MEDIATING ROLE OF AWARENESS BENEFIT AND PERCEIVED USEFULNESS IN E-WALLET ADOPTION IN MALAYSIA

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Abstract

The growing need of encouraging a cashless society has enabled various forms of electronic transactions. However, the acceptance of such technology especially e- wallet is quite low in most developing countries. Government authorities, especially in Malaysia, are taking necessary action to encourage the use of such technology. This is because, most people are not aware of the benefit of e-wallet, nor do they perceive them to be useful as they heavily rely on physical cash in performing their day to transactions. Government policies such as government incentives could encourage them to shift to e-wallet. Due to the scare of study on this topic, the present study contributes to the literature by examining the effect of awareness benefit, government incentive, perceived ease of use, and perceived usefulness on customers' intention to use e-wallet in Malaysia. To give more fruitful insight, one good contribution of this study is investigating the mediating role awareness benefit on government incentives and perceived usefulness. Questionnaires were distributed online to the respondents by using a proportional sampling technique. As a result, a total of 180 users of electronic wallet from Malaysia were collected. Such a country was selected due to the current government policy in supporting e-wallet usage with the ePENJANA credits scheme which supports e-wallet service providers such as BoostPay, Touch N' Go e-wallet, and Grab Pay. PLS-Structural Equation Modeling (SEM) approach was employed in examining the research hypothesis. The results show that government incentives positively affect awareness benefits. Government incentive positively affects individual intention to use e-wallets. Likewise, awareness benefit positively affects both intention to use and perceived usefulness. Besides, that awareness benefit mediates the relationship between government incentives and perceived usefulness, and also mediated the effect of government incentives on the intention to use e-wallets.

Keywords: Government Incentive; E-Wallet; Cashless Policy; Government Support; Perceived Usefulness; Awareness Benefit.

1. INTRODUCTION

Cashless payment through cell phones has acquired traction (Andrieu, 2001) in many developing nations (Capgemini, 2019), including Thailand, Malaysia, Vietnam, and Indonesia PWC (2019). The recent surge of online purchasing has influenced e-commerce since total transaction volumes have increased. Customers of all ages are engaged, thanks to the rising popularity of smartphones, which contributes to Malaysia's high Internet penetration rate of over 91 percent. E-wallet payments specific are one type of mobile payment option. An E-wallet according to Aji et al., (2020) is a form of e-money in which the funds are kept on a server rather than on a chip card. BoostPay, Touch N' Go Wallet, and Grab Pay is the most popular in Malaysia. However, in Malaysia, e-wallet usage is still in its infancy (PWC, 2018). According to Focus Malaysia (2020), the majority

of Malaysians believe: "Why do I need an e-wallet when I have credit or debit cards?" At the same time, 90 percent of transactions are still done in cash. Given that the respective citizens of Malaysia, are mainly cash-based and are typically unaware of the benefits of e-wallets, and that there are over 52 million credit and debit cards in circulation, consumers' adoption of e-wallets can be perceived to be hindered.

On the other hand, Government policy, such as government support for business startups in promoting growth, has been shown in recent publications to have a substantial impact on individual involvement. Likewise, the previous study has also demonstrated the value of awareness benefit in terms of its impact on business performance in general (Howcroft et al., 2002). However, research investigating government policy, such as the impact of government incentives on consumer knowledge of the benefits of making a payment via e-wallet, is uncommon. Presently, Malaysia's central bank (Bank Negara Malaysia) has set a ten-year financial plan to "modernize the payment environment" by 2020. This initiative attempts to promote its cashless policy by encouraging more use of e-wallet by replacing checks and cash, resulting in a more fluid transaction process and reduced transaction costs. This strategy is critical for the nation's economy, as small and medium-sized companies (SMEs) and micro SMEs account for 98.5 percent of all businesses as they shift gradually to their cashless policy.

However, the government's Pelan Jana Semula Ekonomi Negara (PENJANA) programs, which tempted 15 million customers with RM50 ePENJANA credits for transactions made using e-wallets, may have accelerated consumers' adoption of contactless payments or e-wallets. Although transitioning from cash to cashless payment or e-wallets necessitates a mental adjustment, the e-rapid wallet's rise was primarily due to the sake of redeeming such a reward. But most importantly, the present ePENJANA credits scheme was put in place to raise individual knowledge and trust in the usage of such electronic payment systems. Such a system may provide the entire people with a choice in how they go about their everyday lives. However, consumer adoption through a reward system such as a government incentive is known to have a short-term effect (Huysman and de Wit, 2002).

Previous research has shown that awareness has an impact on an individual's decision to use the internet or conduct an online transaction (Sathya, 1999). In general, almost all research indicated that perceived Awareness benefits had a favorable influence on behavior. However little evidence exists within the context of e-wallet users' perspectives (Sharma et al., 2018). Also, if an individual's perceived awareness benefit is linked to government policy, such as a government incentive, the result is likely to be different. As awareness benefits could breach the gap between government incentives and individual intention to use the e-wallet. As previously stated, such government policies are expected to increase trust, and individual knowledge of such technology while supporting individual intention to support the adoption of cashless policies. Therefore, customers' intentions to utilize nonphysical money will be favorably impacted by perceived awareness benefits linked with government assistance. Regrettably, empirical data on this topic are still understudied.

Individual awareness of such benefits, perceptions of usefulness, and desire to use e-wallets may be influenced by government funding for e-wallet innovation. Following the introduction of such a regulation in Malaysia, the government believes that it would encourage Malaysians to use electronic wallets to make payments, which is beneficial to the nation's "cashless philosophy" (Ishak, 2020).). Through such support, consumers will appreciate the flexibility of not having to carry currency in their pockets, and with the convenience of high-tech gadgets, transactions may be completed quickly, and greener economy transactions by using wireless technologies via mobile devices. However, after the program's implementation, digital payments are anticipated to increase by 10.8% and reach $17 billion in the next three years. Despite the implementation of such policies, citizens may continue to favor traditional payment methods. Therefore the silver lining is that consumers are not just encouraged to use such technology for the reward's sake but rather to make them understand the associated benefit as well as the usefulness of such technology. As such consumers are expected to prefer the e-wallet cashless method.

In several empirical findings, government support has a significant effect on firm performance (Appiah et al., 2019), and also concerning innovation (Wei & Liu, 2015). Customers' intentions to use mobile payment were shown to be strongly affected by government assistance on a personal level. In the context of internet banking (Rambocas & Arjoon, 2012; Tan & Teo, 1998), Islamic banking and finance (Ali et al., 2015; Reni & Ahmad, 2016), mobile commerce, and government service (Dawi, 2019; Mandari et al., 2017). Since government incentives can be considered as part of government support, this study proposes that government incentives on e-wallets facilities and innovation would drive customers' adoption and usage of e-wallet. Due to a lack of study on this topic, the present study contributes to the literature by examining the effect of awareness benefit, government incentive perceived ease of use, and perceived usefulness on customers' intention to use the e-wallet. To give more fruitful insight, another major contribution of this study is investigating the mediating role of awareness benefit in the overall model.

2. REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

2.1. Awareness of services and their benefits

According to Sharma (2018), utilizing electronic wallet services is a relatively new experience for many consumers, and a lack of understanding of e-wallet is a major reason for customers' refusal to utilize them. In the same vein, Al-Somali, Gholami, & Clegg, (2009) discovered that clients in Saudi Arabia were unaware of the benefits, advantages, and problems connected with internet banking which affected the individual perception of its perceived usefulness. This is also following Howcroft et al., (2002), who observed that a lack of understanding about online banking services and their benefits is one of the main reasons why customers are hesitant to utilize banks' online banking services. The acceptance of a product, service, or concept is referred to as adoption. Consumers go through a "process of information, persuasion, choice, and confirmation" before they are ready to embrace a product or service, according to Rogers and Shoemaker (1971).

When a customer becomes aware of a product, he or she decides whether or not to embrace it (Rogers and Shoemaker, 1971). Guiltinan and Donnelly (1983) identify knowledge about the benefits of utilizing a product/service as a key service/product promotion approach in the context of bank marketing planning. According to Arslan, & Fröjdh (2019), the additional benefit of electronic wallet included convenience, security, and cheaper costs. According to Howard and Moore (1982), "consumers must become aware of the new brand" for it to be adopted. Creating customer awareness of an innovative service or product is a crucial characteristic for any adoption of such a service or product. As a result, if Malaysian customers are not using an electronic wallet, it might be because they are unaware of the service's existence and the benefits it provides. These findings and observations lead us to the hypothesis:

> H1a: Awareness benefits affect individual intention to use the electronic wallet in Malaysia

> H1b: Awareness benefit affects individual perceived usefulness of e-wallet

2.2. Government incentive and awareness benefit

To implement e-commerce, it is necessary to raise awareness. Increased awareness will aid in the growth of e-commerce and the number of internet users (Al-Khaffaf, 2013). The study on users' electronic wallet awareness benefit is significant because it has the potential to minimize customer confusion and worry, therefore increasing consumer confidence (Sharma 2019). One element that influences e-commerce adoption is consumer awareness of the benefit that relates to such technology in concern. According to Mehrtens et al. (2001), increased knowledge of the benefits of e-commerce can lead to increased adoption. Focus Malaysia (2020), indicates that there is a lack of awareness benefits of e-wallet in Malaysia. According to Bakri (2013) and Shkoukani et al. (2013), one of the biggest hurdles to e-commerce adoption is a lack of understanding.

According to Halaweh and Fidler (2008), government policies tend to raise e-commerce awareness and involvement. However, according to Shkoukani et al. (2013), the government can raise such awareness through the utilization of resources such as leaflets, brochures, and training programs. Alkhaleefah et al. (2010) proposed that training programs be used to increase awareness and trust. According to Al- dalahmeh et al. (2014), the media, including newspapers, television, and radio, may be utilized to spread further knowledge and awareness about e-commerce in developing nations. Another technique for increasing citizen knowledge of internet services is through promotion and incentives (Ziadat et al., 2013). At the moment, no research has looked at the role of awareness benefits in e-wallet adoption and how government policies such as government incentives could influence the individual perspective, especially from the customer perspective. Much research, on the other hand, has looked at the efficacy of people's awareness of e-government (Al-Jaghoub et al., 2010; Alkhaleefah et al., 2010; Shannak, 2013). As highlighted by Sharma et al 2019, awareness benefit plays a role a crucial role in e-wallet adoption, which is one of the problems that face consumers in developing countries such as Malaysia. Therefore raising individual perspectives on the

benefits of such technology through government programs such as government incentives could be a better adoption of such service. Therefore the following hypothesis was developed

> H2a: Government incentive affects individual awareness benefit of e-wallet

2.3. Government incentive and intention to use the e-wallet

Consumer acceptability of technology systems is impacted by both internal and external factors, including perceived danger (internal factor) and government backing (external component) (Haderi, 2014; Hai & Kazmi, 2015). In the case of online payment, government incentive plays a big part in determining whether or not people choose to utilize it (Rambocas & Arjoon, 2012; Tan & Teo, 1998). Mobile commerce and government services are also important in the context of Islamic banking and financing (Ali et al., 2015; Reni & Ahmad, 2016). (Dawi, 2019; Mandari et al., 2017). Government support for e-wallets might take the form of network infrastructure, policy packages, access speed, and security assurances in digital transactions. In Malaysia, the government is encouraging an individual to utilize an electronic wallet through the provision of rewards and incentives in other to reduce consumers' dependence on the use of physical cash (Ishak, 2020). Such governments' support in the form of incentives for e-wallet payment transactions is beneficial in achieving its cashless policy. As a result, when customers perceive government assistance, they are more likely to utilize an e-wallet. In summary, the impact of government assistance on e-wallet use may be explained more by perceived usefulness. As a result, the authors propose that

> H2b: Government support positively affects the intention to use e-wallets

2.4. Perceived ease of use and intention to use the e-wallet

The simplicity of use is the second element that influences client acceptance of new services/products. Cooper (1997) identifies "ease of adoption" as one of the three most significant qualities for consumer acceptance of new services in his study. According to the Wallis Report (1997), technological innovation "must be simple to use" to get user acceptability. One of the reasons for the failure of home banking in the United States was the degree to which an invention was difficult to understand or utilize (Dover, 1988). The relevance of human perceptions and knowledge of new technology in determining its adoption is emphasized in Rogers' (1962) analysis of diffusion. Consumer understandings, according to Scarbrough and Corbett (1992), are an essential factor in the dissemination of new technologies. Daniel (1999) lists 'ease of use' as one of the criteria influencing client acceptability. It's possible that clients in Malaysia aren't using e-wallet because it's difficult to navigate. Hence, the following hypothesis is proposed:

> H3: Malaysian consumers are not adopting electronic wallet services because they do not find that it is easy to use.

2.5. Perceived usefulness and intention to use the e-wallet

Perceived usefulness may be defined as the level of confidence that customers have in the ability to improve their performance by utilizing a certain technology (Davis et al.,

1989). Technically, the e-wallet platform is a highly effective way of payment for a variety of purposes. Furthermore, e-wallets can be used as an alternate payment mechanism to assist the government in its cashless policy which in turn reduces individual dependence on cash. Several previous research has indicated that perceived usefulness is a major predictor of the desire to use e-money (Aji & Dharmmesta, 2019) and in explaining why consumers adopt a technology or application (Aji & Dharmmesta, 2019). (Venkatesh & Bala, 2008; Rauniar et al., 2014; Beldad & Hegner, 2017).Thus, the authors hypothesize that,

> H4: perceived usefulness affects individual intention to use the electronic wallet in Malaysia.
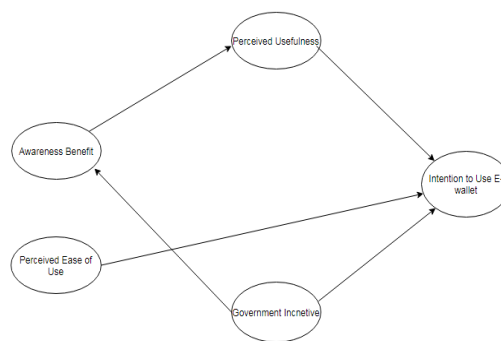
3. METHODOLOGY/MATERIALS

3.1. Data collection and sampling technique

In Malaysia, online surveys were distributed to a sample of respondents as part of a quantitative approach. Such a country was chosen specifically for its government's backing of electronic payment systems. E-wallets in this study are all server-based non-bank e-wallets. In Malaysia, the most well-known e-wallet providers are BoostPay, Touch N' Go Wallet, and Grab Pay are considered as they were been supported by the ePENJANA credit scheme.

3.2. Items measurement

All of the items used to assess the components in this study were from previously validated instruments. Gender, age, employment, and race were among the demographic information asked about in Section

A. Section B, on the other hand, is comprised of a 5-point Likert scale measuring questions ranging from strongly disagree (1) to strongly agree (5) to assess e-wallet intention. The degree of information customers have regarding electronic wallets is operationally described as the awareness benefit. It is measured by four items adapted from Sathye (1999); Yousafzai et al., (2003); Pikkarainen et al., (2004). TAM's model from Davis et al., (1989) is adopted to measure both perceived usefulness and perceived ease of use. It is operationally defined in this paper as the degree of confidence that

emphasizes the extent to which consumers believe that using e-wallets as a mode of payment can be more useful. While perceived ease of use is defined as the degree to which a person believes that using a specific system will be painless, perceived ease of use is defined as the degree to which a person believes that utilizing a particular system will be painless. The intention to use an e-wallet is defined as the intention of consumers to utilize electronic money, as measured by three items derived from Aji et al., (2020). Finally, a government incentive is operationally defined as the government's perceived support for encouraging and strengthening e-wallet use and infrastructure. Four self-administered questionnaires are used to assess it. Table 2 shows the detailed item measurements, and Figure 1 shows the study model.

4. RESULTS AND FINDINGS

4.1. Respondent's demographics

A total of 180 respondents' data were successfully collected from Malaysia between March and May 2021. As for gender data, male respondents (110 or 61.1%) are more dominant as compared with females (70 or 38.9%). Most respondents were aged between 18–25 (80 or 44.4%), followed by those aged between 26–35 (56 or 31.1%), and only 14 respondents (7.8%) who are born between 46–55. Perhaps, that is because most respondents are dominated by students (77 or 42.8%). More detailed respondent characteristics are shown in Table 1.

Table 1: Respondent's characteristics

Gender	110	61.1
	70	38.9
Age		
	80	44.4
	56	31.1
	30	16.7
	14	7.8
Education		
	73	40.6
	63	35.0
	29	16.1
	15	8.3
Occupation		
	14	7.8
	30	16.7
	59	32.8
	77	42.8
Experience		
	81	45.0
	49	27.2
	25	13.9
	25	13.9

4.2. Measurement model test—validity and reliability

To evaluate the measurement and structural model, the Structural Equation Modeling (SEM) method is utilized. Because both direct and indirect impacts can be proven, it is extremely successful (Cheung & Lee, 2008; Huh et al., 2009). Average Variance Extracted (AVE), square roots AVE, loading factors, and Composite Reliability (CR) scores are used to assess the items' validity and reliability. Convergent validity is assessed using the AVE and factor loadings, whereas discriminant validity is assessed using the square roots of the AVE (Hair et al., 2014). Convergent validity is also determined by reliability (Hair et al., 2014). The squared sum of factor loadings for each construct and the sum of the error variance terms for each construct are used to calculate it. Table 2 shows that all items have loadings larger than 0.70 and an AVE score greater than 0.50. These findings revealed that the items do not have a convergent validity problem. Furthermore, the CR score is greater than 0.70, suggesting that all constructions are consistent or trustworthy (Hair et al., 2014; Nunnally, 1967).

Table 2. Convergence validity and construct reliability results

Constructs	Construct items	Factor loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Awareness Benefit	AB1	0.621	**0.851**	**0.904**	**0.706**
	AB2	0.888			
	AB3	0.890			
	AB4	0.868			
Perceived Ease of Use	PEOU1	0.876	**0.838**	**0.893**	**0.680**
	PEOU2	0.865			
	PEOU3	0.860			
	PEOU4	0.615			
	PEOU5	0.663			
Perceived Usefulness	PU1	0.616	**0.836**	**0.886**	**0.615**
	PU2	0.896			
	PU3	0.901			
	PU4	0.911			
Government Incentive	GI1	0.362	**0.642**	**0.802**	**0.604**
	GI2	0.911			
	GI3	0.923			
Intention to Use E-wallet	BI1	0.774	**0.819**	**0.847**	**0.526**
	BI2	0.722			
	BI3	0.697			
	BI4	0.692			
	BI5	0.738			

The square root AVE score for each construct in the diagonal portion is larger than the association with the other constructs, according to Table 3. This indicates that the discriminant validity is valid (Fornell & Larcker, 1981). The Cronbach's Alpha Coefficient

was used to measure the study constructs' reliability (Sekaran, 1992). The criterion employed in the study to assess the reliability of each variable is that it must be more than 0.60 to be regarded as trustworthy. The reliability coefficients for the research constructs are shown in Table 2. It indicates that all of the research variables' reliability coefficients were over the alpha cut-off value of 0.60 utilized in this study, suggesting evidence of reliability.

Table 3: Fornell Larkers discriminant validity

	AB	BI	GI	PEOU	PU
AB	**0.840**				
BI	0.571	**0.825**			
GI	0.530	0.651	**0.784**		
PEOU	0.509	0.957	0.593	**0.777**	
PU	0.463	0.702	0.572	0.587	**0.725**

4.3. Structural model test—hypotheses testing

Table 4: path coefficient

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Support
AB -> BI	0.059	0.057	0.018	3.163	**0.002**	Supported
AB -> PU	0.223	0.221	0.071	3.143	**0.002**	Supported
GI -> AB	0.530	0.529	0.066	8.066	**0.000**	Supported
GI -> BI	0.046	0.043	0.021	2.192	**0.029**	Supported
PEOU -> BI	0.792	0.791	0.026	30.435	**0.000**	Supported
PU -> BI	0.184	0.189	0.024	7.679	**0.000**	Supported

The results of the structural model in Table 4 described that all hypotheses were supported. The estimated effect of government support on awareness benefit is supported since the β = 0.530, significant at p-value <0.01. This gives support to H1. The test also supported H2 (β = 0.223, p-value <0.01) which indicates that the relationship between awareness benefit and perceived usefulness was supported. Adding to that the result further validates the role of government incentive concerning its relationship between awareness benefit and behavioral intention to use e-wallet with respective values of (β = 0.530, p-value <0.01) (β = 0.046, p-value <0.01) which were all supported. Lastly, both perceived ease of use, as well as perceived usefulness, were found to positively affect individual intention to use e-wallet with respective values of (β = 0.792, p-value <0.01) (β = 0.184, p-value

<0.01) with both being supported.

4.4. Mediation

In this study, both perceived usefulness and awareness benefit were employed as the mediating variable this study. Table 5 displayed the mediating effect of perceived usefulness on the relationship between awareness benefit and the intention to use an e-

wallet; the coefficient of awareness benefit toward the intention to use an e-wallet was (β direct effect 0.041, p-value > 0.006).

Moving on, the relationship between the government incentive and individual intention to use an e-wallet was mediated by awareness benefit, the coefficient of government incentive toward intention to use an e-wallet (β direct effect 0.031, p-value > 0.003). The awareness benefit was found to mediate the relationship between government incentive and perceived usefulness; the coefficient of government incentive toward the adoption of an e-wallet was (β direct effect 0.118, p-value > 0.000).

Table 5: mediation effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
GI -> AB -> BI	0.031	0.030	0.010	2.981	**0.003**
AB -> PU -> BI	0.041	0.042	0.015	2.739	**0.006**
GI -> AB -> PU	0.118	0.118	0.045	2.624	**0.009**

5. DISCUSSIONS

Statistical results revealed that awareness benefits, government incentives, perceived ease of use, and perceived usefulness all have a positive influence on individual intention to use e-wallets in Malaysia. Also, awareness benefit was found to mediate the link between perceived usefulness and government incentive. As previously said, Malaysian residents are unaware of the advantages of using an e-wallet (Focal Malaysia 2020). Therefore, the government promoted the adoption of digital payment by instituting an incentive system (Ishak, 2020). The findings both confirmed that awareness benefit plays a crucial and enabling role in terms of promoting consumers' understanding of the usefulness of the technology, likewise, government assistance through an incentive program was found to promote the awareness and benefit of such technology to the consumers. Earlier research by How croft et al., (2002) found a link between awareness benefit and intention. Therefore, an individual's intention to utilize an e-wallet is strongly influenced by their understanding of its benefits. On the other hand, awareness benefit was found to mediate the relationship between government incentives and individual intention to use an e-wallet. Such a finding is in line with Halttunen, (2016), which suggested that it's important to intensify the intention of consumer's intention to use e-wallet by providing more information on the benefit of such services or products to create a positive mindset. The support from the government in the form of incentives affects the individual understanding of the associated benefit of e-wallet which does trigger them to use e-wallets. Thus, this finding provides input for Malaysian and any other governments to strengthen support for the people as well as focus on benefits, so that the people may directly feel it. It is useful for encouraging them to use digital payment, such as e-wallets, and hopefully reducing the usage of physical cash. As a result, consumers would consider online transactions as a useful and smart choice to purchase and even repurchase in the future. According to the Wallis Report (1997), "consumers will seek out financial goods and providers that provide the best value for money, and they will be informed about it."

As a result, for e-wallet to be widely adopted, service providers must inform customers about their availability and explain how it differs from other products offered by rivals. Therefore, the provision of multifaceted knowledge to young consumers about digital content, in particular, is essential to highlight the usefulness of e-wallets.

In Malaysia, the influence of government incentives on the desire to use e-wallets was both positive and substantial. This finding suggests that the outcome might be explained by people's trust and allegiance to the government, as impacted by the political systems in such a nation. Malaysians, as previously said, hold the King and the government in high regard (Victoria & Amir, 2018). It helped Malaysians believe, either directly or indirectly, that the government is truly on their side and wants to help them the perception of government incentives is essential, especially throughout the process of promoting the cashless policy, to remove the anxiety and worry felt by the majority of the people.

Likewise, government incentive was found to positively affect awareness benefit. Halaweh and Fidler (2008), reported similar findings. This is because, the Malaysian government choose to oversee its cashless policy by offering incentives through "ePenjana RM50 E-Wallet Credit where, eligible Malaysians will be granted RM50 worth of e-wallet credit as well as an extra RM50 in value through coupons, cashback, and discounts offered by e-wallet partners. It undoubtedly impacts not just Malaysian customers' perceptions of the service's awareness and benefits, but also and ultimately determines their intention to use an e-wallet.

Another interesting finding revealed that the significant effect of awareness benefit on the intention to use e-wallets is fully explained or mediated by perceived usefulness. This means that consumers are willing to use e-wallets when they are aware of the benefit of e-wallet which is fully explained by perceived usefulness. Thus, this finding provides the input for Malaysian and the related service providers to focus on improving individual awareness of the benefit of such technology, so that people may directly understand the usefulness of such technology as they depend on a reward system is known to have a short term effect to the consumers. It is useful for encouraging them to use digital payment, such as e-wallets, and hopefully reducing the usage of physical cash.

Likewise, perceived usefulness was found to significantly affect individual intention to electronic wallets in Malaysia. From a theoretical standpoint, such findings are seen to be well aligned with previous works in the field of electronic banking solutions, which have focused on testing and approving performance expectancy or otherwise have come to garner insight into factors such as perceived usefulness and relative advantage as pivotal factors establishing the overall intention of a person to use electronic banking solutions, for example. More specifically, most work in this arena has adopted UTAUT as a theoretical underpinning in conceptual frameworks and has further validated performance expectancy as a significant influential driver in behavioral intention (Martins et al., 2014; Riffai et al., 2012; Foon & Fah, 2011; AbuShanab et al., 2010).

Also, government incentive was found to positively affect the awareness benefit of e-wallet in Malaysia. Such a finding is in line with (Al-Ibrahem and Tahat, 2006). This

supports that government should utilize a variety of supported instruments to encourage consumers and businesses to use e-commerce without any fear Lack of such support affects peoples' trust in e-commerce (Siau and Shen, 2003). Moreover, without knowledge and awareness of the benefit of such technology, such could lead to a lack of e-wallet adoption (Siau and Shen, 2003). Awareness is the first step towards trust; hence the first step towards e-commerce adoption (Najafi, 2012).

Perceived ease of use had a positive and significant relationship with an intention to use an e-wallet (H2). This mode of intention to use an e-wallet was determined by consumers' perception regarding the perceived ease of use of technology. This study supports Chawla and Joshi's findings. These findings point out those e-wallet providers such as banks and online stores should focus on the latest technologies that enable users to perform transactions effectively and efficiently. These savings in time, cost, and ease of use will help in enhancing benefits, as e-wallets are perceived as easy to use by consumers.

6. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Despite its contribution, this study is not without limitations. The findings and the implications of this study were derived from a cross-sectional research design. Hence, a longitudinal study is necessary to clarify the effects of temporal change. Second, factors such as trust and brand loyalty can be examined with the relationship between government incentives. Third, this study uses simple random sampling to obtain respondents, which may have a different effect than another sampling method.

References

- AbuShanab, E., Pearson, M. and Setterstrom, A. J. (2010). Internet banking and customers' acceptance in Jordan: The unified model's perspective. Communications of the Association for Information Systems, 26(1), 493-524.

- Aji, H. M., & Dharmmesta, B. S. (2019). Subjective norm vs dogmatism: Christian consumer attitude towards Islamic TV advertising. Journal of Islamic Marketing, 10(3), 961–980. https://doi.org/10.1108/JIMA-01- 2017-0006

- Aji, H. M., Berakon, I., & Riza, A. F. (2020). The effects of subjective norm and knowledge about riba on intention to use e-money in Indonesia. Journal of Islamic Marketing, ahead-of-print (ahead–of–print). https:// doi.org/10.1108/JIMA-10-2019-0203

- Al Ziadat, M. T., Al-Majali, M. M., Al Muala, A. M., & Khawaldeh, K. H. (2013). Factors Affecting University Student's Attitudes toward E-Commerce: Case of Mu'tah University. International Journal of Marketing Studies, 5(5), 88

- Ali, M., Raza, S. A., & Puah, C. H. (2015). Factors affecting intention to use islamic personal financing in Pakistan: Evidence from the modified TRA model. In Munich Personal RePEc Archive (pp. 66023)

❖ Al-Ibrahem, M. and Tahat, H. (2006). Regulating Electronic Contracting in Jordan. 21st BILETA Conference: Globalisation and Harmonisation in Technology Law.

❖ Al-Jaghoub, S., Al-Yaseen, H., & Al-Hourani, M. (2010). Evaluation of Awareness and Acceptability of Using e-Government Services in Developing Countries: the Case of Jordan. Electronic Journal of Information Systems Evaluation, 13(1), pp1-8.

❖ Al-Khaffaf, M. (2013). Factors Effecting E-Commerce Prevalence in Jordan. The Macrotheme Review A multidisciplinary journal of global macro trends, 2(3), pp.66-70.

❖ Alkhaleefah, M., Alkhawaldeh, M., Venkatraman, S. and Alazab, M. (2010). Towards understanding and improving e-government strategies in Jordan. International Conference on e-Commerce, e-Business and e-Service, 66, pp.1871-1877

❖ Almarabeh, T., & AbuAli, A. (2010). A general framework for e-government: definition maturity challenges, opportunities, and success. European Journal of Scientific Research, 39(1), 29-42.

❖ Al-Shboul, M., & Alsmadi, I. (2010). Jordan e-government challenges and progresses. International Journal of Advanced Corporate Learning (iJAC), 3(1), 37-41.

❖ Al-Somali, S. A., Gholami, R., & Clegg, B. (2009). An investigation into the acceptance of online banking in Saudi Arabia. Technovation, 29(2), 130-141.

❖ Andrieu, M. (2001). The future of e-money: An internatioal review of policy and regulatory issues. The Journal of Futures Studies, Strategic Thinking and Policy, 3(6), 502–522. https://doi.org/10.1108/14636680110420459

❖ Appiah, K., Osei, C., Selassie, H., & Osabutey, E. (2019). The role of government and the international competitiveness of SMEs: Evidence from Ghanaian non-traditional exports. Critical Perspectives On International Business, 15(4), 296–322. https://doi. org/10.1108/cpoib-06-2018-0049

❖ Arslan, B., & Fröjdh, B. (2019). E-wallet-designed for usability.

❖ Bakri, A. (2013). An Overview of Information and Communication Technology (ICT) in Jordan: Review the Literature of Usage, Benefits and Barriers. International Journal of Internet and Distributed Systems, 1(2), pp.9-15

❖ Beldad, A. D., & Hegner, S. M. (2017). Expanding the technology acceptance model with the inclusion of trust, social influence, and health valuation to determine the predictors of German users' willingness to continue using a fitness app: A structural equation modeling approach. International Journal of Human-computer Interaction, 34(9), 882–893. https://doi.org/10.1080/10447318.2017.1403220

❖ Capgemini. (2019). World payment report 2019. Capgemini Research Institute. Retrieved April 2, 2020, from. https://worldpaymentsreport.com/wpcontent/uploads/sites/5/2019/09/World-PaymentsReport-WPR-2019.pdf

❖ Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India–An empirical study. International Journal of Bank Marketing.

❖ Cheung, C. M. K., & Lee, M. K. O. (2008). The structure of web-based information systems satisfaction: Testing of competing models. Journal of the American Society for Information Science and Technology, 59 (10), 1617–1630. https://doi.org/10.1002/asi.20881

❖ Cooper, R.G. (1997), ``Examining some myths about new product winners'', in Katz, R. (Ed.), The Human Side of Managing Technological Innovation, Oxford, pp. 550-60.

❖ Daniel, E., 1999. Provision of electronic banking in the UK and the Republic of Ireland. International Journal of Bank Marketing 17 (2), 72–82.

❖ Davis, F., Bagozzi, R., & Warshaw, P. (1989). User acceptance of computer technology: A comparison of two theoretical models. Management Science, 35(8), 982–1003. https://doi.org/10.1287/mnsc.35.8.982

❖ Dawi, N. M. (2019). Factors influencing consumer's intention to use QR code mobile payment – A proposed framework. International Journal of Recent Technology and Engineering, 8(2S), 114–120. https://www.ijrte.org/wp-con tent/uploads/papers/v8i2S/B10170782S19.pdf

❖ Dover, P. A. (1988). The Effect of Technology Selection on Consumer Adoption of In-home Computerised Banking. International Journal of Bank Marketing.

❖ Focal Malaysia (2020), TNG Digital: Education, awareness current focus of e-wallet sector. https://focusmalaysia.my/tng-digital-education-awareness-current-focus-of-e-wallet-sector/

❖ Foon, Y. S., & Fah, B. C. Y. (2011). Internet banking adoption in Kuala Lumpur: an application of UTAUT model. International Journal of Business and Management, 6(4), 161.

❖ Fornell, C., & Larcker, F. D. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39–50. https://doi.org/10.1177/002224378101800104

❖ Guiltinan, J.P. and Donnelly, J.H., .(1983) The use of product portfolio analysis in bank marketing planning, in Shanmugam and Burke (Eds), Management Issues for Financial Institutions,p. 5.

❖ Haderi, S. M. (2014). The influences of government support in accepting the information technology in public organization culture. International Journal of Business and Social Science, 5(5), 118–124. http://

❖ Hai, L. C., & Kazmi, S. H. A. (2015). Dynamic support of government in online shopping. Asian Social Science, 11(22), 1–9. https://doi.org/10.5539/ass.v11n22p1

❖ Hair, J. F., Jr, Black, W. C., Babib, B. J., & Anderson, R. E. (2014). Multivariate data analysis (7th ed.). Edinburgh.

❖ Halaweh, M. and Fidler, C. (2008). Security perception in e-commerce: Conflict between customer and organizational perspectives. Computer Science and Information Technology, pp.443-449.

❖ Halttunen, V. (2016). Consumer behavior in digital era: general aspects and findings of empirical studies on digital music with a retrospective discussion. Jyväskylä studies in computing, (235).

❖ Howard, J. and Moore, W. (1982), ``Changes in consumer behaviour over the product life cycle'' in Tushman and Moore (Eds), Readings in the Management of Innovation, Pitman, p. 128.

❖ Howcroft, B., Hamilton, R., & Hewer, P. (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. International journal of bank marketing.

❖ Huh, H. J., Kim, T. T., & Law, R. (2009). A comparison of competing theoretical models for understanding acceptance behavior of information systems in upscale hotels. International Journal of Hospitality Management, 28(1), 121–134. https://doi.org/10. 1016/j.ijhm.2008.06.004

❖ Huysman, M., & de Wit, D. (2002). Knowledge Development. In Knowledge Sharing in Practice (pp. 95-123). Springer, Dordrecht.

❖ Ishak, N. (2020). Overview of cashless payment in Malaysia. Int. J. Acc. Financ. Bus. (IJAFB), 5(27), 11-18.

❖ Mandari, H. E., Chong, Y.-L., & Wye, C.-K. (2017). the influence of government support and awareness on rural farmers' intention to adopt mobile government services in Tanzania. Journal of Systems and Information Technology, 19(1/2), 42–64. https://doi. org/10.1108/JSIT-01-2017-0005

❖ Martins, C., Oliveira, T., & Popovič, A. (2014). Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. International journal of information management, 34(1), 1-13.

❖ Mehrtens, J., Cragg, P. and Mills, A. (2001). A model of Internet adoption by SMEs. Information & Management, 39(3), pp.165-176.

❖ Najafi, I. (2012). The Role of e-Commerce Awareness on Increasing Electronic Trust. Life Science Journal, 9(4), pp.1487- 1494.

❖ Nunnally, J. C. (1967). Psychometric theory. McGraw-Hill. Oh, S.-H., Paek, H.-J., & Hove, T. (2015). Cognitive and emotional dimensions of perceived risk characteristics, genre-specific media effects, and risk perceptions: The case of H1N1 influenza in South Korea. Asian Journal of Communication, 25(1), 14–32. https://doi.org/10.1080/01292986.2014.989240

❖ Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. Internet research.

❖ PMO. (2020). [PRIHATIN] Matlamat 1: Lindungi Rakyat. PMO: Prime Minister Office. Retrieved March 20, 2020, from https://www.pmo.gov.my/2020/03/pre-prihatinmatlamat-1-lindungi-rakyat/

❖ PWC. (2019). it's time for a consumer-centred metric: Introducing 'return on experience' – Global consumer insights survey. PWC: PricewaterhouseCoopers. Retrieved March 29, 2020, from https://www.pwc. com/gx/en/consumer-markets/consumer-insightssurvey/2019/report.pdf

❖ Rambocas, M. M., & Arjoon, S. (2012). Using diffusion of innovation theory to model customer loyalty for internet banking: A TT millennial perspective. International Journal of Business and Commerce, 1 (8), 1–14. https://pdfs.semanticscholar.org/91dc/ 0b67507e55cfb30a73251c74533bd83e6eea.pdf

❖ Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: An empirical study on Facebook. Journal of Enterprise Information Management, 27(1),

❖ Riffai, M. M. M. A., Grant, K., & Edgar, D. (2012). Big TAM in Oman: Exploring the promise of on-line banking, its adoption by customers and the challenges of banking in Oman. International journal of information management, 32(3), 239-250.

❖ Rogers, E. (1962), Diffusion of Innovations, the Free Press, New York, NY.

❖ Rogers, E. M., & Shoemaker, F. F. (1971). Communication of Innovations; a Cross-Cultural Approach.

❖ Sathye, M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. International Journal of bank marketing.

❖ Sathye, M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. International Journal of bank marketing.

❖ Scarbrough, H., Corbett, J.M., 1992. Technology and Organization: Power, Meaning and Design. Routledge, New York

❖ Sekaran, U. (1992). Research method for business: A skill building approach. New York: John Wiley & Sons Inc.

❖ Shannak, R. O. (2013). The difficulties and possibilities of e-government: the case of Jordan. Journal of Management Research, 5(2), 189.

❖ Sharma, S. K., Mangla, S. K., Luthra, S., & Al-Salti, Z. (2018). Mobile wallet inhibitors: Developing a comprehensive theory using an integrated model. Journal of Retailing and Consumer Services, 45, 52-63.

❖ Shkoukani, M., Lail, R., Abusaimeh, H. and Hamarneh, L. (2013). The Impact of Establishing a Governmental Consumer Agency in Jordan towards Expanding the Use of E-business. Computer and Information Science, 6(2). pp. 71

❖ Siau, K. and Shen, Z. (2003). Building customer trust in mobile commerce. Commun. ACM, 46(4), pp.91-94.

❖ Tan, M., & Teo, T. S. H. (1998). Factors influencing the adoption of the Internet. International Journal of Electronic Commerce, 2(3), 5–18. https://doi.org/10. 1080/10864415.1998.1151831

❖ Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management Science, 46(2), 186–204. https://doi.org/10.1287/mnsc.46.2.186.11926

❖ Victoria, O. O., & Amir, F. (2018). Systems and political development in malaysia. International Journal of Law Reconstruction, 2(2), 122–137. https://doi.org/10. 26532/ijlr.v2i2.3306

❖ Wallis, S., (1997). Financial System Inquiry final report: overview. Sydney, Australia: Australian Government Publishing Service,

❖ Wei, J., & Liu, J. (2015). Government support and firm innovation performance: Empirical analysis of 343 innovative enterprises in China. Chinese Management Studies:, 9(1), 38–55. https://doi.org/10.1108/CMS-01-2015-0018

❖ Yousafzai, S. Y., Pallister, J. G., & Foxall, G. R. (2003). A proposed model of e-trust for electronic banking. Technovation, 23(11), 847-860.