reported. All hypotheses were tested using correlation analysis and multiple linear regression analysis.

Correlation Analysis

Table 3

Correlation among Acceptance, Performance Expectancy, Effort Expectancy, and Social Influence.

Variables	Pearson Coefficient	Correlation Relationship with Acceptance
Performance Expectancy	0.445**	Low positive correlation
Effort expectancy	0.482**	Low positive correlation
Social Influence	0.664**	Moderate positive correlation
		Significant** P < 0.01

The strength of a linear between two variables is evaluated by a correlation coefficient. In this study, a Pearson correlation coefficient measured the strength of a linear between the Acceptance and three determinants namely Performance Expectancy, Effort Expectancy, and Social Influence. From Table 3, the correlation between overall independent and dependent variables was positive and significant at the 0.01 level (2-tailed), with all values represented in between 0.445 to 0.664. The result was statistically significant, moderate positive correlation between Social Influence and Acceptance ($r = 0.664$), low positive correlation between Effort Expectancy and Acceptance ($r = 0.482$, $p = 0.00$) followed by Performance Expectancy ($r = 0.445$, $p = 0.00$). Therefore, the study discovered that there were associations among all e-wallet determinants and acceptance among the Malaysian low income- group.

Multiple Linear Regression Analysis

Multiple linear regression analysis is a statistical analysis that is used to evaluate the relationship between independent variables and a dependent variable. There were three hypotheses tested

H1: There is a significant relationship between performance expectancy towards acceptance of e-wallet.

H2: There is a significant relationship between effort expectancy towards acceptance of e-wallet.

H3: There is a significant relationship between social influence towards acceptance of e-wallet.

Enter method was applied in this standard multiple linear regression analysis in testing the relationship between determinants, which is considered as an aggregated variable when acted as independent variables. As in Table 4, the independent variables (Performance Expectancy, Effort Expectancy, and Social Influence) explained 50.1% of the total variances in the dependent variable (Acceptance) with R-Square 0.501. Thus, the relationship between all determinants and acceptance of *e-wallet* among Malaysian low income was strong.

Table 4

Relationship between Performance Expectancy, Effort Expectancy, and Social Influence towards Acceptance on e-wallet among Malaysian low income.

Determinant	B	Beta	Sig.
Performance Expectancy	0.142	0.087	0.462**
Effort Expectancy	0.283	0.194	0.109**
Social Influence	0.584	0.556	0.000**
R-Square	0.501		
Adjusted R-Square	0.487		

** significant $p < 0.01$

Only Social Influence has as a significant determinant in explaining the acceptance of e-wallet which received a p-value of 0.000 reported as positively and significantly related to the dependent variable. While Performance Expectancy and Effort Expectancy has no significance which received p-value of 0.462 and 0.109. Therefore, these findings fail to reject H3 while H1 and H2 must be rejected in the study.

Conclusion and Contribution

This study assists to monitor the behavior among B40 users regarding an intention to use e-wallet payment to subsequently fit the government's aspirations of transforming into a cashless society. To ensure that the digital economy is always well received and sustainable, the government needs to create more exposure and awareness of the importance of "electronic wallet", especially among B40 users. For instance, the government should launch initiatives to create a description of the State Wise use of technology across government, industry, and community, regardless of economic background.

On the other hand, the government also needs to find the appropriate approach to open opportunities and increase the use of e-wallets among B40s even though they are in dire financial straits. Furthermore, this will open room for improvement for the government, and e-wallet developers need to think of the easiest and most effective way to close the disability gap of the B40 group in adopting the use of e-wallets and at the same time feel the benefits that will be obtained. Thus, this research will help in creating a new model for the government to use as a guideline to improve existing policies to achieve a high level of acceptance of e-wallet usage among B40 even when they are facing financial difficulty. Aside, the e-wallet providers should be able to escalate the profit rate and optimize the cost rate efficiently according to the consumers' acceptance determinants.

Acknowledgments

The authors would like to express their appreciation to Universiti Teknologi MARA Cawangan Melaka for the financial support provided in accomplishing this research under the TEJA Internal Grant Scheme 2021 (GDT2021/1-6).

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