

The Adoption of the Grab Pay Mobile Payment System by Foreign Students in Kuala Lumpur, Malaysia: Application of UTAUT Model

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Abstract

The purpose of this study was to empirically analyse the determinants of international students' intention to use the Grab Pay mobile payment system in Kuala Lumpur. It examined the influence of performance expectancy, effort expectancy, social influence, and facilitating conditions on the intention to use the Grab Pay mobile payment system. The target population was randomly selected from male and female international students in Kuala Lumpur. The study was a quantitative study assessing the intention to use the Grab Pay mobile payment system among international students in Kuala Lumpur. A self-administered survey questionnaire was used to collect primary data from 180 respondents. The data gathered was analysed using SPSS, and findings discovered that the proposed model explained 61% of the variance in the dependent variable. The results showed that three independent factors, namely effort expectancy, social influence, and facilitating conditions, are the strong predictors of behavioural intention. However, effort expectancy has no significant influence on the intention to use the Grab Pay mobile payment system among international students in Kuala Lumpur, Malaysia. Findings from the study can benefit other academics with a better understanding of the adoption of Grab Pay in Kuala Lumpur. It can also help other institutions in the technology (Grab Holdings Inc., etc.) and financial sectors to better function based on the driving elements towards influencing behavioural intentions on the Grab Pay mobile payment system.

Keywords: *Mobile Wallet, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Intention to Adopt, Grab Pay, Mobile Payment.*

1.0 Introduction

Mobile payments are a potential fast-growing industry. Mobile phones are changing business practices and offering various opportunities in the digital business world. Mobile payments allow users to conduct transactions through smartphones and tablets, which enabled mobile payments. Example of these platforms is PayPal and Venmo, which allows money transfer. Mobile payments complement electronic payments with the usage of E-business transactions on multi-user workstations that provides anonymity but complicate identification, security and trust services for electronic payments. Mobile payment service replaces cash, cheques and credit cards. The use of mobile payments has driven a 16.5% growth in cashless transactions in developing countries (Latin America, CEMEA, Emerging Asia and Mature Asia-Pacific) since 2015-2016. (Bose & Mellodo, 2018). Mobile payment technology is expected to grow at 16.3% annually. The market is expected to grow by 30.3% to \$174.29 billion by 2025. (Research and Markets, 2021). China is a leader in mobile payments with digital information and the digital economy has revolutionised Chinese consumers' transactions.

The mobile payment technology is expected to grow by 16.3% annually and its market is expected to grow by 30.3% to \$174.29 billion by 2025. (Research & Markets, 2021). China is a leader in mobile payments at the moment with its digital information and the digital economy has revolutionised Chinese consumers' transactions. Alipay and WeChat Pay dominate China's fast-growing payment app industry. In a country where many small businesses serve customers, credit cards have never been widely accepted, forcing businesses to switch from cash to mobile payment apps. In India and Vietnam, payment app acceptance is generally higher than the global average, but the average amount spent per user is still modest, suggesting that most consumers use payment apps only occasionally. In Nigeria, mobile payments without smartphones are famous, but digital wallets are not. The US, UK, Portugal and Scandinavia have higher annual transaction values per customer. In 2022, the average Chinese consumer will spend \$4,000 on payment apps, compared to \$14,000 in the UK and \$13,000 in the US. Portugal has fewer users than the UK. India and Vietnam have high payment app penetration but low user spending, suggesting informal use. Nigeria allows mobile payments without a smartphone, but no digital wallets (Buchholz, 2022).

2.0 Literature Review

Previous studies have examined these parameters for mobile wallets and showed that the technology acceptance paradigm has shown that utility and ease of use positively influence consumers' views (Shin, 2020). Studies conducted using the UTAUT model have found a positive relationship between antecedents such as effort expectancy and performance expectancy and willingness to use mobile wallets (Alkhunaizan & Love, 2012). Latha and Vatchala (2019) found that performance expectancy was a significant predictor of willingness to use mobile payments. According to Voronenko (2018), effort expectancy was a significant predictor of willingness to use a mobile wallet. Using the external components of the UTAUT model, Al-Saedi et al. (2020) found that performance expectancy was the most significant predictor of willingness to use mobile payment services. However, several studies have found results that contradict with UTAUT theory. According to a study by Slade et al. (2015), performance expectancy, social influence, degree of innovation and perceived risk had a significant influence on the intention to use mobile payment services. However, the influence of effort expectancy on mobile payments was minimal. Similarly, Patel (2016) showed that effort expectancy did not influence the likelihood of using mobile wallet services. Al-Saedi et

al. (2020) found that threat perception had no influence on willingness to use m-payment systems. This suggests that previous research has provided contradictory results.

Conclusively, there is empirical research that has identified digital mobile payment systems, as well as studies that have investigated and analysed the characteristics influencing mobile payment adoption, including Grab. However, previous research has shown that albeit international students hold a variety of opinions, the adoption of mobile payment systems varies widely. Therefore, it is very important to conduct a study pertaining to the determinants of the intention to use the Grab Pay mobile payment system among international students in Kuala Lumpur, Malaysia. Specifically, to gain a better understanding of how overseas students use the Grab Pay mobile payment system, the study will focus on four main elements of the UTAUT model: Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions.

3.0 Methodology

The study employs a quantitative-based research design. A self-administered survey questionnaire was used in the data collection process. The study was a cross-sectional study with an individual as the unit of analysis. The target respondents for the study are international students in Malaysia, aged between 20 to 36 years old and use Grab Pay mobile. Non-probability sampling was used, as it allows respondents to voluntarily agreed to participate (Saunders et al., 2016). Tabachnick and Fidell's (2007) method served as the basis for estimating the sample size. the formula is " $50 + 8m$ ", where m is the number of variables. Consequently, 82 respondents formed the minimum sample size. To obtain better results, a sample size of 180 respondents was collected.

A self-administered questionnaire, distributed online, was used in this study because it is more convenient and offers greater anonymity. The inclusion criteria were set and the questionnaires were completed by the respondents who were international students in Malaysia. There were 2 sections in the survey questionnaire, i.e., the demographic section and another to collect responses pertaining to independent and dependent variables used in this study. All questions were measured using a five-point Likert scale, starting with fully agreed until fully disagree. The study managed to obtain 200 responses and upon filtering only 180 respondents were usable. Upon completion of the data collection, the data was coded and processed as there was no missing data. SPSS was used to examine the frequency, central tendency and dispersion of the data, as well as conduct the descriptive analysis (Sekaran and Bougie, 2010). Based on checking for outliers, none of the items needs to be excluded. Reliability tests were performed to examine the consistency of the data, while the reliability of the data distribution was tested using the value of Cronbach's alpha. Multiple regression analyses were conducted to determine the model fitness of this study.

4.0 Results and Discussion

The majority of the respondents in this study were male (51.7%) and only (48.3%) were female. Most of the respondents' age were between 21-25 years old (43.9%), with 27.2.% of them between 26-30 years. Below 20 years old were 20.6%, 31-15 years old were (6.1%) and the rest were above 36 years, comprised of 2.2%. On the education level, most of the students were Post Graduate students (63.3%) and only 36.7% were from the undergraduate level. In terms of the hours spent on mobile devices each day, most of them (43.9%) spend up to 2-5 hours per day with only 26.7% spending more than 5 hours in a day. Only 22.2% spent 1-2 hours in a day and the rest spent less than 1 hour a day.

Reliability testing was used to assess the degree of consistency of a particular measurement. According to Moser and Kalton (2017), there is a relationship between repeatability and reliability. If a measurement can be repeated using the same scale and produce the same result, this is the evidence of reliability through Cronbach's alpha value, which must be between 0 and 1. A test is considered highly reliable if the alpha value of a variable exceeds 0.60. (Zikmund, 2013). In this study, the reliability testing result is indicated in Table 1.0 below:

Table 1: Reliability Testing

Variables of The Study	Cronbach's Alpha (r)	N of Items
Performance Expectancy	0.773	4
Effort Expectancy	0.617	4
Social Influence	0.762	5
Facilitating conditions	0.701	6
Intention to Adopt Grab Pay	0.834	6

A normality test was conducted to assess the skewness and kurtosis of variables. According to Muzaffar (2016), Hair et al. (2010) and Byrne (2010), data are considered normal if skewness and kurtosis are between -2 and +2 and -7 and 7 respectively. The variables in the study are evenly distributed with skewness values ranging from (-0.814) to (-1.408), which shows a normal distribution and is considered acceptable. The distribution is acceptable and normal when the value of kurtosis is between 0.258 and 2.256. Table 2.0 depicted the results of the normality test.

Table 2: Normality Test

Variables	Skewness	Kurtosis
Performance Expectancy	-1.205	1.605
Effort Expectancy	-.814	.258
Social Influence	-1.382	2.190
Facilitating Conditions	-.959	.653
Behavioral Intention	-1.408	2.256

Pearson correlations was performed in the study to determine the degree and direct condition of the relationship between two interval-scaled variables. It was found that all the independent variables have a positive and statistically significant correlation as shown in the results. However, the strongest correlation was found between condition and intention to adopt Grab Pay. Details are depicted in Table 3.0 below:

Table 3: Pearson Correlation Analysis

No	Variables	1	2	3	4	5
1	Performance Expectancy	1				
2	Effort Expectancy	0.677	1			
3	Social Influence	0.522	0.572	1		
4	Facilitating Conditions	0.565	0.571	0.587	1	
5	Behavioural Intention	0.660	0.598	0.611	0.679	1

Multiple regression analysis was also performed in the study. The adjusted R-squared indicates a value of 0.607, which explained that the independent variables have a moderate influence on the dependent variable. All four independent variables, namely performance expectancy, effort expectancy, social influence (SI), and enabling conditions (FC) are responsible for 60.7% of grab pay acceptance intention. Details are available in Table 4.0 below:

Table 4: Model Fit Summary

Multiple R	.779
Coefficient of Determination (R Square)	.607
Adjusted R square	.598
F Value	67.507
Sig	<.001

The first objective was to investigate the significant relationship between performance expectancy and intention to adopt the Grab Pay mobile payment. The result showed that performance expectancy had a positive and significant impact and the intention to adopt the Grab Pay mobile payment. Previous studies have shown a significant relationship between performance expectation and intention to adopt a mobile wallet, including the research conducted by Yeh and Tseng (2017), Venkatesh et al. (2003), Slade et al. (2015), and Madan and Yadav (2016), which supported that Performance Expectancy and intention to adopt the Grab Pay mobile payment system based on the survey results. This outcome is consistent with these researchers' past findings. According to previous research, performance expectations have a positive and statistically significant relationship with the adoption of mobile wallets or mobile commerce. Therefore, it is essential to offer the Grab Pay mobile service in a high-performance, efficient, and effective environment. Since most customers expect a high level of service, the service must be of a very high standard. Therefore, from the findings of this study, it can be said that the performance expectancy variable has a big effect on the usage of the Grab Pay mobile payment system among international students in Kuala Lumpur.

The second objective was to investigate the relationship between effort expectancy and intention to use Grab Pay mobile payment system. Findings from the study showed that there is a positive and significant relationship between the two variables. The result from the study was in tandem with findings from previous research by Yadav and Madan (2016), Chaouali et

al. (2015) and Slade et al. (2015), that showed effort expectancy has an insignificant effect on the intention to use mobile technologies. According to Tossy (2014), respondents may already have the necessary expertise and knowledge to use digital payments. Therefore, there is no significant relationship between effort expectation and behavioural intention. Consequently, it is very easy for this group of respondents to acquire new skills and adapt to new technologies, resulting in no significant relationship between the two factors (Jambulingam, 2013). From this study, we found that there is no relationship between effort expectancy and the intention to adopt the Grab Pay mobile payment system among foreign students in Kuala Lumpur, Malaysia.

The third objective was to investigate how social influence predicted the intention to implement Grab Pay. Findings from the study discovered that there was a positive and significant influence on the intention to use Grab Pay. The findings were consistent with the UTAUT model by Venkatesh et al. (2003), which indicated a significant relationship between social influence and intention to use Grab Pay. This is in tandem with Alraja (2016) who stated that peers and friends are likely to influence the adoption of new technology. Lwoga & Lwoga (2017) also found that social pressure tends to increase the rate of users adopting the technology, and this is confirmed by Slade et al. (2015) and Yang et al. (2012) who discovered that social influence is the greatest predictor of behavioural intention in relation to technology adoption.

Therefore, based on the findings and also previous studies, we can confirm that there is a strong relationship between social influence and intention to use Grab Pay mobile payment system for international students in Kuala Lumpur, Malaysia.

The fourth objective of the study is to investigate the relationship between facilitating conditions and the intention to adopt the Grab Pay mobile payment system among international students in Kuala Lumpur, Malaysia. Findings of this study found there is a significant and positive relationship between facilitating conditions and intention to use Grab Pay mobile payment system among international students in Kuala Lumpur, Malaysia. The results of these studies confirm the concept and are consistent with Venkatesh et al. (2003) and the study by Abidin et al. (2017) also confirmed that there is a positive relationship between facilitating conditions and the intention to adopt new technologies. Previous studies found that user adoption increases when more resources are available, supported by Thakur and Srivastava (2013) and Aggelidis and Chatzoglou (2009). Further, the study by Mugambe (2017) found that facilitating conditions have a significant impact on behavioural intention, which is influenced by other moderators such as age, gender and experience. Therefore, we can conclude from this study that there is a significant relationship between facilitating conditions and intention to use the Grab Pay mobile payment system among international students in Kuala Lumpur, Malaysia.

5.0 Conclusion

The objective of this study is to investigate the relationships between performance expectancy, effort expectancy, social influence and facilitating conditions related to the intention to use the Grab Pay mobile payment system and ultimately influenced international students to use the Grab Pay mobile payment system. Findings obtained from this study unearth that effort expectancy, social influence and facilitating conditions are positively and significantly related to behavioural intention. However, effort expectancy showed the opposite whereby there is no relationship with the intention to use Grab Pay mobile.

6.0 References

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