Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004


JOURNAL OF INFORMATION SYSTEM AND TECHNOLOGY MANAGEMENT (JISTM)
www.jistm.com

# FACTORS AFFECTING ADOPTION OF E-WALLETS AMONG YOUTHS IN MALAYSIA

Siew Chein Teo[1*], Pei Li Law[2], Ah Choo Koo[3]

[1] Faculty of Business, Multimedia University, Melaka, Malaysia
Email: scteo@mmu.edu.my
[2] Faculty of Creative Multimedia, Multimedia University, Cyberjaya, Malaysia
[3] Faculty of Business, Multimedia University, Melaka, Malaysia
[*] Corresponding Author

**Article Info:**

**Article history:**
Received date: 13.07.2020
Revised date: 10.08.2020
Accepted date: 30.09.2020
Published date: 01.12.2020

**To cite this document:**

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.

**DOI:** 10.35631/JISTM.519004.

**This work is licensed under CC BY 4.0**

**Abstract:**

This study aims to identify the current level of e-wallet adoption among the youths in Malaysia and to examine the factors that drive them to get adapted to the ongoing implementation and development of e-wallet in Malaysia. This study extended the TAM model with perceived security and social influence factors for assessing the attitude among the Malaysian youths towards e-wallet adoption. 200 sets of questionnaires had been gathered from the Malaysian youths, Quantitative data analysis was performed via SPSS and Smart-PLS 3.0 program. The results indicate that perceived security, perceived ease-of-use, and social influence were the significant factors that influence or predict the intention of using e-wallets but leaving the perceived usefulness as an insignificant predictor towards the e-wallet adoption among the Malaysian youths.

**Keywords:**

E-Wallet, Malaysia, Perceived Security, Perceived Usefulness, Perceived Ease-Of- Use, Social Influence

## Introduction

An e-wallet serves as a substitution for physical wallet, in digital format, and it stores digitized variable such as personal payment method details for convenience of transaction via the use of password, QR code or facial image (Krisna, 2017). Despite the popularity of smart phones among the Malaysia population that demonstrates huge potential for the e-payment market, the e-wallet industry is still in its infancy, with most use cases concentrate mainly in the field of

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
JISTM
EISSN: 0128-1666
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

Food & Beverage and Transportation, where abundance of players are spending heavily to acquire customers and merchants in these fields (Yennie, 2018). Hizam (2020) clarified the differences of digital wallets, e-wallets and mobile wallets as shown in Figure 1. Often, the term e-wallet and mobile wallet are used interchangeable by users.

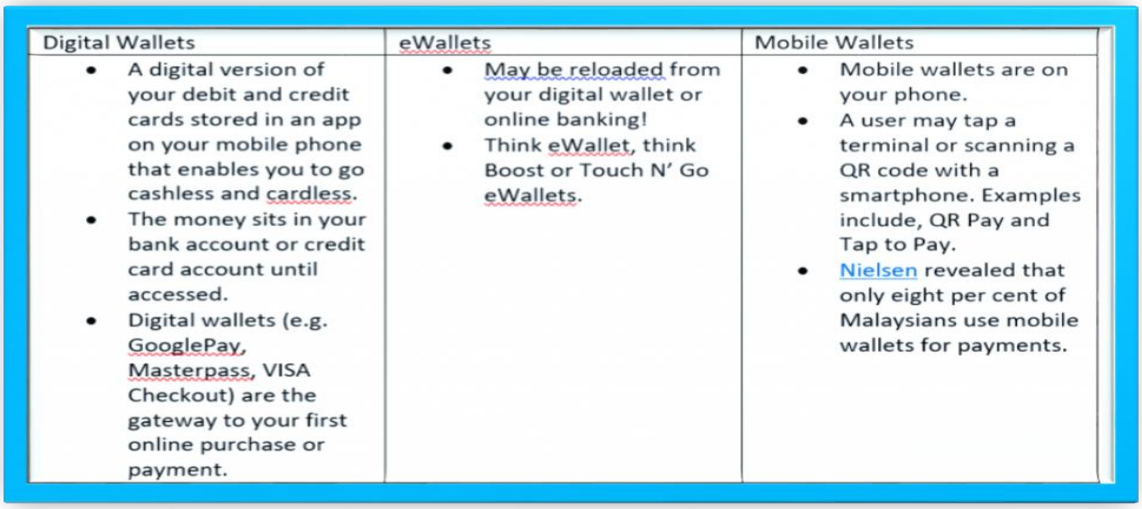


**Figure 1: The Differences of Digital Wallets, E-Wallets and Mobile Wallets**
Source: MDEC files in Hizam (2020)

Malaysia has a large number of e-wallet providers as compared to the world's second largest country, China. Malaysia has approximately forty (40) e-wallet services, with 32 million population, while in China has only two e-wallet service providers, with 1.5 billion people, reflecting the huge difference for the need to consolidate e-wallet environment in Malaysia (Ganeshwaran, 2019). Despite the large number of services in Malaysia, e-wallet is still yet to serve as the mainstream payment method among Malaysians. The existing e-payment market in Malaysia is still conquered by credit and debit cards (Low, 2019). A survey conducted by Carousell Malaysia in 2018 revealed that there are merely 24.3% of digital wallet users out of the overall population, while only 9% of the respondents reported to utilize e-wallet as the main payment method for more than six times in each week (Milo, 2018).

In its effort to stimulate greater adoption of cashless payment and to motivate the public, especially the youths to be more voluntarily engage in e-wallet adoption, Malaysia government in collaboration with the three largest e-wallet operators in Malaysia (Grab, Boost and Touch 'n Go E-Wallet), to rollout the RM450 million e-Tunai Rakyat programme on 15 January 2020 (Ministry of Finance Malaysia, 2020). The e-Tunai Rakyat initiative aims to accelerate the e-payment adoption among Malaysian consumers and small retail merchants.

Despite the abundance number of researches on user's acceptance towards the m-banking and m-payment, there is no comprehensive study conducted to investigate the factors influence the implementation of e-wallet in Malaysia, especially concerning to the young generation who are more familiar to e-wallet. It would be intriguing to investigate these factors especially among the Malaysian youths, due to the fascinating developments of e-wallet and the prediction of its grow within the subsequent years. The main reason for emphasizing on the youth group is because they are more willing to accept new technology as compared to the older generation.

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
JISTM
EISSN: 0128-1666
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

## Literature Review

E-wallet adoption in this study is referred to user's attitude, behaviour or intention to use when dealing with e-wallet. To gain better understanding of consumers' behavioural intention to adopt a specific technology, Technology Acceptance Model (TAM) by Davis (1989) was proposed in this study. TAM mainly contains two chief elements, namely perceived usefulness and perceived ease-of-use to measure the attitudes of consumers towards the technology dedicated to them. TAM is a useful model, which has been used widely to describe how the users react and response towards the emergence of advanced technologies. This study extended TAM model with perceived security and social influence factors for assessing the attitude among the youths towards e-wallet adoption.

### *Perceived Security*

Perceived security refers as an individual's belief that a particular procedure would be secure. It was proven to directly affect intentions to use a technology (Voronenko, 2018). Security concerns are among the main factor in supporting digital cash transactions using e-wallet (My Money Store, 2019). Thus, e-wallet contains Near Field Communications (NFC) that claims to supply a safe environment for the users to carry out business transactions conveniently and efficiently (Nathan, n.d). Moradi (2013) has shown that perceived security has positive relationship towards behavioural intention of the consumers towards e-Banking and Kumar (2018) stated that security is a key indicator that results in adoption of mobile wallet payment methods. Thus, the first hypothesis is developed:

*H1: Perceived security positively influence intention to adopt e-wallet among Malaysian youths*

### *Perceived Usefulness*

Perceived usefulness is one of the important components in TAM. Perceived usefulness refers to the degree for which a customer perceived that he or she will be profited by using the services provided by e-payment services (Goh, 2017). Perceived Usefulness is strongly related to the extent of productivity (Cheng et al., 2018b). Numerous studies proved that perceived usefulness greatly influenced the behavioural intentions of the users in using the internet payment method, such as e-payment, e-banking as well as e-wallet. Perceived usefulness has shown to raise significant relationship with the adoption of e-wallet in study of Liu and Tai (2016). This is further supported by Cheng et al. (2018b) that portrays that perceived usefulness substantially affects the users' loyalty level towards the adoption of e-wallet services. Hence, the second hypothesis is proposed:

*H2: Perceived usefulness positively influence intention to adopt e-wallet among Malaysian youths*

### *Perceived Ease-of-use*

Perceived ease-of-use serves as one of the elements that is suggested in the TAM. Perceived ease-of-use is defined as "the freedom from complicatedness and struggles required while dealing with e-payment services" (Sunny & George, 2018). Consumers have higher intention to utilize the system if they feel that the system is of simplicity without complicatedness for them (Liu & Tai 2016). E-services that appears easy to manage, utilize and implement will be of ease to the users, less worry and less dreary to initialize the system (Makanyeza, 2017). Therefore, the third hypothesis as follows:

*H3: Perceived ease-of-use positively influence intention to adopt e-wallet among Malaysian youths*

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

***Social Influence***

Social influence refers to an individual's perception of the social pressure on the decision of engagement in a certain event (Fishbein & Ajzen, 1975). Social influence can be derived from various sources, such as family members, friends, teachers, partners as well as the celebrity influences. Social influence has positive impacts towards the consumers' behaviours on mobile-wallet enforcement (Megadewandanu et al., 2017). Cheng et al. (2018a) has further supported that social influence positively affects the adoption of e-wallet among the respondents involved in his survey. This leads to the fourth hypothesis:

*H4: Social influence positively influence intention to adopt e-wallet among Malaysian youths*

Figure 2 shows the research framework for this study:

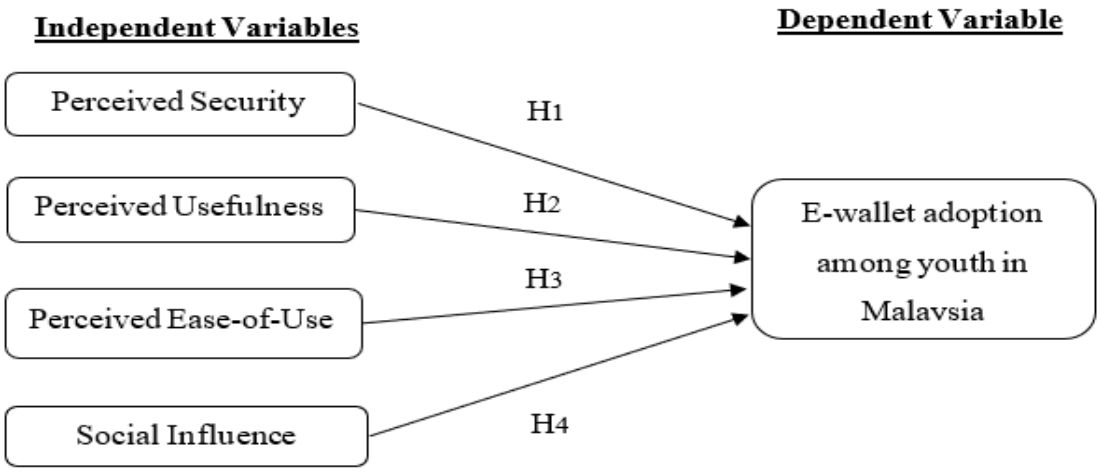


**Figure 2: Research Framework**

## Methodology

A survey was conducted by gathering primary data via web based self-administrated questionnaires. The questionnaire is classified into two sections. The first section covers respondents' demographic and general questions about their habit on e-wallet utilization. The second section focuses on the construct measurements, mainly the four independent variables and intention to adopt e-wallet as shown in Table 1. All measurement constructs are evaluated using a 5-point Likert level of agreement scale from 1 to 5 where 1 (strongly disagree), 2 (disagree), 3 (Neutral), 4 (agree), and 5 (strongly agree). The data collected is only able to explain the behavioural intention of the youths towards the e-wallet adoption in Malaysia. Purposive sampling technique is used as the main technique to collect data, Google form was distributed to the online social groups (closed group and public group) which are working on specific purpose that suite the youth populations via online social media (Facebook, WhatsApp, WeChat, Instagram). This method is a straightforward method to reach out to the youths. The minimum sample size suggested by G*Power is 129 with 4 predictors and medium effect size (0.15). Nevertheless, the number of responses returned was 200 sets of questionnaires and no other responses receive afterward. Mostly they were the youths, age within 15 to 40 years old (based on the definition by National Youth Development Policy of 1997) who live in Malaysia.

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

**Table 1: Construct Measurements Questions**

| Variables | Construct Measurements Questions | Source |
|---|---|---|
| E-wallet Adoption | I intend to use e-wallet for my payments in the future<br>I will always try to use e-wallet payments during purchasing things<br>I will recommend others to use e-wallet payments for purchasing<br>E-wallet payments would be one of my favourite technologies for payment | Voronenko, (2018) |
| Perceived Security | I would feel secure using my credit/debit card information through e-wallet systems.<br>E-wallet systems are secure to send/use sensitive information.<br>I would feel totally safe by providing information about myself over the e-wallet systems.<br>Overall, the e-wallet are safe systems to transmit sensitive information. | Voronenko, (2018) |
| Perceived Usefulness | Using e-wallet saves my time.<br>E-wallet is a practical option in making payment.<br>Using e-wallet makes it easier for me to carry out my day-to-day tasks.<br>Using e-wallet is the trend of the modern lifestyle. | Vy, (2019) |
| Perceived Ease-of -use | I can easily learn how to use the e-wallet.<br>I can quickly become proficient in using services of the e-wallet.<br>The procedures of e-wallet are simple to me.<br>The interface of the e-wallet is user-friendly and easy to understand. | Vy, (2019) |
| Social Influence | Family and people who are important to me affect my intention to use the e-wallet.<br>Friends and colleagues affect my intention to use the e-wallet.<br>The media and advertisement affect my intention to use the e-wallet.<br>I use e-wallet because the people I know also use it. | Vy, (2019) |

## Findings and Discussions

Descriptive analysis was performed via SPSS. Table 2 summarises the samples' profile. Among the 200 respondents, male respondents constitute 53.5% (n = 107) of the overall respondents, whose number is slightly higher than female respondents. Majority of respondents (49%) are degree holders; more than half are age from 15 to 25 years old, and 40% of them with monthly income in the range of RM3001 to RM6000. As tabulated in Table 3, e-wallet users comprise of 71.5% of the total respondents, and the top three e-wallets applications used are Touch 'n Go (21.3%), Boost (18.4%) and Grab pay (16.4%).

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

**Table 2: Demographic Profile Analysis**

| Demographics | | Frequency | Percentage |
|---|---|---|---|
| Age | 15- 25 years old | 105 | 52.5 |
| | 26- 40 years old | 95 | 47.5 |
| Gender | Male | 107 | 53.5 |
| | Female | 93 | 46.5 |
| Races | Malay | 64 | 32.0 |
| | Chinese | 80 | 40.0 |
| | Indian | 38 | 19.0 |
| | Other | 18 | 9.0 |
| Education | Primary School | 10 | 5.0 |
| | Secondary School | 18 | 9.0 |
| | Foundation / Diploma | 65 | 32.5 |
| | Degree | 98 | 49.0 |
| | Undergraduate | | |
| | Postgraduate | 6 | 3.0 |
| | PhD | 3 | 1.5 |
| Monthly Income Level | RM1100 - RM3000 | 59 | 29.5 |
| | RM3001 - RM6000 | 81 | 40.5 |
| | RM6001 - RM13000 | 32 | 16.0 |
| | RM13001 and above | 28 | 14.0 |

**Table 3: General Information on E-wallet Use**

| General Information | | Frequency | Percentage |
|---|---|---|---|
| Degree of Awareness on the growth of Technology | Strongly Aware | 49 | 24.5 |
| | Slightly Aware | 121 | 60.5 |
| | Not Aware | 30 | 15.0 |
| Usage of e-wallet | Users | 143 | 71.5 |
| | Non-Users | 57 | 28.5 |
| E-wallets used (Can choose more than one) | None | 57 | 11.3 |
| | Boost | 93 | 18.4 |
| | TouchnGO | 108 | 21.3 |
| | BigPay | 78 | 15.4 |
| | Wechatpay | 58 | 11.5 |
| | Grabpay | 83 | 16.4 |
| | Other | 29 | 5.7 |
| Experience in using e-wallet | Never | 57 | 28.5 |
| | Less than 6 months | 70 | 35.0 |
| | 6 months to < 1 years | 50 | 25.0 |
| | More than 1 year | 23 | 11.5 |
| Frequency used for e-wallet per week | None | 57 | 28.5 |
| | 1-4 times | 39 | 19.5 |

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

| | | |
|---|---|---|
| 5-8 times | 51 | 25.5 |
| 9-12 times | 32 | 16.0 |
| Over 12 times | 21 | 10.5 |

**Table 4: Overall Descriptive Analysis Table**

| | Mean | Std. Deviation |
|---|---|---|
| E-wallet Adoption | 3.5563 | .77874 |
| Perceived Security | 3.5125 | .73402 |
| Perceived Usefulness | 3.3025 | .81351 |
| Perceived Ease-of-Use | 3.8687 | .88962 |
| Social Influence | 3.5425 | .69325 |

Note: 1 (strongly disagree), 2 (disagree), 3 (Neutral), 4 (agree), and 5 (strongly agree).

As shown in Table 4, the mean scores for all the variables are oriented towards 3.3 and above, this indicates the respondents were generally (on average) quite agreed to all the statements. It is interesting to point out that the two elements of TAM have received diverse ratings from the respondents, in which, perceived ease-of-use obtained the highest score in mean (3.87) while perceived usefulness has the lowest mean (3.30).

The structural model and the four hypotheses were analysed via Smart-PLS 3.0 program. Firstly, the model's validation was conducted, and the results of convergent validity was summarized in Table 5 and the discriminant validity via Heterotrait-Monotrait (HTMT) criterion was tabulated in Table 6. The composite reliability (CR) values in this study ranged from 0.815 to 0.931, exceed the 0.7 threshold of CR and with average variance extracted (AVE) above 0.5. The discriminant validity between the constructs is established as outputs of the all constructs in HTMT0.90 inference is free from value of 1.

**Table 5: Convergent Validity for the Measurement Model**

| Construct | Indicator | Factor Loading | CR | AVE |
|---|---|---|---|---|
| E-wallet Adoption (EWA) | EWA1 | 0.805 | 0.851 | 0.589 |
| | EWA2 | 0.810 | | |
| | EWA3 | 0.700 | | |
| | EWA4 | 0.748 | | |
| Perceived Security (PS) | PS1 | 0.660 | 0.819 | 0.533 |
| | PS2 | 0.776 | | |
| | PS3 | 0.668 | | |
| | PS4 | 0.804 | | |
| Perceived Usefulness (PU) | PU1 | 0.738 | 0.836 | 0.561 |
| | PU2 | 0.741 | | |
| | PU3 | 0.728 | | |
| | PU4 | 0.787 | | |
| Perceived Ease-of-use (PEOU) | PEOU1 | 0.902 | 0.931 | 0.772 |
| | PEOU2 | 0.931 | | |
| | PEOU3 | 0.892 | | |

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

| | | | | |
|---|---|---|---|---|
| | PEOU4 | 0.783 | | |
| Social Influence (SI) | SI1 | 0.752 | 0.815 | 0.525 |
| | SI2 | 0.743 | | |
| | SI3 | 0.672 | | |
| | SI4 | 0.728 | | |

**Table 6: Discriminant Validity by Heterotrait-Monotrait (HTMT) Criterion**

| | EWA | PS | PU | PEOU |
|---|---|---|---|---|
| EWA | | | | |
| PS | 0.857 CI.90(0.74, 0.951) | | | |
| PU | 0.39 CI.90(0.222, 0.564) | 0.39 CI.90(0.222,0.607) | | |
| PEOU | 0.414 CI.90(0.266, 0.549) | 0.323 CI.90(0.184,0.443) | 0.191 CI.90( 0.107, 0.283) | |
| SI | 0.867 CI.90(0.729, 0.974) | 0.726 CI.90(0.544,0.879) | 0.406 CI.90( 0.236, 0.604) | 0.243 CI.90( 0.121,0.384) |

*Note*: EWA= E-wallet Adoption, PS=Perceived Security, PU=Perceived Usefulness, PEOU=Perceived Ease-of-use, SI= Social Influence.
*CI.90(lower bound of confidence interval, upper bound of confidence interval)

The above analyses on CR, AVE, and HTMT value are required for measurement model assessment. All values required for the assessments are fulfilled.

Subsequently, the assessment of the structural model for this study with four hypotheses is developed, as shown in Figure 3.

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
JISTM
EISSN: 0128-1666
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

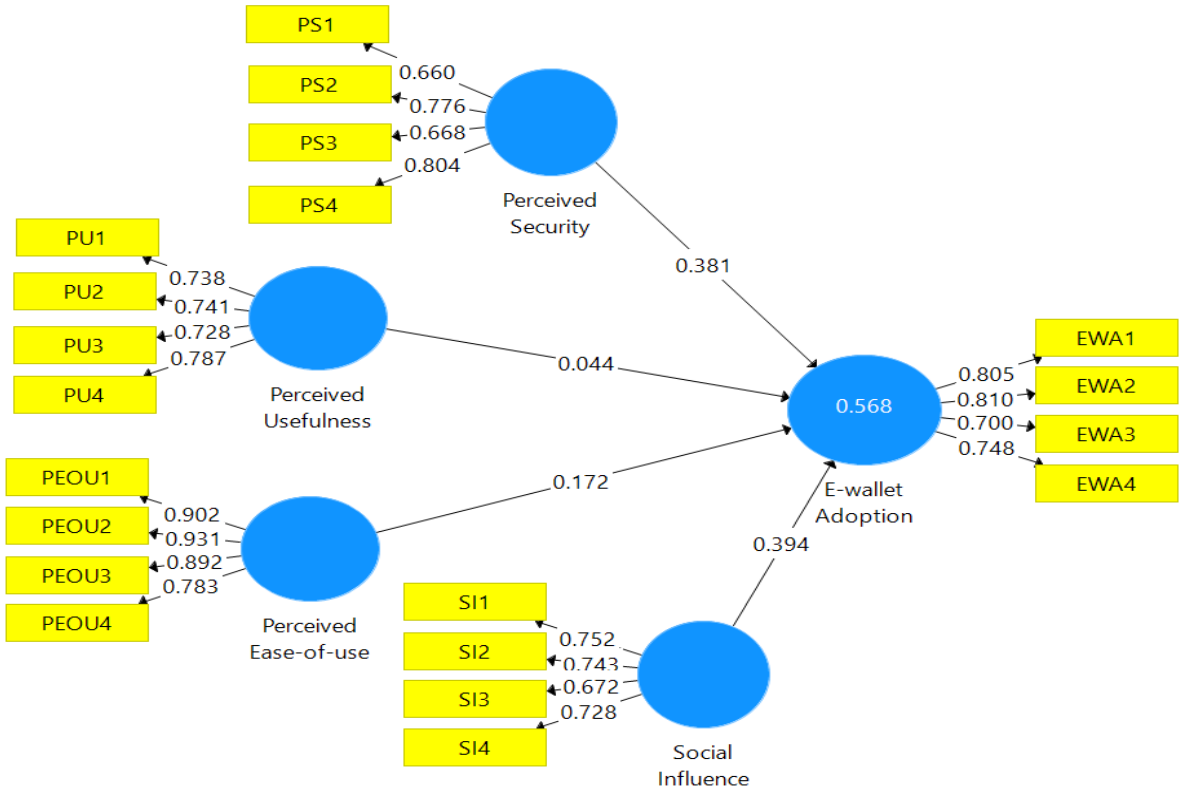


**Figure 3: The Structural Model**

**Table 7: A Summary of The Assessment for The Structural Model**

| HP | Path | Std. Beta | Std. Error | T-value | Decision | $R^2$ | $Q^2$ | $f^2$ | VIF |
|---|---|---|---|---|---|---|---|---|---|
| H1 | PS -> EWA | 0.381 | 0.062 | 6.125** | Supported | 0.568 | 0.319 | 0.232 | 1.450 |
| H2 | PU -> EWA | 0.044 | 0.055 | 0.801 | Not supported | | | 0.004 | 1.131 |
| H3 | PEOU -> EWA | 0.172 | 0.053 | 3.235** | Supported | | | 0.063 | 1.083 |
| H4 | SI -> EWA | 0.394 | 0.07 | 5.61** | Supported | | | 0.256 | 1.404 |

Note: ** $p < 0.01$

T-statistics for all hypotheses are generated by Smart PLS 3.0 bootstrapping function with subsamples of 5000. All the predictors have positive influence on e-wallet adoption as shown by positive beta values. However, only three out of four hypotheses are supported at 1% alpha value with t-value exceed 2.33 as shown in Table 7. The results indicate that, perceived security, perceived ease-of-use, and social influence were the significant factors that influence or predict the intention of using e-wallets but leaving the perceived usefulness as insignificant predictor towards the e-wallet adoption among the Malaysian youths. The $R^2$ value of 0.568 in this study indicates that 56.8% of total variation in the e-wallet adoption can be explained by the structural model. Referring to Cohen (1988)'s guidelines for effect size, perceived security ($f^2 = 0.232$) and social influence ($f^2 = 0.256$) have medium effect (exceed 0.15); perceived ease-of-use has small yet significant effects (exceed 0.02) in producing the $R^2$ for e-wallet adoption whereas perceived usefulness has no significant effects in producing the $R^2$ for e-wallet

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

adoption. The $Q^2$ value for e-wallet adoption of 0.319 obtained through blindfolding procedure which fall between 0.15 and 0.35 indicates that the model has medium predictive relevance (Hair *et al*. 2013). Besides, there isn't any multicollinearity issue as all the VIF readings are less than 5.

## Conclusion

The TAM model was employed to investigate the factors that are affecting the e-wallet adoption. The findings of this study indicate that adoption of e-wallet affected by the users' perception on the system's security, ease of use of the application, and the influence or encouragement by their peers or their close contacts. When the government provided incentive to Malaysian to use e-Tunai Rakyat in January 2020, that is where the influence of these factors especially the social influence has boosted the adoption.

The medium effect of perceived security found in this study is synchronized with the Nielsen's report that highlighted security concern is the main barrier for 46% of non-users to try on e-wallet (Tan, 2019). This suggested that e-wallet service providers should emphasise the security and privacy elements in their marketing strategy to increase awareness of the credibility of e-wallet. Besides, the highest score on the mean of perceived ease-of-use implies the easy of using e-wallet is an important element in adoption of the said technology. As suggested by Vy (2019), service providers can increase the ease of use of their e-wallet by paying more attention to its structure and interface design.

Perceived usefulness is the only insignificant independent variable in this study most probably due to 28.5% of respondents are not a user of e-wallet, therefore they did not perceive about the benefits and usefulness brought by e-wallet and it is proven by the lowest mean values of perceived usefulness (3.30 out of 5) among other variables. The finding on the perceived usefulness is insignificant in predicting the intention to use e-wallet, is coherent with Dastan and Gürler (2016)'s finding that perceived usefulness has no effect on the adoption of mobile payment system, although similar studies by others have indicated otherwise.

During the movement control order (MCO) in Malaysia due to coronavirus outbreak, the subscribers of e-wallets and contactless payments growth substantially in March, 2020 (Hazlin, 2020). To fight the outbreak of Coronavirus pandemic, Malaysia government requests Malaysians to practice the "new normal" which emphasises on social distancing and personal hygiene. Cashless transactions through e-wallets are no longer just a convenience, but a crucial part of the "new normal". It may also a way to help in curbing the spread of virus through cash or bills (Hazlin, 2020). Hence, a further recommendation would be to perform empirical studies on new variables that derived from the necessity of "new normal", which may be the antecedents for the intention of adopting e-wallet among Malaysian.

## References

Cheng, F. M., Khim, C, Thai, S (2018a, December 21-22). Consumer Adoption of E-Wallets: A Study of Millennials at the Institute of Foreign Languages, Cambodia. *Proceedings of the 21st Asia-Pacific Conference on Global Business, Economics, Finance & Social Sciences (AP18Taiwan Conference) Taipei-Taiwan*.

Cheng, F. M, Phou, S., & Phuong, S. (2018b, December 21-22). Factors Influencing on Consumer ' s Digital Payment Adaptation – A Comparison of Technology Acceptance Model and Brand Knowledge. *Proceedings of the 21st Asia-Pacific Conference on*

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

*Global Business, Economics, Finance & Social Sciences (AP18Taiwan Conference) Taipei-Taiwan*.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences.* Mahwah, NJ: Lawrence Erlbaum

Dastan, I. , & Gürler , C (2016). Factors Affecting the Adoption of Mobile Payment Systems: An Empirical Analysis. *EMAJ: Emerging Markets Journal*, *6*(1), 1–16. https://**doi**.org/**10.5195**/**emaj**.**2016.95**.

Davis, F. D. (1989), Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly*, **13** (3): 319–340, https: doi.org/10.2307/249008.

Fishbein, M. & Ajzen, I (1975). *Belief , attitude , intention and behaviour : An introduction to theory and research*. Reading, MA: Addison-Wesley.

Ganeshwaran, K. (2019, June 19). CEO: Time for e-wallet environment to consolidate. *The Star*.https://www.thestar.com.my/business/business-news/2019/06/19/ceo-time-for-ewallet-environment-to-consolidate

Goh, S,W. (2017, April). *Factors affacting adoption of E-payment among private univeristy students in Klang Valley* . [Master dissertation, Universiti Tunku Abdul Rahman]. http://eprints.utar.edu.my/2487/

Hair, J.F., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM).* United Stated: SAGE Publication, Inc

Hazlin, H (2020, April 27). Coronavirus pandemic has steepened adoption curve of e-wallets in Malaysia. *The Strait Times.* https://www.straitstimes.com/asia/se-asia/coronavirus-pandemic-has-steepened-adoption-curve-of-e-wallets-in-malaysia

Hizam, K (April 24, 2020). Digital Vs. Covid-19: Easing into Ewallets! *MDE*C. https://mdec.my/blog/?p=621

Krisna, M. (2017, Dec 20). Product adoption life cycle for Mobile wallets in India. *Noteworthy - The Journal Blog.* https://blog.usejournal.com/product-adoption-life-cycle-for-mobile-wallets-in-india-5cf45170975b

Kumar, A. (2018). The effect of perceived security and grievance redressal on continuance intention to use M-wallets in a developing country. *International Journal of Bank Marketing*, *36*(7), 1170–1189. https://doi.org/10.1108/IJBM-04-2017-0077

Liu, GS., & Tai., PT. (2016). A Study of Factors Affecting the Intention to Use Mobile Payment Services in Vietnam. *Economics World*, *4*(6), 249–273. https://doi.org/10.17265/2328-7144/2016.06.001

Low, J. (2019, April 22). E-Wallet in Malaysia : A Glimpse Into the Future of Payments in Malaysia. *JasonLow.my*. https://jasonlow.my/2019/04/22/alibaba-netpreneur-program-day-4-e-wallet-in-malaysia-part-1/

Makanyeza, C. (2017). Determinants of consumers' intention to adopt mobile banking services in Zimbabwe. *International Journal of Bank Marketing*, *35*(6), 997–1017. https://doi.org/10.1108/IJBM-07-2016-0099

Megadewandanu, S., Suyoto, & Pranowo (2017). Exploring mobile wallet adoption in Indonesia using UTAUT2: An approach from consumer perspective. *Proceedings - 2016 2nd International Conference on Science and Technology-Computer, ICST 2016*, 11–16. https://doi.org/10.1109/ICSTC.2016.7877340

Milo, EC. (2018, December 19). The e-wallet usage statistics by Carousell Malaysia. *ecInsider News*.https://news.ecinsider.my/2018/12/ewallet-usage-statistics-carousell-malaysia.html

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*

Journal of Information System and Technology Management
EISSN: 0128-1666
JISTM
Volume 5 Issue 19 (December 2020) PP. 39-50
DOI: 10.35631/JISTM.519004

Ministry of Finance Malaysia (2020, January 14). The e-Tunai Rakyat initiative. https://www1.treasury.gov.my/index.php/en/gallery-activities/press-release/item/5784-press-release-the-e-tunai-rakyat-initiative.html

Moradi, H. (2013). Factors Affecting Customer Confidence in Using E-Banking. *European Online Journal of Natural and Social Sciences*, *2*(3), 2769–2776. http://european-science.com/eojnss_proc/article/viewFile/4000/1722

My Money Store. (2019, January 4). *Security concerns of digital wallets*. https://www.mymoneystore.in/security-concerns-of-digital-wallets

Nathan, C. (n.d). How Digital Wallets Work. *HowStuffWorks*. https://electronics.howstuffworks.com/gadgets/high-tech-gadgets/digital-wallet2.htm

Sunny, P., & George, A. (2018). Determinants of Behavioral Intention To Use Mobile Wallets-a Conceptual Model. *Journal of Management*, *5*(5), 52–62. http://www.iaeme.com/MasterAdmin/UploadFolder/JOM_05_05_008/JOM_05_05_008.pdf

Tan (2019, July 1) Nielsen sees security concerns as main barrier to e-wallet adoption. *Digital News Asia.* https://www.digitalnewsasia.com/digital-economy/nielsen-sees-security-concerns-main-barrier-e-wallet-adoption

Voronenko, D. (2018). *Determining factors of adoption of digital device wallets by Russian consumers*. [Master dissertation, St. Petersburg University]. https://dspace.spbu.ru/bitstream/11701/12245/1/Voronenko_Dmitrii_Olegovich_MiM_2018.pdf

Vy, T. N. (2019). *Factors Influencing Consumers ' Intention To Adopt Mobile wallet in Ho Chi Minh city.* [Dissertation, Vaasan Ammattikorkeakoulu, University of Applied Sciences] https://www.theseus.fi/handle/10024/169099

Yennie, T. (2018, October). Banking on the e-wallet in Malaysia. *PwC Malaysia.* https://www.pwc.com/my/en/perspective/deal-strategy/181003-banking-on-the-e-wallet-in-malaysia.html

*Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved*