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The Emergence of the E-Payment Landscape: Acknowledging the Malaysian B40's Behavioral Intention on E-Payment Usage

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Abstract

The primary goal of this study is to acknowledge the Malaysian B40 income group's behavioral intention on e-payment usage as a result of emerging changes in the e-payment landscape, supported by Technology Acceptance Model (TAM) theory. This study used an online survey questionnaire and was completed by 330 respondents of the Malaysian B40 income group. The findings revealed that perceived usefulness, ease of use, and perceived risk have utterly affected the willingness of the Malaysian B40 income group to use the e-payment platform. The current e-payment trend has forced various categories of users (business and community) to adapt to digital payments, regardless of their socioeconomic status. Users, buyers, and sellers who are active in the e-payment platform will benefit from this research as the findings highlighted important drivers impacting e-payment usage intention as well as the way forward to keep them competitive.

INTRODUCTION

Nowadays, virtual cash, often known as cashless transactions, is a relatively new technology that has grown trendy. The landscape of traditional transactions and payments has changed and moved towards cashless payments/digital payments/e-payments. The emergence of the current trend in e-payment has forced various categories of users (business and community) to adapt to digital payments. The Malaysian community must adapt to the latest trend in the mode of payments regardless of the income categories, including the lower-level income category identified as the B40 group (Ministry of Finance Malaysia, 2019). E-payment is also referred to as mobile or digital wallet. As part of a digital transaction, a consumer's debit card or bank account information is stored in an electronic application. It functions similarly to a debit or credit card (Ray, 2017). As compared to traditional transactions, e-payment makes it simpler and faster for customers to allocate funds or make payments at a lower cost, which may encourage Malaysians to use cashless transactions. Some transactions in Malaysia, such as toll payments on most Malaysian highways, are transitioning entirely to digital payment. As a result, Malaysian users, regardless of their socioeconomic status, must adapt to technological advances.

One of the primary advantages of e-payment is convenience. Users can utilise e-payment to buy things or send money over the world with relative simplicity. E-payment is an electronic payment mechanism that allows users to process information related to purchase decisions, membership, loyalty, and banking details in a central location

that functions similarly to a physical wallet. According to Chauhan (2013), consumer data can be saved for secure online purchases in an e-payment system. Furthermore, this system offers clients with simple access to all transactional information throughout their online buying experience, making it more convenient for them. Security is one of the most serious challenges that has overtaken e-payment systems, with hackers or scammers being the main source of concern. As a result, customers may perceive dangers when making e-payments (Kim et al., 2010). Hackers are constantly on the lookout for personal information and credit card numbers, posing a serious threat to clients. E-payment transactions must be reliable, as they are at the heart of the use and acceptance of online applications (Kassim and Ramayah, 2015).

Despite all the benefits of using e-payment, some communities are unable to use it in their daily transactions due to low income. Hence, this study aimed to analyse the determinant factors that affect the intention to use e-payment among the Malaysian B40 income level between the needs and constraints that this income level group may face. This study was supported by the Technology Acceptance Model (TAM) theory. The Malaysian B40 group was chosen as the target population because they are considered the low-level income group. The B40 group refers to the bottom 40% of the household with monthly incomes of up to RM4,849 (Ministry of Finance Malaysia, 2019). This group is perceived to be less interactive to information technology (IT) services. Thus, this study aimed to acknowledge the motivation factors on e-payment usage among them.

This research analysed three determinants that influenced the intention of e-payment usage among the B40 income group. The determinants are perceived usefulness, perceived ease of use, and perceived risks associated with e-payment, such as privacy, security, and trust. The existing TAM model typically emphasises two determinants, perceived usefulness, and perceived ease of use. The users' security is of the utmost importance for digital payment (Nizam et al., 2018). Thereby including perceived risk to the model as a subsequent extension of digital technology usage. This study could provide a broad view of e-payment consumers, allowing providers of e-payment services to focus on perceived risks related to security, privacy, and trust to improve e-payment usage efficiency.

LITERATURE REVIEW

Intention of E-payment Usage

Through digital wallet or e-payment that is linked to the individuals' bank accounts, consumers could purchase many types of items online using a computer or a smartphone. Amoroso and Watanabe (2012) cited that the electronic payment category of digital technology covers all payment devices, including plastic cards, direct payments, electronic money transactions, and digital money payment technologies. Mobile carriers usually take the shape of a built-in microchip or mobile application (Apps). Literature suggested that mobile users have optimistic views to use mobile application facilities, including e-payment (Oliveira et al., 2016; Pham and Ho, 2015). E-payment is a cashless extension that enhances the technology's capacity to deliver customer service in an appropriate position and time. Hence, e-payment offers several benefits, such as the security of transactions, appropriate micropayments, convenience, and universal applications (Bhattacherjee, 2001; Van der Heijden et al., 2003). Since intention can influence actions (Lim et al., 2019), behavioural intent is observed to evaluate technology use during the TAM evolution (Davis, 1989). The low-level income group, which is normally associated with inaccessible areas, insufficient infrastructure, and mobility restrictions, may gain an advantage from the use of e-payment (Dakduk et al., 2020). However, due to the profit maximisation motive of digital finance services, the low-income customers may not persistently use e-payment due to a less-aggressive marketing strategy targeting this group (Ozili, 2018).

Perceived Usefulness

Perceived usefulness is described as those people who believe that a specific device would improve their effort efficiency (Davis, 1989; Redzuan et al., 2016). Thus, in this research, perceived usefulness relates to the low-level income group customers' expectations about the usefulness of using e-payment in some financial and daily transactions. Customers are preferred to use e-payment if they perceive the platform is beneficial (Tarhini et al., 2016). It is argued that the use of e-payment may improve payment-related productivity and efficiency (Yeow et al., 2018), enhance customer services and information about the products (Aji and Dharmmesta, 2019), and offer flexibility (Wang and Li, 2016). Perceived usefulness may enhance the willingness to use the system due to the digital infrastructure contribution in the information dissemination system (Yang et al., 2021). Customers from the low-income group who have perceived usefulness of e-payment would use the system to their advantage. It implies that if the invention is not deemed reasonably useful, e-payment would probably not be adopted regardless of its diligent application, though perceived usefulness would lead to different results (Murthy and Mani, 2013). Hence, perceived usefulness more likely influences customers in making decisions on adopting an e-payment system (Davis et al., 1989).

Perceived Ease of Use

Literature suggests that perceived ease of use is one of the critical facets of implementing modern technologies that need to be considered in customers' intention to adopt emerging technology. In order for a customer to view a product as being easy to use, it must be structurally convenient (Davis et al., 1989) due to its chronological categories (Lim et al., 2018). Davis (1989) described customers' ease of use to the point that they view the system as uncomplicated, easy, or quick to be used. The indicators of perceived ease of use include transparent and understandable (Manjunath and Nagabhushanam, 2017), step-by-step installation service and device learning facilities (Priyono, 2017), as well as a quick comparison of cash payment systems to e-payment methods used by third parties (Wang and Li, 2016). The e-payment application is regarded as simple and straightforward, without any problems in finding out more about the service (Yeow et al., 2018). Previous studies proposed that when a customer considers the device is free from mental and physical effort, the usage is considered significant (Tahar et al., 2020). In this research, this concept was extended to the social viewpoint on e-payment usage to increase the interactions and results in electronic commerce (Huang et al., 2020).

Perceived Risks

Another factor that may motivate the low-income customers' intention to adopt new technology is perceived risk (Amirtha et al., 2021). Customers may have ambiguity and possible unfavourable outcomes of using e-payment platforms (Marafon et al., 2018). Since perceived risk is expected to be higher in online transactions due to the customers' inability to physically inspect the products prior to the acquisition (Chiu et al., 2012) and information asymmetry that exists between customers and suppliers (Liang et al., 2017), customers may have doubt in e-payment facilities. Customers are reluctant to obtain goods or services online, including e-payment, unless their privacy and security are well protected (Milberg et al., 2000). According to Kaur et al. (2017), e-payment facilities without safety-related features may lead to misappropriation of data and an enticing potential for cyber-criminals to contravene information. Thus, privacy and security are among the most persuasive considerations impacting the use of e-payment (Soodan and Rana, 2020). Trust is another perceived risk that relates to e-payment transactions among low-income customers. Yousafzai et al. (2003) suggested that to encourage these customers to use e-payment, the risk of trust should be minimised, and the digital payment activities should be performed based on the expectations and trusts of the customers (Tsiakis and Sthephanides, 2005). This trust is crucial since skepticism could prevent future errors in exchange (Kousaridas et al., 2008). Hence, the lower perceived risk among the low-income customers is expected to protect them, as a result of which they may be more inclined to use electronic payment services.

The Extension of the Technology Acceptance Model

Consistent with the literature, this study was based on the TAM framework introduced by Davis (1989) in examining the determinants of behaviour intention on e-payment among the low-income group in Malaysia. According to Alshurideh et al. (2021), TAM offers a single platform of e-payment system with a single platform e-payment architecture and security for the customers. Luarn and Lin (2005) suggested that TAM could be used to explain the influence of customers' intention to utilise new technological innovations, including e-payment. Even though TAM was initially developed to foresee the use of information technology systems for work purposes, many studies used this model to anticipate consumers' intentions (Schierz et al., 2010). The main constructs in the basic TAM framework are perceived usefulness and perceived ease of use. It is proposed that perceived ease of use of e-payment encourages perceived usefulness since customers are likely to assume that e-payment platform is efficient when they can use the system effortlessly (Alshurideh et al., 2021). Thus, these constructs are regarded as the essential determinants of behavioural intention usage and technology acceptance (Widyanto et al., 2021) among low-income customers.

The TAM is expanded either by combining the platform with other information system models or by defining third-party variables to facilitate e-payment usage. It is argued that risks should be regarded as an essential consideration in examining the influence of the acceptance of e-payment services (Kim et al., 2008). A high level of risk may deter the customers' desire to use a single e-payment system (Lai, 2017). Due to perceived risk or uncertainty on the use of e-payment, customers are uncertain about the outcome of the usage, consequently influencing their intention to adopt the system. This uncertainty indicates that the perceived risks and customer acceptance against the e-payment platform should be taken into consideration. An extended TAM framework could be adopted to check customer behaviours to explore the low-income customers' acceptance of the e-payment system. Thus, following Lai (2017), this research adopted the extended TAM framework among the low-income customers that have the intention to use the e-payment platform while, at the same time, exploring the theory of potential risks raised by different complexities in Malaysia's e-payment platform.

Hypotheses Development

In the current global industrial revolution, the existence of the e-payment platform may be preferred due to favourable impacts of technological innovation. However, because of the challenges and issues relating to the e-payment system, customers may be deterred from using such a system. Hence, the behavioural intention of the

customers in adopting the e-payment transactions may be influenced by certain antecedents. While the dependent variable of this research was the usage intention among the low-income customers, and the independent variables are the determinants that affect the usage intention (perceived usefulness, perceived ease of use, and perceived risks). This research examined whether there is any relationship between these independent variables and the usage intention of e-payment among low-income customers. Thus, the research framework was constructed as presented in Figure 1.

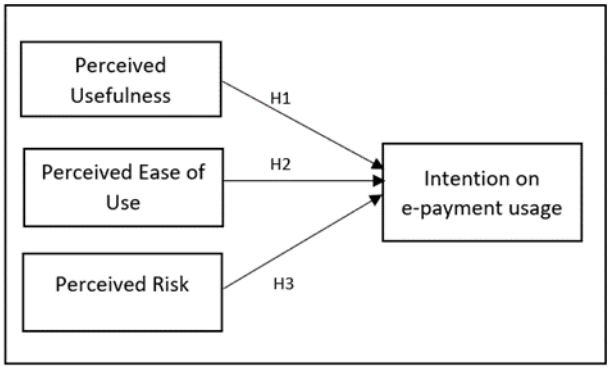

Fig 1: Research Framework: Behaviour Intention on E-payment Usage among the Malaysian B40

Perceived usefulness is an essential TAM element that significantly influences behavioural intentions (Davis et al., 1989). The strong relation between perceived usefulness and behavioural intention to use particular technologies has been identified through the TAM model (Al-Maroof and Al-Emran, 2018; Mun and Hwang, 2003). Previous literature has consistently shown that perceived usefulness is a good indicator of e-payment's use and why customers embrace the application of such technology (Beldad and Hegner, 2017; Rauniar et al., 2014; Venkatesh and Bala, 2008). Numerous studies have revealed a robust connection amongst perceived usefulness and the intention to use emerging technologies (Gu et al., 2009; Ho et al., 2020; Jeong and Yoon, 2013; Kulviwat et al., 2007; Liu and Li, 2011; Zhang and Mao, 2008). However, Li et al. (2014) found no clear evidence for this connection. Therefore, in line with prior literature, this research proposed the following hypothesis:

H1: There is a significant relationship between perceived usefulness and e-payment usage intention.

Perceived ease of use has a beneficial impact on intention to use (Venkatesh and David, 2000). Barry and Jan (2018) had found a significant relationship between perceived ease of use and behavioural intent to use a specific method. There is indeed a significant effect between the ease of use of the e-payment platform and digital payment acceptance (Kim et al., 2010), internet payments (Yu, 2014), and internet payments with contactless banking (Liébana-Cabanillas et al., 2019). Short Message Service (SMS) and Near Field Communication (NFC) mobile payment have been reported to have a significant impact on mobile usability (Liébana-Cabanillas et al., 2019). Ramos et al. (2016) examine NFC technology's usage in mobile payments. The results of this analysis show that users agree to utilise NFC technology conveniently through its application. Besides, current studies, such as Chawla and Joshi (2020), Ho et al. (2020), Lai (2017), and Yang et al. (2021), also supported the view that perceived ease of use is directly associated with the customers' intention to use the e-payment system. Consequently, the following hypothesis was proposed in this study:

H2: There is a significant relationship between perceived ease of use and e-payment usage intention.

By extending the TAM model, this research added the risk element in predicting the behaviour intention on e-payment usage. Risk mainly includes privacy, security, and trust associated with e-payment transactions. Since awareness and maturity within the diverse ecosystem are the key obstacles of e-payment, the immature system would lead to higher risks, such as uncertain networks, mobile malware, risky apps from third parties, and unsafe consumer behaviours (Kiran et al., 2014). Studies done by Ho et al. (2020), Kassim and Ramayah (2015), Liébana-Cabanillas et al. (2014), Marafon et.al. (2018), Pham and Ho (2014), Slade et al. (2015), as well as Wong and Mo (2019) found a negative influence of perceived risk on usage intention. Low-income customers who believe e-payment transactions as risky transactions may be discouraged from using such a platform (Ho et al., 2020). Consequently, the following hypothesis was put forth in this study:

H3: There is a significant relationship between perceived risk and e-payment usage intention

METHODOLOGY

Quantitative methods were used in this study. A self-administered online survey was performed in Selangor to gather information from the Malaysian B40 using Google form. The target sample was Malaysians who received a monthly household income of RM4,850 or less in the state of Selangor. The total Malaysian population that falls

under B40 in 2016 was 2.78 million (Department of Statistics Malaysia, 2016). This study was limited to the Selangor state only. The Malaysian B40 group was chosen as a target population because they are the low-income group. This study aimed to reveal the motivation factors on e-payment usage among this group that is perceived as less interactive to IT services. The survey was mainly conducted among B40 households residing in the People's Poorest Housing (PPRT) areas in Selangor. This research used the G*Power programme analysis to decide the minimum sample size necessary, following other researchers (Faul et al., 2007; Haenlein and Kaplan, 2011; Sarstedt et al., 2017). Based on the programme, 119 respondents were sufficient to accomplish a statistical power of 95% for detecting the R2 value of 0.15 with a 5% probability of error. This research obtained 330 usable responses.

The questionnaire for this research was divided into three main sections. Section 1 asked about the level of income of the respondents. If the respondents answered 'yes' to the question, they may proceed to the next section. If otherwise, they need not continue the survey. This question was mainly to ensure that only those in the B40 group participated in the survey. Section 2 focused on the respondents' demographic while, section 3 contained items about perceived usefulness (5 items) which were adapted from Bhattacherjee (2001) and Van der Heijden et al. (2003); perceived ease of use (5 items) that were adapted from Davis (1989) and Venkatesh and Davis (2000); perceived risks (5 items) which were adapted from Khalilzadeh et al. (2017), and e-payment usage intention (5 items) that being adapted from Bhattacherjee (2001), Venkatesh and Davis (2000) and Morosan and DeFranco (2016). The questionnaire used a five-point Likert scale ranging from 1 'strongly disagree' to 5 'strongly agree' to assess the respondents' behaviours.

A normality test on perceived usefulness, perceived ease of use, perceived risk, and usage intention was performed using the Skewness and Kurtosis test. The data was discovered to have a normal distribution. The data is reliable, as shown by the Cronbach's Alpha values in this study, ranging from 0.829 (perceived usefulness) to 0.930 (usage intention), indicating that the various statements consistently measure the respondents' perceptions on the four dimensions related to the determinants of the usage intention of e-payment among the B40 in Selangor. The data was being analysed using the Statistical Package for Social Sciences (SPSS) system for Windows Platform version 23.0. Multiple regression analysis was carried out to examine the relationship between perceived usefulness, perceived ease of use, perceived risk, and usage intention among Malaysian B40.

FINDING AND DISCUSSION

Descriptive Analysis

The number of respondents for this study was 330. Fifty percent (50%) of the survey were completed by male respondents, and 50% of the respondents were females. They are employed either in the private sector (73%) or the public sector (27%). The majority of respondents are 26 years to 55 years old (87%), and only 13% are 20 years to 25 years old. All respondents' income is RM4, 849 and below. Some 85% of the respondents are fully aware of the e-payment function, while the remaining respondents are partially aware of the function. E-payment is by far the trendiest payment mechanism that has won Malaysians' hearts and minds in the current days.

E-payment has become a norm nowadays. However, the frequency of the usage among the low-income group could be slightly different from the people that received high incomes. The motivation to use e-payment could be due to various factors. This research measured the respondents' perception of usefulness, ease of use, and risk of e-payment usage through a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Table 1 shows the mean score and standard deviation for all the variables. First, the mean scores for perceived usefulness were 4.57. The scores imply that the respondents are very confident that the e-payment platform is very useful as it makes the transaction activities quick and requires fewer resources and time to use than the conventional payment systems.

TABLE 1.
DESCRIPTIVE STATISTICS

Variables	Mean	Std. Deviation
Perceived usefulness	4.57	0.470
Perceived ease of use	4.57	0.499
Perceived risk	4.36	0.693
Adoption Intention	4.50	0.657

Meanwhile, for perceived ease of use, the mean scores were 4.57. These mean scores imply that, on average, the Malaysian B40 respondents perceive the e-payment platform as a convenient and easy payment method. The respondents are assured that using smartphones makes payment simple and easy to complete as the instructions are clear and understandable. The respondents agree that the process of learning to use e-payment is very fast. Their intention of e-payment usage is also influenced by perceived risk. The mean scores for perceived risk were 4.36. Overall, the respondents perceived that e-payment is a safe system to transmit sensitive information as the service providers have taken all necessary actions to protect customers' transactions. The respondents believe that e-payment services are convenient and reliable for the transmission of highly confidential information. Meanwhile, the mean scores of the intention of e-payment usage were 4.50, indicating that the Malaysian B40s have an intention to use e-payment as their payment method as it has become a norm nowadays.

Data Analysis

This research used a multiple regression analysis to respond to the research objectives. The three independent variables were investigated using multiple regression analysis: perceived usefulness, perceived ease of use, and perceived risk, which significantly explain the e-payment usage intention among the B40 group in Selangor. The regression equation is statistically significant at 0.05 ($p<0.05$), indicating that the desire to utilise e-payment has a significant relationship with all the independent variables.

TABLE 2.
MODEL SUMMARY

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.806[a]	.650	.647	.39030

a. Predictors: (Constant), Perceived Usefulness, Perceived Ease of Use, Perceived Risks
b. Dependent Variable: Usage Intention

According to Table 2, the R-square value for this model is 0.650, indicating that the relationship between these three independent variables accounts for 65% of the variation in the dependent variable (usage intention). In other words, the overall impact of perceived usefulness, perceived ease of use, and perceived risk on usage intention is moderate.

TABLE 3.
REGRESSION RESULT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-477	220		-2.164	.031		
	Perceived Usefulness	.505	.080	.361	6.312	.000	.328	3.051
	Perceived Ease of Use	.340	.072	.258	4.698	.000	.356	2.811
	Perceived Risks	.256	.046	.270	5.540	.000	.452	2.214

Table 3 indicates no multicollinearity issues as the tolerance value is above 0.2 (Hair et al., 2019) and VIF is less than 10 (Pallant, 2020). According to the statistics in Table 3 above, all the independent variables are significant to the dependent variable since the p-values are less than 0.05. The results indicate that there is a positive significant linear relationship between perceived usefulness and e-payment usage intention among the B40 in Selangor ($t(95) = 6.312$, $p = 0.000$). Additionally, the results indicate a positive significant linear relationship between perceived ease of use and e-payment usage intention among the B40 in Selangor ($t(95) = 4.698$, $p = 0.000$). Furthermore, the results also show a positive significant linear relationship between perceived risk and e-payment usage intention among the B40 in Selangor ($t(95) = 5.540$, $p = 0.000$). All independent variables are statistically significant at 0.01 ($p<0.01$) based on the individual regression coefficients. The coefficients for perceived usefulness (0.361), perceived ease of use (0.258), and perceived risk (0.270) indicate that an increase in perceived usefulness, perceived ease of use, and perceived risk increases the usage intention of e-payment.

Discussion of Findings

Perceived usefulness has a more significant impact on the B40's decision to adopt e-payment. The respondents considered e-payment as more useful and make it easier to buy products or services. They also agreed that the use of e-payment would save time to purchase products or services. They suggested that e-payment is beneficial and makes it easier to conduct transactions and buy products (Bhattacherjee, 2001). Van der Heijden et al. (2003) proposed that e-payment would take less time and effort than the traditional payment methods. The fact that e-payment has a quicker checkout mechanism is another factor that other researchers have concentrated on. It does not require signing documents like the manual payment systems (Chan and Chong, 2013).

Karim et al. (2020) suggested that since customers are not required to insert the credit card numbers into the system (some of these numbers are very long), the e-payment system is more preferred and adopted. Eastin et al. (2016) also discovered that e-payment usage was higher because it was six times quicker than the standard payment mechanism for regular credit. This outcome is consistent with the analysis by Davis et al. (1989), which found that perceived usefulness impacts the decision-making of e-commerce customers in adopting the e-payment system.

Besides, the findings portrayed a substantial link between perceived ease of use and the intention to use e-payments. Hsiao and Chen (2016) claimed that customers expect the use of e-payment to be easy and, thus, effortless for future adoption. The respondents regard the instructions given as explicit. Therefore, the steps to perform e-payment transactions are becoming more effortless. These advantages would lead to the interaction with e-payment as more helpful to users. This research proves that if e-payment technology is easy to learn and use, consumers would perceive e-payment as useful. Thus, they would use it due to its convenience, which includes ease in the e-payment application registration process. The user is intimidated by the complicated registration process. Research conducted in France highlighted user interface, system operation, and features as the core pillars for broad-based mobile payment system acceptance (Dutot, 2015).

The third factor that influences the e-payment usage intention is perceived risk. Studies such as Liébana-Cabanillas et al. (2019) and Yuan et al. (2016) had highlighted a high degree of perceived risk in various types of information systems usage, representing the users' expectations of ambiguity and adverse effects of participation that decrease the intent to use the activity. The findings of this study demonstrated a strong link between perceived risks (related to privacy, security, and trust) and e-payment usage intention among Selangor's B40 income group. The respondents believed that the e-payment service providers would perform the necessary actions to secure the transactions for their users. They also indicated that the e-payment service providers are trustworthy and have secure means of disseminating sensitive information (Khalilzadeh et al., 2017).

Overall, the findings of this study revealed that the Malaysian low-income group (B40) intend to use the e-payment platform as their payment method because they perceive the system is useful, easy to use, and has low risk. This result is consistent with Kasirye and Masum (2021) and Singh and Rana (2017), which discovered no significant difference between the low household income levels and high household income levels when comparing the effects of e-wallet usage. As a result, even though Malaysian B40's income level is relatively lower, they intend to use e-payment once they perceive that the e-payment platform is useful, easy to use, and less risky to meet the demonetisation era. However, this outcome is contradictory to the findings on online banking acceptance, where people with high income and financial assets are more inclined to use e-banking (Kim et al., 2005). It is also contradictory to Garrett at el. (2004), which stated that financial variables are significantly related to digital payment behaviour, and those who are more likely to use digital payment have higher income levels

CONCLUSION

This study discovered that three determinant factors perceived usefulness, perceived ease of use and perceived risks had a substantial impact on e-payment usage intentions within the B40 income level in Selangor. Even though the Malaysian B40 income levels are relatively low, they intend to use e-payment once they perceive that the e-payment platform is useful, easy to use, and less risky. Besides, this perceived usefulness finding indicates that it is important to inform customers of the differences of the e-payment networks. Consequently, the government must take precautions to protect the customers by regulating the e-payment systems to raise the financial reliability of the systems. Providers of online transaction services, decision-makers, and banks play an essential part in ensuring the reliable security of the platforms to maintain customer trust and confidence in the system. Additionally, the research adds value to banks, retailers, and e-payment service providers by identifying causes to be tackled to improve the use of e-payment platforms. As technology evolves and changes swiftly, the government, banking, and e-payment service providers should coordinate and collaborate to encourage customers to adopt e-payment and decrease their e-payment worries. E-payment systems must be developed further in order

to maintain a dependable and competitive environment. The results of this research could be used to direct service providers to upgrade their services appropriately and establish suitable e-payment service strategies that are mainly aimed at increasing customer awareness.

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REFERENCES

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.

Alshurideh, M. T., Al Kurdi, B., Masa'deh, R., Salloum, S. A. (2021). The moderation effect of gender on accepting electronic payment technology: A study on United Arab Emirates consumers. Review of International Business and Strategy, Ahead-of-Print.

Al-Maroof, R. A. S., & Al-Emran, M. (2018). Students' acceptance of Google Classroom: An exploratory study using PLS-SEM approach. International Journal of Emerging Technologies in Learning, 13(6), 112-123.

Amirtha, R., Sivakumar, V. J., & Hwang, Y. (2021). Influence of perceived risk dimensions on e-shopping behavioural intention among women—a family life cycle stage perspective. Journal of Theoretical and Applied Electronic Commerce Research, 16(3), 320-355.

Amoroso, D. L., & Magnier-Watanabe, R. (2012). Building a research model for mobile wallet consumer adoption: the case of Mobile Suica in Japan. Journal of Theoretical and Applied Electronic Commerce Research, 7(1), 94-110.

Barry, M., & Jan, M. T. (2018). Factors influencing the use of M-commerce: An extended technology acceptance model perspective. International Journal of Economics, Management and Accounting, 26(1), 157-183.

Beldad, A. D., & Hegner, S. M. (2017). More photos from me to thee: Factors influencing the intention to continue sharing personal photos on an online social networking (OSN) site among young adults in the Netherlands. International Journal of Human–Computer Interaction, 33(5), 410-422.

Bhattacherjee, D. (2001). The evolution of Indian industrial relations: A comparative perspective. Industrial Relations Journal, 32(3), 244-263.

Chan, F. T., & Chong, A. Y. L. (2013). Analysis of the determinants of consumers' m-commerce usage activities. Online Information Review, 37(3), 443-461.

Chauhan, P. (2013). E-wallet: The trusted partner in our pocket. International Journal for Research in Management and Pharmacy, 2(4), 12-19.

Chawla, D., & Joshi, H. (2020). Role of mediator in examining the influence of antecedents of mobile wallet adoption on attitude and intention. Global Business Review, 1-17. https://doi.org/10.1177/0972150920924506.

Chiu, C., Wang, E. T. G., Fang, Y., & Huang, H. (2012). Understanding customers' repeat purchase intentions in B2C e-commerce: The roles of utilitarian value, hedonic value and perceived risk. Information System Journal, 24(1), 85-114.

Dakduk, S., Santalla-Banderali, Z., & Siqueira, J. R. (2020). Acceptance of mobile commerce in low-income consumers: Evidence from an emerging economy. Heliyon, 6(11), e05451.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS quarterly, 319-340.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. Management Science, 35(8), 982-1003.

Department of Statistics Malaysia. (2016). https://www.dosm.gov.my. Accessed 15th January 2021.

Dutot, V. (2015). Factors influencing near field communication (NFC) adoption: An extended TAM approach. The Journal of High Technology Management Research, 26(1), 45-57.

Eastin, M. S., Brinson, N. H., Doorey, A., & Wilcox, G. (2016). Living in a big data world: Predicting mobile commerce activity through privacy concerns. Computers in Human Behavior, 58, 214-220.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behavior Research Methods, 39(2), 175-191.

Garrett, J. L., Rodermund, R., Anderson, N., Berkowitz, S., & Robb, C. A. (2014). Adoption of mobile payment technology by consumers. Family and Consumer Sciences Research Journal, 42(2), 358-368.

Gu, J. C., Lee, S. C., & Suh, Y. H. (2009). Determinants of behavioral intention to mobile banking. Expert Systems with Applications, 36, 11605–11616.

Haenlein, M., & Kaplan, A. M. (2011). The influence of observed heterogeneity on path coefficient significance: Technology acceptance within the marketing discipline. Journal of Marketing Theory and Practice, 19(2), 153-168.

Hair, J. F., Page, M., & Brunsveld, N. (2019). Essentials of business research methods. Routledge.

Ho, J. C., Wu, C., Lee, C., & Pham, T. T. (2020). Factors affecting the behavioural intention to adopt mobile banking: an international comparison. Technology in Society, 63(6), 102360.

Hsiao, K. L., & Chen, C. C. (2016). What drives in-app purchase intention for mobile games? An examination of perceived values and loyalty. Electronic Commerce Research and Applications, 16, 18-29.

Huang, F., Teo, T., & Scherer, R. (2020). Investigating the antecedents of university students' perceived ease of using the Internet for learning. Interactive Learning Environments, 1-17.

Jeong, B. K., & Yoon, T. E. (2013). An empirical investigation on consumer acceptance of mobile banking services. Business and Management Research, 2(1), 31-40.

Karim, M. W., Haque, A., Ulfy, M. A., Hossain, M. A., & Anis, M. Z. (2020). Factors influencing the use of E-wallet as a payment method among Malaysian young adults. Journal of International Business and Management, 3(2), 1-12.

Kassim, N. M., & Ramayah, T. (2015). Perceived risk factors influence on intention to continue using Internet banking among Malaysians. Global Business Review, 16(3), 393-414.

Kaur, K., Gupta, I., & Singh, A. K. (2017). Data leakage prevention: E-mail protection via gateway. In Journal of Physics: Conference Series, 933(1)-012013.

Kasirye, F., & Masum, S. M. H. (2021). The effects of e-wallet among various types of users in Malaysia: A comparative study. Asian Journal of Research in Business and Management, 3(2), 26-41.

Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017). Security-related factors in extended UTAUT model for NFC based mobile payment in the restaurant industry. Computers in Human Behavior, 70, 460-474.

Kim, B. M., Widdows, R., & Yilmazer, T. (2005). The determinants of consumers' adoption of Internet banking. In Proceedings of the Consumer Behavior and Payment Choice 2005 Conference, Boston, MA (pp. 1-34).

Kim, C., Tao, W., Shin, N., & Kim, K. S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. Electronic Commerce Research and Applications, 9(1), 84-95.

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. Decision Support Systems, 44(2), 544-564.

Kiran, K. V. D., Srivatsava, M. V. R., & Devi, K. G. (2014). Risk management in mobile banking. International Journal of Engineering Research & Technology (IJERT), 3(3), 2278- 0181.

Kousaridas, A., Parissis, G., & Apostolopoulos, T. (2008). An open financial services architecture based on the use of intelligent mobile devices. Electronic Commerce Research and Applications, 7(2), 232-246.

Kulviwat, S., Bruner II, G. C., Kumar, A., Nasco, S. A., & Clark, T. (2007). Toward a unified theory of consumer acceptance technology. Psychology & Marketing, 24(12), 1059-1084.

Lai, P. C. (2017). Security as an extension to TAM model: Consumers' intention to use a single platform E-Payment. Asia-Pacific Journal of Management Research and Innovation, 13(3-4), 110-119.

Li, H., Liu, Y., & Heikkilä, J. (2014). Understanding the factors driving NFC-enabled mobile payment adoption: An empirical investigation. In PACIS (p.231).

Liang, L. J., Choi, H. C., & Joppe, M. (2017). Understanding repurchase intention of Airbnb consumers: Perceived authenticity, electronic word-of-mount, and price sensitivity. Journal of Travel & Tourism Marketing, 35(1), 73-89.

Liébana-Cabanillas, F., Molinillo, S., & Ruiz-Montañez, M. (2019). To use or not to use, that is the question: Analysis of the determining factors for using NFC mobile payment systems in public transportation. Technological Forecasting and Social Change, 139, 266-276.

Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2014). Antecedents of the adoption of the new mobile payment systems: The moderating effect of age. Computers in Human Behavior, 35, 464-478.

Lim, Y. M., Cheng, B. L., Cham, T. H., Ng, C. K. Y., & Tan, J. X. (2019). Gender differences in perceptions and attitudes toward online shopping: A study of Malaysian consumers. Journal of Marketing Advances and Practices, 1(2), 11-24.

Lim, Y. M., Cham, T. H., & Sia, B. C. (2018). Medical tourists' behavioral intention in relation to motivational factors and perceived image of the service providers, International Academic Journal of Organizational Behavior and Human Resource Management, 5(3), 1-16.

Liu, Y., & Li, H. (2011). Exploring the impact of use context on mobile hedonic services adoption: An empirical study on mobile gaming in China. Computers in Human Behavior, 27(2), 890-898.

Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioural intention to use mobile banking. Computers in Human Behavior, 21(6), 873-891.

Manjunath, K. S. K., & Nagabhushanam, M. (2017). Perception and attitudes towards information and communication technology (internet) for purchase decisions among generation cohorts. American Journal of Information Science and Computer Engineering, 3(4), 56-63.

Marafon, D. L., Basso, K., Espartel, L. B., de Barcellos, M. D., & Rech, E. (2018). Perceived risk and intention to use internet banking. International Journal of Bank Marketing, 8(23), 576-799.

Milberg, S. J., Smith, H. J., & Burke, S. J. (2000). Information privacy: Corporate management and national regulation. Organization Science, 11(1), 35-57.

Ministry of Finance Malaysia. (2019). https://www.mof.gov.my. Accessed 10th January 2021.

Morosan, C., & DeFranco, A. (2016). It's about time: Revisiting UTAUT2 to examine consumers' intentions to use NFC mobile payments in hotels. International Journal of Hospitality Management, 53, 17-29.

Mun, Y. Y., & Hwang, Y. (2003). Predicting the use of web-based information systems: Self-efficacy, enjoyment, learning goal orientation, and the technology acceptance model. International Journal of Human-Computer Studies, 59(4), 431-449.

Murthy, S. R, & Mani, M. (2013). Discerning rejection of technology. SAGE Open, 3(2), 1-10.

Nizam, F., Hwang, H. J., & Valaei, N. (2018, July). Measuring the effectiveness of e-wallet in Malaysia. In 3rd IEEE/ACIS International Conference on Big Data, Cloud Computing, and Data Science Engineering, Springer, Cham, 59-69.

Oliveira, T., Thomas, M., Baptista, G., & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. Computers in Human Behavior, 61, 404-414.

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. Borsa Istanbul Review, 18(4), 329-340.

Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS. Routledge.

Pham, T. T. T., & Ho, J. C. (2015). The effects of product-related, personal-related factors and attractiveness of alternatives on consumer adoption of NFC-based mobile payments. Technology in Society, 43, 159–172.

Priyono, A. (2017). Analisis pengaruh trust dan risk dalam penerimaan teknologi dompet elektronik Go-Pay. Journal Siasat Bisnis, 21(1), 88.

Ramos-de-Luna, I., Montoro-Ríos, F., & Liébana-Cabanillas, F. (2016). Determinants of the intention to use NFC technology as a payment system: An acceptance model approach. Information Systems and e-Business Management, 14(2), 293-314.

Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: An empirical study on Facebook. Management, 27(1), 6-30.

Ray, A. (2017). Electronic payment systems: An empirical investigation of customer and merchant requirements. In Managing Business with Electronic Commerce: Issues and Trends, 151-166.

Redzuan, N. N., Razali, N. A., Muslim, N., & Hanafi, W. W. (2016). Studying perceived usefulness and perceived ease of use of electronic human resource management (e-HRM) with behavior intention. International Journal of Business Management, 1(2), 118-131.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. Handbook of market research, 26(1), 1-40.

Schierz, P. G., Schilke, O., & Wirtz, B. W. (2010). Understanding consumer acceptance of mobile payment service: An empirical analysis. Electronic Commerce Research and Applications, 9(3), 209-216.

Singh, S., & Rana, R. (2017). Study of consumer perception of digital payment mode. Journal of Internet Banking and Commerce, 22(3), 1-14.

Slade, E., Williams, M., Dwivedi, Y., & Piercy, N. (2015). Exploring consumer adoption of proximity mobile payments. Journal of Strategic Marketing, 23(3), 209-223.

Soodan, V., & Rana, A. (2020). Modeling customers' intention to use e-wallet in a developing nation: Extending UTAUT2 with security, privacy, and savings. Journal of Electronic Commerce in Organizations (JECO), 18(1), 89-114.

Tahar, A., Riyadh, H. A., Sofyani, H., & Purnomo, W. E. (2020). Perceived ease of use, perceived usefulness, perceived security, and intention to use e-filing: The role of technology readiness. The Journal of Asian Finance, Economics, and Business, 7(9), 537-547.

Tarhini, A., El-Masri, M., Ali, M., & Serrano, A. (2016). Extending the UTAUT model to understand the customers' acceptance and use of internet banking in Lebanon. Information Technology and People, 29(4), 830-849.

Tsiakis, T., & Sthephanides, G. (2005). The concept of security and trust in electronic payments. Computers & Security, 24(1), 10-15.

Van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: Contributions from technology and trust perspectives. European Journal of Information Systems, 12(1), 41-48.

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. Decision Sciences, 39(2), 273-315.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management Science, 46(2), 186-204.

Wang, Z., & Li, H. (2016). Factors Influencing Usage of Third-Party Mobile Payment Services in China: An Empirical Study. Master's thesis, Uppsala University, Sweden.

Widyanto, H. A., Kusumawardani, K. A., & Yohanes, H. (2021). Safety first: Extending UTAUT to better predict mobile payment adoption by incorporating perceived security, perceived risk, and trust. Journal of Science and Technology Policy Management, Ahead-of-Print.

Wong, W. H., & Mo, W. Y. (2019). A study of consumer intention of mobile payment in Hong Kong, based on perceived risk, perceived trust, perceived security and Technological Acceptance Model. Journal of Advanced Management Science, 7(2), 33-38.

Yang, M., Al Mamun, A., Mohiuddin, M., Che Nawi, N., & Zainol, N. R., (2021). Cashless transactions: A study on intention and adoption of e-wallets. Sustainability, 13(2), 1-18.

Yeow, A., Soh, C., & Hansen, R. (2018). Aligning with a new digital strategy: A dynamic capabilities approach. The Journal of Strategic Information Systems, 27(1), 43-58.

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

Yu, C. S. (2014). Consumer switching behavior from online banking to mobile banking. International Journal of Cyber Society and Education, 7(1), 1-28.

Yuan, S., Liu, Y., Yao, R., & Liu, J. (2016). An investigation of users' continuance intention towards mobile banking in China. Information Development, 32(1), 20-34.

Zhang, J., & Mao, E. (2008). Understanding the acceptance of mobile SMS advertising among young Chinese consumers. Psychology & Marketing, 25(8), 787.