

Preliminary Study on the Perception of E-Wallets Usage by Malaysian Online Users

Nur Amalina Diyana Suhaimi^{1*}

¹Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia (UTM), Malaysia.

ABSTRACT

E-wallet is a cashless payment method performed through applications. With wider accessibility to the Internet, the usage of e-wallets has increased and is believed to continuously grow among Malaysians. This preliminary study has been conducted on Malaysian online users to explore (i) background of Malaysian e-wallet users, (ii) their level of awareness, and (iii) their preference and perception on the usage of e-wallets in daily life. The self-administered survey through Google Form has been adapted based on two different surveys conducted by previous researchers. The convenience sampling method has been used so participation in the study is voluntary. A total of 119 responses from online users were collected, which found that 74% of the respondents know and use e-wallets. Majority of the users prefer to use it to pay for food and beverages. Other than that, based on the relationship testing between the users' intention to continue to use an e-wallet, it depends on the benefit offered by the provider. They are likely to recommend the e-wallet platform to their relatives based on the perceived easiness factors. It is also determined by the other groups of respondents that the main reason for them not using e-wallets is due to the concerned that it will lead to transaction fraud. In conclusion, it is crucial for e-wallet providers in Malaysia to continuously improve their services by identifying and fulfilling the needs of their users to ensure their sustainability in the fintech industry.

Keywords: Cashless, E-Wallets, Malaysians, Online Users, Perception.

1. INTRODUCTION

Electronic wallet (e-wallet), also known as digital wallet, is a type of electronic card which enables payments to be made through applications on smartphones, tablets, and notebooks. To start making such transactions, users must first install an e-wallet application in their device, fill in all the details needed for registration and reload the e-wallet account using online banking or credit card. E-wallet users could link their e-wallet to their bank account for easy account reload (Subaramaniam et al., 2020). It is crucial that they have internet access for the money to be transferred to other parties. Next, to ensure that the security of the e-wallet account is protected, the user must set the e-wallet account with a unique key password. The password will help prevent the account from getting hacked. After that, the user needs to scan the QR code provided by the business store and key in the specific amount of payment required for each cashless transaction. This straightforward payment method has made the usage of e-wallets easier and hassle-free, and users no longer need to carry around cash to pay for expenses and purchases (Blockchains, 2018; Tan, 2019).

In Malaysia, the usage of e-wallets has increased and continues to grow among Malaysians as a way to replace the traditional method of paying for goods and services with cash (Haroon, 2020). With numerous e-wallet providers such as Boost, GrabPay, Touch 'N Go (TNG), MPay, Razer Pay,

* Corresponding Author: nuramaliniadiyana@graduate.utm.my

BigPay and FavePay starting to bloom in the fintech industry, e-wallet users have a wide range of options to choose from according to their preferences (Pikri, 2018).

In addition, a significant number of retailers with physical stores in the country have begun to accept e-wallet as a payment method. According to Cheng (2019), more retailers began offering an e-wallet payment facility to encourage their customers to pay for their goods through e-wallets. Besides retailers, it has been found that 7% of e-wallet transactions in 2018 involved online shopping platforms (e-commerce), as reported by Morgan (2019), and the percentage is predicted to continuously grow within the next three years.

In line with the Malaysian vision of building a cashless society, the government introduced *e-Tunai Rakyat* incentive in early January 2020. An amount of RM30.00 per e-wallet account was distributed through e-wallet providers such as Boost, GrabPay, and Touch 'N Go (TNG) to all Malaysians aged 18 and above who earned less than RM100,000.00 a year and owned a smartphone (Abas, 2020). The ultimate aim of this initiative was to encourage Malaysians – both consumers and business providers (small businesses and retailers) – to make and accept digital payments for business transactions.

Cashless payment is extensive and wide-ranging, as consumers can buy food and groceries as well as cinema and flight tickets, pay bills and tolls, and even fuel their cars (Rosnidah et al., 2019). However, according to a study by Mun, Khalid, and Nadarajah (2017), the familiarity of consumers in Malaysia with cashless payment services is still in its infancy. Therefore, this preliminary study aims to explore the: (i) background of Malaysian e-wallet users, (ii) their level of awareness, and (iii) their preference on the usage of e-wallets in daily life. It also examines why some Malaysians who have already heard of e-wallets have yet to use it.

2. LITERATURE REVIEW

Ahuja and Joshi (2018) highlighted the significance of factors which affected customer perception towards e-wallets such as easiness, benefit, user trust, and self-efficacy. However, due to the limitations of small sampling, the results could not be generalised. Pousttchi and Wiedemann (2007) studied the key factors which influence customers' intention to perform mobile payments. It found that perceived usefulness and perceived ease of use had a significant impact on the intention of customers to use mobile payment in a business transaction. This is supported by Aydin and Burnaz (2016) who found that the attitude of mobile wallet users in Turkey was highly influenced by the interface of the application system. However, the study's finding that the security feature was not a key factor must be further explored since it is anticipated that better security for mobile payments will increase their perceived trustworthiness for mobile payment providers (Pousttchi and Wiedemann, 2007; Aydin and Burnaz, 2016; Akhila Pai, 2018).

Rosnidah et al. (2018) found that comfort using the applications, users' intentions, and social influence had a highly significant impact on the use of mobile payments. The researchers recommended that e-wallet providers continuously improve the applications to increase acceptance by users. The findings of a study by Karim et al. (2020), which focused specifically on e-wallet users aged 18 to 39, show a significant contribution by factors such as usefulness, ease of use, privacy and security on the intention of users to use e-wallets in making payments. Meanwhile, Subaramaniam et al. (2020) found an almost equal distribution of 40% in the percentage of respondents who preferred paying for goods using cash (36.7%) or e-wallets (38.9%). The remaining respondents (20%) preferred making payments using debit or credit cards. The majority of those who preferred to pay in cash were older respondents who believed that cash transactions did not require the payment of additional fees such as for e-wallets and debit or credit cards. In contrast, e-wallet users are mostly youngsters who find that e-wallets offer convenience and rewards such as cashback, free items and discounts. This is supported by

Akhila Pai (2018) who stated that most respondents who are e-wallet users agree that they receive many benefits from using e-wallets and 94.45% of them are satisfied with the services rendered by e-wallet providers.

According to Shukla (2016), in India, consumer demand for mobile wallets is high (85%) due to the benefits given, such as coupons and loyalty cards, compared to traditional cash payment. The researcher also concluded that digital payment would become the new preferred mode of transaction among the country's citizens due to an increase in the number of smartphone users and its convenient usage. The researcher recommended that business marketers grab the opportunity to create a new digital experience for customers by strengthening their branding and improving their marketing strategies.

Malaysia has shown significant progress in moving towards becoming a cashless society based on three reform measures in 2013, 2015, and 2018 (Wei and Tsu, 2018). By carrying out mobile payments, the usage of cash can be reduced further. The usage of cheques has been decreasing annually by 42% since 2011 with replacement by electronic fund transfers. In addition, payment by card has been growing by six times more and the number of point-of-sale (POS) terminals has doubled from 2017. This has proven that the usage of cashless payments has been expanding across the country.

3. METHODS

This preliminary study employs a quantitative method for data collection, which is a self-administered questionnaire. The questionnaire was adapted from two different surveys conducted by Ahuja and Joshi (2018), and Akhila Pai (2018). The questions in the current survey were chosen from these two earlier surveys due to their simplicity and ease of understanding for questions related to e-wallets. The questions were presented in two parts: Part A explores the demographic profile of the respondents while Part B presents close-ended questions with a list of answers to choose from.

The questionnaire was developed in a web-based survey form using Google Forms. The data was collected online as the respondents chosen were Malaysian Internet users. The survey form was distributed and shared to the public via e-mail and social media such as Twitter, Facebook, LinkedIn, and WhatsApp in order to receive as many responses as possible. The sampling method used for this study was convenience sampling since the study participation is open and voluntary to all online users who click on the survey links. The duration of data collection was one month, in January 2020.

According to Roscoe (1975), the appropriate rule of thumb sample size is greater than 30 and smaller than 500 for most research. Since the study collected responses from 119 respondents, the data is sufficient to be processed and analysed. A pie chart was auto-generated by Google Form for all demographic data in Part A on the background of the Malaysian e-wallet users. The data in Part B were analysed by measuring the (i) awareness level and distributions of e-wallet usage, (ii) user preferences in the e-wallet usage, (iii) perception in the e-wallet usage between groups and relationship testing for group 1, by using the Statistical Package for Social Sciences (SPSS) Version 22. The following research model shown in Figure 1 is proposed based on the previous literature studies.

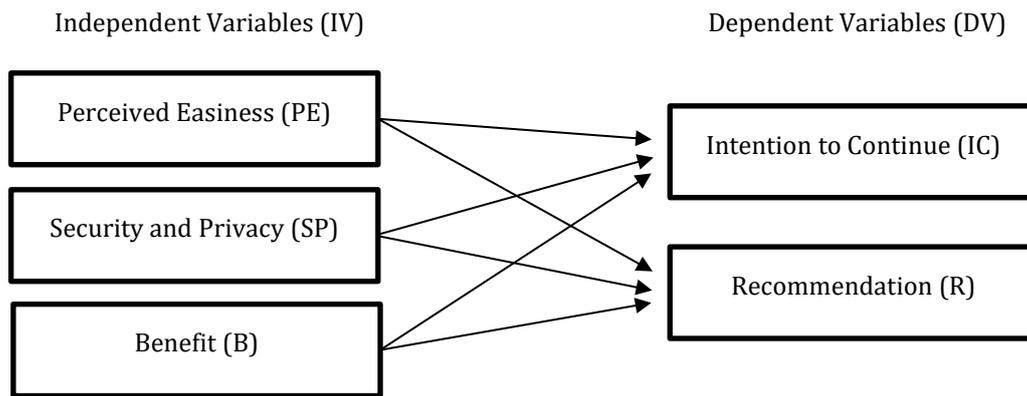


Figure 1. Proposed Research Model in the Relationship Testing for Group 1.

4. RESULTS AND DISCUSSIONS

4.1 Demographic Analysis

Based on the sample data collected, it has been found that out of 119 responses, 67.20% (n = 80) of the respondents are female while 32.80% are male respondents (n = 39), as shown in Figure 2. Meanwhile, Figure 3 shows that the majority of respondents are in the age group of 25 to 34 years old (n = 82, 68.90%), followed by those aged 18 to 24 years old (n=18, 15.10%) and 35 to 44 years old (n=13, 10.90%). The remaining six respondents are less than 18 as well as 45 and above. From this demographic finding, it can be concluded that the majority of sample respondents are young adults. This finding is similar to those of Ahuja and Joshi (2018), Akhila Pai (2018), and Rosnidah et al. (2018).

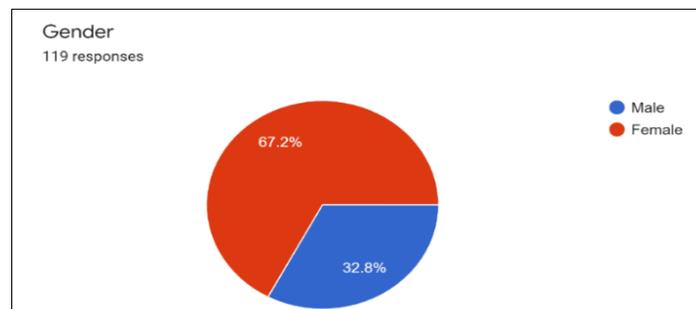


Figure 2. Respondents' Gender.

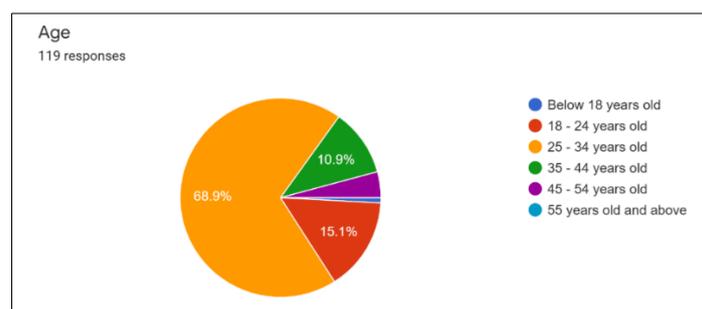


Figure 3. Respondents' Age Group.

4.2 Awareness Level and Distributions of E-wallet Usage

Next, Table 1 shows that there are four groups of respondents with different levels of awareness about e-wallet payment gateways. Most of the respondents belong to the group who use e-wallets to make payments (n = 88, 73.90%). Another 16.80% (n = 20) respondents had never used e-wallets and 8.40% (n = 10) respondents had used an e-wallet only once in conducting a payment transaction. Only one respondent had heard about e-wallets for the first time.

Table 1 Awareness of E-wallet Payment Gateways

Awareness Level	Frequency (n)	Percentage (%)	Group
Heard about it and used it.	88	73.90	1
Heard about it but never used it.	20	16.80	2
Heard about it and used it only once.	10	8.40	3
Heard about it for the first time.	1	0.80	Other
Total	119	100.0	

In answering one of the objectives in this study, further exploration was conducted on the first group of respondents who “heard about it and used it” to find out their preferences in using e-wallets. Figure 4 shows almost equal distributions in the number of e-wallet applications available in the respondents’ smartphone or computer. Of the 88 respondents, 25% have one e-wallet application, 26.1% have two e-wallet applications, and 23.9% have three e-wallet applications. 25% of respondents with more than three e-wallet applications use different e-wallets for different payment transactions.

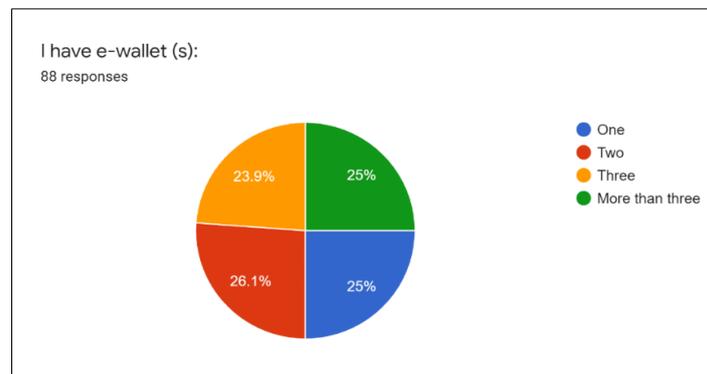


Figure 4. Distribution of the Number of E-wallets Available in the Respondents’ Smartphone or Computer.

Since there are various e-wallet applications available in the market, it is interesting to identify which application(s) is known to and extensively used by the respondents. As shown in Figure 5, it has been identified that the Touch n Go e-wallet (86.4%) is the most popular e-wallet application among the respondents, followed by GrabPay (62.5%), and Boost (37.5%). Other e-wallet providers may study the marketing strategies of these top three e-wallet providers in attracting people to use their applications. This finding is slightly different from that of Subaramaniam et al. (2020) who found that most users preferred GrabPay compared to other e-wallets.

I know and currently use this e-wallet (s):

88 responses

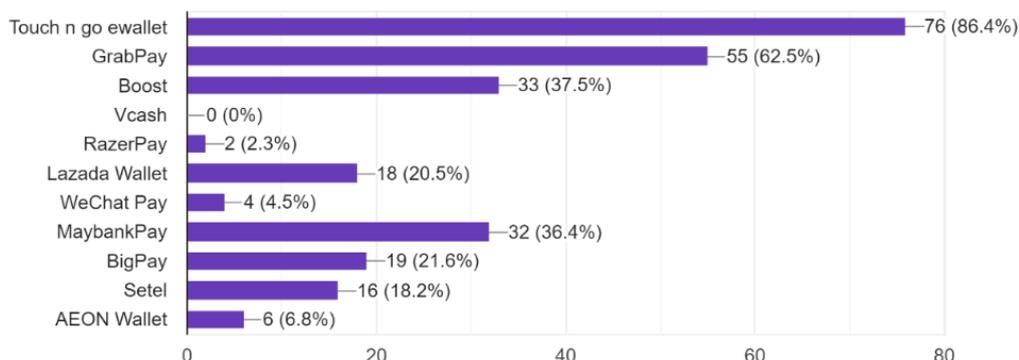


Figure 5. Distribution of Usage of Different E-wallet Applications.

4.3 Preferences in the E-wallet Usage

In studying users' preferences concerning e-wallets, a five Likert-scale measurement has been used with 1 = least preferred and 5 = most preferred. Table 2 which was sorted from high to low scores shows that among the 88 respondents who are e-wallet users, most of them use e-wallets to pay for food and beverages with an average score of 4.25 (sd = 1.157), followed by movie tickets and entertainment (mean = 3.76, sd = 1.546), and toll payment with an average of 3.56 (sd = 1.734). The least preferred payment is for utility bills (mean = 2.80, sd = 1.730), hotel or flight tickets for travel (mean = 2.63, sd = 1.663), and transfer of money to other recipients (mean = 2.58, sd = 1.707). The e-wallet is least preferred for these transactions probably because of the use of other payment methods such as online banking or credit card.

Table 2 Preference in Using E-wallets for Payment Transactions

Category	Group 1 (n=88)	
	Mean	Standard Deviation (sd)
(1) Food and beverages	4.25	1.157
(2) Movie tickets/Entertainment	3.76	1.546
(3) Toll payment	3.56	1.734
(4) Online shopping/Vouchers	3.50	1.647
(5) Transportation/Parking/Fuel	3.49	1.702
(6) Mobile Reload	3.13	1.727
(7) Utility bill	2.80	1.730
(8) Travel (Hotel/Flight)	2.63	1.663
(9) Transfer money	2.58	1.707

4.4 Perception in the E-wallet Usage between Groups and Relationship Testing

Table 3 shows the perception of e-wallet usage by the first group of e-wallet users which sorted from high to low scores. By using the five Likert-scale measurement ranging from 1 = strongly disagree to 5 = strongly agree, it has been found that three main items scored an average score of more than 4.30. These are ease of making payment (mean = 4.45, sd = 0.829), users knowing the benefits (mean = 4.43, sd = 0.785) and enhanced effectiveness of the e-wallet (mean = 4.34, sd = 0.921). However, respondents' concern for security and privacy in using e-wallets must be highlighted due to the low mean scores of 3.74 and 3.61 respectively.

Table 3 Respondents' Perception of the Use of E-wallets

Perception	Group 1 (n=88)		Variables
	Mean	Standard Deviation (sd)	
(1) Using e-wallets makes it easier for me to conduct payment transactions.	4.45	0.829	PE
(2) I know the benefits of using e-wallets.	4.43	0.785	B
(3) Using e-wallets would enhance my effectiveness in conducting payment transactions.	4.34	0.921	PE
(4) I will continue using e-wallet payment gateways.	4.24	0.788	IC
(5) I would recommend my friends, family, and colleagues to use e-wallets.	4.09	0.978	R
(6) I believe online transactions are secure through e-wallets.	3.74	1.208	SP
(7) I trust the ability of e-wallets to protect my privacy.	3.61	1.299	SP

Following the above findings, further exploration of the relationship testing between the variables by performing the regression analysis has been conducted. The relationship between the independent variables from Perceived Easiness (PE), Security and Privacy (SP), and Benefit (B) have been tested on the two dependent variables, (i) Intention on the Continuity to use the e-wallet (IC), and (ii) Recommendation to family and peers (R).

The models have been analysed and the summarized result as shown in Table 4. It is found that the R² score of Security and Privacy on the intention on the continuity to use the wallet is the highest with 60.9% compared to the variables of Perceived Easiness (36.50%), and 1.82% for the variable Benefit. However, the relationship was found only significant between the Benefit and the intention to continue to use the e-wallet (p-value < 0.005). This concludes that although the security matters to the users, due to benefits offered by the e-wallet, it contributes to the significant relationship on the e-wallet users' intention to continue to use the platform while making payment.

Next, for the Recommendation factors, at 5% significant level, it can be concluded that all variables were significantly associated but the highest R² shown on Security and Privacy (50.1%), followed by the Perceived Easiness (41.7%), and finally is Benefit with the lowest percentage of 1.58%. Thus, e-wallet providers shall focus on the perceived easiness factors in increasing the contentment among the current users for them to spread the words about the e-wallet to their relatives and friends.

Table 4 Summary of Relationship Testing

Model	Relationship in the Perception	R ²	p-value	Conclusion
1	PE -> IC	36.5%	0.2080	Not Supported
2	SP -> IC	60.9%	0.2505	Not Supported
3	B -> IC	1.82%	0.0000	Supported
4	PE -> R	41.7%	0.0410	Supported
5	SP -> R	50.1%	0.0195	Supported
6	B -> R	1.58%	0.0000	Supported

Apart from studying the perception of current e-wallet users (group 1), it is also important to discover the perception or main reason for not using e-wallets of the second and third groups of respondents who "heard about it but never used it" and "heard about it and used it only once". As

shown in Table 5, both groups are concerned about the potential for transaction fraud through the use of e-wallets which was indicated by the highest mean score (Group 2 mean = 4.05, sd = 1.146 and Group 3 mean = 3.50, sd = 1.434). Other than that, the respondents also worry about the confidentiality of their data when managed by e-wallet providers. These findings are aligned with the responses from the first group of respondents. This indicates that e-wallet providers need to act with a serious emphasis on both matters in order to earn the trust of existing and potential e-wallet users.

Table 5 Respondents' Perception or Reasons for Not using E-wallets

Perception	Group 2 (n=20)		Group 3 (n=10)	
	Mean	Standard Deviation (sd)	Mean	Standard Deviation (sd)
(1) I am concerned that e-wallets will lead to transaction fraud.	4.05	1.146	3.50	1.434
(2) I am concerned that my personal information may not be kept confidential while using the e-wallet.	4.00	1.257	3.30	1.494
(3) The people around me do not use the e-wallet.	2.95	1.504	2.90	1.287
(4) It is troublesome.	2.45	0.999	2.40	1.265
(5) It is difficult to learn how to use the e-wallet.	2.20	1.281	2.30	1.337
(6) My family, friends and colleagues do not recommend that I use e-wallets.	2.20	1.24	2.30	0.823
(7) E-wallets are not available when I want to conduct a payment transaction.	3.00	1.124	2.30	0.949
(8) The steps required to use an e-wallet are difficult.	2.90	1.165	2.50	1.354
(9) E-wallets make payment transactions less effective (e.g. speed, flexibility).	2.60	0.995	2.10	0.738

It can be seen that both groups provide nearly same average scores for the four items on the non-availability of families, friends and colleagues who are using e-wallets, the trouble and difficulty faced in using e-wallets, and not receiving recommendations to use e-wallets from families, friends and colleagues. Although the average score for these items is less than 3.00, it is important to be aware of the reasons why both groups did not use e-wallets. One solution would be for e-wallet providers to offer assistance or educate these two groups through campaigns so that their perceived lack of effectiveness and other issues related to e-wallets can be addressed. Hence, it is concluded that there is still room for improvement and actions that can be taken by the relevant parties in increasing social awareness for these groups so as to encourage them to use e-wallets.

Even though there are various obstacles in forming a cashless society among Malaysians, the importance of cashless transactions can be seen with the outbreak of the Covid-19 pandemic in the initial four months of 2020. Since cash notes may spread the Coronavirus, the World Health Organisation (WHO) has recommended that consumers worldwide begin shifting towards making contactless payments and buying goods through online platforms (e-commerce) whenever possible. Other than that, physical store merchants in Malaysia are also highly concerned for the safety of their workers; they fear the spread of the infections and prefer their customers to pay for goods by using cards or e-wallets instead of cash. Therefore, in recognition of the advantages of cashless payment transactions, it is hoped that Malaysians will continue practising this safer mode of payment even after the health crisis is over.

5. CONCLUSION

Based on this preliminary study, it has been found that most e-wallet users are youngsters and the most popular e-wallet used in Malaysia is the Touch n Go e-wallet. The e-wallet users agree that e-wallets make their payment transactions easier since they no longer need to bring cash everywhere. The other findings on the perception of the three main groups of respondents may be useful to e-wallet providers as improvement of their business strategies, especially in relation to users' concerns on privacy and security of the application, can be increased. Other than that, the relationship testing shows that among the e-wallet users, their concerns were highlighted on the benefit offered by the providers and they would also recommend to their relatives with regards to the perceived easiness of the e-wallet. Based on the perception and reasons for not using an e-wallet, the providers will also be able to satisfy the needs of potential users more efficiently by offering solutions to them as a way to attract them to use e-wallet in future.

However, due to limitation in the small number of respondents and the short duration of data collection, the findings may not be generalised as it does not represent the target population of Malaysian online users. Other than that, improvement in the survey by adding more items and variables shall be conducted next as having only a few items and variables have put limits on the analysis performed of the study. Hence, it is suggested that a more in-depth or extensive study be embarked upon, targeting large audiences, and conducting focus group interviews to obtain more meaningful outcomes on e-wallets. Future researchers may want to focus on another area of e-wallet studies such as comparative analysis across ASEAN countries and the future direction of e-wallets in the digitalisation of the fintech ecosystem. Lastly, it is crucial for e-wallet providers in Malaysia to improve their services and innovate thoroughly to fulfil the needs of their users in order to ensure their sustainability in the fintech industry.

REFERENCES

- Abas, A. (2020). e-Tunai Rakyat application period starts Jan 15; free RM30 for all. *New Straits Times*. Retrieved April 15, 2020, from <https://www.nst.com.my/news/government-public-policy/2020/01/556304/e-tunai-rakyat-application-period-starts-jan-15-free>
- Ahuja, A., & Joshi, R. (2018). Customer Perception towards Mobile Wallet. *IJRDO-Journal of Business Management*, 4(1), 52-60.
- Akhila Pai, H. (2018). Study on Consumer Perception Towards Digital Wallets. *International Journal of Research and Analytical Reviews*, 5(3), 385a-391a.
- Aydin, G., & Burnaz, S. (2016). Adoption of Mobile Payment Systems: A Study on Mobile Wallets. *Journal of Business, Economics and Finance*, 5(1), 73-92.
- Blockchains.my. (2018). Growing Use of Digital Wallets [Summary of Studies by Country]. Retrieved August 15, 2020, from <http://bcmy.io/blog/growing-use-of-digital-wallets-summary-of-studies-by-country/>
- Cheng, T. L. (2019). Retail Goes Cashless but Overhang Still A Sticky. Retrieved August 15, 2020, from <https://www.thestar.com.my/business/business-news/2019/12/30/retail-goes-cashless-but-overhang-still-a-sticky-point>
- Haroon, R. (2020). E-wallet Gaining Traction in Malaysia. Retrieved August 15, 2020, from <https://www.nst.com.my/opinion/columnists/2020/07/605958/e-wallet-gaining-traction-malaysia>
- Karim, M. W., Haque, A., Ulfy, M. A., & 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), 1-11.
- Morgan, J.P. (2019). E-commerce Payments Trends: Malaysia. Retrieved August 15, 2020, from <https://www.jpmorgan.com/merchant-services/insights/reports/malaysia>
- Mun, Y.P., Khalid, H., & Nadarajah, D. (2017). Millennials' Perception on Mobile Payment Services in Malaysia. *Procedia Computer Science*, 124, 397-404.

- Pikri, E. (2018). Malaysia Has So Many E-Wallets – We Help You Decide Which Ones to Download. Retrieved April 15, 2020, from <https://vulcanpost.com/642146/e-wallet-malaysia-comparison-difference/>
- Pousttchi, K., & Wiedemann, D. G. (2007). What Influences Consumers' Intention to Use Mobile Payments? Retrieved April 15, 2020, from <https://www.semanticscholar.org/paper/What-Influences-Consumers-%E2%80%99-Intention-to-Use-Mobile-Pousttchi-Wiedemann/a4ddce87edaa6d2bf14d0bd362e1c9beb24b030b#references>
- Roscoe, J. T. (1975). *Fundamental Research Statistics for the Behavioral Sciences*. New York: Holt, Rinehart, and Winston.
- Rosnidah, I., Muna, A., Musyaffi, A. M., & Siregar, N. F. (2019). Critical Factor of Mobile Payment Acceptance in Millennial Generation: Study on the UTAUT model. *Advances in Social Science, Education and Humanities Research*, 306, 123-127.
- Shukla T. N. (2016). Mobile Wallet: Present and the Future. *International Journal in Multidisciplinary and Academic Research*, 5(3), 1-22.
- Subaramaniam, K., Kolandaisamy, R., Jalil, A., & Kolandaisamy, I. (2020). The Impact of E-Wallets for Current Generation. *Journal of Advanced Research in Dynamical and Control Systems*, 12 (01-Special Issue), 751-759.
- Tan, J. (2019). E-Wallet Basics: What All Malaysians Should Know. Retrieved August 15, 2020, from <https://ringgitplus.com/en/blog/e-wallet/e-wallet-basics-what-all-malaysians-should-know.html>
- Wei, L. Z., & Tsu, D. K. P. (2018). Transforming Mobile Phones into e-Wallets in Malaysia. *Second Quarter 2018, BNM Quarterly Bulletin*, 35-43.