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# Acceptance of WeChat Pay among Consumers in Malaysia

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## Abstract

WeChat, the most popular social media application in China, had recently launched its integrated mobile payment feature, WeChat Pay, in Malaysia. With the advancement of technology, mobile payment potentially become a replacement to cash, cheques, credit cards and debit cards. However, Bank Negara Malaysia reported that, in 2017, the mobile payment transaction value per capita is only RM0.50 which is far lesser than cash transaction at RM2,881.40 per capita. Therefore, this study intends to determine the acceptance of WeChat Pay, and identify the factors influencing the acceptance among consumers in Malaysia. The findings show that, perceived ease of use, perceived usefulness and perceived risk have a significant relationship with the acceptance of WeChat Pay among consumers in Malaysia.

## Keywords

Mobile Payment Acceptance, WeChat Pay, Perceived Ease of Use, Perceived Usefulness, Perceived Risk

## Introduction

Today, mobile phone, particularly smart phone, is no longer only a communication device, but packed with other functions and applications like email, video call, test messaging, social media, navigation and etc. (Patela, Kunchea, Mishraa, Bhaiyata, and Joshib, 2015). Smart phone has evolved to be the most successful multi-functional gadget human cannot live without (Lee, Chang, Lin, and Cheng, 2014).

With the launching of mobile payment services by some of the biggest smart phone manufacturers, namely Apple Pay by Apple, Samsung Pay by Samsung and Android Pay by Google, it raises the consumers' awareness about the option of mobile payment (Kerviler, Demoulin, and Zidda, 2016). In addition, with the advancement of technology, mobile payment potentially become a replacement to cash, cheques, credit cards and debit cards (Patela et al., 2015).

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A decade ago, there was only 9% of cashless transactions done in Malaysia, which make Malaysia to be classified as a cash-based country (Denecker, Sarvady, and Yip, 2009). Later between 2010 – 2015, the growth of cashless transaction in Malaysia had grown only 9%, compared to 12% and 27% in Japan and China respectively, which shown that Malaysia is still rely heavily on cash and other paper-based payment methods (Vinayak, Kamal, and Istace, 2012). However, there is an improvement shown lately in 2017, where financial transactions through the mobile banking had doubled from 55.8 million transactions valued at RM33.2 billion in 2016, to 106.1 million transactions valued at RM48.3 billion (Bank Negara Malaysia, 2018a).

Sidek (2015) suggested that in order for Malaysia to achieve higher competitiveness, Malaysia needs to fully migrate from paper-based payment system to electronic payment system, in line with the strong vision to advance from a developing country to a developed country by 2020. This is supported by Bank Negara Malaysia (2018b), who stated that, if the payment system in Malaysia has fully migrated from paper-based payment system to mobile payment system, Malaysia would achieve higher economic growth and higher competitiveness as mobile payment could enhance the productivity levels and lower the cost of business. This could be achieved by the development of interest and synergy between various stakeholders like banks, mobile payment service providers, credit card companies, telecommunication service providers, government bodies, businesses as well as the users (Sidek, 2015).

Today, mobile payment services in Malaysia are still considered in the embryonic stage and still quite a new technology to the consumers even though mobile technologies have become increasingly adopted in Malaysia (Yeow, Khalid, and Nadarajah, 2017). The awareness of mobile payment among the stakeholders in Malaysia is still low, especially among the consumers, which is shown by the consumers' behaviour who are willing to queue at the cash payment lane of the toll-free collection system instead of using the faster cashless lane (Sidek, 2015).

To date, there is a total of 42 mobile payment service provides in Malaysia that are regulated under Bank Negara Malaysia, including 5 banks and 37 non-bank entities (Bank Negara Malaysia, 2018a). WeChat Pay, the social-network-based mobile payment giant in China (Qu, Rong, Chen, Ouyang, and Xiong, 2017), is among the 42 mobile payment service providers that is recently launched in Malaysia in August 2018. Malaysia had been chosen to be the first expansion of WeChat Pay in Asia outside of China (Finextra Research, 2018) as WeChat, the most popular social media application in China, already has a wide user base of 20 million active users in Malaysia (Green, 2018) which is a favourable growing ground for its integrated payment feature, WeChat Pay.

According to the Basic Payment indicators reported by Bank Negara Malaysia (2018), in 2017, the population of Malaysia is 32.1 million with the total cash in circulation (CIC) at about RM92,347.6 million, but the number of mobile payment transaction is still very low at only RM0.50 transaction per capita as compared to cash transaction at RM2,881.40 transaction per capita, despite the collaborations and efforts done by different entities in Malaysia to promote the transition to electronic payments in addition to the government's leading role in the migration process (Bank Negara Malaysia, 2018a).

Nevertheless, the central bank of Malaysia is still optimistic with the future of mobile payment as the widespread use of mobile phones, especially smart phones, as well as the growing presence of new entrants in the mobile payment industry, could potentially improve and increase the acceptance of mobile payment by both the merchants and the consumers (Bank Negara Malaysia, 2018b).

With the launching of China's most popular social-network-based mobile payment platform, WeChat Pay, in Malaysia (Finextra Research, 2018), it is important to understand the acceptance among the consumers in Malaysia and the factors influencing the acceptance to better improve the mobile payment service platform and to promote the acceptance of mobile payment. WeChat Pay's first partnering bank in Malaysia, Hong Leong Bank, is confident that WeChat Pay would be positively accepted by the consumers, in view of the proven platform and the ready-to-activate existing users of WeChat application in Malaysia (Xinhuanet.com, 2018).

This study focused on the smartphone users in Malaysia regardless of race, gender and age, as all of them are the potential mobile payment users or consumers who are equipped with the basic necessity, where they can simply download the mobile payment application to use it using their smartphones. This study also focused on how perceived ease of use, perceived usefulness and perceived risk could influence the acceptance of mobile payment, particularly, WeChat Pay, among consumers in Malaysia.

## Literature Review

Perceived Ease of Use (PEOU): PEOU is defined by Davis (1989) as the extent to which a person thinks that using a particular system, would be effortless or in other word, it is easier to use as compared to another and is more acceptable by users. In the case of mobile payment, PEOU is the extent to which the users find the mobile payment application is simple and effortless without the need of tedious work to figure out on the usage (Yeow et al., 2017).

Perceived Usefulness (PU): Back in 1989, Davis defined PU as the extent to which a user believes that using a particular system is capable of bringing additional advantage to him/her in relationship with a positive user-performance. In the case of mobile payment today, PU is the extent to which a user believes that using mobile payment could improve his/her daily performance and could help him/her to achieve efficiency and effectiveness in completing payment-related task (Yeow et al., 2017).

Perceived Risk (PR): PR is defined as the extent to which a user believes that he/she may be exposed to certain type of uncertainty as an outcome of a decision (Dowling and Stealin, 1994), in the case of mobile payment today, PR is the extent to which users of mobile payment believe that they are exposed to certain types of risks such as financial risk, social risk, physical risk, privacy risk, psychological risk and time risk when they are using the said service (Zhang, Zhu, and Liu, 2012). PR is associated with the reliability (Yang, Pang, Liu, Yen, and Tarn, 2015) and security (Oliveira, Thomas, Baptista, and Campos, 2016) of the technology.

**Relationship Between PEOU, PU, PR and Acceptance of Mobile Payment**

According to Sidek (2015), PEOU significantly and positively influences the adoption of e-payment technology where people who perceive the mobile payment technology to be easy to use in their day-to-day activities will most likely to use it. This is supported by a study done by Seetharaman, Kumar, Palaniappan, and Weber (2017), where PEOU have a very strong influence over the behavioural intention to use mobile payment in Singapore. Sidek (2015) suggested that, male users regardless of age, education level or usage experience, generally perceived mobile payment services to be easy to use and are the early adopters as they stay positive when encountering new technologies and have high confidence in using new things such as mobile payment. This segment of users believes that new technology is interesting, stimulating and not complex and they just simple start using it irrespective of how complex the new technology may be (Pal, Vanijja, and Papasratorn, 2015). In contrast with the late adopters, no matter how easy the mobile payment services can be, this group of people prefer less changes and they only willing to accept a technology when it is mature enough and is adopted by many.

*H1: There is positive relationship between PEOU and acceptance of WeChat Pay among consumers in Malaysia.*

In a research conducted by Teng, Ling, and Seng (2018) where customer intention to use mobile payment services in Nanjing, China is studied, they suggested that PU has a strong relationship with the acceptance of mobile payment as it brings convenience to the users as compared to traditional payment methods in term of portability since the users do not need to carry along a physical wallet with them while doing their daily payment activities. This is supported by Hayashi and Bradford (2014) that, mobile payment has eliminated the inconvenience of needing to carry a stack of credit cards as mobile payment service enable the users to link their credit cards to the phone. Therefore, mobile payment is perceived to be a useful tool and the PU of mobile payment is significantly influencing the consumers' intention to use mobile payment as it plays a vital role in affecting a person's intention to adopt a new technology (Yeow et al., 2017). Besides that, a study conducted by Sidek (2015) on mobile payment adoption in Malaysia concluded that there is a strong relationship between PU and acceptance of mobile payment among young consumers, regardless of gender, education level or usage experience as they find mobile payment to be a time-saving tool. Mobile payment is able to cut short the payment transaction time about 15 to 30 seconds faster than the conventional action of swiping a card, entering PIN or signing a receipt (Hayashi and Bradford, 2014). Moreover, the ability of multi-tasking on a smart phone has made mobile payment more convenient as compared to conventional cash payment as the user could execute different task or use different services at the same time (Teng et al., 2018).

*H2: There is positive relationship between PU and acceptance of WeChat Pay among consumers in Malaysia.*

PR has a significant influence on the customer acceptance of mobile payment (Qasim, and Abu-Shanab, 2016). This is supported by Seetharaman et al. (2017) that PR has a very strong influencing factors of behavioural intention to use mobile payment in Singapore. This is also supported by the research done by Martins, Oliveira, and Popovic (2014), where the result shown that PR is one of the main determinants of adoption and use of technology. PR will not only

influence the acceptance of mobile payment but also the continuity usage of mobile payment (Slade, Williams, Dwivedi, and Piercy, 2014). Although PR is a factor influencing the acceptance of mobile payment, the degree of influence varies between experienced and inexperienced users (Liébana-Cabanillas, Sánchez-Fernández, and Muñoz-Leiva, 2014).

*H3: There is positive relationship between PR and acceptance of WeChat Pay among consumers in Malaysia.*

## Methodology

This study is a type of correlation design as the purpose of the study is to investigate how PEOU, PU, and PR influence the acceptance of WeChat Pay among consumers in Malaysia. Data were collected using online through Google Forms, which is a survey administration application which enable the users to collect information from respondents via a personalised survey (Google.com, 2019). Additionally, since the target population is more than 100,000; hence, the sample size is 384 as suggested by Krejcie and Morgan (1970). However, more samples are needed to achieve statistical significance considering the response rate and number of usable data; therefore, a total of 500 questionnaires were distributed. Convenience sampling is used as sampling technique in this study because it is the most convenient approach to collect data from the large population that are near and readily available for the purposes of research, regardless of characteristics, until the required sample size has been achieved (Sekaran and Bougie, 2016). The instruments used in this study were adopted from established sources using 5-point Likert scales ranged from 1 to 5 (1 = strongly disagree to 5 = strongly agree). Specifically, there are 4 questions on demographic information, 4 questions each on independent variables (PEOU, PU, and PR) and 4 questions on dependent variable (acceptance of WeChat Pay). Data were analysed using IBM Statistical Package for the Social Sciences Software (SPSS) version 23.0.

## Results and Discussion

Data were collected from 387 respondents for further analysis. Most of the respondents were female (57.4%) and they were in the range of 20 to 29 years old. Most respondents involved in the study were Chinese which made up of 65.6% and most of them were degree graduates (66.9%).

Table 1: Demographic Profile of Respondents

| Demographic Variables | Categories | Frequency | Percentage |
|---|---|---|---|
| **Gender** | Female | 222 | 57.4 |
| | Male | 165 | 42.6 |
| **Age** | < 20 | 16 | 4.1 |
| | 20 – 29 | 170 | 43.9 |
| | 30 – 39 | 143 | 37.0 |
| | 40 – 49 | 24 | 6.2 |
| | > 50 | 34 | 8.8 |
| **Race** | Chinese | 254 | 65.6 |
| | Malay | 101 | 26.1 |
| | Indian | 29 | 7.5 |
| | Others | 3 | 0.8 |
| **Education Level** | Secondary school | 72 | 18.6 |
| | Pre-university | 40 | 10.3 |
| | Degree | 259 | 66.9 |
| | Master | 11 | 2.8 |
| | PhD | 5 | 1.3 |

Based on the reliability test conducted, all adopted measurements were found to be reliable as the Cronbach's alpha values were found more than the 0.7 threshold as well indicating good internal consistency. Hence, the data is deemed reliable.

Table 2: Cronbach's Alpha Reliability Test

| Variables | Cronbach's Alpha | Number of Items |
|---|---|---|
| PEOU | 0.888 | 4 |
| PU | 0.953 | 3 |
| PR | 0.948 | 4 |
| A | 0.950 | 4 |
| Overall | 0.930 | 15 |

Multiple regression test was run to determine the extent of model fit of the study with a focus on the framework (Sekaran and Bougie, 2016). The goodness of fit, $R^2$ shows 51.4%, this means that the variance of the dependent variable could be explained by the 3 independent variables used in this study.

Table 3: Multiple Regression Model Summary

**Model Summary[b]**

| | | | | | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | **R** | **R Square** | **Adjusted R Square** | **Std. Error of the Estimate** | **R Square Change** | **F Change** | **df1** | **Df2** | **Stg. F Change** |
| 1 | 0.717[a] | 0.514 | 0.510 | 0.76909 | 0.514 | 135.165 | 3 | 383 | 0.000 |

a. Predictors: (Constant), MEAN_PR, MEAN_PEOU, MEAN_PU
b. Dependent Variable: MEAN_A

Based on the One-Way Analysis of Variance (ANOVA) conducted, at 95% confidence level, p = 0.000, since the value is less than 0.05, it shows a statistically significant relationship between the independent variables and the dependent variable (Cooper and Schindler, 2014).

Table 4: ANOVA Test

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| **Model** | | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| 1 | Regression | 239.848 | 3 | 79.949 | 135.165 | 0.000[b] |
| | Residual | 226.541 | 383 | 0.591 | | |
| | Total | 466.389 | 386 | | | |

a. Dependent Variable: MEAN_A
b. Predictors: (Constant), MEAN_PR, MEAN_PEOU, MEAN_PU

The finding of this study revealed that PEOU, PU, PR and the acceptance of WeChat Pay among consumers in Malaysia are positive correlated as the p-value is less than 0.05. Hence, the hypotheses proposed for this study are accepted.

This result is aligned with the previous study done by Seetharaman et al. (2017); Sidek (2015); and Teng et al. (2018) where PEOU significantly and positively influences the adoption of e-payment technology where people who perceive the mobile payment technology to be easy to use in their day-to-day activities will most likely to use it. Therefore, it is suggested that mobile payment application like WeChat Pay should focus on the development and improvement of their mobile application software so that the application is embedded with user-friendly designs and interfaces that would assist users to operate it effortlessly to match with the high users' expectation (Sidek, 2015).

This study is supported by Hayashi and Bradf (2014) that mobile payment has eliminated the inconvenience of needing to carry along a physical wallet or a stack of credit cards as mobile payment service enable the users to link their credit cards or bank account to the phone. Since PU is the dominant factor which influence the acceptance of WeChat Pay among consumers in Malaysia, mobile payment service providers like WeChat Pay should really focus on widening their scope of service to different industries so that user will believe that using that particular mobile payment application is useful as it improves his/her daily performance and could help him/her to achieve efficiency and effectiveness in completing payment-related task (Yeow et al., 2017). Therefore, mobile payment service providers should engage more partnering merchants to increase their visibility at places of interest, at the same time ensuring sufficient mobile payment terminals are installed in the merchants' establishment.

The result is also aligned with the previous study done by Martins et al. (2014); Seetharaman et al. (2017) which stated that PR is one of the main determinants of adoption and use of technology. Since Malaysia is still at its infant stage of mobile payment adoption, the awareness of the safety feature of WeChat Pay using QR-based transaction should be instilled in the consumers in Malaysia as QR-based transaction is actually a much safer option than

conventional payment method as it is embedded with features of strong security, confidentiality and reliability (Liébana-Cabanillas et al., 2015).

In conclusion, PEOU, PU and PR could influence the acceptance of WeChat Pay among consumers in Malaysia. Therefore, WeChat Pay should focus on improving their services by focusing on the factors discussed in this study and the service provider should not only stop in increasing the acceptance but also to promote the continuous usage of WeChat Pay so that they could expand their market share in this industry.

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