



Factor Affecting Adoption of E-Wallet in Sarawak

Kelvin Lee Yong Ming, Mohamad Jais, Chan Chia Wen, Nurul Syuhada Zaidi

Universiti Malaysia Sarawak, ¹E-mail: kelvinklym910104@gmail.com, ²E-mail: jmohamad@unimas.my

Abstract

E-wallet was an innovative payment instrument that arises under financial technology. E-wallet helps to ease the user's daily life, in which users can make their daily transactions without using the notes or coins. Indirectly, E-wallet also helps to reduce the risk of cash being stolen. Undeniably, E-wallet brings more benefits than disadvantages. The primary aim of this study is to examine the factors affecting the adoption of E-wallet services in Sarawak. The questionnaire, which consisted of 26 questions were distributed to the respondents and successfully collected 450 feedbacks. Firstly, this study applied factor analysis to construct all the variables. Also, Cronbach's α coefficient was computed to determine internal consistency reliabilities. Then, this study used regression analysis to test the relationship between the variables. The results of the regression analysis showed that the users would adopt E-wallet when they perceive that the E-wallet is useful and easy to be used. Meanwhile, the findings of this study also showed that rewards tend to attract users to use E-wallet. Besides that, this study also found that higher perceived risk may act as a barrier to stop users from using E-wallet. These results help the E-wallet service providers to identify the significant factors that influence the user's intention to use E-wallet services. Lastly, this study recommended the E-wallet service providers to take the security systems and rewards into consideration for the enhancement of their payment system.

Key words

E-wallet, Technology Acceptance Model, Theory of Planned Behaviour, Perceived Risk, Rewards

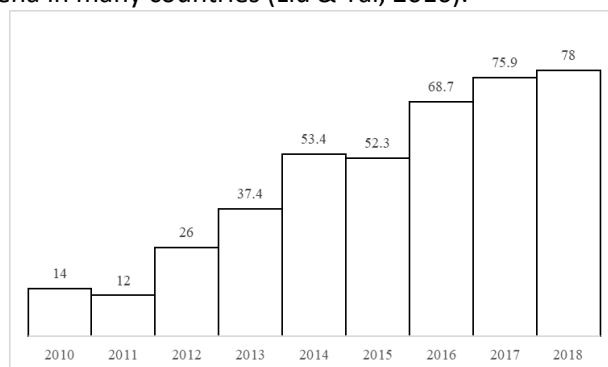
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1. Introduction

FinTech, a short form of financial technology, refers to the innovative sector that incorporates the technology with the finance industry (Ion & Alexandra, 2016). Financial innovation is needed to reduce costs and risks of the users since the financial industry owns a vital role in facilitating the economic growth (Frame & White, 2014). In addition, FinTech enhances the transparency and efficiency of the financial process and brings convenience to the users (Zavolokina *et al.*, 2016). FinTech companies also expand their business scope into smartphones as smartphones are the popular tools used by the consumers for banking, payments, budgeting, shopping, or even stock trading. The technology advancement also contributes to the increment in the smartphone users to subscribe for FinTech services (Ryu, 2018).

The emergence of the smartphone completely transforms the way how a person communicates and stay connected with others over the past decade. By connecting to the internet, the smartphone able to perform multiple tasks, such as online shopping, purchasing cinema tickets, sending documents, etc. These features also make the user's life more comfortable and feeling stress-free (Punwatkarn & Verghese, 2018). In the aspect of the business, the seller also utilized the smartphone to change their distribution channel and selling network. Meanwhile, banks also developed several applications or products that fit in the

smartphone to enhance their competitiveness in this technology era (Yen, 2017). Figure 1 shown that the percentage of smartphone users in Malaysia increase from only 14% in 2010 to 78% in 2018. Since the smartphone became an important tool for human beings, and thus payments via smartphones are no longer the strange phenomena in many countries (Liu & Tai, 2016).



Source: MCMC 2018

Figure 1. Percentage of Smartphone Users from 2010 to 2018

The lifestyle of everyone has changed during this digital era. E-wallet is one of the most innovative financial technology products that emerge in the digital era. E-wallet defined as the electronic payment instruments that enable the users to make transactions anytime anywhere, for instance, using E-wallet apps that installed in their smartphone to purchase items at the convenience store (Punwatkar & Verghese, 2018). Meanwhile, convenience and speedy transactions are significant factors that attract the customer in using the e-wallet for online shopping purposes (Manikandan & Jayakodi, 2015). Several key features of E-wallet also mentioned by Varsha and Thulasiram (2016), which include (i) easy to use, (ii) low deposit amount, and (iii) sharing of E-wallet's benefits with the others. As one of the greatest innovations in this era, e-wallet also slowly replaces the usage of cash in the physical form (Dalimunita *et al.*, 2019). However, Subaramaniam *et al.* (2020) argued out that elders usually need to take a longer period to adapt to the E-wallet services since holding cash will make them feel more secured.



















Bank Negara Malaysia (BNM) issued 48 e-wallet licenses to cultivate Malaysian apply the cashless culture in the society before 2050 (Yunus, 2018; Tan, 2019). Various E-wallet services arise in Malaysia, and the related advertisements can be found in the restaurant, shopping mall, or even roadside. Meanwhile, E-wallet service provider also introduced different rewarding schemes to boost up the number of users. Recently, Malaysia was giving out a one-off RM 30 e-Tunai Rakyat incentives to encourage Malaysian to use E-wallet. The total incentives worth RM 450 million also expected to benefit 15 million Malaysian (Azura, 2020). Indirectly, the e-Tunai Rakyat incentives program accelerating the speed of transforming into the digital economy.

Among all the E-wallet available in Malaysia, there were three famous and well-known E-wallet providers who successfully dominate the market after the first half of 2018 until the end of 2019. Table 1 shows the ranking of the E-wallet by the number of active users. Grab Pay consistently dominates the market since the third quarter of 2018 until last quarter of 2019. As of 2020, there were more than 20 million downloads for Grab apps (Hassan, 2020). On the other hand, Touch n Go and Boost had 5 million and 4.8 million users, respectively. Noteworthy, Touch n Go and Boost currently had more than 100,000 merchants participated in their platform (Ker, 2019).

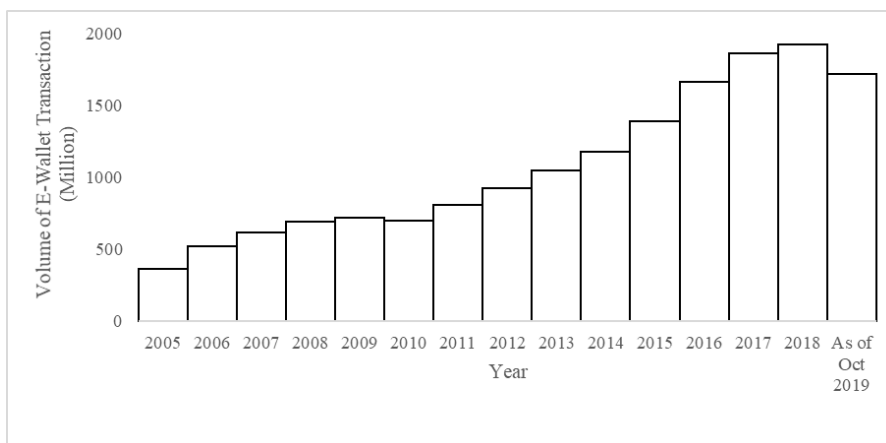
Since the existence of E-wallet, there was an uptrend in both the volume and value of E-wallet transactions in Malaysia (Figures 2 and 3). Figure 2 shows that there was just a total of 365.6 million E-wallet transactions achieved in 2005 and increase dramatically to 1.92 billion in 2018. As of October 2019, there were a total of 1.72 billion E-wallet transactions in Malaysia. In terms of value, the total value of the transaction that had been done through E-wallet achieved the record high of RM 13.9 billion as of October 2019 (Figure 3). In addition, Wiese and Humrani (2019) pointed out that growth in online shopping contributed to the massive usage of the digital wallet. As shown in Figure 4, the contribution of E-commerce to Malaysia's GDP climbed from RM 89.1 billion in 2015 to RM 115.5 billion in 2018. E-wallet usage is increasing rapidly in Malaysia and it is crucial to understand the reason behind this amazing

increment. The findings of this study also expected to help the E-wallet provider to have a better idea in capturing their potential customers.

Table 1. Top E-Wallet in Malaysia

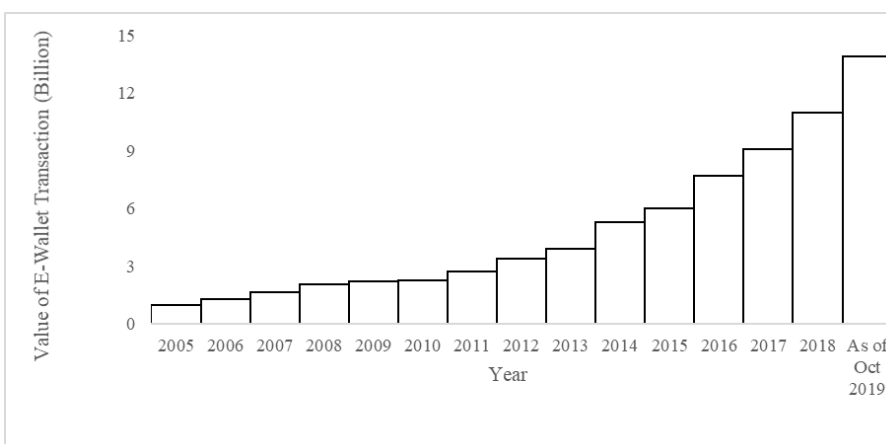
Ranking	Year					
	2018		2019			
	3 rd Quarter	4 th Quarter	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
1 st						
2 nd						
3 rd						

Source: Ker (2019)



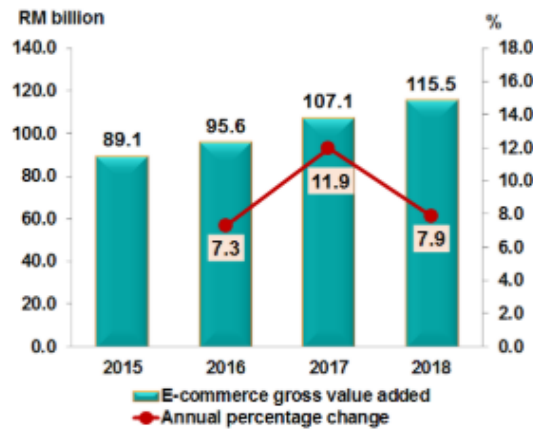
Source: BNM

Figure 2. Volume of E-Wallet Transaction (in Million) from 2005 to 2019



Source: BNM

Figure 3. Value of E-Wallet Transaction (in RM Billion) from 2005 to 2019



Source: Department of Statistics Malaysia (2018)

Figure 4. E-Commerce Gross Value Added to GDP

2. Literature review

This section begins with a discussion of the related theories. Also, this section discussed the existing literature related to the factors that influence the adoption of E-wallet. A considerable amount of studies has been carried out to investigate the factors that affect the user in using E-wallet. Along with that, Technology acceptance model (TAM) developed by Davis (1986) was widely applied in the research field to study the factors that influence the user to use a new technology system. Figure 5 illustrates two primary factors – (i) perceived usefulness (PU) and (ii) perceived ease of use (PEOU) that affects the users’ attitude in using a new system. TAM model is constructed based on the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975). TRA hypothesized that a person’s behavioural intention tends to affect their behaviour. Meanwhile, TRA suggests that a person’s behavioural intention is determined by his or her attitude and subjective norms. Figure 6 illustrates the relationship between a person’s attitude, subjective norms and behavioural.

Thereafter, Ajzen (1985) formed Theory of Planned Behaviour (TPB) by incorporating the perceived behavioural control into TRA. As illustrated in Figure 7, perceived behavioural control was an exogenous variable which posed both the direct and indirect effects on the person’s behaviour. Perceived behavioural control is the belief of a person about the available resources or opportunities that facilitate their intentions to perform an intention (Ajzen & Madden, 1986). Thus, higher level of resources and opportunities tend to lead a person to have a greater perceived behavioural control over their behaviour (Madden *et al.*, 1992). As a summary, TPB predict the interest or intention of consumers to perform a particular action. This study integrates the TPB into TAM model to investigate the potential factors that influence the user in adopting E-wallet in Sarawak.

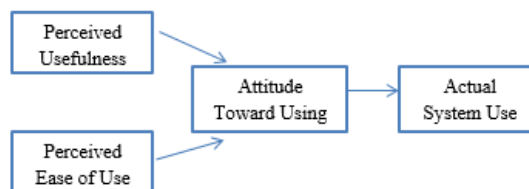


Figure 5. Technology Acceptance Model (TAM)

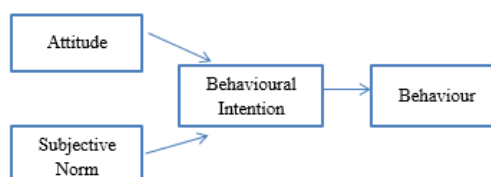


Figure 6. Theory of Reasoned Action (TRA)

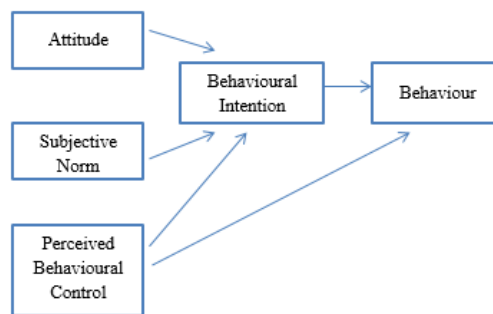


Figure 7. Theory of Planned Behaviour (TPB)

2.1. Perceived usefulness and perceived ease of use

Perceived usefulness (PU) refers to the users' perspective that the useful new technology system able to enhance their performance. Meanwhile, perceived ease of use (PEOU) relates to the users' perspective that usage of a system would require less effort in completing their tasks (Davis, 1989). Based on TAM, Liu & Tai (2016) conducted research in examine the determinants for the intention of E-wallet usage in Vietnam. They revealed that both PU and PEOU profoundly influence the users' intention in using E-wallet. Through the qualitative questionnaire, they realized that compatibility owns significant impact on both the PU and PEOU. However, they found that users' risk perception had no effect on the users' E-wallet usage intention. Lastly, the researcher pointed out there was a need for the E-wallet service provider to understand the factors that stop the elder group from using E-wallet in Vietnam.

On the other hand, Trivedi (2017) using TAM to investigate the factors that influence Generation Y in India to accept E-wallet. He mentioned that 65% of the Indian population aged under 35 years old. His results provide support to the TAM, in which the PU and PEOU play an essential role in affecting the Indian Gen Y in accepting the E-wallet services in India. Seetharaman *et al.* (2017) extended the TAM by include eight more variables as the potential factors that affect Singaporean's intentions in using E-wallet. They suggested industry players of E-wallet to enhance transaction security to attract more users. On the other hand, they found that PEOU did not show any significant impact to the users' intention in using E-wallet. However, they discovered that PEOU has demonstrated a strong influence on the PU. Lastly, they also recommend the services provider to enhance the transaction speed in order to increase the PU of the mobile wallet.

Taufan & Yuwono (2018) examined the factors that affect Indonesian in using the GO-Pay Application. GO-Pay is an electronic payment instrument that widely used by Indonesian. There were more than 79% of Indonesian make their daily transaction by using GO-Pay. Their results indicate that PU positively related with the usage of GO-Pay, but not PEOU. Another study is carried out by Nag & Gilitwala (2019) in Bangkok, Thailand to examine the factor in affecting the user's intention to adopt E-wallet. They revealed the PU and PEOU tend to attract more E-wallet users in Thailand.

Recently, Karim *et al.* (2020) examined the factors that affect Malaysian young adults in adopting the E-wallet. However, this study only focused in the students who pursued university degree in Klang Valley area. Thus, the results of Karim *et al.* (2020) may not generalize the decision of Malaysian young adults. They also emphasized that the choice of young adults may vary according to their income level. Their results showed that both higher levels of PU and PEOU linked with the higher usage of E-wallet in Malaysia.

By combining TAM with the TPB, Friadi *et al.* (2015) investigated the factors that influence the attitude and intention of using smartphone-based electronic money in Indonesia. Consistent with the assumption of TAM, they revealed that a higher level of PU and PEOU tend to encourage more Indonesian to use smartphone-based e-money. On the other hand, Gbongli *et al.* (2019) extend the TAM model by incorporating technology anxiety and personal innovativeness as the potential factors that affect a person in using E-wallet. They also found that PU and PEOU positively related with the intention of adopting E-wallet. However, they pointed out that the effect of PEOU will be more significant than PU. This study proposed the following hypotheses based on the literature reviewed.

H1: Perceived usefulness (PU) positively related with the users' adoption of E-wallet.

H2: Perceived ease of use (PEOU) positively related with the users' adoption of E-wallet.

2.2. Perceived risk

Perceived risk (PR) refers to the thought of possible adverse outcomes or consequences that shall be aroused from the usage of a particular service (Featherman & Pavlou, 2003). Earlier study of Mitchell (1999) also emphasized that users' risk perception strongly influences the intention of the users in using digital payment. Furthermore, users would always focus in minimizing the risk, but not maximizing the utility of the digital payment mechanism (Bauer *et al.*, 2005). On the other hand, Kim *et al.* (2008) mentioned that PR own substantial impacts in influencing the consumers' intention in online purchasing. A later study of Lee (2009) also revealed that higher perceived risk tends to reduce users' interest in adopting internet banking.

In the context of Malaysia, Hamid & Cheng (2013) investigated the risk perception and behaviour of young adults towards various payment methods in Malaysia. They found that Malaysian young adult perceives the transaction by cash will be safer than E-payment. However, they argued that perception of the young adult will be varying according to the transaction amount. Besides that, Lai & Zainal (2015) extended the TAM model by incorporating the perceived risk in their study. They found that perceived risk tend to lower down the consumers' intention in using E payment system. However, their study only limited to the internet users. Similarly, Yang *et al.* (2015) examine the impacts of the various dimensions of PR towards the consumers' intention in using mobile wallet. Consistent with the findings of Lai & Zainal (2015), Yang *et al.* (2015) revealed that PR tends to affect the consumers' intention negatively. Specifically, Yang *et al.* (2015) found that perceived performance risk, financial risk and privacy risk adversely affect the consumers' acceptance of mobile payment mechanisms.

A recent study conducted by Wong & Mo (2019) revealed that the users from Hong Kong do not have a good perception towards the security of mobile payment. Throughout the analysis, they also revealed that PR had a negative effect on the consumers' intention to use mobile payment. They also recommend that mobile payment provider should enhance the security system by changing the password protection to facial recognition or fingerprint. On the other hand, Alaeddin *et al.* (2019) revealed that PR had an indirect impact towards the intention of using a digital wallet, in which the attitude of consumer acts as a mediating variable. By incorporating the innovativeness resistance theory in the model, Aransyah *et al.* (2019) revealed that a high level of PR would pose a negative impact towards the usage of E-wallet. They also argued that the risk of losing the E-wallet is similar to cash because the user cannot claim back whatever is being stolen. Furthermore, Ahmed & Sajid (2019) mentioned that users also worried about information leakage when they are using E-wallet. In addition, Subaramaniam *et al.* (2020) who reported that most of the respondents stated that security risk is the primary concern for them in using E-wallet. This study proposed the following hypotheses based on the literature reviewed.

H 3: Perceived risk (PR) negatively related with the users' adoption of E-wallet.

2.3. Rewards

The term 'rewards' refers to the benefits that could be obtained from the seller right after their spending. As pointed by Dmeoulin & Zidda (2009), retailers usually provide monetary advantage and psychological advantage to retain their customers' loyalty. In addition, the reward may come in different forms, which included monetary incentives, free gift, and coupons (Aydin & Burnaz, 2016). Recently, Singh *et al.* (2020) mentioned that users only adopt the E-wallet services when the E-wallet provide benefit, such as cashback or reward point to the users. For instances, Singh *et al.* (2020) reported that mobile transaction rose by 38% from 235.5 million in 2017 to 325.2 million in 2018 as a result of several incentives has been given or offered to the users. The incentives include the waiver in service taxes and cash backs. In Malaysia, Subaramaniam *et al.* (2020) reported that 22% of the respondents agreed that E-wallet brought rewards. They also pointed out some examples, such as some shopping malls or restaurants working closely with the E-wallet service provider to offer attractive rewards or benefits to the customers. This study proposed the following hypotheses based on the literature reviewed.

H 4: Reward (RW) positively related with the users' adoption of E-wallet.

3. Methodology of research

This section discusses the data collection process and research methodologies applied in this study. Purposive sampling method was used to select the respondent for this study since this study only intends to collect the feedbacks from Sarawakian during the period between June 2019 and February 2020. This study used the application of Google form to create the intangible questionnaire. Then, intangible questionnaires were sent to the respondents and successfully collected feedbacks from 450 respondents. The questionnaire consists of 2 sections, in which Section A gathers information related to the respondent's background and Section B collects feedbacks for 18 statements from the respondents. Specifically, respondents need to express their extent of agreement to the total of 18 statements based on the seven-point Likert scale (1 = "strongly disagree" and 7= "strongly agree").

After collecting the data, the respondent's demographic information was summarized in the next section. Then, the factor loading for each item and Cronbach's α coefficient were calculated. Notably, Cronbach's α coefficient of exceeding 0.8 is preferable. Then, this study applied the regression analysis to investigate the relationship between the variables. The dependent variable used in this study was the adoption of the E-wallet, whereas the independent variables used in this study were (i) perceived usefulness, (ii) perceived ease of use, (iii) perceived risk and (iv) rewards. In accordance with the theoretical basis and literature reviewed, the hypotheses are summarized in Figure 8.

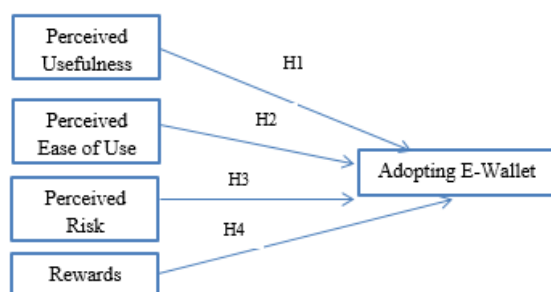


Figure 8. Conceptual Framework of the Study

4. Results and discussions

This section discusses the results obtained in this study. Firstly, descriptive statistics is used to summarize the respondent's demographic information.

The descriptive statistics of demographic information are presented in Table 2. The majority of the respondents were female (52.44%) and single (67.11%). Besides that, about 30.22% of the respondents come from the group of 21 to 25 years old, followed by the group of below 21 years old (21.11%) and 26-30 years old (16.89%). From the aspect of education, most of the respondents (30%) were Degree graduates, followed by SPM leavers (27.11%) and Diploma holder (26.89%). Nearly half of the respondents (47.11%) were employees and 65.56% of them earning more than RM 1,000 per month. Besides that, a large proportion of respondents (71.56%) also used E-wallet for less than a year and 46.22% of them had an experience of using E-wallet before. In the other word, 46.22% of the respondents were using more than one E-wallet.

Table 2. Demographic Information of the Respondents

Total Respondents: 450			
		Frequency	Percentage
Gender	Male	214	47.56%
	Female	236	52.44%
Marital Status	Married	148	32.89%
	Single	302	67.11%
Age (Years Old)	< 21	95	21.11%
	21 to 25	136	30.22%
	26 to 30	76	16.89%
	31 to 35	49	10.89%
	36 to 40	23	5.11%
	> 40	71	15.78%
Education Level	Penilaian Menengah Rendah	7	1.56%
	Sijil Pelajaran Malaysia	122	27.11%
	Sijil Tinggi Persekolahan Malaysia	43	9.56%
	Diploma	121	26.89%
	Bachelor's Degree	128	28.40%
	Master's Degree	29	6.44%
Occupation	Student	139	30.89%
	Self-employed	59	13.11%
	Employee	212	47.11%
	Housewife	17	3.78%
	Others	23	5.11%
Income (RM)	< 1,000	155	34.44%
	1,000 to 2,000	116	25.78%
	2,001 to 3,000	80	17.78%
	3,001 to 4,000	34	7.56%
	> 4,000	65	14.44%
E-wallet experience	Yes	208	46.22%
	No	242	53.78%
Using E-wallet for	Under 1 year	322	71.56%
	1 to 2 years	85	18.89%
	2 years and above	43	9.56%

Table 3 breakdowns the demographic information of respondents based on the different periods for E-wallet usage. Based on Table 3, the majority of the respondent has been using E-wallet for less than one year, in which 175 of the respondents were below 25 years old. In the aspect of age, Table 3 clearly showed that 86.32% of the respondents from the age group of below 21 have started to use E-wallet for a year or a few months ago. Surprisingly, the results also shown than 78.87% of the respondents from the age group have begun to use E-wallet recently. On the other hand, 35.94% of the Degree holders and 50% of the Master Degree holders used E-wallet for more than 1 year. In the aspect of occupation, 88.23% of the housewife has been using E-wallet for more than 1 year, whereas 83.45% of the students used the E-wallet for less than a year. The last row of Table 3 showed that nearly half of the respondents with income more than RM 3,000 have been using E-wallet for more than 1 year.

Table 3. Period of E-Wallet Usage Based on Demographic Information

		Usage of E-wallet		
		Less than a year	1 to 2 year	More than 2 years
Age (Years Old)	< 21	82 (86.32%)	9 (9.47%)	4 (4.21%)
	21 to 25	93 (68.4%)	33 (24.26%)	10 (7.35%)
	26 to 30	47 (61.84%)	19 (25.00%)	10 (13.16%)
	31 to 35	32 (65.31%)	11 (22.45%)	6 (12.24%)
	36 to 40	12 (52.17%)	8 (34.78%)	3 (13.04%)
	> 40	56 (78.87%)	5 (7.04%)	10 (14.08%)
Education Level	Penilaian Menengah Rendah	6 (85.71%)	0 (0.00%)	1 (14.29%)
	Sijil Pelajaran Malaysia	99 (81.15%)	17 (13.93)	6 (4.92%)
	Sijil Tinggi Persekolahan Malaysia	33 (76.74%)	3 (6.98%)	7 (16.28%)
	Diploma	87 (71.90%)	23 (19.00%)	11 (9.09%)
	Bachelor's Degree	82 (64.06%)	33 (25.78%)	13 (10.16%)
	Master's Degree	10 (34.48%)	13 (44.83%)	6 (20.69%)
Occupation	Student	116 (83.45%)	19 (13.67%)	4 (2.88%)
	Self-employed	34 (57.62%)	10 (16.95%)	15 (25.42%)
	Employee	138 (65.09%)	52 (24.53%)	22 (10.38%)
	Housewife	2 (11.76%)	13 (76.47%)	2 (11.76%)
	Others	18 (78.26%)	4 (17.39%)	1 (4.35%)
Income (RM)	< 1,000	135 (87.10%)	16 (10.32%)	4 (2.58%)
	1,000 to 2,000	82 (70.69%)	25 (21.55%)	9 (7.76%)
	2,001 to 3,000	59 (73.75%)	13 (16.25%)	8 (10.00%)
	3,001 to 4,000	18 (52.94%)	13 (38.24%)	3 (8.82%)
	> 4,000	34 (52.31%)	13 (20.00%)	18 (27.69%)

Notes: The percentage in the brackets is calculated based on the number of respondents in that particular group. For instance, 82 respondents are representing 86.32% of the group less than 21 years old. Calculation: $[82 / (82 + 9 + 4)] \times 100\% = 86.32\%$.

All the respondents are required to response to the statements in the questionnaire, in which the scale of 1 representing “strongly disagree” and the scale of 7 representing “strongly agree”. Table 4 is shown the summary statistics for the responses collected. On average, the respondent has shown a higher agreement to the statements related to PU and PEOU, followed by PR and RW. As reported in Table 4, the average scale for all the items ranged from 4.198 to 4.878. Table 4 also reported the value of Cronbach’s α for the variables. According to Khairul et al. (2018), a Cronbach’s α coefficient value that ranged between 0.6 and 0.8 is considered as moderate and acceptable. In addition, Khairul et al. (2018) mentioned Cronbach’s α coefficient value that exceeds 0.80 indicates that the particular set of items is reliable. The value of Cronbach’s α obtained for the variables ranging from 0.864 to 0.944. This indicated that the measurements for the variables are reliable in this study.

Table 4. Results of Factor Analysis and Cronbach Alpha

Variables	Item	Mean	Standard deviation	Factor Loadings	α
PU	PU 1	4.878	1.560	0.878	0.944
	PU 2	4.862	1.556	0.934	
	PU 3	4.804	1.508	0.919	
PEOU	PEOU 1	4.853	2.045	0.649	0.910
	PEOU 2	4.700	1.543	0.901	
	PEOU 3	4.636	1.515	0.876	
	PEOU 4	4.602	1.510	0.849	
	PEOU 5	4.827	1.535	0.885	
PR	PR 1	4.442	1.706	0.745	0.864
	PR 2	4.487	1.473	0.780	
	PR 3	4.420	1.578	0.804	
	PR 4	4.122	1.497	0.757	
RW	RW 1	4.198	1.661	0.836	0.908
	RW 2	4.220	1.700	0.870	
	RW 3	4.238	1.664	0.864	
Adoption of E-Wallet (AD)	AD 1	4.618	1.591	0.903	0.942
	AD 2	4.547	1.573	0.899	
	AD 3	4.607	1.599	0.914	

Table 5 reported the results of correlation analysis for the variables. All the correlation among the variables was significant at 5% level of significance. AD is positively correlated with PU, PEOU and RW, whereas AD is negatively correlated with PR. Specifically, PEOU showed the strongest positive correlation (0.756) with the AD, followed by PU (0.744) and RW (0.641). Although PR negatively correlated with AD, the association is the weakest with a coefficient of only -0.343.

Table 5. Results of Correlation Analysis

Variable	AD	PU	PEOU	PR	RW
AD	1.000	0.744	0.756	-0.343	0.641
PU	0.744	1.000	0.856	-0.185	0.499
PEOU	0.756	0.856	1.000	-0.287	0.561
PR	-0.343	-0.185	-0.287	1.000	-0.334
RW	0.641	0.499	0.561	-0.334	1.000

Table 6 presented the results of regression analysis. At the significance level of 1%, the results shown that four independent variables significantly related with the adoption of E-wallet in Sarawak. In addition, the signs of independent variables were similar to the results of correlation analysis. The R-square of 0.6819 indicates that 68.19% of the variation in dependent variable was explained by the independent variables. Three independent variables, which included PU, PEOU and RW shown a significant and positive relationship with the adoption of E-wallet in Sarawak. The results reported were also consistent with the assumption of TAM, in which both the PU and PEOU posed a significant impact to the adoption of the new technology system. Based on the results obtained, higher rewards tend to attract users in using the E-wallet services. Consistent with Aransyah *et al.* (2019), the results also shown that PR negatively related with the adoption of W-wallet. These results also implied that the user would not choose E-wallet as the payment method when the PR is high.

Table 6. Results of Regression Analysis

Dependent variable = Adoption of E-Wallet R-squared = 0.6819		
Independent Variable	Coefficient	p-value
PU	0.378	0.000***
PEOU	0.257	0.000***
PR	-0.113	0.000***
RW	0.281	0.000***

Table 7 summarized the results of hypothesis testing in this study. Based on the results obtained, four of the hypothesis tested in this study was supported. Consistent with the results of several researchers (Friadi *et al.*, 2015; Gbongli *et al.*, 2019; Karim *et al.*, 2020; Liu & Tai, 2016; Nag & Gilitwala, 2019; Trivedi, 2017), PU and PEOU found to be positively related with the users' adoption of E-wallet. Meanwhile, consistent with the findings of several researchers (Aransyah *et al.*, 2019; Lai & Zainal, 2015; Wong & Mo, 2019; Yang *et al.*, 2015), the findings of this study also showed that higher PR tends to lower down the user's adoption of E-wallet. Lastly, this study also revealed that RW tend to attract the user to adopt E-wallet. This result is also consistent with the most recent study of Singh *et al.* (2020) who mentioned that benefit or rewards tend to encourage users to adopt E-wallet services.

Table 7. Results of Hypothesis Testing

Factors	Hypothesis	Results
PU	H ₁ : PU positively related with the users' adoption of E-wallet.	Supported
PE	H ₂ : PEOU positively related with the users' adoption of E-wallet.	Supported
PR	H ₃ : PR negatively related with the users' adoption of E-wallet.	Supported
RW	H ₄ : RW positively related with the users' adoption of E-wallet.	Supported

5. Conclusions

E-wallet was the most exceptional financial innovations product. The emergence of E-wallet also serves as an impetus for the country to move towards the target of a cashless society. Hence, the principal aim of this study was to investigate the significant factors that affect the user in adopting E-wallet services in Sarawak, Malaysia. This study found that the majority of the respondents only used the E-wallet for less than a year. In addition, the empirical results also indicated that a higher level of perceived usefulness and perceived ease tend to attract more users in adopting E-wallet services. However, the empirical results also suggest that users will refuse to use E-wallet when they think that perceived risk is high. Interestingly, this study also found that rewards had a significant positive impact on the adoption of E-wallet service. This study also confirms the previous findings and contributes additional evidence that may benefit the E-wallet service providers. Specifically, the E-wallet service providers are suggested to focus on two factors, which were risk controlling and rewards. Lastly, this study also recommends E-wallet service providers to organize more campaigns to educate the public regarding the benefits of E-wallet.

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