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Research

The use of e-wallet among Gen-Y in Malaysia during the global pandemic: An analysis using PLS-SEM

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Abstract

Traditionally, everyone uses notes and coins or even credit cards and cheques for all business transactions, resulting in several problems such as inconvenience, inefficiency, and ineffectiveness. The limitation of traditional payment may cause delay in payment, high risk of theft, and fraud transaction. To reduce these problems, an e-wallet is introduced, and it helps to reduce fraud as the data stored in the mobile wallet are encrypted. An owner can reduce the limit and receive notification on any transaction. During the global pandemic, consumers are forced to follow the restriction of movement. Stores in Malaysia are closed, and consumers begin to buy things online aggressively. This study aims to determine the factors that affect the use of e-wallet among Gen-Y during the Global Pandemic using PLS-Sem analysis. Snowball sampling was used to gather 181 respondents via online surveys. This study adopted four variables, *i.e.*, perceived ease of use, perceived usefulness, benefits to users, and trust. Of them, two (perceived usefulness and trust) are supported.

Keywords: *e-wallet; perceived ease of use; perceived usefulness; benefits; trust; Generation Y*

INTRODUCTION

The adoption of e-wallets in Malaysia has grown in the Southeast Asian neighbours in the early stage of the global pandemic. According to Boon [1], the number of Malaysian users of e-wallet increased dramatically during the pandemic. In fact, Malaysia was reported to have the highest e-wallet usage in Southeast Asia at 40%, ahead of the Philippines (36%), Thailand (27%) and Singapore (26%). These numbers were gathered by the MasterCard Impact Study 2020 and, interestingly, the study also indicated that approximately 40% of Malaysians use mobile/e-wallets, followed by debit cards (26%) and contactless credit cards (22%). During the global pandemic, the Malaysian government is running several innovative programs such as 'E-Tunai' and 'E-Penjana' to encourage the use of the e-wallet and reduce the amount of physical contact. In the 20th century, many consumers have excessively relied on smartphones for their day-to-day activities. Students, especially Generation Y, are excessively relying on smartphones for their day-to-day and treated them as fundamental to their life. The rise in smartphone penetration will cause a rapid flow of e-commerce. According to a survey conducted by ACI Worldwide or IDC Financial Insights [2], generation Y customers were more interested in the new payment methods. This survey was carried out in 9 countries in Asia Pacific. In Malaysia, 72% of them stated that they had used emerging digital payment systems, while 82% of them had the intention to adopt them in the future [2]. Besides that, Generation Y (Gen Y) is described as 'those born between the mid-1970s and the early 2000s' and Gen Y, also considered the 'internet generation', who have grown up together with the power of the Internet [3]. An existing study [4] had predicted that the student population of

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students by Gen-Y will achieve 22 million and they had greater purchasing power than any previous generation. Therefore, the purpose of this study is to determine the factors that affect Gen-Y in using e-wallet in Malaysia during the global pandemic.

LITERATURE REVIEW

Covid-19 Pandemic in Malaysia

In early March 2020, there is a sudden increase in positive cases of Covid-19 in Malaysia, and to date, on 19 September 2020, Malaysia has reached 10,000 cases of Covid-19 [5]. According to Aji *et al.* [6], many consumers around the world, including Malaysia, engaged in panic buying activities and hoarding the supply during the Covid-19 pandemic. Many Malaysian consumers purchase the supply online and it was reported that some delivery companies in Malaysia have recorded a more than 30% increase in purchase orders during the pandemic. Besides, the Malaysian government has set several restrictions on the movement control of people in and out of the area [7]. With that, many consumers have started to use mobile apps to control movement and reduce physical contact. The use of e-transaction and e-wallet has increased rapidly during this pandemic to mitigate physical visits, social distancing, and the control order of movement [8]. Therefore, electronic payments have attracted a lot of attention from researchers and information system designers due to their significant role in the current trend of e-Commerce and pandemic seasons. Several researchers [6][7][9] had studied the Malaysian global pandemic. Aji *et al*. [6] mentioned variables such as perceived usefulness and perceived risk to significantly and positively affect intention to use the e-wallet in Malaysia. The study consisted of respondents of different generations and only 26.6% are Gen-Y respondents [6]. However, to further this research, this paper will consider several important variables and focus on Gen Y, as they have a high spending power and the largest segment of the population in Malaysia. Furthermore, Gen Y is also the group of consumers who are actively involved in online purchases and hit $ 1.7 trillion by 2015 [10]. They also mentioned that Gen Y is a cohort of people born after Gen X, many studies have accepted Generation Y to be those born between 1978 and 1994 and accumulate up to 40% of the total Malaysian population.

Perceived Ease of Use

Venkatesh *et al*. [11] have defined perceived ease of use as trust when using a particular system without requiring any effort. It was suggested as a measurement of cognitive exertion that expected to study and utilise new Information Technology (IT). Moreover, numerous studies had mentioned that systems or technologies, which were easier to use and apply as a user, were definitely more valuable and beneficial [12]. It means that the user-friendly technology or framework are more favourable to the users. Gen-Y represents the largest proportion of the Malaysian population, and are the main users of smartphones, as their perceived ease of use is higher compared to other generations [13]. In Malaysia, perceived ease of use had a great influence on the use of e-payment among Malaysians to use e-payment [14]. During the global pandemic, the government has imposed several restrictions on movement. Malaysia's government provides free internet usage and data plan during movement control orders, and many businesses have started to initiate online transactions and door-to-door delivery. An effective e-payment based on its design and system was very significant in attracting customers to use it [15]. Therefore, perceived ease of use has a positive relationship with the adoption of e-payment.

H1 Perceived ease of use positively affects Gen Y to use the e-wallet during the global pandemic in Malaysia

Perceived Usefulness

Lai [12] and Davis [16] had defined perceived usefulness as '*the degree to which the individual believed that using a suitable system would improve his or her work performance*'. In addition, perceived usefulness was an external motivation that pushed as well as supported someone that alludes to the potential adopter becoming aware of the usage of some systems to be helpful in illuminating his or her job performance. Furthermore, customers are more likely to use the system or technology if the total enhancement on the job can lead to usefulness in job efficiency and productivity. During Covid-19, many businesses started to go online due to several restrictions. According to a local newspaper [17], the use of e-wallet is perhaps the most trending payment system during the pandemic and has captured the hearts and minds of Malaysians. It has become a standard for many Malaysians to make purchases of necessary things while at home. Gen-Y who spend most of their time online purchasing find it very useful to use a digital wallet. According to Aji *et al.* [6], perceived usefulness positively affects intention to use e-wallet. Therefore, Hypothesis 2 is formed:

H2 Perceived usefulness positively affects Gen Y in using e-wallet during the global pandemic in Malaysia

Benefits

Chou *et al*. [18] had stated that the benefits were the fundamental driver for adoption as well as the use of online payment. Many studies had identified that one of the benefits of using electronic payments to do online transactions was low cost and more benefits. The e-wallet provided several incentives and benefits to users. For example, Malaysians can get RM50 through e-wallets if they download the 'MySejahtera' application. In 2017, companies such as Boost and Touch & Go were reported to have a few million subscribers [17]. These e-wallet companies gave rebates, points, and several benefits to subscribers and users. According to Boon [1], there are new smart vending machines with e-wallet payment technology that have been installed responding to the COVID-19 pandemic. When bricks-and-mortar retailers cannot operate during the lockdown and movement control order, the vending machine never stops its operation during the lockdown. It seems that traction is gaining every other day, especially among Gen Y who are the main active users of e-wallets. Thus, the benefits that were gained from the e-payment could directly influence customers to adopt e-payment. Hence, H3 is formed.

H3 Benefits to user positively affects Gen Y in using e-wallet during the global pandemic in Malaysia

Trust

Trust is defined as "*a function of the degree of risk involved in financial transactions and the outcome of trust is reduced perceived risk, leading to positive intentions toward e-payment adoption*" [19]. In addition to that, trust can also be explained by the transactions of e-payment that were completed and fulfilled the expectations of customers. Furthermore, many researchers had proposed that trust was necessary and significant to understand interpersonal behaviour and economic exchanges that influenced consumers' intention to adopt an e-wallet. Sarika & Vasantha [20] stated that trust is one of the main factors that affects the growth of the digital payments

system, and many users are afraid of security issues. However, in Malaysia, the e-wallet providers are heavily regulated as well as adhere to strict guidelines set by the Bank Negara Malaysia. This means that security and data preservation are always a priority for these companies. Based on the study by Nguyen & Huynh [21], trust was the principal role in adopting electronic payment. Furthermore, Haroon [17] added that e-wallet covers a much larger proportion of the population than credit cards due to the trust of users. Therefore, Hypotheses 4 is proposed:

H4 Trust of the users positively affects Gen Y in using e-wallet during the global pandemic in Malaysia

RESEARCH METHOD

Figure 1 shows the research framework is the necessity for this research project and is to study the relationship between all the 4 independent variables as well as a dependent variable. This research uses a quantitative approach and uses a survey of 181 respondents. Since this study aims to target Gen-Y, the population is huge. To collect the data, this study used nonprobability sampling. The selected sampling method is snowball sampling via online questionnaires.

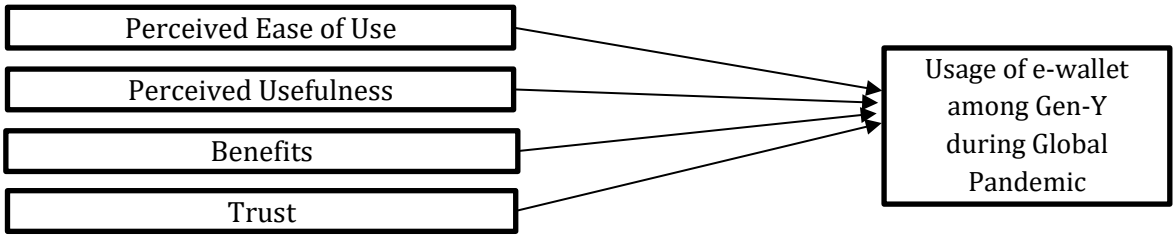

Figure 1. Research framework

Due to the restriction movement control order at this moment, questionnaires were sent through Google forms via social media, Facebook page, Instagram etc. but only 181 respondents replied. This research adopted snowball sampling, as traveling is restricted, and we can only send to friends and relatives who belong to Gen-Y. There are several ways to determine the sample size, and rules of thumb for sampling size and power analysis is one of the tools to determine the total number of accepted samples [22]. The sample size had been calculated by the G-Power software, which was 129 with 4 predictors, therefore, this research manages to obtain 181 respondents. The data collected from the questionnaire was analysed through SMART PLS-SEM (Partial Least Square – Structural Equation Modelling).

RESULTS AND DISCUSSION

This study has successfully collected 181 sets of questionnaires, and the respondent's demographic profile is presented in Table 1. As mentioned above, Gen-Y was born between 1978-1994. There are about 39.78% of the respondents who born during 1988-1994 as the younger Generation Y, while 30.39% born during 1978-1982 (Table 1). Based on the table, it shows that the majority of the respondents are female where 43.65% are male. Most of the respondents hold a bachelor's degree (67.69%). The rest of the respondents had an Advanced/Diploma (17.13%), Postgraduate/Master/PhD (9.94%) and STPM/A-Level/Foundation (3.31%). The least in the distribution accounted for 1.66% from the SPM / O-level category.

Table 1. Demographic profiles of respondents

	Frequency	Percentage
Year of birth		
1878-1982	55	30.39
1983-1987	54	29.83
1988-1994	72	39.78
Gender		
Male	79	43.65
Female	102	56.35
Highest Academic Qualification		
SPM/O-Level	3	1.66
STPM/A-Level/Foundation	6	3.31
Diploma/Advanced Diploma	31	17.13
Undergraduate/Bachelor's Degree	123	67.96
Postgraduate/Master/PhD	18	9.94

Table 2. Model measurements

Construct	Indicator	Loading	Composite Reliability	Average Variance Extracted (AVE)	Effect size
Benefits	BEN1	0.887	0.941	0.799	0.117
	BEN2	0.882			
	BEN3	0.906			
	BEN4	0.900			
Perceived Ease of Use	PEU1	0.884	0.909	0.77	0.144
	PEU2	0.882			
	PEU3	0.867			
Perceived Usefulness	PU1	0.828	0.903	0.699	0.377
	PU2	0.860			
	PU3	0.857			
	PU4	0.800			
Trust	T1	0.847	0.860	0.754	0.197
	T2	0.889			
Use of E-wallet	USE1	0.873	0.888	0.725	
	USE2	0.863			
	USE3	0.818			

Table 3. Discriminant validity of constructs

	Benefits	Perceived Ease of Use	Perceived Usefulness	Trust	Usage of E-wallet
Benefits	**0.904**				
Perceived Ease of Use	0.524	**0.748**			
Perceived Usefulness	0.757	0.647	**0.846**		
Trust	0.761	0.67	0.712	**0.894**	
Usage of E-wallet	0.673	0.568	0.668	0.685	**0.851**

Note: Diagonal (in bold) represents the √AVE, while others represent the correlation.

Table 2 shows the overall measurement of the model. All constructs are reflective assessment and the loading factors for all indicators are above 0.708. The composite reliability for all constructs has met the minimum threshold of 0.7, whereas the Average Variance Extracted (AVE) is also greater than 0.5 [23]. In conclusion, all the constructs met the requirement of reliability and convergent validity. The effect size (f^2) is small for Benefits (0.117), Perceived Ease of Use (0.144), and Trust (0.197). Perceived usefulness has a medium effect size (0.377) according to Cohen's guidelines [24]. The R^2 value was 0.54.5, which suggested that 54.5 % of the variance in Gen-Y use of the e-wallet may be explained by perceived ease of use (PEU), perceived usefulness (PU), benefits for the user (BEN) and trust (T).

The perceived ease of use has achieved the t value of 1.218 ($p>0.05$), which means that the perceived ease of use does not significantly affect Gen Y in using the e-wallet. Therefore, H1 is not supported. Interestingly, it is inconsistent with previous research conducted by Abrazhevich [15]. The reason that perceived ease of is not supported mainly due to respondents being Gen-Y, known as the techno-savvy generation. The generational group is born with the Internet and learns quickly in adopting technology usage. Additionally, during the Covid-19 pandemic, most of the business transactions, government sectors and even education have moved towards online. Besides, most of the respondents are all undergraduates and working adults who can be considered highly technologically-literate. It could be the main reason why H1 is not supported.

Table 4. Path-coefficient and hypothesis testing

	Coeff.	t-value	sig.	Hypothesis
H3 Benefits → Usage of E-wallet	0.118	0.752	0.452	not supported
H1 Perceived Ease of Use → Usage of E-wallet	0.150	1.218	0.224	not supported
H2 Perceived Usefulness → Usage of E-wallet	0.376	3.016	0.003	supported
H4 Trust → Usage of E-wallet	0.193	2.446	0.015	supported

Furthermore, H3 is also not supported for which the t value is 0.752 ($p>0.05$). Initially, many e-Wallets started giving several benefits to new users, such as points, rebates, gifts, and instant cashback. However, one user can top up a certain amount of money in the e-wallet, with or without benefits, and they will need to finish up the credit. It acts like a normal wallet but in a digital form. In addition, during the global pandemic, respondents do not consider the benefits as the main factors in using the e-wallet. According to Subaramaniam *et al.* [25], the e-wallet add-on is not fully available in all places and different retailers accept different types of payment such as Boost, Touch N Go, WeChat Pay, GrabPay, and more. Therefore, Gen Y will consider downloading most of the e-wallet without looking much into the benefits, especially during the Covid-19 pandemic season. This could be the reason why H3 is not supported.

CONCLUSION

This research aims to determine the factors that affect Gen Y in using e-wallet in Malaysia during the global pandemic. In summary, this research has narrowed the knowledge gaps of the previous study in terms of examining the four factors in a single setting and focusing on Gen Y as respondents. Moreover, this research has advanced mainstream literature regarding usage of e-wallet during Covid-19. The findings ensure the salience of all the four factors that are being

investigated, and two hypotheses are supported for Gen-Y respondents, permitting managerial implications from different perspectives of strategies to suggest boosting the use of e-wallet.

According to the findings in this research, perceived usefulness and trust appear to be important factors that will influence Gen Y to use e-wallet, thereby requiring more attention from online transaction facility providers, banks, and software developers. It means that any improvement to the existing e-payment system must consider these characteristics, which are conveniently useful and trustworthy. For instead, software developers must collaborate with the strategy team to figure out what are the core as well as additional features like Grab with GrabGift, GrabMart, GrabMaid, and others. On the other hand, the findings on trust issue imply that customers need to feel low risk and safety regarding their privacy when using an electronic payment system. Thus, all policy makers, banks, software developers and e-payment service providers have a significant role to play to ensure the security and trustworthiness of e-payment system to boost customer confidence and strengthen their trust. E-payment service providers and banks must make sure their system is always secure from viruses, hackers, and so on. Besides, government can also play a role to keep on retaining stability as well as financial regulating through regulating e-payment services so that the customers are being protected.

There are several opinions and suggestions to be proposed for future research in the similar area of study to solve the limitation mentioned. First, researchers should enlarge the overall sample size of the research, normally 300 respondents and above. If the total sample size of a research has increased and expanded, thereby it will result in the enhancement of testing the hypotheses specifically as well as accurately. Future study can also consider using other analytical instruments such as qualitative approach to be implemented in exhaustive finding. For example, a qualitative method can be used to gather more updated and precise than accurate results, as the individual's intention to adopt e-payment can change from time to time due to advancement in technologies.

CONFLICT OF INTERESTS

The author(s) declares that they have no conflict of interest.

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