



Investigating the Determinants of E-wallet Adoption Intention in Malaysia: An Empirical Study

Jaludin Janteng, Nur Fatin Nabilah Dino

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v12-i6/13855

DOI:10.6007/IJARBSS/v12-i6/13855

Received: 07 April 2022, Revised: 09 May 2022, Accepted: 24 May 2022

Published Online: 05 June 2022

In-Text Citation: (Janteng & Dino, 2022)

To Cite this Article: Janteng, J., & Dino, N. F. N. (2022). Investigating the Determinants of E-wallet Adoption Intention in Malaysia: An Empirical Study. *International Journal of Academic Research in Business and Social Sciences*. *12(6)*, 561 – 575.

Copyright: © 2022 The Author(s)

Published by Human Resource Management Academic Research Society (www.hrmars.com)

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non0-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: http://creativecommons.org/licences/by/4.0/legalcode

Vol. 12, No. 6, 2022, Pg. 561 – 575

http://hrmars.com/index.php/pages/detail/IJARBSS

JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at http://hrmars.com/index.php/pages/detail/publication-ethics



Investigating the Determinants of E-wallet Adoption Intention in Malaysia: An Empirical Study

Jaludin Janteng, Nur Fatin Nabilah Dino Faculty of Labuan International Finance, Universiti Malaysia Sabah, Malaysia Corresponding Author's Email: jaludin@ums.edu.my

Abstract

This study investigates the intention of adopting an e-wallet in Perlis, Malaysia. A total of 250 consumers were selected to respond to the structured questionnaire. The partial least squares-structural equation modelling (PLS-SEM) was used to analyse the data by assessing the measurement and model. Perceived ease of use and perceived social influence significantly affected the intention to adopt e-wallets. The analysis provides insight that perceived ease of use and perceived social influence are considered significant determinants for the intention of e-wallet adoption. The digital wallet stakeholder can consider perceived ease of use and perceived social influence as a suggestion to make a strategic decision related to the digital wallet ecosystem. The present study contributes to the intention to adopt e-wallet literature by investigating the factors that influence the adoption of e-wallets in Perlis, Malaysia.

Keywords: Perceived Contactless, Perceived Ease of Use, Perceived Social Influence, Adoption of E-Wallet, Malaysia

Introduction

An e-wallet is an electronic payment system that allows you to make online purchases with your phone or computer. It functions similarly to a debit or credit card. It must be linked to the user's bank account to make a payment. The user can save money in an e-wallet for future transactions (The Economic Times, 2021). In Malaysia, e-wallets such as Boost, BigPay, GrabPay, Touch'n Go e-wallet, and others are available. Consumers can use an e-wallet to pay for services and goods at online stores and non-online stores such as convenience stores. Non-online stores will issue QR codes for clients to scan to make a payment.

This study focuses on Perlis consumers' use of an e-wallet as a payment method during the Covid-19 epidemic. For many years, most Malaysians have recognised and used e-wallets. Malaysia is on the verge of becoming a cashless society, with over 70 percent of consumers choosing businesses that allow online transactions over those that only accept cash (Kamel, 2019). However, since the pandemic hit Malaysia, the use of e-wallets has surged by 45 percent (Lim, 2021). Many daily actions, or "new norms" must be adjusted or adopted during the Covid-19 outbreak, including using an e-wallet as a payment method for practically all daily necessities.

The number of covid-19 cases in other Malaysian states is increasing when data is collected. However, the number of cases in Perlis remains low despite the state's small size. If the individuals in the state did not rigorously follow the SOP, Perlis might be highly infectious. Furthermore, during this continuing pandemic, people are recommended to limit physical contact to prevent the Covid-19 virus from spreading. Considering the precautions to avoid the virus, medical authorities highly advised people to go cashless or reduce their use of cash, and an e-wallet is the most acceptable payment option that can be used in this circumstance due to its contactless capabilities (Alwi et al., 2021). As a result, the low number of cases of covid-19 in Perlis and the increased use of e-wallets during the epidemic may be related, as everyone is attempting to avoid physical contact.

The increase in the use of an e-wallet as a payment mechanism during the Covid-19 pandemic may be related to the feature e-wallet's ease of use. Nowadays, most consumers own smartphones, which makes a payment more manageable. Additionally, merchants accepting electronic wallets only need to install a simple, inexpensive application that can be downloaded quickly from mobile phones or PCs. Further, the small size of the application and the absence of a significant fee simplify the adoption process. A mobile application's perceived ease of use is determined by its functionality and compatibility (Phuong et al., 2020).

Consumers periodically use the e-wallet system to make payments due to bill rebates, cashback payments, and discount coupons (Phuong et al., 2020). Before the pandemic, most people were aware of and learned about e-wallets through the social influence of their contacts, such as family and friends (Yang et al., 2021). During the pandemic, the adoption of e-wallets is increasing, notably since the government announced incentives to use e-Tunai Rakyat in January 2020 (Teo et al., 2020). There are numerous other incentives for customers to embrace e-wallet platforms that the government will create shortly.

Based on the previous discussion and given the critical role that consumers play in Malaysia, the objective of this:

a) To examine the influence of perceived contactless on behavioural intention to use an e-wallet.

b) To examine the influence of perceived ease of use on behavioural intention to use an e-wallet.

c) To examine the influence of perceived social influence on behavioural intention to use an e-wallet.

The following section of this study is structured as follows. After the introduction, the relevant literature review was discussed, resulting in the development of hypotheses. Then, the methodology was examined, followed by the results of data analyses. Furthermore, we discussed the study's implications, and the final section presents the conclusion of the study.

Literature Review

E-wallet Adoption

An e-wallet is a payment method that can store the amounts of money and enables consumers to make a payment through a smartphone or computer. However, it must first attach to the consumers' debit card or credit card details (Pachpande & Kamble, 2018). Previous studies have been conducted related to adopting e-wallets that used various variables such as performance expectancy, effort expectancy, social influence, facilitating conditions, habit, security, trust, and risk (Puasa et al., 2021; Voronenko, 2018; Widodo et al., 2019; Yang et al., 2021). A study conducted by Pachpande and Kamble (2018) found that the

factors that have influenced young consumers to adopt the e-wallet are easy to use, the process transaction is faster, and its usefulness. The habit of using digital payment has been found to be the main reason consumers intend to adopt it in the future (Voronenko, 2018). Furthermore, Teo et al (2020) stated that perceived security, ease of use, and social influence have affected consumers' adoption of the e-wallet. Adoption in this study is related to the consumers' decision and response to adopting an e-wallet as a payment method.

Based on Akilandeswari (2021) findings in the study of digital payment, consumers chose to adopt digital payment methods during the Covid-19 pandemic because it was effective and fair. Moreover, according to Daragmeh et al (2021), as people are concerned about their health, they tend to adopt e-wallets as a payment method during the pandemic. It has been found that a positive relationship exists between several factors such as government support, health risk, subjective norm and perceived behavioural control on e-wallet adoption (Aji eta I., 2020; Ojo et al., 2022; Persada et al., 2021). This study identified factors influencing consumers to adopt e-wallets as a payment method amid the covid-19 outbreak by using perceived contactless, ease of use, and social influence.

Perceived Contactless

Contactless shops based on Artificial Intelligence (AI) design provide customers with speedy contactless payments and hygiene and satisfaction. The contactless transaction or businesses found have a massive impact in less risk of infection during payment processes discourages goods from being touched again throughout the checkout process, Covid-19 viruses are less likely to expand and could prevent contact with cash and credit cards during the payment process (Sahinaslan et al., 2021). This reason showed perceived contactless importance in ensuring continuing financial transactions during the pandemic. One of the benefits of a mobile transaction is that it does not require physical contact. The mobile transaction allows account holders to transfer money and conduct other financial transactions with little or no physical contact, decreasing the virus's spread. Contactless economic activities, such as utility bills, are possible if the mobile money account has a sufficient balance. A study conducted by Zhao and Bacao (2021) discovered that mobile payment, also known as M-payment, with a contactless feature, effectively maintains social distance and ensures personal safety during the Covid- 19 pandemic.

Furthermore, due to the World Health Organization's (WHO) physical distance restriction, customers have been compelled to engage in contactless activities, including financial transactions. As the Covid-19 virus spreads, governments encourage consumers to use contactless payment methods (Aji et al., 2020). Furthermore, contactless technology users are aware of the benefits of using contactless technology tools to reduce touch with items such as cash, as well as contact with a person while handing the money, as they believe it can reduce their chances of becoming infected by not touching the suspicious area (Puriwat & Tripopsakul, 2021). According to a study on how the virus pandemic affects consumers' payment option selections at the moment of purchase, those who feel cash offers a substantial risk of infection will choose cashless options (Wisniewski et al., 2021). Furthermore, contactless payments like e-wallets may lower the number of people who visit a bank office to withdraw or transfer money during this pandemic (Saha, 2021). Saha (2021) also stated that e-wallets could eliminate social alienation, limit physical contact, and shorten payment queues. Therefore, the authors formulate that

H1 Perceived contactless will have a positive relationship with e-wallet adoption.

Perceived Ease of Use

Perceived ease of use can be defined as the user's belief that using a particular information technology system requires less effort (Daragmeh et al., 2021). Tandon et al (2017) pointed out that ease of use may be characterised as a technology designed in a user-friendly manner, requires little effort from the novice, has a straightforward requirements method, and is simple to navigate and purchase. The perceived ease of use suggests that the ease with which an e-wallet may be used is a critical factor in the technology's adoption (Teo et al., 2020). According to Karim et al (2008), the perceived ease of using e-wallets has influenced young Malaysian adults. Based on the findings, perceived ease of use is connected with a positive and significant behavioural intention to use an e-wallet. Following that, perceived ease of use significantly impacts consumer satisfaction in Ho Chi Minh City, Vietnam (Phuong et al., 2020). Users quickly picked up on how to use the e-wallet.

Additionally, youngsters can quickly learn how to utilise an e-wallet to conduct financial transactions. Additionally, payments made with an e-wallet need the least effort. Transferring funds via an e-wallet platform is simple due to the lack of requirements (Phuong et al., 2020). Additionally, Yang et al (2021) discovered that perceived ease of use significantly influenced users' willingness to use an e-wallet. Yang et al (2021) also suggested that operators of ewallet services, such as banks and online merchants, should prioritise cutting-edge technology that enables consumers to make payments quickly and easily. Yang et al (2021) found that perceive ease of use is vital in affecting consumers' intention to adopt e-wallet. Further, Khoa, (2020) found that perceived ease of use positively impacts the usefulness of the e-wallet payment. Additionally, perceived ease of use dramatically affects customer satisfaction (Phuong et al., 2020). Further, another study found that perceived ease of use mediated the effect of compatibility on the intention to use mobile payment (Leong, Tan, Puah, & Chong, 2020). Previous studies have testified that perceived ease of use significantly has a positive effect on e-wallet adoption (Abdul-Halim et al., 2021; Ariffin et al., 2021; Do & Do, 2020; Malik & Annuar, 2021; Sarfo & Song, 2021). Therefore, the authors hypothesise that,

H2 Perceived ease of use will have a positive relationship with e-wallet adoption.

Perceived Social Influence

Perceived social influence can be defined as the conduct of people who make decisions after being impacted by the acts of others. According to Teo et al. (2020), perceived social impact considerably affects customers' desire to embrace the e-wallet. Furthermore, social influence is a crucial factor in increasing the usage of e-wallets, as demonstrated by a study done by (Chandran and Balaji, 2020). Chandran and Balaji (2020) discovered that social influence substantially affects consumers' behavioural intention to use an e-wallet. The media also plays a significant influence in persuading individuals to use e-wallets. According to the Vy (2019) findings, social media influence significantly impacts consumers' intentions to use mobile wallets.

Social influences such as family or friends influence consumers' attitudes toward using new technology (Yang et al., 2021). Previous research by Prabhakaran and Vasatha (2020) found that social influence substantially affects customers' behavioural intention to use an e-wallet. Yang et al (2021) discovered that perceived social impact is becoming increasingly essential in boosting customers' choice to use e-wallets. It may assist consumers in developing countries in establishing emotional and logical viewpoints. The earlier study by Zhao and Bacao (2021) to analyse consumers' perspectives in the situation of the Covid-19 pandemic

discovered that social influence has a substantial effect on both behavioural intention and perceived benefits of using Mobile Payments as a payment method amid this pandemic. Furthermore, perceived social influence was found to influence e-wallet adoption positively (Do & Do, 2020; Phan et al., 2020; Yang et al., 2021; Yong et al., 2022). Therefore, the authors hypothesise that,

H3 Perceived social influence will have a positive relationship with e-wallet adoption.

Methodology

This study looked into how perceived contactless, ease of use, and perceived social influence impact e-wallet adoption. This survey approach collected information from consumers in Perlis, Malaysia.

Study Design and Sample

The present study is cross-sectional. G*power 3.1.9.4 further confirmed the required minimum sample size for statistical analyses. The G*power analysis calculated that this study required a minimum acceptable sample size of 77. The input parameters for medium effect size and the statistical power level were 0.15 and 0.80, respectively, with the error probability at 5%. Simple random sampling was used whereby 250 questionnaires were distributed to collect data from consumers located in Perlis, Malaysia.

Research Instrument and Measurement Scale

A questionnaire was employed as a data collection instrument in this study. As a result, a sequence of questions has been designed to elicit information from the target respondent. According to Etikan and Bala (2017), a questionnaire allows researchers to obtain a large amount of data from a diverse group of people quickly, conveniently, and efficiently, and the best part is that it is inexpensive. Moreover, the online survey was chosen because it includes useful validation features that ensure the respondent answered all questions completely (Widodo et al., 2019). There are fifteen questions for the independent variables and five for the dependent variable. The Likert Scale was used in this study to determine respondents' answers. The Likert Scale allowed respondents to pick between Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1) based on their point of view. Table 1 summarises the measurements utilised in the questionnaire. Through written consent, participants were informed of the confidentiality and anonymity of their responses.

Table 1

List of Measurements for the Study

-	Sempled Item	Courses
Variables	Sampled Item	Sources
Perceived	1. Contactless payment method can avoid physical	(Saha, 2021;
Contactless	contact at counter payment.	Sahinaslan et al.,
	2. Contactless payment method can reduce the	2021; Zhao &
	spread of Covid-19 virus.	Bacao, 2021)
	social payment method can keep 3. Contactless	
	distancing between the customers.	
	4. Contactless payment method can reduce the	
	number of people visiting the banks to make	
	transactions.	
	5. Contactless payment method can reduce the	
	congestion when queuing.	
Perceived	1. E-wallet is easy to use.	(Phuong et al.,
Ease of Use	2. E-wallet is easy to learn.	2020; Tandon et al.,
	3. E-wallet procedure is simple.	2017; Teo et al.,
	4. E-wallet has a user-friendly interface design.	2020)
	5. E-wallet is easy to be mastered	
Perceived of	1. I used e-wallet after being influenced by my family	(Yang et al., 2021)
Social	and friends.	(Prabhakaran &
Influence	2. I used e-wallet because there are many discounts	Vasatha, 2020)(Vy,
	available when purchasing products.	2019)(Teo et al.,
	3. I used e-wallet because it offers many great deals.	2020)
	4. I used e-wallet after saw it on media.	
	5. I used e-wallet because of the initiative	•
	introduced by the government like e-Tunai Rakyat.	
An adoption	1. E-wallet payment method has faster transaction.	(Akilandeswari,
of Consumers	2. E-wallet payment method is fair and effective.	2021; Daragmeh et
	3. E-wallet is my favourite payment method during	al., 2021;
	Covid-19 pandemic.	Pachpande &
	4. E-wallet can be the substitute for the existing	Kamble, 2018;
	payment method during Covid-19 pandemic.	Voronenko, 2018)
	5. E-wallet is a payment method that I intend to use	. ,
	in future.	

Data Collection and Response Rate

This study targeted consumers in Perlis and permitted respondents aged 18 and over to participate. It is only provided online, using Google Forms to produce the questions. A total of 250 responses were gathered, and each response was usable. The researcher needs two weeks to attain the desired response rate. The acquired data is subsequently analysed using the SPSS and SmartPLS software packages.

Data Analysis

To begin, descriptive statistical analyses were conducted to characterise the sample. Convergent and discriminant validity was confirmed by analysing the measurement model. We examined the construct loading, composite reliability (CR), and average variance extracted (AVE) to validate convergent validity. The HTMT criterion was used to determine the discriminant validity. Meanwhile, the structural model was used to test hypotheses about the relationships between the research variables. The independent variables' path coefficients and statistical significance were determined using SmartPLS with 5000 bootstraps resamples.

Results

Demographic Characteristics

Among the 250 questionnaires collected, most of the participants were male (64.8%), whereas the remaining 35.2 percent were female. The most significant number of participants in terms of ethnicity were from Malay at 84 percent. The respondents majority were aged between 18 and 25 years old (84.1%). In addition, most of the respondents are grouped in B40 household income (household income less than RM4,850) at 91.2 percent, followed by M40 (household income RM4,851 to RM10,959) at 7.2 percent, and T20 (household income RM10,960 and above) at 1.2 percent. Based on the data obtained, the number of respondents is sufficient and has enough experience to answer the questions.

Measurement Model Results

To assess convergence validity, factor loadings, composite reliability (CR), and average variance extracted (AVE) were determined. As shown in Table 2, all indicators fell within the (0.697) to (0.900) range, satisfying the Hair, Babin, and Anderson (2010) minimum cut-off value of 0.5. Similarly, all latent components exhibited sufficient convergent validity, with AVE values ranging from (0.582) to (0.725). Meanwhile, the CR values for the latent variables (0.874–0.929) were more than Hair et al. (2010) threshold value of 0.7, indicating considerable homogeneity. As a result, the measurement model is considered reliable and has a high degree of convergent validity. The results are summarised in Table 2.

Table 2

Results of the measurement model

Model construct	Items	Loadings	CR	AVE
Perceived	Contact1	0.753	0.874	0.582
Contactless	Contact2	0.697		
	Contact3	0.794		
	Contact4	0.726		
	Contact5	0.836		
Perceived Ease of	Ease1	0.775	0.918	0.693
Use	Ease2	0.826		
	Ease3	0.819		
	Ease4	0.869		
	Ease5	0.870		
Perceived of Social	Social1	0.827	0. 929	0.725
Influence	Social2	0.892		
	Social3	0.894		
	Social4	0.900		
	Social5	0.732		
E-Wallet Adoption	Adopt1	0.831	0.916 0.686	0.686
	Adopt2	0.845		
	Adopt3	0.875		
	Adopt4	0.790		
	Adopt5	0.797		

Our model discriminant validity (HTMT ratio of correlations between study variables) was evaluated in the current study to determine whether or not our model was discriminantly valid. Following Gold, Malhotra, and Segars (2011) threshold value of 0.90, all HTMT values (which ranged from 0.627 to 0.834) fell below this value, indicating the presence of discriminant validity (Gold et al., 2011).

Table 3

Heterotrait-monotrait (HTMT) ratio of correlations

	E-Wallet	Perceived	Perceived Ease	Perceived Social
	Adoption	Contactless	of Use	Influence
E-Wallet Adoption				
Perceived	0.627			
Contactless				
Perceived Ease of	0.834	0.676		
Use				
Perceived Social	0.729	0.604	0.697	
Influence				

As illustrated in Figure 1, the R² values for perceived contactless are 0.109, for perceived ease of use are 0.489, and for perceived social influence are 0.299, implying that 62.4 percent of the variance in e-wallet adoption can be explained by perceived contactless, perceived ease of use, and perceived social influence.

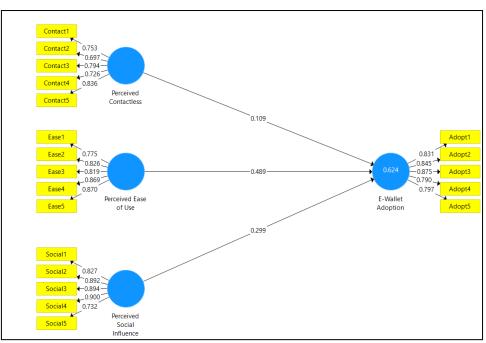


Figure 1. Measurement model of the study

4.3 Structural model results

According to the bootstrapping results (see Table 4), there are positive relationships between perceived ease of use and e-wallet adoption and perceived social influence and e-wallet adoption. Meanwhile, a negative relationship between perceived contactless and e-wallet adoption has been discovered.

Table 4

Results of Structural Model

Paths	Std Beta	Standard	T values	Decisions
		Error		
Perceived Ease of Use \rightarrow E-Wallet	0.489	0.124	3.939**	Supported
Adoption				
Perceived Contactless \rightarrow E-Wallet	0.109	0.133	0.816*	Not
Adoption				Supported
Perceived Social Influence → E-	0.299	0.101	2.961**	Supported
Wallet Adoption				

**p<0.01, *p<0.05, bootstrapping (n=500)

Discussion

The use of e-wallets among the community in Malaysia is gaining popularity. Widespread adoption can ensure that industry players in the retail sector are always in line with the development of digital technology, especially in the aspect of cashless and contactless digital payments. The use of e-wallets in Malaysia has increased by 131% to over 600 million transactions in 2020 (The Edge Market, 2021). This shows that the percentage of Malaysians using cash for payment has decreased by 11%, which is 78% compared to before the covid-19 pandemic which was 89%. Statistics show that the digitization of cashless payments has begun to be adopted and is expected to become a culture of the people in the near future. The overall aim of this study was to examine the effect of perceived contactless, perceived ease

of use and perceived social influence on the adoption of an e-wallet as a payment mechanism during the Covid-19 epidemic. Our data indicate that perceived ease of use and perceived social influence are positively associated with e-wallet adoption. Meanwhile, perceived contactless has a negative effect on e-wallet adoption. The corresponding results supported H2 and H3, but not H1.

According to the findings of this study, perceived ease of use has a positive link with the use of an e-wallet as a payment mechanism during the Covid-19 epidemic. The more user-friendly the e-wallet service, the more people will use it as a payment option. This finding is consistent with prior research that found perceived ease of use influences e-wallet adoption (Karim et al., 2008; Phuong et al., 2020; Teo et al., 2020; Yang et al., 2021). According to Teo et al (2020) research, the ease of use of e-wallets is the primary motivator for consumers to adopt the technology. As a result, the increased use of e-wallets as a payment mechanism is due to consumers' ease of use and understanding. Furthermore, as sophisticated e-payment systems become more convenient, consumers are increasingly interested in using them, particularly amid the Covid-19 pandemic. Again, according to the MasterCard Impact Study 2020, Malaysia leads other Southeast Asian nations to adopt mobile or digital wallets by 40 percent, followed by the Philippines, Thailand, and Singapore with 36 percent, 27 percent, and 26 percent, respectively (Star, 2021). The data suggest that perceived ease of use is one of the reasons Malaysian consumers chose to use an e-wallet, as found in this survey.

However, it was discovered that perceived contactless had a negative relationship with the use of an e-wallet as a payment method during the Covid-19 epidemic. This could be due to security concerns. Certain types of cards do not require a security number to conduct a transaction. It puts you in danger of having your card stolen or being used in the event of a loss. As a result, users continue to be apprehensive about utilising e-wallets. Additionally, some establishments or business centres still do not accept cards and are not prepared to implement this service. This effectively eliminates contactless payment transactions. As a result, contactless transactions will be disrupted, and customers who use e-wallets will have a negative perception.

During the Covid-19 epidemic, perceived social influence was found to significantly affect the use of an e-wallet as a payment mechanism. This finding is consistent with earlier research (Prabhakaran & Vasatha, 2020; Revathy & Balaji, 2020; Teo et al., 2020; Vy, 2019; Widodo et al., 2019; Yang et al., 2021; Zhao & Bacao, 2021). According to Vy (2019), the media significantly influences customers' decision to adopt an e-wallet. This is expected, given the increasing importance of smartphones and internet users now spend more than six hours online (GlobalWebIndex, 2019). The media would directly or indirectly attract and convince internet users to adopt the e-wallet through persuasive marketing. Apart from that, Revathy and Balaji (2020) discovered that social influence plays a significant role in encouraging the adoption of e-wallets. For instance, Yang et al (2021) discovered that family and friends could significantly influence someone's decision to accept new technologies. Individuals will gain confidence and faith in new technology after witnessing their family and friends use it without encountering any problems or obstacles.

Motivation of the Study

The study of the direct effects of perceived ease of use, perceived contactless, and perceived social influence on e-wallet adoption in the retail industry adds to the existing body of knowledge in this area. The findings are particularly motivational and theoretically significant since they provide empirical evidence for the relationship between the identified variables

and e-wallet adoption. As yet, there has been no empirical investigation to the combined factors (perceived ease of use, perceived contactless, and perceived social influence) to predict consumer intention to adopt e-wallet, especially in Malaysia during Covid-19 pandemic. Furthermore, there are practical implications for retail store owners and managers. Managers can use the findings of this study to gain better recognition and a long-term competitive edge. The findings of this study also suggest that managers should be aware of the implications of e-wallet adoption factors in the Malaysian environment, as various variables were found to be relevant in influencing e-wallet use.

Contributions

Cashless digitalized payments were increasingly adopted when the covid-19 pendemic hit. It is expected to continue to grow and become the culture of the people in the future. This study examines the factors that influence consumers to use an e-wallet as a payment option during the Covid-19 pandemic. New variables are suggested, such as perceived contactless and identifying e-wallet adoption intention during the Covid-19 pandemic and concentrating more on their perceptions toward e-wallets. The empirical data in this study can help the founder or developer of an e-wallet identify the causes behind the unexpected increase in e-wallet usage. They can be more attentive and improve the application to ensure that consumers continue to use it. Therefore, identifying the factors of e-wallet usage is very important to understand the customer's perspective so that any important decisions can be made.

Limitations

Despite its contributions, this study has limitations. To begin, because this study focused exclusively on consumers in Northern area in Malaysia, the findings may not be generalisable as a whole. Thus, the same research might be expanded to cover all of Malaysia, where consumer characteristics may differ in the future. Additionally, larger samples from the same area might improve the findings' generalizability. Due to the ongoing Covid-19 outbreak, the researcher chose to collect data on respondents' perceptions of e-wallet acceptance through an online survey. A web-based survey makes it more difficult for researchers to reach target respondents, particularly the elderly.

Conclusion

In conclusion, the findings of this study presented empirical data indicating the favourable benefits of perceived ease of use and perceived social influence on e-wallet adoption. The respondents agreed that they chose the e-wallet due to its perceived ease of use because most consumers had a smartphone, making it simple for them to make a payment through it. Consumers discovered that the e-wallet is simple, even for inexperienced users. To use the e-wallet, customers merely need to download the application and sign up. Furthermore, the consumers believed that social influence is essential in persuading people to use an e-wallet as a payment option. As a result of the Covid-19 pandemic, many everyday activities have changed, and people must adapt to the new normal culture.

References

Abdul-Halim, N. A., Vafaei-Zadeh, A., Hanifah, H., Teoh, A. P., & Nawaser, K. (2021). Understanding the determinants of e-wallet continuance usage intention in Malaysia. *Quality and Quantity*, (0123456789).

- Aji, H. M., Berakon, I., & Husin, M. (2020). COVID-19 and e-wallet usage intention: A multigroup analysis between Indonesia and Malaysia. *Cogent Business & Management*, 7(1).
- Akilandeswari, M. P. (2021). A Study on usage of digital payment system during covid 19. *Turkish Journal of Computer and Mathematics Education*, *12(11)*, 5813–5815.
- Alwi, S., Nadia, M., Salleh, M., Alpandi, R. M., & Farazh, F. (2021). Fintech As Financial Inclusion: Factors Affecting Behavioral Intention To Accept Mobile E-Wallet During Covid-19 Outbreak. *Turkish Journal of Computer and Mathematics Education*, 12(7), 2130–2141.
- Ariffin, S. K., Muhammad, A. M., & Zhang, Q. (2021). Understanding the consumer's intention to use the e-wallet services. *Spanish Journal of Marketing*, *25*(3), 446–461.
- Daragmeh, A., Sagi, J., & Zeman, Z. (2021). Continuous Intention to Use E-Wallet in the Context of the COVID-19 Pandemic : Integrating the Health Belief Model (HBM) and Technology Continuous Theory (TCT). *Journal of Open Innovation: Technology, Market,* and Complexity, 7, 132.
- Do, N. B., & Do, H. N. T. (2020). An investigation of Generation Z's Intention to use Electronic Wallet in Vietnam. *Journal of Distribution Science*, *18*(10), 89–99.
- Etikan, I., & Bala, K. (2017). Sampling and Sampling Methods. *Biometric & Biostatistics* International Journal, 5(6).
- GlobalWebIndex. (2019). *Digital vs. Traditional Media Consumption. Trend Report*. Retrieved from

https://www.globalwebindex.com/hubfs/Downloads/Digital_vs_Traditional_Media_C onsumption%022019.pdf

- Gold, A. H., Malhotra, A., & Segars, A. H. (2011). Knowledge management: An organizationmal capabilities perspective. *Journal of Management Information Systems*, *18*(1), 185–214.
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). Multivariate Data Analysis: A Global Perspective. In *Multivariate Data Analysis: A Global Perspective* (7th ed., Vol. 7th). New Jersey: Pearson Prentice Hall.
- Kamel, H. (2019). *Malaysia is fast becoming a cashless society*. Retrieved from https://themalaysianreserve.com/2019/09/20/malaysia-is-fast-becoming-a-cashless-society/
- Karim, M. W., Haque, A., Hossain, M. A., & Anis, M. Z. (2008). Factors Influencing the Use of E- wallet as a Payment Method among Malaysian Young Adults. *Journal of International Business Studies*, 3(2), 01–12.
- Khoa, B. T. (2020). The role of mobile skillfulness and user innovation toward electronic wallet acceptance in the digital transformation era. 2020 International Conference on Information Technology Systems and Innovation, ICITSI 2020 Proceedings, 30–37.
- Leong, C., Tan, K., Puah, C.-L., & Chong, S.-M. (2020). Predicting mobile network operators users m-payment intention. *European Business Review*, 33(1).
- Lim, J. (2021). Real-time digital payments are winning the hearts of Malaysians. *Techwire Asia*. Retrieved from https://techwireasia.com/2021/07/real-time-digital-payments-arewinning-the-hearts-of-malaysians/
- Malik, A. N. A., & Annuar, S. N. S. (2021). The Effect of Perceived Usefulness, Perceived Ease of Use, Reward, and Perceived Risk toward E-Wallet Usage Intention. *Eurasian Studies in Business and Economics*, *17*, 115–130.
- Ojo, A. O., Fawehinmi, O., Ojo, O. T., Arasanmi, C., & Tan, C. N.-L. (2022). Consumer usage intention of electronic wallets during the COVID-19 pandemic in Malaysia. *Cogent*

Business & Management, 9(1).

- Pachpande, B. R., & Kamble, A. A. (2018). Study of E-wallet Awareness and its Usage in Mumbai. *Journal of Commerce and Management Thought*, 9–1, 33–45.
- Persada, S. F., Dalimunte, I., Nadlifatin, R., Miraja, B. A., Redi, A. A. N. P., Prasetyo, Y. T., ... Lin, S. (2021). Revealing the behavior intention of tech-savvy generation z to use electronic wallet usage: A theory of planned behavior based measurement. *International Journal* of Business and Society, 22(1), 213–226.
- Phan, T. N., Ho, T. V., & Le-Hoang, P. V. (2020). Factors Affecting the Behavioral Intention and Behavior of Using E–Wallets of Youth in Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(10), 295–302.
- Phuong, N. N. D., Luan, L. T., Dong, V. Van, & Khanh, N. L. N. (2020). Examining Customers ' Continuance Intentions towards E-wallet Usage: The Emergence of Mobile Payment Acceptance in Vietnam. *Journal of Asian Finance, Economic and Business, 7*(9), 505–516.
- Prabhakaran, S., & Vasatha, S. (2020). Effect of social influence of intention to use mobile wallet with the mediating effect of promotional benefits. *Journal of Xi'an University of Architecture & Technology*, *12(2)*, 3003–3019.
- Puasa, S., Jiale, T., Gazali, H. M., & Ayub, N. (2021). Consumers' behavioural intention to use e-wallet during the pandemic of covid-19: Applying the unified theory of acceptance and use of technology (UTAUT). *Labuan Bulletin of International Business & Finance*, 19(2), 64–78.
- Puriwat, W., & Tripopsakul, S. (2021). Explaining an adoption and continuance intention to use contactless payment technologies: During the covid-19 pandemic. *Emerging Science Journal*, 5(1), 85–95.
- Revathy, C., & Balaji, P. (2020). Determinants of Behavioural Intention on E-Wallet Usage: An Empirical Examination in Amid of Covid-19 Lockdown Period. *International Journal of Management*, *11(6)*, 92–104.
- Saha, R. (2021). Digital Payments Usage During Covid19 Pandemic With Special Reference To E-Wallet Users in Guwahati City. *International Journal of Multidiciplinary Education Research*, *514*(1), 2018–2022.
- Sahinaslan, O., Sahinaslan, E., & Gunes, E. (2021). Review of the contributions of contactless payment technologies in the COVID-19 Pandemic Process. *AIP Conference Proceedings*, 2334(March).
- Sarfo, C. A., & Song, H. (2021). E-commerce adoption within SME's in Ghana, a tool for growth? *International Journal of Electronic Business*, *16*(1), 32–51.
- Star, T. (2021). *Malaysia leads mobile wallet usage in South-East Asia | The Star*. Retrieved from https://www.thestar.com.my/business/business-news/2020/06/24/malaysialeads-mobile-wallet-usage-in-south-east-asia
- Tandon, U., Kiran, R., & Sah, A. (2017). Analyzing customer satisfaction: users perspective towards online shopping. *Nankai Business Review International*.
- Teo, S. C., Law, P. L., & 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.
- The Economic Times. (2021). *Definition of E-wallets*. Retrieved from https://economictimes.indiatimes.com/definition/e-wallets
- The Edge Market. (2021). *e-wallet usage increased by 131% in 2020*. Retrieved from https://www.theedgemarkets.com/article/ewallet-usage-increased-131-2020
- Voronenko, D. (2018). *Determining Factors of Adoption of Digital Device Wallets by Russian Consumers*. Retrieved from

https://dspace.spbu.ru/bitstream/11701/12245/1/Voronenko_Dmitrii_Olegovich_Mi M_2018.pdf

- Vy, T. N. (2019). Factors Influencing Consumer's Intention to Adopt Mobile Wallet in Ho Chi Minh City. Retrieved from https://www.theseus.fi/bitstream/handle/10024/169099/Final Thesis.pdf?sequence=2
- Widodo, M., Irawan, M. I., & Sukmono, R. A. (2019). Extending UTAUT2 to Explore Digital Wallet Adoption in Indonesia. 2019 International Conference on Information and Communications Technology, 878–883.
- Wisniewski, T. P., Polasik, M., Kotkowski, R., & Moro, A. (2021). Switching from cash to cashless payments during the COVID-19 pandemic and beyond. *SSRN*, (337).
- Yang, M., Mohiuddin, M., Che, N. N., & Zainol, N. R. (2021). Cashless Transactions : A Study on Intention and Adoption of e-Wallets. *Sustainability*, *13*, 1–18.
- Yong, Ming, K. L., & Jais, M. (2022). Factors Affecting the Intention to Use E-Wallets During the COVID-19 Pandemic. *Gadjah Mada International Journal of Business*, 24(1), 82–100.
- Zhao, Y., & Bacao, F. (2021). How does the pandemic facilitate mobile payment? An investigation on users' perspective under the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, *18*(3), 1–22.