

The e-wallet usage as an acceptance indicator on Financial Technology in Malaysia

El uso de la billetera electrónica como un indicador de aceptación de la tecnología financiera en Malasia

Shaliza Alwi*

Taylor's University - MALAYSIA

shaliza.alwi@taylors.edu.my

Masrina Nadia Mohd Salleh

Inti University College - MALAYSIA

masrina.salleh@newinti.edu.my

Halim Shukri Kamarudin

Taylor's University - MALAYSIA

Rabiatul Munirah Alpandi

Taylor's University - MALAYSIA

Shazrul Ekhmar Abdul Razak

Taylor's University - MALAYSIA

ABSTRACT

In the era of Industrial Revolution 4.0 (IR 4.0) the remarkable growth of technology such Financial Technology (Fintech) has skyrocketed to popularity. The widespread use of Fintech such e-wallet is becoming inevitable. The emergence of technology in finance has fuelled interest in how e-wallet usage become an indicator of Fintech's acceptance among Malaysian users. Few studies in technology acceptance have explicitly addressed the acceptance of replacement technologies but limited studies have been done among Malaysian e-wallet users. Furthermore, as the user adoption has a crucial role for a success and effective implementation of this technology, there is a need to assess user acceptance. In response, researchers tested the applicability of Technology Acceptance Model (TAM) to further explore the factors influencing the acceptance of e-wallet among Malaysian users. A quantitative study adopted using questionnaires. These findings suggest an extension of the TAM model for convergence technology such e-wallet. The Statistical Package for the Social Science (SPSS) software result indicate that all variable test had a higher average of mean which indicates all independent variables are equally important and accepted by the respondents.

Keywords: Fintech, E-wallet, User acceptance, E-wallet usage, Technology Acceptance Model (TAM).

RESUMEN

En la era de la Revolución Industrial 4.0 (IR 4.0), el notable crecimiento de la tecnología como la Tecnología Financiera (Fintech) se ha disparado a la popularidad. El uso generalizado de la billetera electrónica Fintech se está volviendo inevitable. El surgimiento de la tecnología en las finanzas ha alimentado el interés en cómo el uso de la billetera electrónica se convierte en un indicador de la aceptación de Fintech entre los usuarios de Malasia. Pocos estudios en aceptación de tecnología han abordado explícitamente la aceptación de tecnologías de reemplazo, pero se han realizado estudios limitados entre los usuarios de billetera electrónica de Malasia. Además, dado que la adopción del usuario tiene un papel crucial para el éxito y la implementación efectiva de esta tecnología, es necesario evaluar la aceptación del usuario. En respuesta, los investigadores probaron la aplicabilidad del Modelo de Aceptación de Tecnología (TAM) para explorar más a fondo los factores que influyen en la aceptación de la billetera electrónica entre los usuarios de Malasia. Un estudio cuantitativo adoptado utilizando cuestionarios. Estos hallazgos sugieren una extensión del modelo TAM para la tecnología de convergencia, como la billetera electrónica. El resultado del software Paquete estadístico para las ciencias sociales (SPSS) indica que todas las pruebas de variables tuvieron un promedio más alto de media, lo que indica que todas las variables independientes son igualmente importantes y aceptadas por los encuestados.

Palabras clave: Fintech, billetera electrónica, aceptación del usuario, uso de billetera electrónica, modelo de aceptación de tecnología (TAM).

*Corresponding author.

Recibido: 03/09/2019 Aceptado: 10/11/2019

1. INTRODUCTION

Technology Acceptance Model (TAM) had been used decades ago to identify or examine the external factors that can affect the intention of use in technology which the most important factors are the perceived ease of use and perceived usefulness (Davis et al., 1989). TAM was established on the basis of Theory of Reasoned Action (TRA) and commonly used in gaining profound understanding on user's behavior in using and accepting the usage of the systems (Hua et al., 2017). In this regard, it is noteworthy that TAM will offer to explain the adoption of technology among users (Davis et al., 1989; Pietro et al., 2012; Hua et al., 2017). In line with this, TAM has been widely used in explaining consumer behaviour (Kitchen et al., 2015).

1.1 User acceptance

Acceptance of users in the application of technology is considered crucial in underlying the success or failure of the particular technology application (Davis, 1993; Ongena et al., 2013). TAM has a reputation in accurately explaining technology acceptance among users (Kwon et al., 2007), hence this study will adopt base model from TAM.

1.2 Perceived ease of use

The theory of perceived ease of use can be defined as "the degree to which a person has a confidence in using a particular technology that would require little effort" (Davis et al., 1989; Al-Rahmi et al., 2019). While, Sahut (2008) contended PEOU as "the degree to which a person believes that using a particular system would be effortless". Thus, in this study, PEOU is defined as the degree where e-wallet users view the ease of use and would enrich their performance in performing payment. One of the major concerns for consumers to accept and use a particular system or technology is based on how easy they can learn and use it. As well perceived ease of use again reflects an individual perception that using those technologies or system is effortless and easy to adapt to use it in real life (Davis et al., 1992). Davis et al. (1992) also found out that perceived ease of use is directly and indirectly, affect the impact of usage on the factors of perceived usefulness. Yet, perceived ease of use served as a significant secondary determinant as well reflect the attitude on people in adopting new technology such as the e-wallet. The research conducted by Lubua et al. (2017) shows that 96.4% of the respondent can easily access and use the e-wallet system without a formal training. As such this result supports Lubua et al. (2017) and Buabeng-Andoh (2012) suggestion that the language must be simple and clear for people to learn a new technology concept. Besides, Aboelmaged and Gebba (2013) support the statement which the transaction system that is less complex does ease the users and increase the adaptability on new technology. Again, this statement is proved by the research of Lubua et al. (2017) as 20% and 80% of the respondent wanted a technology, which is comfortable and highly comfortable, which relates to the perceived intention to use. To conclude that the easy assessment of language and steps does increase the intention and adoption on the new technology.

Moreover, studies of researchers again stated that service delivery and slow response time of the e-tech will lead to the bad influence on consumer's experience and the feeling of uncertainty on whether or not the transaction is done (Jun & Cai, 2001). In simpler words, bad design and default on new technology will affect the intention of the user in adopting new technology because of the loss in trust. The effective design of e-wallet (e-payment system) is very important in order to attract more users to accept and adapt towards e-wallet. Also, in Ndubisi (2018) found out that perceived ease of use had a high positive relationship on the intention to adopt and accept for Malaysians. Thus, perceived ease of use model needs to be tested out in this research to figure out if it does indeed have a positive relationship to the intention and acceptance of e-wallet in Malaysia. The hypothesis to be tested are as follows:

H1: Perceived ease of use have positive relationship to perceive of usefulness.

H2: Perceived ease of use have positive relationship to the intention and acceptance for Malaysians to use e-wallet.

1.3 Perceived usefulness

Davis et al. (1989) contended PU as "the degree to which user believes that using the system would be effortless". While, Hua et al. (2017) defined PU as a form of mental agreement and belief towards application or system is useful to accomplish expectation. The research conducted by Lubua et al. (2017) shows that 96.4% of the respondent can easily access and use the e-wallet system without a formal training. As such this result supports Lubua (2018) and Buabeng-Andoh (2012) suggestion that the language must be simple and clear for people to learn a new technology concept. Besides, Aboelmaged and Gebba (2013) support the statement which the transaction system that is less complex does ease the users and increase the adaptability on new technology. Again, this statement is proved by the research of Lubua et al. (2017) as 20% and 80% of the respondent wanted a technology, which is comfortable and highly comfortable, which relates to the perceived intention to use. Other than that, the ease of use in new technology also influence the repurchase and reuse intention of the consumer (Chiu et al., 2009). Also, research had been carried out which shows that people who always follow up and use new technology has a higher adoption in receiving and accepting new technology innovation because it is easier for them to learn and access (Hubbard & Hayashi, 2003). The hypothesis to be tested as follows:

H3: Perceived usefulness have strong positive relationship to perceived ease of use.

H4: Perceived usefulness have positive relationship to the intention and acceptance for Malaysians to use e-wallet.

1.4 Perceived security

Consumers have recently urged on the importance of safety and security when using any online related application and system (Damghanian et al., 2016). According to Linck et al. (2007) defines that perceived security to which an individual feel and evaluate that he or she is protected against the security while using e-wallet payment system. In other words, it is in the event when an individual believes that using a certain mobile payment will be secure. With the concern of data being stolen by hackers, researchers have stated that many consumers had concerns on the security of e-wallet, which is

not actual security, does create a barrier that slows down the adoption of this system (Linck et al., 2007; Kim et al., 2010; Ovum, 2012).

Also, the consumers also have concerns in the event that they lose their smartphone which is not an uncommon incident to happen, their identity and personal data might be stolen (Gross et al., 2012). In addition, mobile wallet or e-wallet does include parties that actually owns your data such as banks, telecom companies, merchants which lead to consumers' concern about their privacy and security. It is hard for consumers not only in Malaysia but also around the world to be concerned when using e-wallet if the security of those apps were at risk. In this era, electronic transactions are slowly replacing the traditional payment method which (Kadhiwal & Zulfiquar, (2007) claimed that security issue becomes one of the most important concerns in the adoption of e-wallet. Kreyer et al. (2003) claimed that the security issue can be identified or examined through objective security and subjective security. The objective security concerns in technical characteristic which includes authentication, confidentiality, non-repudiation and data integrity (which data of an individual are strictly encrypted and secure during the transaction) (Suh & Han, 2002; Kreyer et al., 2003). In contrast, a person or individual perceives and believes that using e-wallet procedure would be secure represent the subjective security. As such, the hypothesis to be tested is as follows:

H5: Perceived security have positive relationship towards intention and acceptance for Malaysians to use e-wallet.

1.5 Benefits

The benefits are significant factors or component that influence the consumer to have a higher chance of adopting a new technology such as e-wallet system (Chou et al., 2004). First, the cost of usage in e-wallet is low. Many researches had been conducted overseas stated that low cost in the online transaction and electronic payment system will result in higher adoption to replace cash system (Pavlou, 2001; Kousaridas et al., 2008). Besides, a research claimed that consumer is willing to take the effort to achieve a certain task to receive awards or tangible incentives (Varnali et al., 2012; Kim & Han, 2014). This statement can be proved nowadays whereby many e-wallet apps has launched cash back rewards which influence more consumer to use the apps to make the payment. This action would surely attract consumers' attention and increase the chance and adoption of e-wallet. In addition, the tangible benefits on offer for downloading and using the e-wallet such as discounts, free internet access, or free shipping will increase the intention of using e-wallet (Shatskikh, 2013).

According to Eastin (2002), the consumer who tends to do online shopping would have found the convenience and financial benefits in using and adapting to the e-wallet system. This statement is further supported by Kim and Han (2014) whereby when low cost and rewards being given in the usage of e-wallet it will increase the chances of using the payment system while doing online shopping. In terms of ease to the consumer, Chiu et al. (2009) found out that electronic payment system is actually convenient in saving more cost and time. This again supports the notion where e-wallet system will bring payment methods to a higher level in which consumers need not bring any cash around when either having a meal in a restaurant or shopping in a mall.

Yet, even though research claimed that electronic payment system or e-wallet system will bring many benefits to the consumer, Haraiseree (2008) found out that a large number of consumers still prefer to use cash and cheques. This is because the consumers are not convinced by the rewards or benefits in order to adopt the e-wallet system. Also, in the year 2016, Visa Consumer Payment Attitudes survey had been carried out which amounted to 73% of Malaysians still prefer using cash as their payment method. This is because of the lack of internet connection in urban areas and It also contributes to financial stress to those who cannot afford smartphones as well as lack of knowledge in using and adopting e-wallet as a means for payment (Visa, 2016).

In addition, Upadhayaya (2012) again claimed that e-wallet brings many benefits that enhance both the intention for the consumers to adopt e-wallet and also e-commerce in the future. Benefits listed were easy recurring payments and transfer, easy manage from smartphones, personal data encrypted, easy top-up system and others. So, Tan and Goh (2018) claimed that newly launched e-wallet apps in Malaysia might be easy to adopt by the younger generation whereas the older generation might consider security and ease of use as their main concerns and meanwhile prefer using cash more than e-wallet. Again, the factors of benefits need to be tested out in this research if there is relevant positive relationship towards the intention and acceptance of e-wallet in Malaysia. The hypothesis to be tested are as follows:

H6: Benefits have positive relationships towards intention and acceptance for Malaysians to use e-wallet.

H7: Benefits have positive relationships towards perceived ease of use.

H8: Benefits have positive relationships towards perceived usefulness.

2. METHODOLOGY

Previous studies focus on intention to adopt (Chau, 1996; Gefen & Straub, 2000; Chau & Lai, 2003; Jackson et al., 2007; Ongena et al., 2013) and likewise, these studies are conducted in order to demonstrate the usage of e-wallet among Malaysians, focuses on the acceptance of e-wallet through the intention of users in adopting e-wallet. The technology acceptance model (TAM) is being used decades ago to examine the decision and concerns of the consumer to adopt various new technology innovations which are divided into two major factors, perceived usefulness and perceived ease of use (Davis et al., 1989). The traditional variable of PEOU is intentionally omitted by noting this concept is tautological in explaining acceptance. Also, another studies conducted by Albrecht (2001) illustrated that the TAM model is a very important reason that consumers identify and expand the usage of e-wallet system.

Besides than using TAM model to examine the acceptance of e-wallet in Malaysia, perceived security given also take into consideration that influence the intention of consumer. The extension or integration of TAM could afford a robust model than whichever standing along since scholars contended that the hypothesis engaged in TAM are subgroup of perceived innovation features (Chen et al., 2002; Al-Rahmi et al., 2019). Perceived ease of use, personal data, hackers attack, and trust will have positive relationship towards the factors of perceived security. These technological and contextual factors are included as alternatives in the traditional TAM has been upheld to be valued (Baaren et al., 2011; Ongena et al., 2013). This is because research carried out claimed that e-wallet have the biggest challenge in security and having a hard time to prove and convince the consumers that it is safe to use (Kadhiwal & Zulfiqar, 2007; Gross et al., 2012; Oney et al., 2017).

2.1 Procedure and sample

Respondents of this research were among 150 people in Malaysian. The questionnaires were distributed through Google form among three generations. There is potential that some of the questionnaires may not be useful to tabulate in the final result so extra respondents will be needed to fill up the gap. In this research, Malaysians are the main focus group to test out the intention and acceptance on e-wallet. The survey was conducted by spreading the link within Malaysia through digital media. By using media to conduct the survey, it allows the researcher to reach and collect data from people in different states that were far from KL; cities such as Sarawak and Sabah. Thus, the survey can be distributed efficiently that allows this research to be more reliable and credible.

2.2 Rating scales

The rating scale is used in this research of studies to express their result in a more specific number among agreement and disagreement towards a particular statement or factors. Thus, this research had adopted the Likert scale as the research question model for attitudinal studies. In the table below shows the 5-point Likert scale that being adopted from the main reference to use on the variables except for the demographic questions.

2.3 Data analysis

The software that is used to analyze all the data is the Statistical Package for the Social Science. Thus, by using the SPSS system, data analysis had been divided into three categories: descriptive statistical analysis, correlation analysis, and multiple regression analysis. Firstly, the descriptive statistic is used to test the frequency distribution on the mean, standard deviation, the minimum, and the maximum. Besides, Pearson correlation analysis is used to examine the bivariate relationship on the data collected between two variables. In simpler words, p-value or sig is used to test the significant relationship between two variables by using Pearson correlation.

2.4 Demographics of respondent

The total of 3 demographic questions were being place inside the questionnaire. These questions allow the researcher to better understand on how demographic differences affect their thinking and answers towards this research topic. The demographic questions include gender, age, and culture. All the 150 sets of results are collected among respondents all over Malaysia.

Gender is measured as the nominal variable and the respondent is given only male and female as their options. There is a larger number of female respondents compared to males with a 56.7% (female) over 43.3% (male). This result showed a slight imbalance in distributing out the questionnaire. In this research, respondents were being separated into three generations. Generation X represents the respondent's age from 35 to 53 years old; generation Y represent the respondent's age from 22 to 37 years old; generation Z/Millennial represents the respondent's age below 21 years old. The overall data showed that Generation Z were the major respondents with a number of 78 or 52% in the overall data collection. This was followed by generation Y listed as the second highest (34%) while the least number of respondents were generation X (14%).

From the data above, it can be concluded that Generation Z was the respondents that were active and have a higher chance of using e-wallet. This is because the method of distributing this questionnaire is through medias such as Facebook and Instagram. Thus, this illustrated that Generation Z will have a higher percentage in using media and apps which can be related to the higher chance of using e-wallet as they are familiar in E-tech. Yet, Generation Y do also contribute in second highest and having a large chance in terms of using e-wallet as their alternative payment method. To conclude, Generation X had the least number of respondents in this research. Table 1 depicts the demographic of respondents

Table 1. Demographic of respondents

Measure	Items	Frequency	Percentage	Cumulative Percentage
Gender	Male	65	43.3	43.3
	Female	85	56.7	100.0
Total		150	100.0	100.0
Age	GenX 38-53	21	14.0	14.0
	GenY 22-37	51	34.0	48.0
	GenZ 0-21	78	52.0	100.0
Total		150	100.0	
Culture	Malay	16		
	Chinese	99		
	Indian	27		
	Others	8		
Total		150		

3. RESULTS AND DISCUSSION

Table 2 depicts the descriptive statistic on each question that was asked in the questionnaire when distributing it to the respondents. The data that will be focused on is the mean number for each statistic. The mean indicates which variable of question is more important for the respondent when they are answering these questions. In simpler terms, higher mean score means that the particular question is more important to the respondent that it is related to the intention and acceptance of using e-wallet. From the table above, PS3, PS5, and Dep 1 had the 3 highest scores among these questions. PS3 had scored a mean of 4.19 out of 5 as the question asked whether the respondent is willing to use e-wallet if the software is protected by the latest security technology. This shows that Malaysians have more concern about security technology. As e-wallet is still new in Malaysia, many of us have not fully accepted the e-wallet method in making payment because security issues might be the biggest concern that slows down the usage of e-wallet in Malaysia.

Again, the second highest is PS5 with the mean score of 4.31 where the question is about whether the respondents prefer to use e-wallet that provides security insurance. Hence, both of these questions have come from the variable of perceived security. There are two reasons why Malaysians are concerned with e-wallet payment system which was mentioned earlier in the problem statement. First, WeChat pay or AliPay are both e-payment channels from China and people are concerned about their security if their bank or personal information might be attacked or hacked by hackers. Second, there are too many Malaysian Companies launching their own e-wallet services such as Boost or Fave, which lead to confusion and doubts if these e-wallets were highly secured.

The highest mean value was Dep1 whereby the question is about whether the respondents had ever heard about e-wallet. The result showed a mean of 4.45 which means e-wallet still not popular in Malaysia. Yet, the lowest score is PS2 with a mean of 3.55 and the question is "E-wallet has a minimum financial risk". The mean of 3.55 indicated that Malaysians only have moderate responses for this question and do not fully trust on e-wallet's security.

Table 2. Statistics on variable question

	N	Minimum	Maximum	Mean	Std. Deviation
PS2	150	1	5	3.55	1.078
PU3	150	1	5	3.81	0.878
PEU1	150	2	5	3.82	0.751
PU2	150	1	5	3.82	0.956
PS1	150	1	5	3.83	0.862
Dep2	150	2	5	3.84	0.666
PEU3	150	1	5	3.94	0.845
PU1	150	1	5	3.97	0.814
PEU5	150	1	5	3.99	0.927
PU4	150	1	5	3.99	0.863
PEU4	150	1	5	4.05	0.842
PS4	150	1	5	4.09	0.919
B3	150	2	5	4.09	0.780
B2	150	1	5	4.09	0.830
B5	150	2	5	4.13	0.717
PEU2	150	1	5	4.15	0.817
PS3	150	1	5	4.19	0.763
PS5	150	1	5	4.31	0.734
Dep1	150	2	5	4.45	0.609
Valid N (listwise)	150				

The descriptive statistic data above describes the dependent variables and independent variables. Table 3 depicts the descriptive statistic data. All variable shares average mean from 3.8983 to 4.1467 which can explain that all variables are almost equally important. The average mean can also be explained as the respondents agreed with the statements provided in the questionnaire.

Thus, perceived security scores the top highest mean for the category of independent variables. It can be explained as the respondents agreed that perceived security has higher relations to the factors that affect the intention and acceptance for Malaysians to use e-wallet. However, perceived usefulness and perceived ease of use are also in agreement and are related to the factors of this research.

Table 3. Descriptive statistics on variables

	N	Min	Max	Mean	Std. Dev.
Perceive Usefulness	150	1.00	5.00	3.8983	0.66750
Perceive Ease Of Use	150	2.00	5.00	3.9893	0.61950
Perceive Security	150	2.20	5.00	3.9947	0.55415
DEP	150	2.00	5.00	4.1467	0.56919
Benefit	150	2.80	5.00	4.0707	0.59444
Valid N (listwise)	150				

Table 4 depicts the reliability test of all dependent and independent variables. By using the SPSS software, Cronbach's Alpha reliability test was conducted in this research to check the internal reliability of the scale. According to Nunnally (1979), the cut-off value of the reliability test is 0.7 and the score that is higher than 0.7 is considered good

However, the reliability score which is less than 0.7 are not considered as unacceptable. Scores which are lower than 0.7 can be defined as poor. Yet, perceived security might be the factor that the consumers deemed as being not too important compared to the other factors. Other than that, the more respondents who select the median of the scale will also lower the reliability, for example, there are too many respondents who selected the answer of 3 (moderate). Last but not least, a lower number of questions compared to the other independent variables might also lower the reliability score with bigger attenuation.

To conclude, the reliability test among all the variables in this research is good in which the average score of more than 0.75 and above. This indicates that the test is reliable and consistent within itself and across time. Yet, perceived security with a reliability value of 0.620 is also considered as acceptable and reliable in this research.

Table 4. Reliability test

Dependent and Independent Variables	Reliability Score/Cronbach's Alpha	Items
Perceived Security (IV)	0.620	5
Intention and Acceptance (DV)	0.743	2
Perceived Usefulness (IV)	0.755	4
Perceived Ease of Use (IV)	0.794	5
Benefit (IV)	0.823	5

The correlation is to test among all the dependent and independent variables and to determine the relationships among each variable is being supported or vice versa. In statistic, the correlations refer to the relationship between two variables. The cut-off value of the correlation which can be considered as a positive relationship is above 0.500. The higher the value of correlation, the higher the relationship between two variables.

By interpreting the data of correlations, intention, and acceptance (dependent variable) have high positive relationships with perceived ease of use and perceived usefulness. Intention and acceptance have 0.733 of high positive relationship with perceived ease of use. Intention and acceptance have 0.647 of high positive relationship with perceived usefulness. Yet, the intention and acceptance have a lower positive relationship with perceived security at a value of 0.492. Table 5 depicts the Table of Correlation

Table 5. Table of correlation

Variables	PEoU	PU	PS	DEP
Perceived Ease of Use	-			
Perceived Usefulness	0.694	-		
Perceived Security	0.596	0.524	-	
Benefits	0.749	0.701	0.675	-
Int and Acpt (Dependent Variable)	0.733	0.647	0.492	-

Based on the Table of Correlation, the result on all variables had an average score of mean which indicates that all variables are important. To further clarify, the top 2 scores among 4 independent variables were perceived security and benefit. The final mean result of perceived security was 3.9947 while benefit was 4.0707 compared to perceived usefulness with 3.8983 and perceived ease of use with 3.9893.

Also, according to the reliability test, again almost all the independent variables had scored more than 0.7 which is higher than 0.7 and it indicates that the result collected is reliable. Yet, only the variable of perceived security had a lower score of 0.620 but the result is still considered reliable because of the different number of questions compared to other independent variables.

Moreover, the correlation test had been carried out to test the relationship between the independent and dependent variables. The result had shown that perceived ease of use, perceived usefulness, and benefit all have positive relationship towards the intention and acceptance of using e-wallet among Malaysians. This is because from the correlation test, PEU, PU, and B had scored more than 0.5. Thus, the hypotheses of Perceived ease of use, Perceived Usefulness and Benefits having positive relationship towards intention and acceptance of using e-wallet is supported by the correlation test. Meanwhile, the hypothesis of PS having positive relationship towards the intention and acceptance is not supported by the correlation test.

From the first research question discussion, PEU, PU, and B had shown support towards the hypotheses with a positive relationship with the intention and acceptance among Malaysians in using e-wallet. The multiple regression test had been carried out to test on which hypotheses were being accepted or rejected.

By carrying out the multiple regression tests on all independent variable towards the dependent variable, the sig score which is lower than 0.050 only will be accepted while the others will be rejected. From the result of the test, perceived ease of use had a score of 0.000 in the regression model. Hence, perceived ease of use has a positive relationship towards the intention and acceptance, thus, is significant and accepted as one of the major variables that have a larger influence on Malaysians in using e-wallet.

Furthermore, the regression model had also tested on the perceived usefulness and it had a score of 0.001 in the end. From the result of the test, the hypothesis of perceived usefulness has a positive relationship towards the intention and acceptance, hence, is significant and accepted as the second major variable that has a large influence on Malaysians in using e-wallet.

Even though the hypothesis of benefit having a positive relationship with the intention and acceptance is supported by the correlation test. But, the result of multiple regression on this hypothesis had a score of 0.486 and it is higher than 0.050. So, the hypothesis of benefit having a positive relationship towards intention and acceptance has been rejected. Also, perceived security is not supported by both the correlation and regression model (0.492 < 0.500 in correlation; 0.408 > 0.050 in regression).

To conclude, perceived ease of use and perceived usefulness are the most significant and accepted factors on the intention and acceptance of e-wallet in Malaysia. This is because there are many researches carried out to test on the intention and acceptance of e-payment and yet having a major focus on e-wallet as a specific topic in research especially in Malaysia.

4. CONCLUSION

The purpose of this study was to gain an insight into the determinants of acceptance among e-wallet users in Malaysia. Drawing on quantitative study, this study developed user acceptance model to oversee the intention and adoption to use e-wallet among Malaysians. A critical technological requirement, demographic and security influence were used and have shown to be valuable to explore the level of actual usage of e-wallet among Malaysians. In conjunction with Industrial Revolution 4.0, the technological revolution results a drastic change to the state economic system and establishes new technological paradigm that influences all the important sides of economic functioning. As such, an exploration of e-wallet actual usage is indeed crucial as an emergence indicator of Fintech in Malaysia. The emergence of Fintech is generally emerged from the opportunities provided by the fourth industrial revolution that helped provide mobility, ease of use, speed and lower cost of services in financial services sector (Anikina et al., 2016). Over the years there are researches that had been heavily carried out in the study on the area of e-payment and yet there is a rare and limited research on e-wallet specifically. Those researches are really useful in this research because e-payment and e-wallet are related as an e-electronic payment system which aims to ease the consumer in making payments and transactions. Thus, the research of e-payment and e-wallet from overseas had become the reference for this research paper. To increase the usage of e-wallet in Malaysia, the factors of perceived ease of use needs to be focused.

This is because the research of Lubua et al. (2017) had claimed that 96.4% of the respondent is willing to use the mobile payment method because it can be easily accessed without formal training. By applying the foundation on ease of use, Buabeng-Andoh (2012) had suggested that the language needs to be easy in order to understand and also clear to ease the consumers in using it. Also, Lubua et al. (2017), Jun and Cai (2001) have contended that easier steps and less complicated design will increase consumers to have higher intention to use the mobile wallet. Thus, the study of e-wallet is closely related to the other researches in the factors of perceived ease of use. Therefore, Malaysia should have high intention and concern on the perceived ease of use to bring e-wallet as an alternative payment method in the future.

Besides that, this research also implies that Malaysians or e-wallet providers should not just let more similar apps to be launched in Malaysia. This is because with many similar e-wallet apps launched in Malaysia, it will confuse the consumers on which e-wallet provider that is more useful. The bad side of having too many similar apps will lead to loss of trust and belief of the consumers towards e-wallet. So, e-wallet as the alternative to notes and coins should focus more on its usefulness.

To conclude, overseas research had given a lot of information on how to increase the intention and acceptance of new technology of the e-payment system which are closely related to e-wallet. So, government and provider of e-wallet services in Malaysia should take these two factors as the main consideration and keys to improve the system so that e-wallet can be widely used in the future in Malaysia.

BIBLIOGRAPHIC REFERENCES

- Aboelimged, M., & Gebba, T. R. (2013). Mobile banking adoption: An examination of technology acceptance model and theory of planned behavior. *International Journal of Business Research and Development*, 2(1), 35-50.
- Albrecht, A. (2001). Understanding the issues behind user acceptance. *Biometric Technology Today*, 9(1), 7-8.
- Al-Rahmi, W. M., Yahaya, N., Alamri, M. M., Alyoussef, I. Y., Al-Rahmi, A. M., & Kamin, Y. B. (2019). Integrating innovation diffusion theory with technology acceptance model: Supporting students' attitude towards using a massive open online courses (MOOCs) systems. *Interactive Learning Environments*, 2019, 1-13.
- Anikina, I. D. et al. (2016). Methodological aspects of prioritization of financial tools for stimulation of innovative activities. *European Research Studies Journal*, 19(2), 100 - 112.
- Baaren, E., Van de Wijngaert, L., & Huizer, E. (2011). Understanding technology adoption through individual and context characteristics: The case of HDTV. *Journal of Broadcasting and Electronic Media*, 55(1), 72-89.
- Buabeng-Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of Education and Development using ICT*, 8(1), 136-155.
- Chau, P. Y. (1996). An empirical assessment of a modified technology acceptance model. *Journal of management information systems*, 13(2), 185-204.
- Chau, P. Y., & Lai, V. S. (2003). An empirical investigation of the determinants of user acceptance of internet banking. *Journal of Organizational Computing and Electronic Commerce*, 13(2), 123-145.
- Chen, L. da, Gillenson, M. L., & Sherrell, D. L. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information and Management*, 39(8), 705-719.
- Chiu, C. M., Chang, C. C., Cheng, H. L., & Fang, Y. H. (2009). Determinants of customer repurchase intention in online shopping. *Online Information Review*, 33(4), 761-784.
- Chou, Y., Lee, C., & Chung, J. (2004). Understanding m-commerce payment systems through the analytic hierarchy process. *Journal of Business Research*, 57(12), 1423-1430.
- Damghanian, H., Zarei, A., & Siahsharani Kojuri, M. A. (2016). Impact of perceived security on trust, perceived risk, and acceptance of online banking in Iran. *Journal of Internet Commerce*, 15(3), 214-238.
- Davis, F. D. (1993). User acceptance of information technology: System characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies*, 38(3), 475-487.

- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), 1111-1132.
- Eastin, M. S. (2002). Diffusion of e-commerce: An analysis of the adoption of four e-commerce activities. *Telematics and Informatics*, 19(3), 251-267.
- Gefen, D., & Straub, D. W. (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. *Journal of the Association for Information Systems*, 1(1), 1-30.
- Gross, M. B., Hogarth, J. M., & Schmeiser, M. D. (2012). Use of financial services by the unbanked and underbanked and the potential for mobile financial services adoption. *Federal Reserve Bulletin*, 98(4), 1-20.
- Hataiseree, R. (2008). Development of e-payments and challenges for Central Banks: Thailand's recent experience. https://www.ecb.europa.eu/home/pdf/research/WP_2008_01.pdf.
- Hua, L. Y., Ramayah, T., Ping, T. A., & Jun-Hwa, C. (2017). Social media as a tool to help select tourism destinations: The case of Malaysia. *Information Systems Management*, 34(3), 265-279.
- Hubbard, S. M., & Hayashi, S. W. (2003). Use of diffusion of innovations theory to drive a federal agency's program evaluation. *Evaluation and Program Planning*, 26(1), 49-56.
- Jackson, C. M., Chow, S., & Leitch, R. A. (1997). Toward an understanding of the behavioral intention to use an information system. *Decision Sciences*, 28(2), 357-389.
- Jun, M., & Cai, S. (2001). The key determinants of internet banking service quality: A content analysis. *International Journal of Bank Marketing*, 19(7), 276-291.
- Kadhiwal, S., & Zulfiqar, A. U. S. (2007). Analysis of mobile payment security measures and different standards. *Computer Fraud and Security*, 2007(6), 12-16.
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310-322.
- Kim, Y. J., & Han, J. (2014). Why smartphone advertising attracts customers: A model of Web advertising, flow, and personalization. *Computers in Human Behavior*, 33, 256-269.
- Kitchen, P. J., Martin, R., & Che-Ha, N. (2015). Long term evolution mobile services and intention to adopt: A Malaysian perspective. *Journal of Strategic Marketing*, 23(7), 643-654.
- Kousaridas, A., Parissis, G., & Apostolopoulos, T. (2008). An open financial services architecture based on the use of intelligent mobile devices. *Electronic Commerce Research and Applications*, 7(2), 232-246.
- Kreyer, N., Pousttchi, K., & Turowski, K. (2003). Mobile payment procedures: Scope and characteristics. *E-Service*, 2(3), 7-22.
- Kwon, O., Choi, K., & Kim, M. (2007). User acceptance of context-aware services: Self-efficacy, user innovativeness and perceived sensitivity on contextual pressure. *Behaviour and Information Technology*, 26(6), 483-498.
- Linck, K., Pousttchi, K., & Wiedemann, D. G. (2006). Security issues in mobile payment from the customer viewpoint. 14th European Conference on Information Systems, pp. 1-11.
- Lubua, E. W. (2018). "Enhancing e-transparency in public governance through social media," in *Exploring the Role of Social Media in Transnational Advocacy*, F. P. C. Endong, Ed. Pennsylvania: IGI Global pp. 136-152.
- Lubua, E. W., Semlambo, A., & Pretorius, P. D. (2017). Factors affecting the use of social media in the learning process. *South African Journal of Information Management*, 19(1), 1-7.
- Ndubisi, N. O. (2004). Factors influencing e-learning adoption intention: Examining the determinant structure of the decomposed theory of planned behaviour constructs. 27th Annual Conference of HERDSA, pp. 252-262.
- Nunnally, J. C. (1994). *Psychometric Theory*. New Delhi: Tata McGraw-Hill Education.
- Oney, E., Guven, G. O., & Rizvi, W. H. (2017). The determinants of electronic payment systems usage from consumers' perspective. *Economic Research-Ekonomska Istraživanja*, 30(1), 394-415.
- Ongena, G., van de Wijngaert, L., & Huizer, E. (2013). Exploring determinants of early user acceptance for an audio-visual heritage archive service using the vignette method. *Behaviour & information technology*, 32(12), 1216-1224.
- Ovum. (2012). *Digital wallet dynamics*. <https://www.mahindracomviva.com/wp-content/uploads/2017/08/Mahindra-Comviva-Digital-Wallet-Whitepaper.pdf>.
- Pavlou, P. (2001). Integrating trust in electronic commerce with the technology acceptance model: Model development and validation. *Seventh Americas Conference on Information Systems*, pp. 816-822.
- Pietro, D. L., Virgilio, D. F., & Pantano, E. (2012). Social network for the choice of tourist destination: Attitude and behavioral intention. *Journal of Hospitality and Tourism*, 3(1), pp. 60-76.
- Sahut, J. M. (2008). The adoption and diffusion of electronic wallets: The case of monéo. *Journal of Internet Banking and Commerce*, 13(1), 1-9.
- Shatskikh, A. (2013). *Consumer acceptance of mobile payments in restaurants*. Master thesis, Tampa: University of South Florida.
- Suh, B., & Han, I. (2002). Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications*, 1(3-4), 247-263.
- Tan, W. L., & Goh, Y. N. (2018). The role of psychological factors in influencing consumer purchase intention towards green residential building. *International Journal of Housing Markets and Analysis*, 11(5), 788-807.
- Upadhayaya, A. (2012). Electronic commerce and e-wallet. *International Journal of Recent Research and Review*, 1, 37-41.
- Varnali, K., Yilmaz, C., & Toker, A. (2012). Predictors of attitudinal and behavioral outcomes in mobile advertising: A field experiment. *Electronic Commerce Research and Applications*, 11(6), 570-581.
- Visa. (2016). *Visa consumer payment attitudes survey*. <https://www.visa.com.sg/dam/VCOM/regional/ap/documents/rise-of-the-digitally-engaged-consumer-sg-my-th.pdf>.