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Perceived Trust, Convenience and Promotion For the Adoption of e-Wallet

Jiet Ping Kiew[1,2], Evelyn Ting Ling Toh[1,2], Ek Tee Ngian[1,2] and Sally Hui Ching Law[1]

[1]School of Business and Management, University of Technology Sarawak, 96000 Sibu, Sarawak, Malaysia, [2]Centre on Technological Readiness and Innovation in Business Technopreneurship, University of Technology Sarawak, 96000 Sibu, Sarawak, Malaysia.

Corresponding Author's Email: Kiew.jiet.ping@uts.edu.my

Abstract

The outbreak of Covid-19 had accelerated cashless and contactless digital payment like e-wallet. It was projected that the e-wallet market in Malaysia has the potential to grow to USD 20 billion by 2024. The Bank Negara Malaysia (BNM) had granted licence to 53 e-wallet providers and the competition remains fierce. This study is conducted to investigate the factors affecting the adoption of e-wallet by extending TAM model by perceived trust and promotion. The target population was those aged between 18 to 50 and 249 valid responses were collected by using purposive sampling technique. The demographic frequencies and outlier analysis were assessed using the Statistical Package for the Social Sciences (SPSS) while the measurement and structural models were examined using partial least squares-structural equation modelling (PLS-SEM). The results show that perceived trust, convenience, and promotion significantly affect the adoption of e-wallet. This study served as a guidance to the e-wallet service providers to gain competitive advantage in competitive e-wallet industry in terms of attracting new user and also retaining existing users.

Keywords: E-wallet, Adoption, Perceived Trust, Convenience, Promotion

Introduction

The increase in the usage of smartphone and internet had led to the development of e-wallet payment method from paper money. E-wallet is an electronic payment tool allowing users to transfer funds through the use of a mobile device (Undale et al., 2021). The outbreak of Covid-19 resulted in the movement control order (MCO) since March 2020 in Malaysia had encouraged the use of contactless payment to contain the spread of the Covid-19. Physical cash payment method was deemed to be one of the medium spreading the virus when it is touched by the infected person. E-wallet is useful in keeping track of every cent and ringgit spent by the user as every spending is recorded and the users do not need to record their spending manually (Mazlan, 2019). Malaysia had been leading the e-wallet usage in south east Asia with 40% of e-wallet usage followed by Philippine, Thailand, and Singapore with 36%, 27%, and 26% respectively (Sticpay, 2021). The usage of e-wallet is encouraged by

offering cashback if the consumers make payment using e-wallet. Consumers love rewards, getting gift or promotions in different ways no matter what is the consumers' age (Jovenn et al., 2019).

In Sarawak, S Pay Global which is Sarawak Government fintech platform is in line with Sarawak government effort towards forming a digital government. S Pay Global which was previously known as Sarawak Pay had changed its name in 2021 targeting not only Sarawak market but also international market. In 2022, there was 590,290 S Pay users and 85,445 merchants recording transactions worth RM1.8billion since the establishment in 2017 (Bernama, 2022). It is also projected that e-walllet market in Malaysia has the potential to grow to USD20billion by 2024 (Tan, 2018). Bank Negara Malaysia (BNM) had granted 47 non-bank e-money issuers and 6 bank e-money issuers (BNM, 2022). With a total of 53 licenced e-wallet providers, the competition remains fierce. With the potential e-wallet market identified, it is vital for the providers to take up the opportunity before the opportunity is taken up by their competitors. The factors driving the adoption of e-wallet are the keys for the providers to gain competitive advantage in attracting potential customers.

The e-wallet adoption in Malaysia is still in the infancy stage although it has been used for few years and the acceptance of this payment method remained low. The majority of Malaysians has knowledge on the e-wallet but do not know the convenience brought by the adoption of e-wallet in daily life. The major factors affecting the adoption of e-wallet in Malaysia remained unclear (Adullah et al. 2020). This study aims to examine the effect of perceived trust, convenience and promotion to the adoption of e-wallet. This study aims to examine the effect of perceived trust, convenience and promotion to the adoption of e-wallet. This study is conducted with the intention to achieve the following objectives:

- To investigate the effect of perceived trust on the adoption of e-wallet;
- To examine the impact of convenience on the adoption of e-wallet; and
- To study the role of promotion on the adoption of e-wallet.

Literature Review

Underpinning Theory

Technology acceptance model (TAM) developed by Davis in 1989 was widely applied in acceptance and adoption of technology. TAM model focused on two main factors, perceived ease of use and perceived usefulness. Perceived ease of use referred to how much the users believe that by using the system could save time and effort (Davis, 1989). In another word, the easiness in using the system is more likely to be accepted by the users. Perceived usefulness referred to the users believe that using the system helps increasing their performance and resolving their task quicker (Davis, 1989). Therefore, it is more likely for the users to accept the system if they had experienced the convenience that was brought by the technology. This study extended the TAM model with perceived trust variable and promotion variable.

Hypotheses Development

Perceived Trust

Perceived trust is defined as the readiness of a party to entrust the activities of other parties with the belief that the other party will perform certain actions which are essential to the trustor, despite the ability of the trustor to monitor or control the other parties (Mayer et al., 1995). For technology adoption, trust is one of the factors affecting the intention to use (Chatterjee & Bolar, 2018). For online transactions, trust can be explained as the customer's

belief in service provider that their money and personal information will not be stolen, and despite the imperfection of the system, the customer interest will be considered by all relevant parties (Abrazhevich, 2001). In some previous studies, trust had been proven as an important factor affecting the adoption of online payment technologies (Chatterjee & Bolar, 2018; Sharma et al., 2018). Trust has significant positive relationship towards the use of e-wallet (Armanditya & Rahmiati, 2020; Ridaryanto et al., 2020). Sharma et al (2018) found low level of trust will obstruct the technology adoption among mobile banking while Kumar et al (2018) showed positive effect of trust on the e-wallet adoption in developing countries. Therefore, the following hypothesis is formed to be examined in this study.

H1: Perceived trust is positively related to the adoption of e-wallet.

Convenience

Convenience is defined as comfort and ease of use of e-wallets by attaining advantages through the usage driven by immediate accessibility and portability (Sharma & Gutiérrez, 2010). Convenience has been recognised as one of the advantages of e-wallet and it is one of the factors contributed to the success of mobile payment system (Xu & Gutierrez, 2006). Users who perceived the technology's ease of use and the usefulness will embrace and employ the system as they have experienced the convenience brought by the technology (Satyagraha, 2021). Wardana et al (2022) found positive significant effect of convenient on the intention to use e-wallet. Khiong et al (2022) concluded the perceived convenience has effect on the attitude in e-wallet usage. There are several studies show positive effect of convenience towards technology use (Lee et al., 2022; Ramli & Hamzah, 2021). However, there is also inconsistent finding where Satyagraha (2021) found no significant effect of convenience-use of Millennials' intention to use e-wallets. Hypothesis shown below is developed to be investigated in this study.

H2: Convenience is positively related to the adoption of e-wallet.

Promotion

Promotion is one of the marketing strategy being used to create awareness and interest on the products or services (Dubey, 2014). Promotion could be referred to as incentives used by sellers to attract buyers and can be in the form of coupons, vouchers, and cashbacks (Chitty et al., 2018). Product attractiveness could be enhanced through promotions which will positively affect consumer behaviour (Yeshin, 2006). The objectives of having promotion are for the company to communicate the information to the public either new business, existing market, new product, or existing products. It also aims to re-inform the public offering memorising to prevent forgetfulness. Moreover, it also create the awareness of the need and arousing public curiosity (Gherasim et al., 2012). Several studies found positive effect of promotion on the adoption of e-wallet (Satyagraha, 2021; Acelian & Basri, 2021; Ridaryanto et al., 2020). The hypothesis below is therefore being developed in this study.

H3: Promotion is positively related to the adoption of e-wallet.

The conceptual framework developed by the researcher for this study includes three independent variables which are perceived trust, convenience, and promotion and the dependent variable is the adoption of e-wallet as shown in Figure 1.

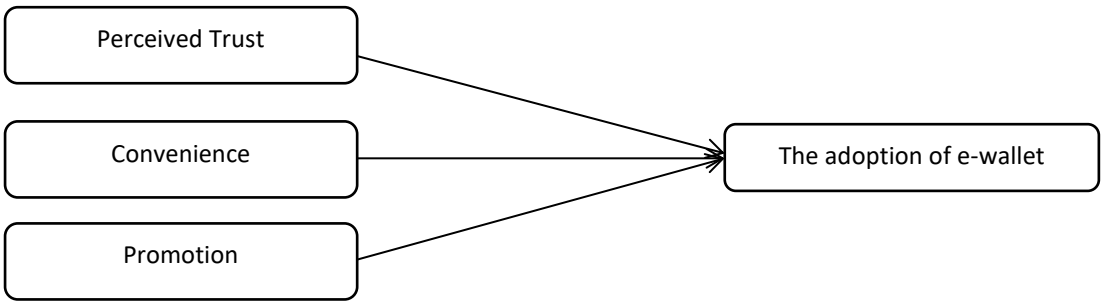

Figure 1: Conceptual Framework

Research Methodology

For this study, quantitative approach is used to determine the factors affecting the adoption of e-wallet. The target population are those aged between 18 to 50 in Sibu. According to the CEO of TNG Digital Sdn Bhd, Syahrunizam Samsudin, those aged between 18 to 25 averagely have five e-wallets to maximise the benefit while those aged above 35 tends to focus on one to two e-wallets which perceived to be more convenient (TheStar, 2019). Also, Oppotus reported the e-wallet usage among generations with Baby Boomers 43% with an increasing trend along with the younger generation with Generation Z 71% which means starting from Baby Boomers almost half of them are using e-wallets (Sticpay, 2021). Closed ended questionnaire is divided into Section A and Section B where Section A consists of eight respondent profile questions about their background and their e-wallet usage. Section B consists of thirteen items where each of the independent variables have three items while the dependent variable has four items with all using five-point Likert scale. Google Form is used to collect data from the target population adopting purposive sampling technique as it is a convenient approach with no cost. Among the 250 responses received, 249 are valid responses and it is sufficient for this study as it is within the range of 30 to 500 as suggested by (Roscoe, 1975).

Findings

The data in this study were analysed using two types of statistical software. Firstly, demographic frequencies and outlier analysis were assessed using the Statistical Package for the Social Sciences (SPSS) version 26. Further, the measurement and structural models were examined using partial least squares-structural equation modelling (PLS-SEM) with SmartPLS version 3 (Ringle et al., 2015; Sarstedt & Cheah, 2019). The assessment of the measurement model evaluates the validity and reliability of the measuring components. The assessment of the structural model evaluates the proposed relationships between the measurable constructs.

This study performed multivariate outlier analysis to screen the data before the statistical analysis. The Mahalanobis distance was calculated using linear regression methods in SPSS. Based on the finding, items with a probability chi-square value of less than .001 was removed (Kline, 2011). A total of 250 questionnaires were distributed to target respondents. Out of 250 testable samples retrieved, one sample was removed as an outlier. Consequently, 249 were retained from hypotheses testing, which yielded a response rate of 99.60%. Table 1 displays the characteristics of the 249 respondents in the survey. The results showed that most of the respondents were male (79.80%), most of them aged between 21 to 25 years old (22.50%), Chinese (35.70%), bachelor's degree holders (49.40%), working as an employee

(50.20%), earned a monthly income between RM 1,100 to RM 3,000 (63.90%). Besides, Table 1 shows that most respondents were adopted to an e-wallet (96.00%), and most of them used e-wallet for one to four times (32.90%) in a day.

Table 1
Demographic Profile of Respondents

Respondent (N=249)			
Demographic Variable	**Category**	**Frequency**	**Per cent (%)**
Gender	Male	121	79.80
	Female	128	20.20
Age Category	Less than 21 years old	33	13.30
	21 to 25 years old	56	22.50
	26 to 30 years old	37	14.90
	31 to 35 years old	45	18.10
	36 to 40 years old	41	16.50
	More than 40 years old	37	14.90
Race	Chinese	89	35.70
	Malay	66	26.50
	Iban	49	19.70
	Other	45	18.10
Educational Level	Penilaian Menengah Rendah	3	1.20
	Sijil Pelajaran Malaysia	34	13.70
	Sijil Tinggi Persekolahan Malaysia	24	9.60
	Diploma	38	15.30
	Bachelor's Degree	123	49.40
	Master's Degree	27	10.80
Occupation	Student	74	29.70
	Self-employed	35	14.10
	Employee	125	50.20
	Housewife	10	4.00
	Others	5	2.00
Monthly Income Level	RM1100-RM3000	159	63.90
	RM3001-RM6000	52	20.90
	RM6001-RM13000	22	8.80
	RM13001 and above	16	6.40
Usage of e-Wallet	Users	239	96.00
	Non-User	10	4.00
Frequency	None	12	4.80
	1-4 times	82	32.90
	5-8 times	57	22.90
	9-12 times	50	20.10
	Over 12 times	48	19.30

Source: Own developed for the research used

Assessment of the Measurement Model

Table 2 exhibits the reflective measurements' assessment regarding their reliability and convergent validity. Regarding the outer loading, all items met the recommended outer loading criterion (i.e., between 0.721 and 0.941) (Hair et al., 2019). Composite Reliability (CR) is used to measure the internal consistency of the data, and Average Variance Extracted (AVE) is used to measure the convergent validity of the data. Table 2 demonstrates all CR values above the critical value of 0.700; thus, all the measurements were internally consistent (Hair et al., 2019). The results listed in Table 2 show that the AVE of each model construct surpassed the acceptable level of 0.500 (Hair et al., 2019), establishing their convergent validity. In addition, discriminant validity using the Heterotrait-Monotrait ratio of correlations (HTMT). All the HTMT values were lower than the conservative threshold value of 0.850 (Henseler et al., 2015) (see Table 3). Thus, it can be concluded that discriminant validity was established between all the constructs.

Table 2
Results of Measurement Model

	Measurement Items	***Cronbach's Alpha***	***Factor Loadings***	***Composite Reliability***	***Average Variance Extracted (AVE)***
Adoption of e-Wallets	*Adoption1*	*0.773*	*0.768*	*0.854*	*0.595*
	Adoption2		*0.813*		
	Adoption3		*0.781*		
	Adoption4		*0.721*		
Perceived Trust	*PTrust1*	*0.927*	*0.940*	*0.954*	*0.873*
	PTrust2		*0.941*		
	PTrust3		*0.922*		
Convenience	*Convenience1*	*0.840*	*0.888*	*0.903*	*0.757*
	Convenience2		*0.852*		
	Convenience3		*0.870*		
Promotion	*Promotion1*	*0.784*	*0.813*	*0.874*	*0.697*
	Promotion2		*0.859*		
	Promotion3		*0.833*		

Note: a. Bold values are loadings for items that are above the recommended value 0.708.
b. Composite Reliability (CR) = (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (square of the summation of the error variances)}
c. Average Variance Extracted (AVE) = (summation of the square of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the error variances)}

Table 3
HTMT Criterion for Discriminant Validity of Constructs

	Adoption of e-Wallet	Convenience	Perceived Trust	Promotion
Adoption of e-Wallet				
Convenience	**0.666**			
Perceived Trust	**0.559**	**0.497**		
Promotion	**0.754**	**0.661**	**0.438**	

Note: HTMT < 0.850 (Kline, 2011), HTMT < 0.900 (Gold, Malhotra, & Segars, 2001)

Assessment of Structural Model

The assessment of the structural model started by evaluating the collinearity between the predictors. Table 4 exhibits that the variance inflator factor (VIF) values of all constructs ranged from 1.282 to 1.551 were below the threshold of 3.33 (Becker, Ringle, Sarstedt, & Volckner, 2015). Hence, collinearity between the predictors was not an issue in this dataset. As shown in Figure 2 and Table 4, perceived trust (β = 0.232; t = 4.155), convenience (β = 0.235; t = 3.549) and promotion (β = 0.382; t = 7.140) have a positive and significant effects on the adoption of e-wallet. Thus, H1, H2, and H3 are supported. This study calculated the R2 to assess the model's in-sample fit. The R2 value of the adoption of e-wallet was 0.467. Finally, the predictive relevance of the model was evaluated using the blindfolding procedure (Shmueli et al., 2019). The Q2 value for e-wallet adoption was 0.267, greater than zero, verifying the model's predictive relevance.

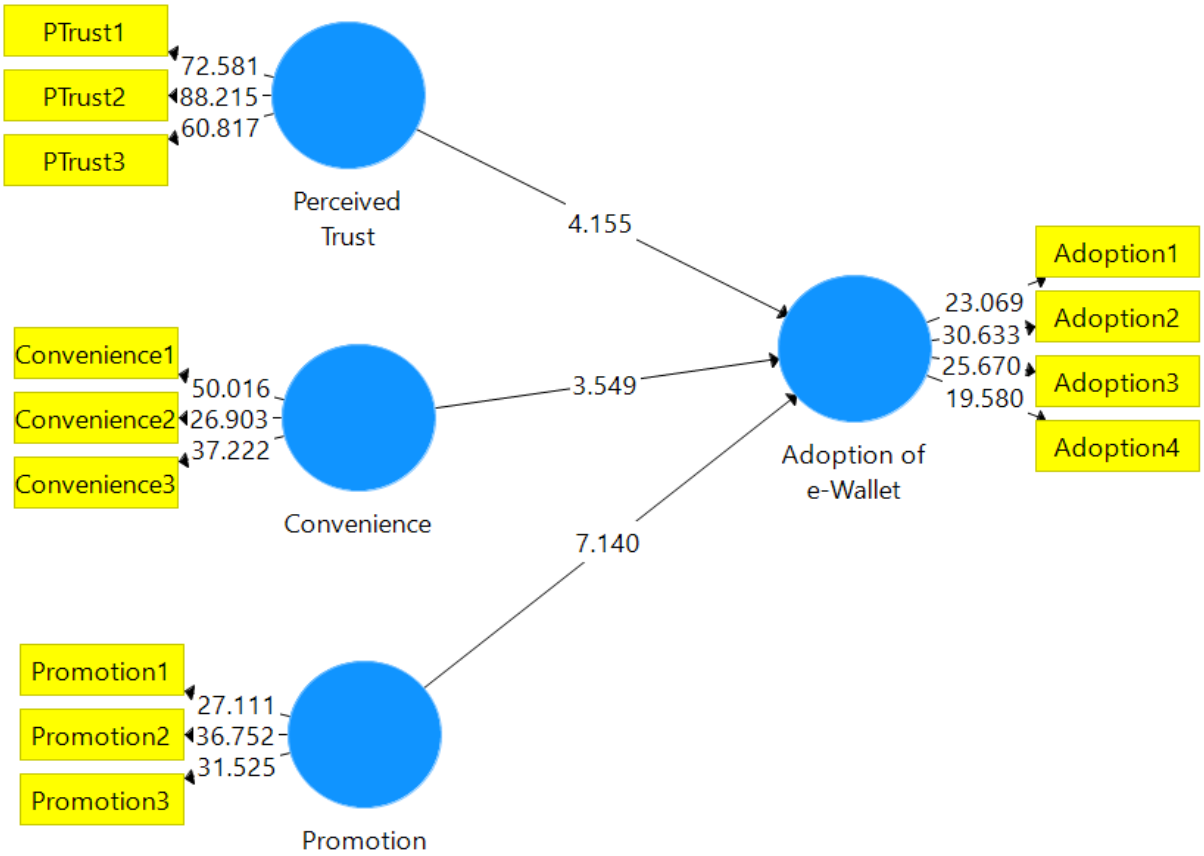

Figure 2: Results of the Path Analysis

Table 4
Path Coefficient and Hypothesis Testing

Hypothesis	Relationship	Coefficient	Variance Inflator Factor (VIF)	t-value	Decision
H1	Perceived Trust -> Adoption of e-Wallets	0.232	1.282	4.155	Supported
H2	Convenience -> Adoption of e-Wallets	0.235	1.551	3.549	Supported
H3	Promotion -> Adoption of e-Wallets	0.382	1.461	7.140	Supported

Note: t >1.645*; p <0.05 or t >2.33**; p <0.01

Discussion and Conclusion

The objective of this study is to identify the factors affecting the adoption of e-wallet. Three factors were proposed to understand better the adoption of e-wallet. Online survey were conducted and 249 valid responses were retained. The results show that all factors play significant role in the adoption of e-wallets.

In this study, perceived trust is referred to the safety and reliability of e-wallet usage. It is found that perceived trust does have significant impact on the adoption of e-wallet. For the users to deposit money into the system, perceived trust is essential whereby the users believed that the safety of the e-wallet is sufficient and their money is safe. When the integrity of the service provider is perceived to be sufficient, user's trust will be developed (Satyagraha, 2021). Perceived trust is also important for the users to reduce their concern on the cyber risk. The finding is in line with the findings of (Satyagraha, 2021; Armanditya & Rahmiati, 2020; Ridaryanto et al., 2020).

As consistent with Wardana et al (2022); Khiong et al (2022), convenience significantly affect the adoption of e-wallet. The covid-19 pandemic had accelerated the adoption of e-wallet to prevent the spread of the virus by making contactless payment. The users had experienced the convenience brought by the e-wallet whereby they do not have to go to the ATM machine every time they are running out of cash. It is convenient where the users can reload money into the e-wallet anyway and anytime as long as they can online. Moreover, by using e-wallet, there is no need for the user to look for cash change from the merchants as the user will be paying the exact amount needed. Transactions can be carried out without bringing purse but with just a mobile phone.

Promotion is also proved to have significant impact on the adoption of e-wallet which means that the better the promotion will increase the adoption of e-wallet. This result is in line with the previous findings (Satyagraha, 2021; Acelian & Basri, 2021; Ridaryanto et al., 2020). Coupons, discounts, and cashbacks are attractive for the users in adopting e-wallet as these could help the users to spend lesser. Attractive promotions are essential in attracting new customer and retaining existing customer (Sunny & George, 2018).

This study proved the convenience factor of the TAM played significant role in the adoption of e-wallet. In addition, perceived trust and promotion are also strong factors affecting the adoption of e-wallet. As the digital payment market is growing fast, the industry

remain competitive. This study can be served as a guidance for the service provider for them to gain competitive advantage.

Recommendation

According to the results, there are some recommendations for future study to provide more comprehensive view in terms of the adoption of e-wallet. First, this study assumes all the respondents have the same perception. Therefore, future research could be conducted by comparing sub group such as existing users and non-users. This will be beneficial for the e-wallet provider to take into account the views of existing users and also the non-users for a more comprehensive consideration. Second, this study is conducted on e-wallet services in common. It would be beneficial if future study can be conducted on specific e-wallet service provider and comparison can be made between different e-wallet service providers.

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