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# RATIONALE FOR THE ADOPTION OF E-WALLET TOWARDS THE CASHLESS SOCIETY DURING COVID 19

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#### **ABSTRACT**

Purpose: The purpose of this study is to investigate the reasons for e-wallet adoption in Malaysia. Design/ Method/ Approach: The data were collected using a structured questionnaire distributed to 305 participants and analysed using the Partial least square structural equation model (PLS-SEM). The convenience sampling method used for the study sample included e-wallet users in Klang Valley, Malaysia.

Findings: This study found that convenience, security, and speed positively influence e-wallet adoption in Malaysia. Furthermore, social influence is indirectly associated with e-wallet usage regarding convenience, security, and speed. According to this study, convenience and security will affect e-wallet adoption, and social influence will intervene between security and e-wallet adoption.

Practical implication: The implication of this study will be on the facility providers and entrepreneurs who could benefit from the guidelines suggested by this research, as they may be able to improve their services in more efficient ways. Moreover, businesses that already exist can focus on elements that will enhance e-wallet services. Entrepreneurs planning to start a business can forecast what customers want in an e-wallet.

Research limitation: The primary drawback of this research is that it is limited to the Klang Valley, raising the possibility that the results are not generalizable to other states in Malaysia. To make the hypothesis more widely applicable, more data from Malaysia's other 13 states are required.

#### 1. Introduction

Indisputably, in today's daily life, owning a handphone, or more precisely, a smartphone is becoming more crucial. The expanding availability of low-cost smartphones has resulted in a massive increase in the number of smartphone users. Furthermore, in today's globe, the Internet has made the lives of people easier. Smart devices are used to make payments. It is important to note that e-wallets (electronic payment systems are integrated with electronic wallets), developed as a part of the overall electronic payment system, are fantastic inventions of the twenty-first century. A digital wallet commonly referred to as an e-wallet, is designed to allow people to conduct any transaction by linking their credit or debit cards to the digital wallet (Digital Wallet, 2019). Other than credit and debit cards, consumers who use electronic cards are given the ability to keep the information from their physical cards and their bank account numbers and use that information to perform specific payment actions (Ray, 2017). An e-wallet is also referred to as a mobile or digital wallet. E-wallets are electronic cards used to conduct transactions via a smartphone. This is done by storing the consumer's debit cards, bank account numbers, and credit cards for payments. According to Ray (2017), the utility is similar to a debit or credit card. As stated by Blockchains (2018), since e-wallets enable people to make payments or transfer money at a reduced cost and more conveniently and timely, they could be a precursor to traditional banking. Therefore, the use of an e-wallet as part of daily life can be considered as a step forward that is significant in the transition of Malaysia to become a cashless society (Jayaseelan, 2017). Shoppers can use e-wallets for online purchases once funded. The advancement of the payment system does not stop with plastic money. Instead, it continues to improve as technology evolves and improves. The massive increase in the Internet and smartphone usage has accelerated the development of e-money, also known as the e-payment system. One of the reasons users buy online is that the desired product is unavailable in traditional retailers.

Furthermore, according to Wróbel-Konior (2016), the spread of online shopping and banking has resulted in significant growth in e-payment usage. Instead of using coins or traditional paper money, the new form of payment is more convenient for consumers. Thus, in the commercial industry, the role of e-payment is essential. Nowadays, various systems of e-payment are employed, including credit cards, debit cards, charge cards, e-wallets, internet banking, and many other types of e-money. In India and China, the services of e-wallet are widely utilized and highly established. However, in Malaysia, the use of e-wallet services is still not common. Although in Malaysia, payments in the form of cash remain as the form of payment that is most common, a shift in trend may be observed as the use of cashless payments grows (Lim and Appaduray, 2017). At the Payment System Forum and Exhibition, the former Governor, Tan Sri

Muhammad Ibrahim, stated that e-payment methods are a crucial component to increase cost-efficiency and productivity in the digital economy, which is rapidly expanding. Tan Sri Muhammad further remarked that the advancement in technology, operating costs that are cheaper due to the use of the QR Code, and many Malaysians who own mobile phones and debit cards should be considered as the advantages that could optimize the technology of e-payment (Bernama, 2017).

Moreover, e-wallets are one of Malaysia's fastest-rising payment trends (Anis Shakirah, 2020). At present, Bank Negara Malaysia has posted 53 e-money issuers on its website under e-money issuers, including 47 licenses of non-bank e-money. With so many options to select from, it is no surprise that selecting the finest e-wallet in Malaysia can be difficult. Some popular e-wallets in Malaysia are Alipay and Ant Financial operates; BigPay, AirAsia Bhd introduced; GrabPay, which was introduced in the first half of 2018; and MPay, which is operated by ManagePay Systems Bhd (Shah, 2018). By safely and efficiently storing all consumers' payment information, e-wallets essentially eliminate the need to carry a conventional wallet. An increasing number of economies are transitioning to a cashless economy. This is due to some drawbacks to cash-based transactions, for example, the inconvenience of traveling or getting to an ATM or Automated Teller Machine or facing the risk of money being lost or stolen. Because tracking cash is a hard thing to do, any money lost or stolen would almost certainly be gone for good (de Almeida et al., 2018). The digitalization in payment processes has been facilitated by the expansion of the Internet and the entrance of e-commerce through the provision of several options of e-payment such as payment cards like debit and credit cards, digital and electronic or mobile wallets, and electronic currency as well as payment methods that are contactless in nature. Organizations, which collect consumer data, may benefit from this financial notion. When corporations know more about the purchasing habits of their consumers, the more efficiently they can promote their products and customize the purchasing experience. However, one of the risks is that providing information online may jeopardize consumers' privacy (Karim et al., 2020).

The COVID-19 pandemic has wreaked havoc on the economy of the country. However, it has simultaneously created chances and conditions for specific enterprises that enable them to continue growing and thriving. The Malaysian government has called on the people of Malaysia to start practicing the "new normal" that emphasizes personal hygiene and social distancing in preparation for a possible COVID-19 pandemic (Teo et al., 2020). One such industry is the ewallet business, which is becoming increasingly important as the need for contactless payment increases. According to Swapnil et al. (2020), during India's lockout, the use of e-wallets surged by 44 percent. As a result of the rising use of digital transactions, cyber-crime attacks grew by 86 percent. E-wallet business in Malaysia was already positioned for a rapid expansion even prior to the COVID-19 pandemic, owing partly to the favorable demographics of the region as well as the numerous programs by the government aimed at achieving a cashless society. Overall, the e-wallet business will grow due to the various platform to choose from. Previous researchers, such as Karim et al. (2020), conducted a study on university students in Klang Valley, Malaysia, and argued that it does not accurately represent Malaysia. As a result, to reduce the gap, this study concentrated on a broader set of respondents, including students and younger and older generations working in public and private sectors, to reflect Malaysia as a whole. In terms of importance, the current study is relevant for entrepreneurs in Malaysia who are keen on developing e-wallet services. The present study provides these entrepreneurs with detailed information regarding e-wallets that can assist them in determining market prospects and market acceptance in Malaysia. In addition, this report can serve as a guide to the entrepreneurs in considering if their businesses should run and whether or not the e-wallet services should be provided.

This study examines the speed, convenience, security, and social influence on the adoption of e-wallets among Klang Valley users. Therefore, the findings can simultaneously help entrepreneurs who plan to provide the services of e-wallet in the form of understanding the critical variables, which drive the acceptance of e-wallet, such as convenience, speed, and security, as well as social influence. The remaining sections of this research are designed as follows: Section 2 defines literature review; Section 3 focuses on research model and hypotheses; Section 4 explain methodology; Section 5 analyse results; Section 6 discuss findings and implications; and finally, Section 7 represents the conclusion which includes future research directions.

#### 2. Literature Review

#### 2.1 Cashless Society

An efficient electronic payment system reduces trading costs and is regarded as crucial for capital and inter-bank markets. Debit cards, credit cards, digital wallets, check systems and electronic cash, smart cards, mobile payments, and contactless payment methods have evolved as technology has advanced (Bezhovski, 2016). According to Simon Kemp, as stated in the Global Digital 2019 report, there has been an increase in the number of Internet users over the last year. Since January 2018, over one million people have joined the Internet every day for the first time. In addition to a poll of smartphone users, smartphone users rose from 75.9 percent in 2017 to 78.0 percent in 2018 (HPUS, 2018). The driving forces for development were low-cost devices, subsidies, active competition and advertising among service providers, and low-cost bundles. In this manner, society is moving toward a cashless state.

#### 2.2 Underpinning Theory

Straub (2009) states that the Theory of adoption aims to comprehend, whether people accept or reject, how they make decisions and behave when faced with an idea. Sahin (2006) also states that Rogers' Theory is adopted when choosing the optimal choice using new technologies. On the other hand, he added that refusal is the opposite of adoption, which implies no innovation. Wang and Gu (2017) focused on whether WeChat users accept WeChat Pay, one of the mobile wallets, and investigated the relationship between social Theory and acceptance using the data derived from WeChat users who utilized the extended TAM or Technology Acceptance Model. According to Davis (1989), the TAM model has been extensively investigated, as indicated by several publications. As stated by Dauda et al. (2015), this model is the information services theory, which predicts the ways consumers gain and utilize a specific technology. Furthermore, Davis et al. (2017) found that specific variables influence using an e-wallet in Chennai City. Therefore, they collected survey responses from respondents via questionnaires. Amin (2009) carried out a survey study in Sabah, Malaysia, on mobile wallets. A questionnaire was administered to gather responses from key customers of the selected bank. The TAM theory can be applied to analyze aspects that influence e-wallet adoption in Malaysia. It can better reflect the situation that mobile wallet usage in the country will also occur.

#### 2.3 Adoption of E-wallet

The company's new software offers users the opportunity to shop online with a credit card without needing a different application for each merchant. Currently, one of the most popular transaction options is the e-wallet payment due to its convenience and flexibility, and security of making a digital transaction with an e-wallet (Uddin et al., 2014). According to Rosnidah et al. (2019), when there is an increase in the number of e-payment systems, e-wallet has obtained a reputation as an e-payment system that provides an enormous number of services in the food delivery and riding sector as well as bill payments. With this, e-wallet payments provide customers with a sense of confidence and security. It gives them the ability to complete transactions anytime, anywhere, and with more incredible speed and convenience (Liébana-Cabanillas et al., 2014). Bezhovski (2016) studied the factors that influence customers' adoption of electronic payment methods. Bezhovski concludes that electronic payment methods adoption by customers is dependent on a variety of factors, which influence consumers' preferences and willingness to use the most recent technology in conducting transactions. The elements that influence e-wallet acceptance are convenience (Bezhovski, 2016), security (Kabir et al., 2017), social impact (Oliveira et al., 2016), and speed (Junadi and Sfenrianto, 2015). Furthermore, Karp (2015) states that the rising rate of cybercrime could lead to cyber-attacks on and theft of financial data. Thus, challenges in security to mobile payments may be divided into those who consider the problem as emerging and those who believe it is conventional. As a result, customers can expect that mobile wallets will be easier to pay for in the future.

#### 3. Research Model and Hypotheses

According to Sharma and Gutierrez (2010), the term convenience may refer to the comfort and ease with which something can be utilized, apart from obtaining a distinct advantage through fast accessibility and portability. In the proposed model, convenience is a significant component because the study's finding indicates various elements affecting the dependent variable, which could be negative or positive. For example, e-wallet customers will find it convenient to manage and implement, as it will be less stressful and time-consuming to get the system up and running (Makanyeza, 2017). Convenience, also considered as compatibility, is the congruence between consumers' experiences and advancement, needs, and values. The system's flexibility is a feature of consumer compatibility that is essential since it permits consumers to adjust quickly to the usage of the payment system and integrate it into their daily lives (Bezhovski, 2016). Furthermore, Blockchains (2018) states that payments via e-wallet are speedier and more convenient than the traditional banking systems because they save money and time. However, again, Punwatkar and Verghese (2018) agree that using an e-wallet allows for transactions on a small scale that is simple to carry out. Therefore, the hypothesis states that:

#### H1: Convenience (CV) has a significant positive influence on the adoption of e-wallet.

Security is a set of procedures and programs that verify the sources of information and ensure data integrity and privacy to avoid problems in data and networks (Junadi and Sfenrianto, 2015). It discusses how the systems of e-Payment provide consumers with protection during transactions. In e-wallet adoption, security is a significantly positive factor suggesting that as security improves, so will e-wallet acceptance (Batra and Kalra, 2016). Many researchers concur on this notion (e.g., Kabir et al., 2017; Junadi and Sfenrianto, 2015; Sardar, 2016; Taheam et al., 2017). Batra and Kalra (2016) state that the main concern of the respondents was money transaction security. Milberg et al. (2000) added that one of the concerns that prevent buyers from acquiring things is the lack of privacy and security. As contended by Kaur et al. (2018), payments by e-wallet could lead to an unlawful entry to personal information, which provides cybercriminals with a lucrative chance for data penetration. Furthermore, Sardar (2016) discovered that most respondents felt that security is a significant element when purchasing goods online. Sardar urges that E-wallet security systems be upgraded so that users can utilize them with confidence. Similarly, Sarika and Vasantha (2020) concur that security is a factor of significance in the use of e-wallet. Customers who have no prior exposure to technology may be concerned about security and privacy. On the other hand, customers who utilize innovative technology for transactions are concerned about security risks due to technological advancement (Karim et al, 2020). Therefore, the hypothesis states that:

H2: Security (SC) has a significant positive influence on the adoption of e-wallet.

Speed is one of the elements that could impact a consumer's decision to utilize e-wallets (Davis et al., 2017). In the study of Chen and Nath (2008), they hypothesized that faster transaction speeds would result in a greater acceptance among respondents towards digital payment. Speed is a significant factor in performance expectations because it is one of the components. It has been concluded that fast transaction speeds would benefit customers and drive e-payment use (Junadi and Sfenrianto, 2015). Furthermore, digital wallets enable many people in developing countries to contribute more to the global financial system. It allows participants to quickly accept payments for services and receive dollars or fees from friends and relatives in other countries (Karim Hussami, 2020). According to Tella and Olasina (2014), one of the motivations for consumers to continue utilizing the digital payment method is speed. Therefore, the hypothesis states that:

H3: Speed (SP) has a significant positive influence on the adoption of e-wallet.

Several previous research suggests a beneficial effect of social influence on the use of mobile payments. On the contrary, some studies claim that social influence does not have a linear relationship with mobile payments. Nonetheless, according to Yang et al. (2012), there is a sizeable non-linear impact of social influence throughout the early stages of adoption. Contrarily, Aydin and Burnaz (2016) found no effect of social influence on the adoption of mobile payments. Nonetheless, Oliveira et al. (2016) contend that the impact of social influence, either indirectly or directly, is inevitable on an e-payment uptake. As discovered by Yang et al. (2012), the indirect effect of social influence is enormous throughout the early stages of the adoption of e-wallet, negatively affecting perceived risk and positively influencing relative advantage. These researchers discovered further social influence is a factor of significance for current and potential users in that it is directly impacting them. Social influences have strongly influenced the objective and attitude of using new technology (Taheam et al., 2016). Therefore, the hypotheses state that:

H4: Social influence (SI) has a significant positive influence on the adoption of e-wallet.

H4a: Social influence (SI) mediates the relationship between convenience and the adoption of e-wallet.

H4b: Social influence (SI) mediates the relationship between security and the adoption of e-wallet.

H4c: Social influence (SI) mediates the relationship between speed and the adoption of e-wallet.

Figure 1 depicts the model measured with Smart PLS 3.3.2 based on route modeling and bootstrapping (Ramayah et al., 2018). The Smart PLS analysis is divided into two stages: 1) The measurement model and 2) the structural model. The measuring model necessitates the evaluation of reliability and validity measures. The discriminant validity and convergent validity of the measurement model were utilized to assess the validity. The Composite Reliability (CR) was examined to determine the reliability of the model. Following the development of the measurement model, a structural model testing was performed with five hundred re-samples to investigate the hypothesis on the correlations between predictors and e-wallet adoption.

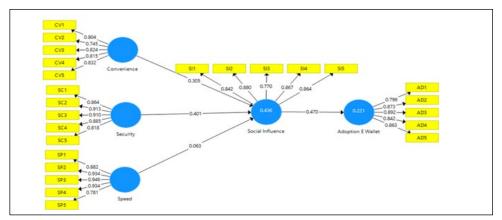


Figure: 1 Research conceptual model.

#### 4. Methodology

#### 4.1 Sampling

The current research looked at the public in the Klang Valley area in Malaysia. The research instrument for the current study was a structured questionnaire administered to the respondents to collect the data for the analysis. The questionnaire is divided into three sections. The first section comprises items on independent variables (convenience, speed, security, and social influence). E-wallet adoption is the subject of the second section of the questionnaire. The third segment contains things that delve into the profiles of the respondents. For the items in the first two sections of the questionnaire, a five-point Likert scale was employed. The scale is in the range of 1 to 5, of which 1 represents 'strongly disagree' whereas 5 represents 'strongly agree'. In this study, the exogenous variables were measured using 20 items representing

four categories: Convenience, security, speed, and social impact. The adoption of e-wallets, on the other hand, was measured using an endogenous variable comprising of 5 elements. The questionnaire was distributed to 500 residents in Klang Valley. The convenience sampling strategy was carried out to select the sample for this investigation. The primary goal of convenience sampling is to obtain information from respondents relatively easily to analyze (Etikan et al., 2016). Representatives have often been selected because they are at the appropriate place and at the right time. The data collection period of this study lasted from January to March 2021. The target group of the current study consisted of users of e-wallet in the area of Klang Valley. In the present study, the G-power software was utilized to calculate the size of the sample of the respondents. The sample size obtained was then used in determining the required minimum size of the sample. The research model was created to have up to four predictors for the outcome variables of e-wallet adoption. The effect size was judged to be at the medium level (0.15), with the necessary power set at 0.80. According to Cohen (1988), the acceptable minimum in social science is established at 80 %. Since the needed sample size was 85, the data obtained were somewhat bigger than the number required for this study. As a result, only 305 of the 500 eligible respondents responded to the questionnaire. According to Sekaran and Bougie (2010), this number of samples provides a 61 percent rate of response, which is considered satisfactory.

#### 4.2 Measurement

Cain et al. (2017) recommended using the Web power website to test multivariate normality. The findings revealed that the data was not normal, with Multivariate Skewness of 671.582 (p < 0.01) and Multivariate Kurtosis of 34.785 (p < 0.01). Consequently, this study utilised the bootstrapping technique to generate standard errors while assessing the structural model. As a result, PLS-SEM was used, as recommended by Hair et al. (2017). Since data were gathered from a single source, the Common Method Bias (CMB) was tested using the marker variable method. The marker variables were created using the items following Lin et al. (2015. We introduced marker indicators as an exogenous variable capable of predicting each endogenous construct within the model. We discovered that all significant effects observed in the model without marker variables remained significant in the new model with marker variables (Hock et al., 2015), supporting our conclusion that the CMB was not a significant issue in this case (Table 1).

	Table:	1 I	Marker	V	'ariab	le	for	CMB
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Endogenous construct	Adjusted R Squared				
	Without Marker	With Marker variable			
Adoption E-wallet	0.218	0.233			
Social Influence	0.43	0.441			

#### 5. Data Analysis and Results

#### 5.1 Descriptive Statistics/Other

Although 500 questionnaires were available, only 305 respondents (61 % of those available) returned them and were usable. According to Table 2, 116 (38 %) were male, while the remaining (62 %) were female. Out of the 305 respondents, 40 % were students who often use e-wallets. Another 37.7 % work in the private sector and use e-wallets to pay their monthly bills. The rest of the respondents comprises 7.2 % who are self-employed, 2 % are unemployed, and 1.3 % are retirees who use e-wallets for their transactions. Furthermore, 53.8 percent of those who took part in the poll were between the ages of 20 and 29, indicating that individuals adopt e-wallets. 16.9 percent of participants were under the age of 20, indicating that most of the younger generation is interested in using their device as an e-wallet. About 10.8 percent of the respondents were in the age group ranging from 30 to 39 years old, while 15.7 percent were in the age group ranging from 40 to 49 years old, indicating that they are mature and busy working people who require an e-wallet to pay all their bills. The remaining 12.8 percent of participants were over the age of 50. It is also revealed that most participants (65.6 percent) hold a bachelor's degree, implying that the respondents are concerned about using e-wallets. As many as 18 % of the respondents hold diploma certificates. The secondary school level qualification accounts for 9.8 percent of the total. About 5.6 percent of the respondents have a master's degree, while 1 percent possesses a Ph.D., indicating that e-wallets are becoming a popular financial transaction method (Table 2).

Table: 2 Respondent's Profile

		Frequency	%
Gender	Male	116	38
	Female	189	62
Age Group	Less 20	52	16.9
	20-29	164	53.8
	30-39	33	10.8

	40-49	48	15.7
	50-59	36	11.8
	60 and above	3	1
Education	Secondary	30	9.8
	Diploma	55	18
	Degree	200	65.6
	Masters	17	5.6
	PhD	3	1
	Student	122	40
Occupation	Private Sector	115	37.7
	Public Sector	36	11.8
	Self-employed	22	7.2
	Unemployed	6	2
	Retired	4	1.3
Marital Status	Single	165	54.1
	Married	137	44.9
	Divorce	3	1

## 5.2 Measurement Model (Partial Least Square – Structural Equation Modeling)

To determine the items' reliability, discriminant validity, and convergent validity, the confirmatory factor analysis (CFA) was conducted. Factor loadings are used to investigate a better convergent validity (Hair et al., 2017). This method, known as Composite Reliability (CR) and Average Variance Extracted, can be utilized to investigate convergent validity (AVE). As shown in Table 3, the results indicate that most of the loading coefficients are greater than 0.5 (significant at p < 0.01). The preceding is also true for AVE values greater than 0.5 (Fornell and Larcker, 1981). According to Hair et al. (2019), in terms of composite reliability (CR), all variables have values ranging from 0.7 to 0.9 (Table 3).

Table: 3 Discriminant Validity

	Loading	CR	AVE
Convenience (CV)			
CV1	0.804	0.902	0.647
CV2	0.745		
CV3	0.824		
CV4	0.815		
CV5	0.832		
Security (SC)			
SC1	0.864	0.944	0.772
SC2	0.913		
SC3	0.91		
SC4	0.885		
SC5	0.818		
Speed (SP)			
SP1	0.882	0.954	0.805
SP2	0.934		
SP3	0.946		
SP4	0.934		
SP5	0.781		
Social Influence (SI)			

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SI1	0.842	0.926	0.715
SI2	0.88		
SI3	0.77		
SI4	0.867		
SI5	0.864		
Adoption of e-wallet (AD)			
AD1	0.796	0.931	0.729
AD2	0.873		
AD3	0.892		
AD4	0.842		
AD5	0.863		

In the current experiment, the Heterotrait Monotrait (HTMT) was also used as a discriminant criterion for confirming discriminant validity (Ramayah et al., 2018). The constructs used in Ramayah et al., (2018) study appear to have correlation values smaller than one, suggesting that discriminant validity has been reached. To illustrate a more significant gap between the conceptions, the author adopted a criterion of 0.85 to provide a more evident limit on how far apart the concepts are, as Kline (2011) advocated, and 0.90 by Gold et al. (2001). Table 4 shows the correlation estimates for HTMT evaluations. There is a correlation of less than 0.85 between the studied constructs. The assessment of HTMT demonstrated that the required discriminant validity level was fulfilled.

Table: 4 Hete	erotrait Monot	rait (HTMT)			
Constructs	CV	SC	SP	SI	AD
Convenience (CV)					
Security (SC)	0.715				
Speed (SP)	0.475	0.556			
Social Influence (SI)	0.506	0.605	0.645		
E-wallet Adoption (AD)	0.614	0.686	0.634	0.524	

## 5.3 Structural Model (Partial Least Square – Structural Equation Modeling)

The endogenous variable's R-squared (R2) was utilized to explain the variance. Hair et al. (2017) suggested that an R2 value greater than 0.75 is considered high. An R2 value of 0.50 is deemed moderate, and an R2 value less than 0.25 is considered low. According to the R2 in Figure 1, all exogenous factors (CV, SC, and SP) can explain 43.6 percent of the social influence (SI), and SI can explain 22.1 percent of e-wallet adoption. Table 5 shows the hypothesis testing results and the routes for all hypotheses regarding significance levels and coefficients observed t-statistics. According to previous research, in a one-tailed test, to ensure the level of significance, the acceptable t-values are 1.28 (10 percent significance level at p < 0.10), 1.645 (5 percent significance level at p < 0.05), and 2.33 (1 percent significance level at p < 0.01) (Hair et al, 2017).

Table: 5 Path Coefficient and Hypothesis Testing

Hypotheses	Relationships	Std	Std	T Values	P Values	BCI	BCI	Decision
		Beta	Error			LL	UL	
H1	Convenience -> E- wallet adoption	0.143	0.043	3.309	0.001	0.078	0.219	Supported
H2	Security -> E- wallet adoption	0.188	0.004	4.724	0.001	0.128	0.252	Supported
Н3	Speed -> E-wallet adoption	0.030	0.035	0.858	0.196	-0.026	0.087	Not Supported
H4	Social Influence - > E-wallet adoption	0.476	0.062	7.617	0,000	0.349	0.557	Supported

#### 6. Discussion and Implications

The findings of the study suggest that three of the four hypotheses evaluated in this study are strongly correlated with the endogenous variable; convenience ( $\beta = 0.143$ , t = 3.309, p < 0.05), security ( $\beta = 0.188$ , t = 4.724, p < 0.05), and social influence ( $\beta = 0.476$ , t = 7.617, p < 0.05) demonstrates a positive and significant association from the standpoint of ewallet adoption as an endogenous variable. For the study results, the hypotheses are as follows: H1 (Convenience has a significant positive influence on the adoption of e-wallet) was supported. Therefore, as suggested by Karim et al. (2020), the providers of e-wallet need to be aware that e-wallet applications that are convenient in its usage would positively impact the adoption of e-wallet among consumers. For H2 (Security has a significant positive influence on e-wallet adoption), it was also supported. Based on hypothesis 2, as stated by Barry et al. (2018), less security might cause consumers to feel unprotected should they use the e-wallet applications for their transactions. If their security and privacy are not sufficiently protected, this will cause customers to be wary in embracing the e-wallet technology. Hence, Karim et al. (2020) state that security is one of the prerequisite dimensions that e-wallet providers should emphasize for consumers to adopt e-wallet positively. Finally, H4 (Social Influence has a significant positive influence on the adoption of e-wallet) was also supported. Jin et al. (2019) concludes from their study that it is possible to increase the number of mobile wallet users by word of mouth. When a person is exposed to others who use new technology, it is more likely for them to employ the technology simply because other people encourage it. A study on individual Indonesians, from a cultural standpoint, seeks suggestions from others (Angelina and Rahadi, 2020).

On the other hand, speed has no significant influence on e-wallet adoption ( $\beta$  = 0.03, t = 0.858, not significant). Therefore, it is most likely that making mobile payments more accessible will increase the transaction speed (Chern et al., 2018). Furthermore, the previous study claims that customers aged 18 to 24 emphasize how quickly something is processed when deciding on using an e-wallet (Chern et al., 2018). However, the findings of this study do not substantiate this claim because the respondents were a blend of both younger and older generations who are more concerned about transaction security, especially during the COVID-19 pandemic circumstances. Hence, H3 (Speed has a significant positive influence on the adoption of e-wallet) was not supported. Table 6 shows how the mediating impact was investigated by using the t-statistic with pooled standard errors. This indirect effect analysis is a parametric approach method (Henseler et al., 2016). According to the research, social influence (SI) will affect e-wallet adoption. Additionally, concerning social influence, the data suggest that it has a more significant impact on security among clients who do e-wallet transactions.

Table: 6 Indirect Effect of Social Influence

Hypotheses	Relationships	Beta	Std	T	P	BCI LL	BCI	Decision
			Error	Values	Values		UL	
H4a	Convenience -> Social Influence -> Adoption E Wallet	0.021	0.095	0.225	0.411	-0.129	0.183	Not Supported
H4b	Security -> Social Influence -> Adoption E Wallet	-0.113	0.067	1.686	0.046	-0.235	-0.018	Supported
Н4с	Speed -> Social Influence -> Adoption E Wallet	-0.088	0.071	1.242	0.107	-0.200	0.031	Not Supported

Due to the COVID 19 pandemic, people are using digital payment applications. Therefore, a ground-breaking new development in the utilization of such applications has emerged. While many people are comfortable with e-wallets, not everyone is, and some will object to using them. However, they are forced to do so because of the appearance of the CORONA virus. Hence, the motivation for this study was to get knowledge about e-wallet customers' security concerns. Lastly, this study found that H4b (social influence as a mediator affects the relationship between security and the adoption of e-wallet) was supported. As technology advances, customers who use innovative technology for transactions are worried about security concerns (Karim et al., 2020). Word of mouth continues to grow the number of mobile wallet users (Jin et al., 2019). On the other hand, in terms of convenience and speed, clients do not need to have any social influence to use an e-wallet.

# 7. Conclusion

For many people, having a diverse array of online options that allow them to find, compare, and purchase the things they want when they want them is essential. When people want different things from the Internet, this desire for diversity matters, and when people lack a specific diversity of options, it results in disappointment. Companies providing e-wallet services should try to increase clients' trust if they want to increase e-wallet adoption. The behaviour of e-wallet adoption systems can be significantly improved by helping customers have greater confidence in these systems. If the usability of mobile wallet adoption services is entirely separate from any other factors, such as time or space, customers will have favourable intentions to use mobile wallets. The current study met the research objectives by considering the elements impacting e-wallet adoption. The findings and outcomes of this research could give facility providers and entrepreneurs

some guidelines for providing more efficient services. In addition, those who already own businesses may concentrate on ways to enhance the services of e-wallets, and potential company owners can measure customers' e-wallet desires in times of covid 19 pandemic outbreak. Again, financial institutions should improve simplicity and transaction speed to promote the interest in consumers in the adoption of e-wallet, especially during the pandemic. Hence, they will be able to improve their ability to compete in the market. Therefore, to address the constraints, future studies should be designed by referring to some proposals and their recommendations. First, more considerations, such as risk, should be considered in a prospective study to impact e-wallet usage. Second, to investigate if gender as a moderator has a more significant influence on the link between variables and e-wallet adoption, whether male or female, has an immense impact on the connection between factors and e-wallet adoption

#### References

- Amin, H., 2009. Mobile wallet acceptance in Sabah: An empirical analysis. Labuan Bulletin of International Business & Finance, 7, 33-52. (PDF)
- Angelina, C. and Rahadi, R.A., 2020. A Conceptual Study on The Factors Influencing Usage Intention Of E-wallets in Java, Indonesia. International Journal of Accounting, Finance and Business (IJAFB). Volume 5 Issues, pp. 19 29. eISSN: 0128-1844 Journal website: www.ijafb.com [PDF]
- Anis Shakirah., 2020. Ultimate Guide To E-wallet in Malaysia 2021 Which Should You Get? CompareHero.my 12 June 2020. https://www.comparehero.my/e-wallet/articles/best-ewallet-malaysia [PDF]
- Aydin, G., and Burnaz, S., 2016. Adoption of mobile payment systems: A study on mobile wallets. Journal of Business, Economics and Finance, 5(1), 73-92. [PDF]
- Barry, M. and Jan, M. T., 2018. Factors Influencing the Use of M-Commerce: An Extended Technology Acceptance Model Perspective. *International Journal of Economics, Management and Accounting*, 26(1), 157-183. [PDF]
- Batra, R. and Neha Kalra, N., 2016. Are Digital Wallets the New Currency? Apeejay Journal of Management and Technology. Vol 11, No 1. [PDF]
- Bernama., 2017. Malaysia moving towards cashless society. The Star Online, 9 December 2017.https://www.thestar.com.my/business/businessnews/2017/12/09/malaysiamoving-towards-cashless-society/ (accessed 25 May 2021).
- Bezhovski, Z., 2016. The future of the mobile payment as electronic payment system. European Journal of Business and Management, 8(8), 127-132.
- Blockchains., 2018. Growing use of digital wallets. The News, 1 February 2018. http://bcmy.io/blog/growing-use-of-digital-wallets-summary-of-studies-by-country/ (accessed 8 June 2021)
- Cain, M.K., Zhang, Z., and Yuan, K.H., 2017. "Univariate and multivariate skewness and kurtosis for measuring nonnormality: prevalence, influence and estimation", Behavior Research Methods, Vol. 49 No. 5, pp. 1716-1735. [PDF]
- Chen, L. D. and Nath, R., 2008. Determinants of mobile payments: An empirical analysis. Journal of International Technology and Information Management, 17(1), 9-20. [PDF]
- Chern, Y. X., Kong, S. Y., Lee, V. A., Lim, S. Y. and Ong, C. P., 2018. Moving into Cashless Society: Factors Affecting Adoption of E-Wallet. Bachelor Of Business Administration research project, Universiti Tunku Abdul Rahman. [PDF]
- Cohen, J., 1988. Statistical power analysis for the behavioral sciences, 2nd ed. US: Lawrence Earlbaum Associates. [PDF]
- Dauda, S. Y. and Lee, J., 2015. Technology adoption: A conjoint analysis of consumers' preference on future online banking services. *Information Systems*, 53, 1-15. [PDF]
- Davis, F. D., Bagozzi, R. P. and Warshaw, P. R., 1989. User acceptance of computer technology: a comparison of two theoretical models. *Management science*, 35(8), 982-1003. [PDF]
- Davis, K. J., Balaji, P. and Gurusamy, S., 2017. Whether E-wallets are really a catalyst towards expedition of cashless economy? An empirical investigation in the aftermath of demonetization. *IOSR Journal of Business and Management*, 1, 50-55. [PDF]
- de Almeida, P., Fazendeiro, P. and Inácio, P. R., 2018. Societal risks of the end of physical cash. *Futures*. Volume 104, Pages 47-60, ISSN 0016-3287, <a href="https://doi.org/10.1016/j.futures.2018.07.004">https://doi.org/10.1016/j.futures.2018.07.004</a>. [Abstract]
- Digital Wallet. 2019. Digital Wallet. Wikipedia, 13 February 2019. https://en.wikipedia.org/wiki/Digital wallet. (accessed 6 Jun 2021) [PDF]
- Etikan, I., Musa, S. A. and Alkassim, R. S., 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. [Abstract]
- Fornell, C. and Larcker, D. F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, American Marketing Association*. Vol. 18 No. 1, pp. 39-50.[Abstract]
- Gold A. H, Malhotra A. and Segars A. H., 2001. Knowledge management: an organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185-214. https://doi.org/10.1080/07421222.2001.11045669 [Abstract]
- Henseler, J., Hubona, G. and Ray, P. A., 2016. Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, Vol. 116 No. 1, pp. 2-20. https://doi.org/10.1108/IMDS-09-2015-0382
- Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. A., 2017. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). 2nd ed.; SAGE: Los Angeles, CA, USA. [Abstract]
- Hair, J.F., Sarstedt, M., Ringle, C.M. and Gudergan, S.P., 2017. Advanced Issues in Partial Least Squares Structural Equation Modeling. SAGE Publications. Available at: https://books.google.com.my/books?id5jmRivgAACAAJ.
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M., 2019. When to use and how to report the results of PLS-SEM. *European Business Review*, Vol. 31 No. 1, pp. 2-24. [PDF]
- Hock, M., Clauss, T., and Schulz, E., 2015. The impact of organizational culture on a firm's capability to innovate the business model, R D Manage. <a href="http://onlinelibrary.wiley.com/doi/10.1111/radm.12153/pdf">http://onlinelibrary.wiley.com/doi/10.1111/radm.12153/pdf</a>
- Jin, C.C., Seong, L.C and Khin, A.A., 2019. Investigating of Factors Affecting the Consumers' Adoption of Mobile Wallet in Malaysia. Conference: UPM 2019 National Seminar on Digitalization, Sustainability & Globalizationat: Faculty of Economics and Management, Universiti Putra Malaysia (UPM), 43400 Upm Serdang, Selangor, Malaysia. [PDF]
- Jayaseelan, R., 2017. The e-wallet race hots up. *The Star Online*, 29 July 2017. <a href="https://www.thestar.com.my/business/businessnews/2017/07/29/the-ewallet-race-hots-up/">https://www.thestar.com.my/business/businessnews/2017/07/29/the-ewallet-race-hots-up/</a> (Accessed 25 May 2021)
- Junadi, and Sfenrianto., 2015. A model of factors influencing consumer's intention to use E-payment system in Indonesia. *Procedia Computer Science*, 59, 214-220. [PDF]
- Kabir, M. A., Saidin, S. Z. and Ahmi, A., 2017. Analysis of factors that influence electronic payment adoption. *Journal of Engineering and Applied Science*, 12(3). [PDF]
- Karim Husami., 2020. E-Wallet convenience: A growing mobile payments market. *Insidetelecom.com*, 13 October 2020 https://www.insidetelecom.com/e-wallet-convenience-a-growing-mobile-payments-market/ (accessed 8 Jun 2021) [PDF]

- Karim, M. W., Haque, A., Ulfy, M. A., Hossain, M. A. and Anis, M. Z., 2020. Factors Influencing the Use of E-wallet as a Payment Method among Malaysian Young Adults. *Journal of International Business and Management*, 3(2), 01-12. Print ISSN: 2616-5163, Online ISSN: 2616-4655. [PDF]
- Karp, N., 2015. Biometrics: The Future of Mobile Payments. US Economic Watch, BBVA Research. [PDF]
- Kaur, R., Li, Y., Iqbal, J., Gonzalez, H. and Stakhanova, N., 2018. A Security Assessment of HCE-NFC Enabled E-wallet Banking Android Apps. 2018. Paper presented at the 42nd Annual Computer Software and Applications Conference (COMPSAC), 23 – 27 July 2018, Tokyo, Japan. [Abstract]
- Kline R.B., 2011. Principles and practice of structural equation modeling. New York: Guilford Press. [PDF]
- Liébana-Cabanillas, F. J., Sánchez-Fernández, J. and Muñoz-Leiva, F., 2014. Role of Gender on Acceptance of Mobile Payment. *Industrial Management & Data Systems*, 114(2), 220–240. [PDF]
- Lim, B. S. and Appaduray, A., 2017. Tech: As Cashless Payment Become More Popular, Merchant Acquirers Will Thrive. *The Edge Malaysia Weekly*, 19 June 2017. <a href="https://www.theedgemarkets.com/source/">https://www.theedgemarkets.com/source/</a> (accessed 30 May 2021)
- Lin, T.C., Huang, S.L., and Hsu, C.J., 2015. A dual-factor model of loyalty to IT product—the case of smartphones, *International Journal of Information Management* 35 (2), 215–228. [Abstact]
- Makanyeza, C., 2017. Determinants consumers' intention adopt mobile banking services to Zimbabwe. International Bank 997-1017. Journal of Marketing, 35(6), https://doi.org/10.1108/IJBM-07-2016-0099
- Milberg, S. J., Smith, H. J. and Bruke, S. J., 2000. Information privacy: Corporate management and national regulation. *Organization science*, 11(1), 35-57. [Abstract]
- Oliveira, T., Thomas, M., Baptista, G. and Campos, F., 2016. Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior*, 61, 404-414. [PDF]
- Punwatkar, S. and Verghese, M., 2018. Adaptation of e-wallet Payment: An Empirical Study on Consumers' Adoption Behavior in Central India. International Journal of Advanced in Management, Technology and Engineering Sciences, 1147–1156. [PDF]
- Ramayah T., Cheah J., Chuah F., Ting H., and Memon M. A., 2018. Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0: An Updated and Practical Guide to Statistical Analysis. 2nd ed. Singapore: Pearson. [PDF]
- Ray, A., 2017. What are the different types of e-commerce payment systems? *Amazon.in*, 8 November2017. <a href="https://sell.amazon.in/seller-blog/different-types-of-e-commerce-payment-systems.html">https://sell.amazon.in/seller-blog/different-types-of-e-commerce-payment-systems.html</a> (Accessed 25 May 2018)
- Rosnidah, I., Muna, A., Musyaffi, A. M. and Siregar, N. F., 2019. Critical factor of mobile payment acceptance in millennial generation: Study on the UTAUT model. International Symposium on Social Sciences, Education, and Humanities (ISSEH 2018). Atlantis Press. [PDF]
- Roy, S. and Sinha, I., 2014. Determinants of customers' acceptance of electronic payment system in Indian banking sector A study. *International Journal of Scientific & Engineering Research*, 5(1), 177-187. [PDF]
- Sahin, I., 2006. Detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology*, 5(2), 14-23. [PDF]
- Sardar, R., 2016. Preference towards mobile wallets among urban population of Jalgaon city. Journal of Management, 3(2), 1-11. [Abstract]
- Sarika, P. and Vasantha, S., 2020. Effect of social influence on intention to use mobile wallet with the mediating effect of promotional benefits. *Journal of Xi'an University of Architecture & Technology.* Volume XII, Issue II, ISSN No:1006-7930, Page No: 3003-3019. [PDF]
- Sekaran, U. and Bougie, R., 2010. Research methods for business: A skill-building approach 5th ed. Haddington: John Wiley & Sons. [PDF]
- Shah, S. A., 2018. The making of Malaysia's cashless society. The Malaysian Reserve, 2 February 2018. https://themalaysianreserve.com/2018/02/02/makingmalaysias-cashless-society (accessed 7 June 2021)
- Sharma, S. and Gutiérrez, J. A., 2010. An evaluation framework for viable business models for M-commerce in the information technology sector. *Electronic Markets*, 20(1), 33-52. [Abstract]
- Straub, E. T., 2009. Understanding technology adoption: Theory and future directions for informal learning. *Review of Educational Research*, 79(2), 625-649. [PDF]
- Swapnil, U., Ashish, K. and Harshali, P., 2020. Perceived eWallet security: Impact of COVID-19 pandemic. *Published in Vilakshan XIMB Journal of Management*. Emerald Publishing Limited 0973-1954 DOI 10.1108/XJM-07-2020-0022 [PDF]
- Taheam, K., Sharma, R. and Goswami, S., 2016. Drivers of digital wallet usage: Implications for leveraging digital marketing. *International Journal of Economic Research*, 13(1), 175-186. [PDF]
- Tella, A. and Olasina, G., 2014. Predicting users' continuance intention toward Epayment system: An extension of the technology acceptance model. International Journal of Information Systems and Social Change, 5(1), 47-67. [PDF]
- Teo, S. C., Law, P. L. and Koo, A. C., 2020. Factors Affecting Adoption of E-wallets among Youths in Malaysia. *Journal of Information System and Technology Management*, 5 (19), 39-50. DOI: 10.35631/JISTM.519004 [PDF]
- Uddin, M. S. and Akhi, A. Y., 2014. E-wallet system for Bangladesh an electronic payment system. *International Journal of Modeling and Optimization*, 4(3), 216-226. [PDF]
- Venkatesh, V. and Davis, F. D., 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204. [PDF]
- Wang, J. and Gu, L., 2017. Why is WeChat Pay so popular? Issues in Information Systems, Volume 18, Issue 4, pp. 1-8. [PDF]
- Wrobel-Konior., 2016. What is an E-payment system? *Digital & Social*, 29 August 2016. <a href="https://www.business2community.com/">https://www.business2community.com/</a> (Accessed 7 June 2021)
- Wu, J. H. and Wang, S. C., 2005. What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management*, 42(5), 719-729. [Abstract]
- Yang, S., Lu, Y., Gupta, S., Yuzhi, C. and Zhang, R., 2012. Mobile payment services adoption across time: An empirical study of the effects of behavioral beliefs, social influences, and personal traits. Computers in Human Behavior, 129-142. [PDF]

# **Appendix**

# Research Questionnaire

	Loading	CR	AVE
Convenience (CV)			
CV1: E-wallet is easy to use	0.804	0.902	0.647
CV2: Ensures access of account when abroad	0.745		
CV3: Convenient to use while on travel	0.824		
CV4: I find a mobile payment procedure to be flexible to interact with	0.815		
CV5: Using mobile payment would make me perform my financial transactions more quickly	0.832		
Security (SC)			
SC1: Satisfied with the security system	0.864	0.944	0.772
SC2: E-wallets keep customers information private and confidential	0.913		
SC3: Customers' financial information is protected	0.91		
SC4: It keeps my payment credentials secure	0.885		
SC5: E-wallets ensure protection against risk of fraud and financial loss	0.818		
Speed (SP)			
SP1: I believe that using E-wallet will improve the speed of transaction	0.882	0.954	0.805
SP2: Transactions will be faster compared to traditional payment methods	0.934		
SP3: It will save my time when using the E-wallet payment system	0.946		
SP4: Using E-wallet can get a quick response	0.934		
SP5: No waiting time/delay	0.781		
Social Influence (SI)			
SI1: People who influence my behaviour think I should use mobile payment	0.842	0.926	0.715
SI2: My friends think I should use mobile payment	0.88		
SI3: Using mobile payment is considered a status symbol among my friends	0.77		
SI4: People who are important to me expect me to use mobile payment technology	0.867		
SI5: People who are important to me are likely to recommended using mobile payment	0.864		
Adoption of e-wallet (AD)			
AD1: E-wallet can substitute the cash-based payment method	0.796	0.931	0.729
AD2: E-wallet can support the existing payment method	0.873		
AD3: Using E-wallet is beneficial	0.892		
AD4: Using E-wallet is wise	0.842		
AD5: Using E-wallet is interesting	0.863		