The Determinants of a Mobile Wallet Intention among Employees of a Multinational Bank in Malaysia

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Abstract
With the rapid technological advancement in smartphone devices in recent years, the usage of mobile wallets has spread widely across the world. In Malaysia, however, despite a considerable gain in intention for mobile wallet usage, most people in Malaysia still rely on cash to carry out payments. There could be a good number of reasons as to why people are reluctant to use a mobile wallet, which include perceived ease of use, compatibility, perceived behavioural control, and trust. This research aims to provide information on the determinants of mobile wallet intention among the employees of a multinational bank. The purpose of this research is to determine the level of people' awareness towards mobile wallet intentions and to investigate the relationship between perceived ease of use, compatibility, and trust with behavioural intention to use a mobile wallet. This research utilised questionnaires as the mechanism for collection of data. The data was collected and feasible at 80% out of 80 respondents, from a total population of 100 employees in a multinational bank. All the data collected was then analysed using Statistical Package for Social Science (SPSS) through which numerous tests were converged such as reliability test, normality test, frequency distribution descriptive analysis and multiple regression analysis. The results of this study show that all the variables have a significant value towards behavioural intention to use a mobile wallet, with trust as the most important factor that influences behavioural intention to use a mobile wallet.
Keywords: Mobile Wallets, Intention, Trust, Perceived Ease of Use, Compatibility

Introduction
Due to the current technological advancement in smartphone devices, the usage of mobile wallets has spread widely across the world and has been introduced to many countries, including Malaysia. According to Ramalingam (2012), Malaysian people are moving to the next phase by replacing traditional payments with electronic payments. In particular, Tang & Chu (2019) have stated that the Association of Banks in Malaysia (ABM) is now trying to change people's behaviour to perform electronic payments instead of making manual payments. In addition, by introducing a mobile wallet in Malaysia, it will give new

opportunities for the economy to grow. In Malaysia, some of the most popular mobile wallet applications include Grab Pay, Touch 'n Go E-Wallet, Boost, and FavePay.

Smartphones play an essential role in making it possible for people to purchase items from various merchants using mobile wallet. In order to use the mobile wallet, the user must first install the relevant application, then key-in the payment information in his or her smartphone. The user can then use it to pay for the desired products. The mobile wallet may also perform other purposes at the same time, such as serving as loyalty cards, membership cards, and/or travel cards. According to Caldwell (2012), the mobile wallet is capable of storing user information such as credit card details, PIN codes, online shopping accounts, and other confidential information that are password-protected.

The mobile wallet can also play the key role of enabling the user to receive notifications from the retailers in order to, say, compare prices. Yang et al. (2012) stated that this environment has radically transformed the business landscape of the merchants, which needs to push notifications to the user about the product lists, discounts and coupons, and also the various methods of payment available due to the increase of the smartphones. In Malaysia, for example, many organizations such as Touch 'N Go e-Wallet give rebates to the user who using this application for transferring funds (Tariq, 2019).

However, a good number of people in Malaysia are still reluctant to adopt e-payment as their main payment tool. According to Dzof (2018), almost 80% of the people in Malaysia still rely on cash payments, mainly because they do not trust the mobile wallet. According to Shaw (2014), people are afraid of using the mobile wallet for monetary transactions, believing that their data might be exposed to potentially harmful parties.

In addition, some people do not even have the intention to use mobile wallet, particularly among baby boomers, who insist that they do not have a reason for adopting this technology for their daily life. According to them, cash is still more convenient to use when purchasing a product, as compared toa mobile wallet. According to Madan & Yadav (2016), such reluctance among the older generation may be attributed to a lack of experience in using auto-debit, scanning, and other similar online services. The older generation also feel uncomfortable about using technology, with the fear that this could expose them to potentially harmful parties, as compared to the younger generation, who feel secure enough about using mobile wallet as their primary payment tool.

There could be a good number of reasons for people's aversion towards the use of mobile wallet, among them being perceived ease of use, compatibility, and trust. This research seeks to provide information on the determinants of a mobile wallet among the employees of a multinational bank. The purpose of this research is
- to determine the level of people' awareness towards mobile wallet intentions and
- to investigate the relationship between perceived ease of use, compatibility, and trust with behavioural intention to use a mobile wallet.

Therefore, this paper is intended to fill the gap by focusing on these barriers that could affect the behavioural intention to use a mobile wallet.

Literature Review
The mobile wallet or M-wallet is said to have been first invented in 2011 by Google through a technology called Near Field Communication (NFC) that allowed the user to pay utility bills and collect points, which could then be used to redeem certain products from selected retailers. At that time, however, very few shops accepted mobile wallet payments.

There are numerous definitions of mobile wallet. According to Bosamia & Patel (2019), mobile wallet is a payment application that allows the user to store their card information, as well as cash value inside it. He also said that that mobile wallet is known as a virtual wallet that allowed the user to use it as their transactional tools with other parties. Caldwell (2012) defines the mobile wallet as a smart payment tool that allows the user to use it to perform daily transactions to other parties, both online or offline. Chatterjee & Bolar (2019) stated that mobile wallet can also be defined as a software that is installed in smartphone devices that allows the user to make an online or offline transaction. According to Nair et al. (2016), a mobile wallet is the platform of services that allows the people to make offline or online payments simply by using their smartphones, wherever they may be. Thanks to Near Field Communications (NFC) technology that is built into mobile wallet, devices can easily link with others device at the merchant' place of business that will allow users to make payments.

Intention is often referred to as one of the behaviours that drives people to use something. Chatterjee & Bolar (2019) define intention as behaviour that drives people's desire to adopt the technology or the system based on what they can be offered to them. Due to the evolution of the technology, the people and the retailers should change their way of interacting with their businesses to keep up the momentum for creating value. This is because, nowadays, most people consider their smartphones as a basic necessity in their daily life. Thus, the intention of using a mobile wallet plays an important role in enhancing the economy market (Aydin & Burnaz, 2016). However, people are being influenced by many factors to drive them to adopt mobile wallets as their part of doing transactions, as cited by Reddy et al. (2017).

According to Reddy et al. (2017), back in 2003, there were also similar payments apps like mobile wallet, which were referred to as a digital wallet or e-wallet. E-Wallet is an application that looks exactly like the normal wallet but, as the same suggests, is in digital form, allowing the user to use it when purchasing an item from a merchant. However, due to the evolution of technology, the digital wallet has improved the system and changed the name to the mobile wallet. The mobile wallet can also now store people's credit card information or credit cash inside it, and can be accessed by such means as a password, QR pay, facial Image, and similar.

Numerous researchers pointed out that the adoption of the mobile wallet can make a business more effective and efficient. Therefore, the mobile wallet has become a popular issue in the business world, whether it could be advantageous or disadvantageous to the users and merchants. A study has found that security and privacy have a positive impact on people's intentions to use a mobile wallet. According to Chen & Chang (2013), NFC is being coded inside the mobile wallet, which can prevent negative situations, while, at the same time, also making mobile wallets more efficient and user-friendly.. This is because the NFC technology being invented by RFID technology allows for faster connections between e-

devices and easier to connect in short distances. As stated by Chatterjee & Bolar (2019), they found that the factors that drive people' intentions to use mobile wallets are perceived ease of use, compatibility, and trust.

The definition of perceived ease of use is "the degree to which understanding the user potential towards the primary system to be zero efforts" by Surendran (2012). Dwivedi et al. (2019) have claimed that the perceived ease of use is the measurement of whether the people can easily be adapted to the technology or not. Many researchers such as Aydin & Burnaz (2016) and Teoh et al. (2013) have proven that people are more likely to adopt a system when the system is user-friendly and requires less effort to use.

Alaeddin et al. (2018) stated that the perceived ease of use and perceived usefulness are primary elements of the Technology Acceptance Model (TAM) by Davis (1989) that can affect the people's behaviours to adapt information technology in their daily life. In can be proved by Yadav (2017) that the measurements of perceived ease of use towards the system determine people's decision on whether they want to accept the technology or not.

In Malaysia, the people are using a mobile wallet when the system are easy to handle (Mun et al., 2017). Many countries are already adopting the mobile wallet as part of their primary payments tools in their life because it can save their time. A study that been made by Nizam et al. (2018) stated that a mobile wallet has the ability to reduce the amount of time spent on daily transactions. For example, if the user is to make a payment for public transportation fees, they just need to use their devices to purchase instead of queuing at the counter to purchase it. Due to increasing usage of public transportation in Malaysia nowadays, the people in Malaysia need to start from now, in order to save time with the use of a mobile wallet. Therefore, the perceived ease of use is a factor that affects people from adopting mobile wallet.

H1: There is a relationship between the perceived ease of use and behavioural intention to use a mobile wallet.

Compatibility is defined as a technology that can provide consistent results in terms of values, needs and expectations by the people, as cited by Schierzet al. (2010) and Yang et al. (2012). According to Jun et al. (2018), compatibility is one of the factors that drive people's intention to use the technological systems. Next is, compatibility is referred to as the degree of understanding which is the user can adapt the system with the surroundings. A study that been made by Ozturk et al. (2016) stated that compatibility of the system can drive the people to adopt the system fast if the system matches their current lifestyle or environments.

By increasing the compatibility of mobile wallet towards the environment, it can accelerate the rate of people's adoption of the mobile wallet. Ewe et al. (2015) concluded that, in order to create awareness towards mobile wallets, the system must meet the user's lifestyles and environments, as well. In addition, compatibility is referred to the people intentions towards the technology whether it capable enough to give them benefits or not. A survey made by Oliveira et al. (2016) shows that the people believe that, by performing virtual payments can give them advantages when executing it. For example, if the people feels secure when performing the mobile wallet instead of cash, they would be more willing to adopt the system

fast (Cobanoglu et al., 2015). If the people are reluctant to use a mobile wallet, they will not drive the intention to use it. Therefore, compatibility is one of the important aspects in order to drive people towards mobile wallet especially in Malaysia.

H2: There is a relationship between compatibility and behavioural intention to use a mobile wallet.

Trust is one of the elements that helps people to adopt technology as well as giving an opportunity to help the merchants to retain and gain their customers. Previous research by Liébana-Cabanillas et al. (2018) says that trust can be defined as an ability of the people to trust others, in terms of the level of satisfaction and levels of security that they can provide. It also helps the adoption of technology become easier, with Daştan & Gürler (2016) citing that trust is a key factor that drives people's intentions to use mobile wallets.

According to Ehrenhard et al. (2017), retailers must gain knowledge about the innovations before adopting the technology into their business. As a result by AlQatan et al. (2012) the context of a mobile wallet is very difficult due to the numerous aspects involved. For this reason, trust is the hardest part to drive people intentions towards the mobile wallet.

At the same time, in order to drive people to trust mobile wallets, the application must be easy enough to handle when the user is making a transaction process. According to Liébana-Cabanillas et al. (2018), if the application is easy to handle, the tendency of the people to driving intention to use mobile wallet will be high. At the same time, Shaw (2014) states that a major factor that affects trust towards mobile wallets is people's fears about the level of security level that an application can provide. Hence, in Malaysia, almost half of the population do not trust electronic payments because of a perceived lack of security and being not user-friendly enough, as cited by Dzof (2018). For this reason, the responsible organization must take all necessary action with regards to ensuring security level, as well as communicating this to users, in order to drive people to use a mobile wallet.

H3: There is a relationship between trust and behavioural intention to use a mobile wallet.

Theoretical Framework
In order to continue the research study, the theoretical framework needs to be developed so that it can assist and give better views on the issues of this study. For this reason, the diagram below shows the relationships between the independent variable and the dependent variable. Four independent variables have been identified for this study, namely, Perceived Ease of Use, Compatibility, Perceived Behavioural Control, and Trust.

Based on Figure 1, the framework of intention to use mobile wallet was adapted by Chatterjee & Bolar (2019), which showed the relationship of perceived ease of use, compatibility, and trust.
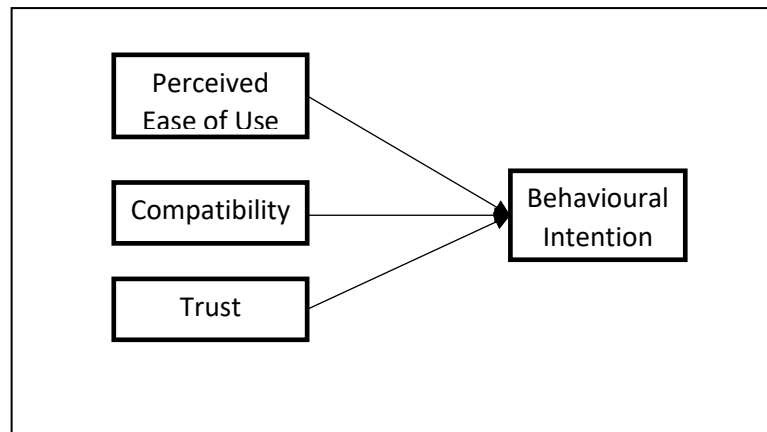
Figure 1: Research Framework

Methodology

In this study, the referred population comprises of a total of 100 employees from a multinational bank in Klang Valley, Malaysia. From the 100 questionnaires distributed to the respondents, 20 questionnaires were not sent back. This study used non-probability sampling in the collection of data from the sample. Based on certain limitations, quota sampling technique was chosen without affecting or interfering much of the accuracy of the results, given that all of the respondents were from the selected population.

This research has chosen to use questionnaire. The variables in the questionnaire are close-ended set of questions and were analysed using statistical and numerical methods. The questionnaire formed was designed in Google Form since most of the employees expressed a preference to answer the questionnaire online. The questionnaire prepared in this research consists of five categories, namely, A, B, C, D, and E and a total of 25 items altogether. Section A consists of the respondent's profile; sections B, C, and D cover the independent variables of Perceived ease of use, Compatibility, and Trust, respectively. Section E comprises of questions regarding the dependent variable of this research, which is behavioral intention to use a mobile wallet. Sections B to E are designed in the form of 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and all items were adapted from Chatterjee & Bolar (2019).

Result and Discussion

Table 1 shows the value of Cronbach's Alpha and proved that all items were realiable to present the particular variable in this research.

Table 1
Realibility Analysis

Variable	Number of items	Cronbach's Alpha	Relationship
Perceived Ease of Use	4	0.804	Good
Compatibility	4	0.875	Good
Trust	5	0.898	Good
Intention to Use a Mobile Wallet	2	0.956	Good

According to the table 2, the highest response rate for gender is female which is 75% while a male is 25%. Thus, a higher number of female respondents contributed to this study. Next, the highest contribution for the age is the 21 – 30 years old range, which is 42.5%, while the lowest percentage for the age is 3.8% which is 51 years old and above. Therefore, Gen Y gave the most contribution to this study. In addition, the highest rate for marital status is single, which contributes 53.8%, while the lowest percentage is 1.3%, labelled as widowed.

For ethnicity, the highest percentage is 53.8% which is Malay, and the lowest percentage in Chinese which is 1.3%. The highest percentage for the job position is Manager which is 30.0 percent and the lowest percentage is 3.8 percent which is Vice President. In terms of length of service, the most percentage comprises those who work less than 5 years, which contributed 36.3%, while the lowest percentage is those who work more than 21 years and above, which is 11.3%.

Furthermore, the highest percentage for a level of education is the employee who holds a Degree certificate, which is 61.3%, and the lowest rate is 3.8%, which is the employee who holds the Master certificates. Moreover, the highest percentage for the monthly income is less than RM 5,000 while the lowest percentage for the monthly income is more than RM15, 001.

Table 2
Respondent Profile

Items		Frequency	Percentage
Gender	Male	20	25
	Female	60	75
Age	21 – 30 years old	34	42.5
	31 – 41 years old	30	37.5
	41 – 50 years old	13	16.3
	51 years above	3	3.8
Marital Status	Single	43	53.8
	Widowed	36	45.0
	Married	1	1.3
Ethnicity	Malay	43	53.8
	Indian	31	38.8
	Chinese	6	7.5
Job Position	Clerk	4	5.0
	Officer	19	23.8
	Associates	8	10.0
	Assistant Manager	14	17.5
	Manager	24	30.0
	Assistant Vice President	8	10.0
	Vice President	3	3.8
Length of Service	Less than 5 year	29	36.3
	6 – 10 years	24	30.0
	11 – 20 years	18	22.5

	21 years and above	9	11.3
Level of Education	SPM/ A Level / O Level/ Other	11	13.8
	Certificates	17	21.3
	Diploma	49	61.3
	Degree	3	3.8
	Master	0	0
	PhD	0	0
Monthly Income	Less than RM5,000	41	51.2
	RM5,001- RM15,000	38	47.5
	More than RM15,001	1	1.3

This research used the regression analysis to test the model relationship between independent and dependent variables. R-square value is important to indicate how many percent does the independent variables influence the dependent variable. Apart from that, the F-value is to check whether the overall regression model or framework of the research is fit and significant. Also, the beta coefficient refers to the significance of the relationship between each independent variable towards the dependent variable.

Table 3
Result of Multiple Regression

Dependent Variable: Behavioral Intention to Use a Mobile Wallet		
Independent Variables	Standardised Coefficient (BETA)	Sig.
Perceived Ease of Use	-0.356	.008
Compatibility	0.435	.001
Trust	0.725	.000
F-Value	23.456	.000[b]
R-Square	0.556	

Based on Table 3, it shows that the results show F-value of 23.456 with significant value of 0.000. This means that the model is statistically fit and significant. However, the value of R-square is at 0.556. Therefore, 55.6% is the percentage of how much the independent variables can explain the dependent variable. The balance of 44.4% did not explain the dependent variable, and the researcher believes that it is may be due to variables other than what have been included in this research. As for the significance of each variable towards the dependent variable, it has been analysed that all dependent variables significantly influence behavioural intention to use a mobile wallet, with a significant value of $p<0.01$ with values at 0.08 (Perceived Ease of Use), 0.01 (Compatibility), and 0.00 (Trust).

Table 3 above shows the value of perceived ease of use which is (β=-.356, $p<0.03$), which shows that perceived ease of use is significant. However, it has a negative relationship with the behavioural intention to use a mobile wallet, which may be explained by an article by Nizam et al. (2018), where he stated that Malaysian people do not have enough money to deposit in mobile wallet accounts. This is supported by Swilley (2010), who stated that people often do not have the intention to use mobile wallet despite its ease of use when the mobile

wallet requires people to put as much of their personal information , making it difficult for them to use it.

As for the independent variable's compatibility, as per the results shown in Table 3, i.e. (β=.435, p<0.01), it can be concluded that compatibility has significant and positive relationships towards the behavioural intention to use a mobile wallet. This is congruent with the findings of previous research, such as Jun et al. (2018) who stated that there is a significant and positive relationship of compatibility towards behaviour intention to use a mobile wallet. Moreover, Oliveira et al. (2016) has proven that compatibility has a significant impact on behavioural intention to use a mobile wallet.

According to this study, it appears that Malaysian users are not yet ready enough to use the mobile wallet as their main platform of payments, as can be deduced from the value for the last independent variable, which is a trust (β=.725, p<0.00). These results prove that the relationship between trust and behavioural intention of the mobile wallet has a significant and positive relationship between both variables. Previous research by Duane et al. (2014) states that trust can influence people to use a mobile wallet. According to Daştan & Gürler (2016), trust is the most influential factor that can lead people to use a mobile wallet in their daily transactions.

Conclusion
The research has been conducted based on identifying the independent variable and dependent variable as stated in this study. Based on the results derived by the researcher, the most significant factor that drives people's intention to use a mobile wallet is trust, followed by compatibility, perceived behavioural control, and perceived ease of use.

According to the results, there is a significant and positive relationship between trust and the intention to use a mobile wallet, as posited by Duane et al. (2014), who stated that trust plays an important role in leading people to using a mobile wallet. Many people tend to feel afraid when implementing a new system, such as a mobile wallet. And when it comes to mobile wallet, people are hesitant to use a mobile wallet due to the fear of inadvertently leaking their personal data to harmful parties, in the course of performing a transaction using the mobile wallet. Therefore, if the new system can give them a sense of security while using the mobile wallet, this, in turn, might drive them to trust in using a mobile wallet. As argued by Daştan & Gürler (2016), the more secure a system is perceived to be, the more likely the people will use the mobile wallet as their primary payment tool. According to Shaw (2014), people need to be able to feel that a mobile wallet can be more secure than using real money and can handle daily transactions smoothly, they will be ready to implement it as their main payment tool in their daily transactions.

Based on the regression analysis results made by the researcher, compatibility has a positive impact on behavioural intention to use a mobile wallet. This statement has been supported by previous researcher Jun et al. (2018), who stated that this value must offer some economic value towards the customer such as distributing promotion events or delivering a discount coupon that can attract more people to use a mobile wallet. By delivering a discount coupon or creating a promotion, it can help people financially, particularly those who are in the middle- or lower-income brackets. Previous research made by Oliveira et al. (2016) stated

that most people will only use a mobile wallet if the application is compatible or useful for them, failing which, they will not feel motivated to use it.

According to the results, perceived ease of use has a significant and negative relationship with behavioural intention to use a mobile wallet. A similar finding that been made by Swilley in 2010, who found that the perceived ease of use has a negative impact on the behavioural intention to use a mobile wallet. This is because most people do not like the idea of using the mobile wallet nor do they have any intention to use a mobile wallet. Furthermore, a good number of people think that they could potentially expose themselves to danger if they switch from real money to virtual money inside their smartphones, with the fear that they might lose or misplace their smartphones and all the virtual money inside it.

To conclude, adding and considering more factors may help researchers to gain more accurate data and find out what really gives significant effect to a dependent variable, which in this current research is the behavioural intention to use a mobile wallet. The researcher hopes that the content of this research, be it the limitations, scope or findings, could give better insights to any academicians or researchers pertaining to mobile wallet and any other related fields of interest.

The present study concretes support to existing theories and practical contributions to the society. Although, many studies have been conducted in the realm of mobile wallet usage intentions, the present study is different because it is investigate the relationship between perceived ease of use, compatibility, and trust with behavioural intention to use a mobile wallet among the employees of a multinational bank. This study improves knowledge to the literature that all the variables have a significant value towards behavioural intention to use a mobile wallet, with trust as the most important factor that influences behavioural intention to use a mobile wallet. Thus, the mobile wallet system needs to be strengthened in terms of security and protection in order to increase trust in the use of the mobile wallet.

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