FACTORS INFLUENCING INTENTION TO ADOPT E-WALLET DURING COVID-19 PANDEMIC

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ABSTRACT

The e-wallet feature allows consumers to make payment by transferring digital money into their virtual wallets for in-application online payments or through Quick Response (QR) codes for physical purchases. This study examines the average usage, transaction size and factors influencing the intention to adopt e-wallet among consumers during the Covid-19 pandemic. A total of 153 responses were collected and analysed using Statistical Package for Social Sciences (SPSS) to determine descriptive statistics and conduct multiple regression analysis to verify that performance expectancy, social influence, facilitating conditions, and perceived security influence the intention to use e-wallets during the Covid-19 pandemic among consumers. Performance expectancy is the strongest factor while effort expectancy is the only factor that has no influence on the intention to

use e-wallets during the Covid-19 pandemic. Additionally, this study reveals that due to the current situation, consumers are pushed to adopt e-wallets despite their security concerns, and they are willing to learn to use the platforms without considering the possibilities and risks. However, the usage of e-wallets as a medium of transaction is still low due to the lack of awareness and knowledge. The outcomes of this study to provided practical contributions for policymakers and service providers on the current acceptance of e-wallets in Malaysia and to help the e-wallet industry develop more reasonable business strategies.

Keywords: E-wallet, cashless payment, Covid-19, unified theory of acceptance, use of technology.

INTRODUCTION

Malaysia's e-wallet market has enormous potential. It is estimated that the e-wallet market will be worth USD20 billion by the year 2024 due to its multipurpose usage in the retail, food and beverage sectors, e-commerce, and peer-to-peer money transfer (Tan, 2018). Additionally, Malaysia's e-wallet market has the potential for growth because of high mobile penetration. In 2019, the figure was 135.4 percent indicating that most Malaysians own a smartphone and are able to access e-wallet applications offered in the market. According to Ramli et al. (2021), the year 2020 showed a surge in Malaysia's e-wallet adoption, which was caused by a combination of government incentives and Covid-19 lockdown restrictions. The Malaysian Investment Development Authority (2020) reported that QR code payments had increased to 18 percent compared to the debit and credit card market share of 24 percent due to the Movement Control Order (MCO) back in 2020. E-wallets are able to support transactions without direct contact and simultaneously protect a person from the risk of Covid-19 (Zhao & Bacao, 2021). This feature allows consumers to make payments by transferring digital money into their virtual e-wallets for in-application online payment or through QR code for physical purchasing. Other than that, e-wallets act as a multipurpose medium that allows consumers to pay bills, purchase tickets, make online or offline payments, peer-to-peer (P2P) transactions, receive promotional offers, and pay for mobile credit top-up.

Despite the potential, e-wallet market growth is slow compared to credit and debit cards that are currently dominating the cashless payment market. According to Aji et al. (2020), e-wallet acceptance among consumers in Malaysia is low. The main challenges in the adoption of e-wallets among Malaysians are lack of awareness and knowledge on e-wallet features that offer convenience and capability (Karim et al., 2020). Additionally, users are unaware of e-wallet's capability as a convenient medium to conduct transactions during the Covid-19 pandemic. Security concerns are also an obstacle in adopting e-wallets. According to Tenk et al. (2020), consumers are making payments using e-wallets but do not prefer to make payments for large sums due to concerns about e-wallet security. This is supported by the work of Andrew et al. (2021), which states that e-wallet growth is slow due to security issues. Karim et al. (2020) emphasizes that the lack of awareness of the security provided by e-wallets is causing the low usage of e-wallet among users. This study seeks to attain the following objectives: firstly, to investigate the average usage and transaction size of e-wallets among consumers during the Covid-19 pandemic; secondly, to investigate factors that influence the intention to adopt e-wallets among consumers during the Covid-19 pandemic.

LITERATURE REVIEW

An e-wallet is a mobile phone application that requires consumers to install it from a digital store such as PlayStore for Android or AppStore for iOS consumers (Alfina, 2020). It provides convenient and fast transactions compared to cash (Karim et al., 2020). Cheng et al. (2018) defined e-wallet as an application on a mobile phone that is used to conduct financial transactions like money transfer peer-to-peer (P2P), mobile top-up, bill payments, e-commerce, and merchant transactions, and functions like mobile banking transfer without knowing the receiver's account details (Intarot & Beokhaimook, 2018). Additionally, consumers must preload an amount of money into the account created (Patel, 2016). Tenk et al. (2020) highlighted that currently, the trending e-wallet service providers in Malaysia are WeChat Pay, Maybank QR Pay, Boost, Touch 'n Go, GrabPay, Boost, SamsungPay and Favepay.

The Malaysian government launched the Malaysia Digital Economy Blueprint to boost the development of digital economy with the aim

of becoming the regional leader (Ramli et al., 2021). Therefore, the adoption of e-wallets among consumers is vital to support the nation's economic plan. Studies have made it clear that e-wallet adoption is not only advantageous for industries but also for consumers. Tenk et al. (2020) investigated the average usage and transaction size of e-wallets in Malaysia. Their research showed that people are actually using e-wallets but do not prefer the payment method as their main choice of payment mechanism. The researchers found that 80 percent of respondents have used e-wallets but not many are using them to make payments for large amounts while 90 percent of respondents spend below RM100 in each transaction.

Undeniably, the Covid-19 pandemic has altered our lives. The virus spreads through droplets and airborne particles, infecting anyone who comes into contact with contaminated people or objects. The World Health Organization (WHO) suggests reducing contact and maintaining social distance to prevent infection by the deadly virus. Therefore, governments worldwide have been encouraging consumers to use cashless payments to reduce physical cash usage in making transactions. This is due to physical cash being a possible medium for the virus spread (Aji et al., 2020). The Malaysian Investment Development Authority (2020) reported that cashless payment in Malaysia has increased to 18 percent compared to the Philippines' 16 percent; Thailand's, 15 percent; and Singapore's, 15 percent. The increased usage of cashless payment in Malaysia is due to the MCO enforced by the government to break the chain of Covid-19 infections. However, Malaysia's e-wallet market share is still low compared to credit and debit cards (Wei et al., 2021).

Unified Theory of Acceptance and Use of Technology (UTAUT) Model

The Unified Theory of Acceptance and Use of Technology (UTAUT) model was developed by Venkatesh et al. (2003) to understand the behavioural intention to adopt technology. It is also used to study the intention to adopt technology (Widayat et al., 2020). A study conducted by Rahi et al. (2018) indicated that the UTAUT model provides a good theoretical foundation in technology adoption investigation. The model consists of four major factors which are performance expectation, effort expectation, social influence, and facilitating conditions. These factors are moderated by gender, age,

experience, and voluntariness of use. The model is derived from a combination of eight different technology acceptance theories: Technology Acceptance Theory (TAM), Innovation Diffusion Theory (IDT), Theory of Reasoned Action (TRA), Motivation Model (MM), Theory of Planned Behaviour (TPB), Combined TAM and TPB (C-TAM-TPB), Model of PC Utilization (MPCU), and Innovation Diffusion Theory (IDT) (Patel et al., 2016; Tenk et al., 2020). The UTAUT model provides a framework to understand and predict the use of technology (Patel et al., 2016) with 70 percent more accuracy and efficiency in forecasting the adoption of new technology compared to other theories (Intarot & Beokhaimook, 2018; Lim et al. 2019; Tenk et al., 2020). Even though UTAUT has been proven as a theoretical framework for predicting technology use, several studies have shown the need to include constructs to boost the explanatory ability (Jung et al., 2020). UTAUT has been extended with additional factors or models to evaluate individual behavioural intentions (Zhao & Bacao, 2021).

Performance expectancy estimates customers' confidence that a particular system's ability, can be beneficial in their daily lives (Tenk et al., 2020). Additionally, it is the strongest factor in forecasting the intention to use technology (Venkatesh et al., 2003; Patel, 2016; Jung et al., 2020; Tenk et al., 2020). Zhao and Bacao (2021) highlighted that performance expectancy factor is related to the system's efficiency, speed, and accuracy of technology, which is relevant because during Covid-19, consumers need a payment technology that can offer efficiency and accuracy in its system. In their study, they found that the intention to adopt mobile payment in China during Covid-19 shows a positive relationship between performance expectancy and intention to use mobile payment.

Effort expectancy indicates consumers' perception that a technology is easy to use (Lim et al., 2019). Yang et al. (2021) highlighted that digitization has shifted payment systems from conventional to online transactions, resulting in transactions that can be completed through a smartphone easily. Patel et al. (2016) stated that consumers will only adopt a technology for a short period if it is difficult to use. However, if a technology is easy to use, consumers are willing to use it in the long run (Tenk et al., 2020). Tenk et al. (2020) investigated the intention to adopt e-wallet among Malaysians and indicated that effort expectancy has a significant impact on behaviour intention.

Social influence indicates that a person's decision to use a new technology is influenced by the opinion of others (Patel, 2016; Tenk et al., 2020). Possible influencers are family members, friends, neighbours and colleagues (Yang et al., 2021). According to Jung et al. (2020), when adopting new technology, consumers tend to have uncertainty and to reduce their uncertainty they will seek advice from peers to consider their decision. Furthermore, Jung et al. (2020), in their study into the acceptance of mobile payment in the United States, showed a positive effect between social influence and behavioural intention.

Venkatesh et al. (2003) defined facilitating conditions as the "degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system". It also includes an environment that eliminates barriers to use a particular technology. A system fulfils facilitating conditions if it consistently remains up-to-date, easy to use and can function properly (Cheng et al., 2018). According to Patel (2016), consumers are likely to adopt e-wallets if there is adequate infrastructure, including knowledge to use the service, internet connectivity, and acceptance of e-wallet services by merchants. The study also investigated the intention to adopt mobile e-wallets among young users and the result showed that there is a relationship between facilitating conditions and the intention to use mobile e-wallet services in India.

Perceived security is when a consumer believes that mobile payments are secure to be used (Chawla & Joshi, 2020). Trust, security and reliability concerns are the main reasons why consumers avoid using electronic payments (Cheng et al., 2018). Tenk et al. (2020) claimed that security issues are one of the reasons consumers avoid using e-wallets because when accepting new technology, consumers are worried about uncertainties. This is supported by Andrew at al. (2021) who stated that the growth of e-wallets is slow due to security issues. Karim et al. (2020), in their study of the intention to use e-wallets among young adults in Malaysia, indicated that there is a significant relationship between perceived security and behaviour intention in the adoption of e-wallets among young adults in Malaysia.

Karim et al. (2020) in the same study on the intention to use e-wallet among young adults in Malaysia, emphasized that the behavioural intention to use refers to a possible behaviour a person will act in the

future. In the context of e-wallets, it is a new payment technology expected to have significant acceptance in the future. Yang et al. (2021) explored the adoption and intention to repurchase online using e-wallets and argued that e-wallets will overtake physical cash payments. They advocated for service providers to understand the consumers' attitude towards e-wallets. Their study indicates a positive relationship between intention to use and adoption of e-wallets in Indonesia.

According to Moorthy et al. (2021), performance expectancy, effort expectancy, social influence, perceived security, and incentives have positive effects on the adoption of e-wallets in Malaysia. Findings show that Covid-19 has significantly moderated the relationship between performance expectancy, effort expectancy, social influence and facilitating conditions on the behavioural intention to use cashless payment (Pey & Kosim, 2022). Additionally, Yang et al. (2021) found that age, gender and education have no moderating effect on the intention to adopt e-wallets. From the prior studies discussed, it can be concluded that several studies have investigated the intention to use e-wallets among consumers. However, no research has been conducted on the intention to use e-wallets related to Covid-19. This study used the UTAUT model developed by Venkatesh et al. (2003) to understand the factors that influence the intention to adopt e-wallets among consumers during the Covid-19 pandemic with an extended factor of perceived security. . Therefore, this study aims to fill the gap in the area. Based on the discussion, the following are the hypotheses:
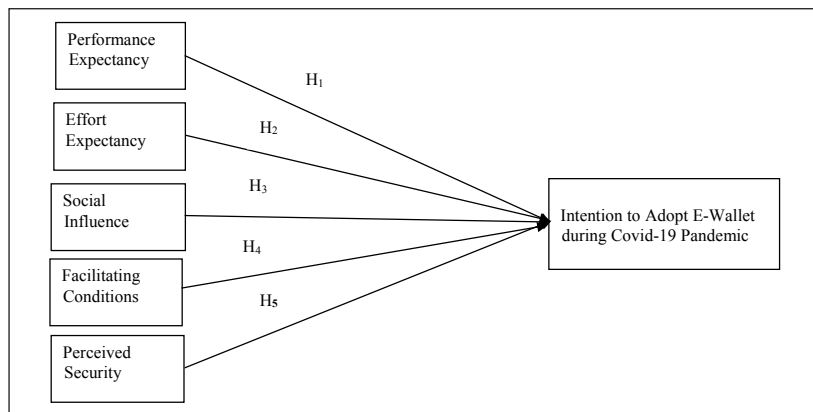
H_1 : Performance expectancy has a positive and significant impact on the intention to use e-wallet during the Covid-19 pandemic.

H_2: Effort expectancy has a positive and significant impact on the intention to use e-wallet during the Covid-19 pandemic.

H_3: Social influence has a positive and significant impact on the intention to use e-wallet during the Covid-19 pandemic.

H_4: Facilitating conditions has a positive and significant impact on the intention to use e-wallet during the Covid-19 pandemic.

H_5: Perceived security has a positive and significant impact on the intention to use e-wallet during the Covid-19 pandemic.

Figure 1 illustrates the proposed framework based on the hypotheses constructed in this study. Drawing from the UTAUT model by Venkatesh et al. (2003), it is posited that performance expectancy,

effort expectancy, social influence, facilitating conditions, and perceived security have a positive and significant impact on the intention to use e-wallet during the Covid-19 pandemic.

Figure 1

Theoretical Framework

METHODOLOGY

A quantitative approach was used in this study to provide a statistical description of the connection between the independent variable and dependent variable and the frequency of consumers' e-wallet average usage and transactions. The data for empirical analysis were collected through a closed-ended survey questionnaire consisting of three sections via Google Form. The first section covers the respondents' demographic information.

The second section consisted of questions on respondents' average e-wallet usage and transaction size. The final section focuses on the five constructs of independent variables and intention to adopt e-wallet during the Covid-19 pandemic, using a five-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). In addition, instrument measurements used in this study were adapted and modified from multiple previous studies to suit our research objectives. Table 1 illustrates the research instrument items and the sources.

Table 1

Items for Variables Understudy

Dimension	Item	Source
Performance expectancy	I feel e-wallet is a useful way to make purchases during Covid-19 pandemic.	
	I feel e-wallet improves my payment efficiency during Covid-19 pandemic.	Zhao & Bacao (2021)
	I feel e-wallet makes it easier for me to conduct my daily transactions during Covid-19 pandemic.	Yang et al. (2021)
	I feel e-wallet is more convenient without the need to bring cash or credit cards during Covid-19 pandemic.	Wei et al. (2021)
Effort expectancy	I think remembering steps to complete a transaction using e-wallet is easy.	Yang et al. (2021)
	I find e-wallet is easy for me to use.	
	I find learning how to use e-wallet is easy.	Venkatesh et al. (2003)
	I think the function of e-wallet is easy for me to understand.	Wei et al. (2021)
Social influence	I was recommended by people who are important to me to use e-wallet during Covid-19 pandemic.	
	People who are important to me think it is a good idea to use e-wallet during Covid-19 pandemic.	
	People who are important to me view e-wallet as a beneficial medium for transaction during Covid-19 pandemic.	Zhao & Bacao (2021)
	Celebrity or influencer endorsement (For example, my favourite idols) have influenced me to use e-wallet during Covid-19 pandemic.	Wei et al. (2021)
Facilitating conditions	The physical and online shops that I visited accept transactions using e-wallet during Covid-19 pandemic.	Venkatesh et al. (2003)

Dimension	Item	Source
Facilitating conditions	I have access to the software and hardware required to use an e-wallet during Covid-19 pandemic. (Example: Smartphones and internet accessibility)	
	I am currently using e-wallet services that are well-integrated and provided within a stable service infrastructure during the Covid-19 pandemic.	
	My e-wallet service provider facilitates the use of e-wallet during Covid-19 pandemic	Yang et al. (2021)
Perceived security	I feel e-wallet is secure when transmitting sensitive information during Covid-19 pandemic.	
	I feel secure providing personal information when using e-wallet during Covid-19 pandemic.	
	I feel secure using my credit/debit card information through e-wallet during Covid-19 pandemic.	Zhao & Bacao (2021)
Behavioural intention	I intend to use e-wallet in the future.	Yang et al. (2021)
	I would recommend my friends and family to use e-wallet for transactions during Covid-19 pandemic.	Wei et al. (2021)
	I intend to continue using e-wallet more frequently during Covid-19.	Venkatesh et al. (2003)
	I prefer using e-wallet for payment transactions during Covid-19 pandemic.	Aji et al. 2020

To determine the sample size, this study used the M indicator or Green's (1991) procedure, following the guideline n > 50 + 8m as suggested by Green (2010), where M is the number of indicators or independent variables (IV) in a model. Since the number of independent variables in this study is 5, the minimum sample size required is 90 (n > 50 + 8(5)). However, a total of 153 questionnaires were distributed through social media platforms such as Instagram, Twitter, and Facebook via direct messages to ensure an adequate return. This study employed a cross-sectional design to gather a large dataset in a short period involving consumers who met the criteria, using a convenience sampling technique. The convenience sampling technique was chosen due to lack of a sampling frame. However, data collection was

conducted through Google Forms because the researcher was unable to distribute questionnaires face-to-face due to the movement control order (MCO). The target sample in this study consisted of consumers who intended to use or were currently using any e-wallet platform offered in the Malaysian market such as ShopeePay, GrabPay, Touch 'n Go e-wallet and Boost. Respondents aged above 18 years old who intended to use or were currently using e-wallets and were currently staying in Johor Bahru were chosen as the respondents in this study.

The location of the study is in Johor because it is the third most populous state in Malaysia, and this research will only focus on the metropolitan area, which is Johor Bahru. Johor Bahru is chosen as it is the city area. Johor Bahru's location is next to Singapore, and it is a preferred shopping destination for Singaporeans.

Before distributing the questionnaire, the researcher informed potential respondents of the purpose of the survey and confirmed that they fulfilled all criteria. Those who were uninterested to participate in the survey were not included, as participation was voluntary. Distribution of questionnaire was carried out only for those who agreed to participate. Finally, Statistical Package for Social Sciences (SPSS) was used to analyze the gathered data through descriptive statistics and multiple regression analysis.

RESULTS

The minimum sample size required for this study is 90, based on the M indicator formula "$n > 50 + 8m$" as suggested by Green (2010). However, 153 responses were collected from the target respondents in Johor Bahru, resulting in a response rate of 90 percent, which is above the average of 50 percent. The respondents comprised 34 percent male and 66 percent female.

Reliability Test

Cronbach's alpha was gathered to gauge the reliability of the instrument. The results of reliability for each dimension are used to examine the independent variable factors and average usage and transaction as shown in Table 2. A pilot study was conducted to determine the reliability value for each dimension used in this study. The findings indicate that all data are reliable as all seven dimensions

have Cronbach's alpha values of more than 0.6. Both performance expectancy, and usage and transaction dimensions have alpha values of 0.9, indicating that the reliability values of these instruments are very good. In addition, effort expectancy and behavioural intention dimensions, each consisting of four questions, have good reliability values at 0.80. Social influence, facilitating conditions and perceived security each reported an acceptable reliability value of 0.7.

Table 2

Cronbach's Alpha Results

Dimension	Number of Items	Cronbach's alpha
Usage and transaction	3	0.932
Performance expectancy	4	0.947
Effort expectancy	4	0.839
Social influence	4	0.710
Facilitating conditions	4	0.789
Perceived security	3	0.730
Behavioural intention	4	0.837

Demographic Findings

Two items related to e-wallet consumers' information are gender and age. Based on data collected from 153 respondents, 101 (66%) are female and 52 (34%) are male. Most respondents (104, 68%) are in the age range of 18 to 25.

Table 3

Demographic Results

Demographic characteristics		Frequency *(N=153)*	Percentage (%)
Gender	Female	101	66
	Male	52	34
Age	18-25	104	68
	26-35	26	17
	36-45	12	7.8
	46-49	5	3.3
	Above 50	6	3.9

This is followed by 26 respondents (17%) out of 153 in the age range of 26 to 35 years old. A total of 12 respondents are between 36 and 45 years old (7.8%). Only 6 respondents (3.9%) are above 50 years old. Lastly, only 5 respondents (3.3%) are in the age range of 46 to 49 years old.

Average usage and Transaction Size of e-wallet

The first objective of this study is to examine the average usage and transaction size of e-wallets among consumers during the Covid-19 pandemic. To achieve this objective, the collected data were analysed using percentage values. Table 4 depicts the average usage and transaction size.

Table 4

Average Usage and Transaction Size

		Frequency	Percentage (%)
Average usage of e-wallet in a month during Covid-19 pandemic	Never	19	12.4
	1 to 3 times	64	41.8
	4 to 7 times	34	22.2
	8 to 10 times	10	6.5
	More than 10 times	26	17
Average amount per transaction during Covid-19 pandemic	RM 0 (None)	18	11.8
	Below RM30	53	34.6
	RM31 – 49	19	12.4
	RM50 – 89	29	19
	RM 90 - 99	8	5.2
	RM 100 - 499	23	15
	RM 500 – 999	1	0.7
	Above RM 1000	2	1.3
Average transaction amount in a month using e–wallet during Covid-19 pandemic	RM 0 (None)	20	13.1
	Below RM 60	41	26.8
	RM 61- 99	25	16.3
	RM 100 – 499	47	30.7
	RM 500 – 999	12	7.8
	RM 1000 – 2000	7	4.6
	Above RM 2000	1	0.7

From Table 4, it is observed that 12.4 percent of respondents have never experienced the use of any e-wallet platform. However, almost half of the respondents (41.3%) use e-wallets to make payments at a frequency of 1 to 3 times a month. A total of 22.2 percent of respondents make payments using the platform between 4 to 7 times a month. Finally, slightly less than a quarter of the respondents (23.5%) use e-wallets more than 8 times a month during the Covid-19 pandemic.

Next, 47 percent of respondents spend less than RM50 during the Covid-19 pandemic, while 41.1 percent spend more than RM50 in total. Respondents who use e-wallets for transactions above RM500 are a minority at 1.9 percent. Many respondents spend a low amount per transaction using e-wallets, at less than RM30; this totals 53 responses (34.6%). Nevertheless, the total transactions made by the respondents in a month during Covid-19 imply that most of the respondents spend less than RM500, comprising 73.8 percent of the total respondents. In contrast, respondents who engage in transactions of above RM500 using e-wallets account for 13 percent of the total respondent number. These results imply that consumers are starting to use e-wallets to make transactions but do not constantly and frequently use the platform. This issue might be caused by a lack of awareness and understanding of e-wallet features.

Multiple Regression Analysis

Multiple regression analysis is an analysis used when a study consists of two or more independent variables and one dependent variable (Abdullah et al., 2020). This study has a total of five independent variables: performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), social influence (SI) and perceived security (PS) with behavioural intention to use e-wallet during the Covid-19 pandemic as the dependent variable. Therefore, multiple regression analysis was used to investigate factors that influence the intention to adopt e-wallet among consumers in Johor Bahru during the Covid-19 pandemic. To validate the model used in this study, the existence of multicollinearity was first analysed through the values of R, tolerance, variance inflation factors (VIF) and R-square ($R2$). Based on Table 5, the R-values are between 0.388 to 0.714. Therefore, we conclude that there is no strong relationship between each of the independent variable because the R values never exceed 0.90. However, VIF and tolerance values must be further considered to validate multicollinearity as non-existent.

Table 5

Pearson Correlation Results

		BI	PE	EE	SI	FC	PS
Pearson Correlations	BI	1.000	0.714	0.641	0.517	0.620	0.541
	PE	0.714	1.000	0.713	0.439	0.591	0.388
	EE	0.614	0.713	1.000	0.487	0.643	4.68
	SI	0.517	0.439	.487	1.000	0.475	0.403
	FC	0.610	0.591	0.643	0.475	1.000	0.449
	PS	0.541	0.388	0.468	0.403	0.449	1.000

R-Value: *Below 0.3 = Weak relationship, 0.3 - 0.7 = Moderate relationship, Above 0.8 =Strong relationship*

The acceptable values to evaluate non-multicollinearity are a tolerance value of > 0.1 (above 0.1) and VIF value of < 10 (below 10). According to Table 6, the tolerance values are between 0.390 and 0.688, while VIF values are between 1.393 and 2.561. This indicates that the tolerance and VIF values have fulfilled the requirements of above 0.1 and below 10, respectively. Therefore, the values are acceptable, and multicollinearity does not exist. Based on the above discussion, it can be concluded that the data are suitable for analysis using multiple regression.

Table 6

Standardized Coefficient Results

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficient Beta	Collinearity Statistics			
				t	Sig.	Tolerance	VIF
(Constant)	- 0.292	1.172		-0.249	0.804		
PE	0.514	0.088	0.434	5.867	0.000	0.458	2.186
EE	0.064	0.074	0.070	0.872	0.385	0.390	2.561
SI	0.127	0.057	0.134	2.223	0.028	0.688	1.453
FC	0.164	0.079	0.146	2.082	0.039	0.511	1.957
PS	0.258	0.069	0.220	3.731	0.000	0.718	1.393

To evaluate non-multicollinearity: *Tolerance Value: > 0.1, VIF (Variance Inflation Factors): < 10*

Furthermore, goodness of the model is evaluated using a significance value lower than 0.05 (< 0.05) prior to evaluating the variation of dependent variables. If the significance value is < 0.05 then the H_0 must be rejected and H_1 is accepted. Table 6 demonstrates the significance value of this study. From the result, it is observed that the significance value is 0.000, which is below 0.05. Since H_0 is rejected, it can be concluded that the model used in this study is good.

The R² value describes the variations in the dependent variable that can be predicted from independent variables. The result, as shown in Table 7, shows that the R² value is 0.632, which indicates that the model used in this study is good and represents 63 percent of the data. Specifically, 63 percent of the variations in behavioural intention (i.e. dependent variable) are explained by the independent variables, while the remaining 37 percent may be attributed to other factors not included in this study.

Table 7

Model Summary

R	R Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
0.795	0.632	0.620	1.847	1.876

Table 8

Summary of Hypotheses

Hypotheses	Standardized Coefficient Beta	Significance Value	Result
H_1	0.434	0.000	Accepted
H_2	0.070	0.385	Rejected
H_3	0.134	0.028	Accepted
H_4	0.146	0.039	Accepted
H_5	0.220	0.000	Accepted

Significance value *< 0.05 = Accepted, > 0.05 = Rejected.*

The importance of independent variables to the model is evaluated through the significance value. Specifically, if the significance value is less than 0.05, then the hypothesis will be accepted while a significance value of more than 0.05 means the hypothesis will be rejected. Table 8 shows that performance expectancy, social influence, facilitating conditions and perceived security influenced the dependent variable, while effort expectancy did not influence the dependent variable since its significance value is above 0.05. The value of beta is used to evaluate the percentage (%) strength of each of the independent variables on the dependent variable. Thus, it can be concluded that the factor with the highest influence on e-wallet adoption among consumers in Johor Bahru during the Covid-19 pandemic is performance expectancy at 43.4 percent, while social influence has the least influence at 13.4 percent. Facilitating conditions at 14.6 percent and perceived security at 22 percent indicate that they have a moderate influence on the dependent variable.

DISCUSSIONS

This study's outcome indicates that people are beginning to use e-wallet platforms offered in the market but do not frequently use the medium to make payments. There are moderate and low percentages of usage and transaction size, respectively, which might be due to security concerns. For instance, less than half of respondents (23.5%) use e-wallets more than 8 times in a month during the Covid-19 pandemic, and 73.8 percent of respondents spend less than RM500 in a month using e-wallets. However, people who are currently using or intending to use e-wallets during the Covid-19 pandemic show a convincing 87 percent. The results indicate a positive sign for wallet adoption and its development in Malaysia. Nevertheless, this research concurs with Tenk et al. (2020), who found that people do not constantly use e-wallets as their main source of payment. It can be concluded that from the results of the transaction size, e-wallet consumers in Johor Bahru are starting to use e-wallets in their daily transactions, but there is still a lack of awareness and understanding of e-wallet features.

Additionally, factors such as performance expectancy, effort expectancy, social influence, facilitating conditions and perceived security have been tested in this study to investigate factors that influence the intention to adopt e-wallets among consumers in Johor

Bahru during the Covid-19 pandemic. Four out of five hypotheses are supported and proven to have influenced the intention to adopt e-wallets among consumers in Johor Bahru during the Covid-19 pandemic (H_1, H_3, H_4, H_5). Firstly, it is observed that performance expectancy has the strongest effect on the intention to adopt e-wallets. This result is similar to the study by Jung et al. (2020), where the authors concluded that performance expectancy has a huge impact on determining the intention to adopt mobile payments. It is believed that respondents are attracted to the adoption of e-wallets if they are well aware of e-wallet convenience. This is especially important during the Covid-19 situation, as consumers will seek a system or platform that could facilitate real-time and accurate transactions. E-wallet features are able to offer these benefits as it eliminates place and time constraints. Therefore, service providers should provide a convenient e-wallet system that is user-friendly. Secondly, effort expectancy shows an insignificant effect on the intention to adopt e-wallets during the COVID-19 pandemic among consumers in Johor Bahru. Easy usage is not a factor that influences consumers in Johor Bahru in adopting e-wallets during the Covid-19 pandemic. Patel et al. (2016) emphasized that effort expectancy is important at the early stage of adoption and will become insignificant later.

Additionally, this research found that social influence has a significant but low-strength influence on intention to adopt e-wallets during the Covid-19 pandemic. It is observed that peers such as friends, family or even celebrities can influence consumers to use newly introduced technology like e-wallets. The social influence from peers can reduce consumers' uncertainty on using e-wallets as they seek the opinions of others before deciding to use the platform. Therefore, service providers should implement marketing strategies that can leverage consumer influence to encourage the adoption of e-wallets as their main cashless payment method. Abdullah et al. (2020) stated that social influence has a significant impact on the behavioural intention to use e-wallets.

Finally, perceived security is another significant factor influencing the intention to adopt e-wallets during the Covid-19 pandemic among consumers in Johor Bahru, following performance expectancy. Consumers are concerned about using e-wallets in their daily transactions due to security risks. This is supported in a study conducted by Bhatti and Ur Rahman (2019) which stated that privacy risks in online transactions have reduced consumers' intentions to purchase

goods online. Similarly, the security factor also has a significant effect on the adoption of e-wallets among Penang residents (Isa et al., 2021). Therefore, it can be observed that security is a vital factor influencing consumers to adopt e-wallets in Johor Bahru during the Covid-19 pandemic. The adoption of technology depends on individuals' desire to use a new technology in their day-to-day activities (Aafaqi et al., 2007). From these discussions, it can be concluded that due to the current Covid-19 pandemic situation, consumers are compelled to adopt e-wallets despite their security concerns and are willing to learn to use the platform without considering the possibilities and risk. It is observed that even though consumers in Johor Bahru are starting to adopt e-wallets in their daily transactions, there is still a lack of awareness and understanding of e-wallet applications.

IMPLICATIONS, DIRECTION FOR FUTURE RESEARCH, AND CONCLUSION

This study aimed to determine the factors influencing consumers' intention to adopt e-wallets during the Covid-19 pandemic. Generally, the higher the correlation of the independent variables with the dependent variable, the more significant the factors are in determining e-wallet adoption during the Covid-19 pandemic among consumers in Johor Bahru. Secondly, due to the low number of e-wallet transactions and usage, it can be concluded that consumers in Johor Bahru lack awareness and knowledge of adoption of e-wallet. This situation arises because consumers do not use e-wallets frequently and consistently. However, this could be a promising start for the development of e-wallets in Malaysia. Thus, the objectives of this study have been achieved.

This study provides a practical contribution for policymakers as it has identified the challenges in e-wallet adoption among consumers in Johor Bahru. Therefore, necessary improvements can be made to promote e-wallet adoption by making it convenient for consumers to use e-wallets, especially during this pandemic period. Additionally, the findings of this study will benefit the e-wallet industry by assisting in developing a more resilient business strategy suitable for the Covid-19 pandemic and other possible unexpected situations. The study extends the application of the UTAUT model in the context of e-wallet adoption with an extended factor of perceived security. This study has some limitations, which may affect the generalisability of

the research findings, as it was conducted among consumers in Johor Bahru. Future researchers may conduct qualitative research to address the research gaps in this field of study and may include age and gender as mediators, given that the present study was unable to do so due to time constraints. Any future study is encouraged to involve other states in Malaysia to provide a holistic and better understanding of the field of study.

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