

Factors Influencing Behavioural Intention for Mobile Banking Adoption Among Students of Universiti Putra Malaysia

Syuhaily Osman¹, Tan Pik Leng¹

¹*Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia*

Abstract

Along with the increasing sophistication of the banking industry and the era of smartphones and tablets, banking services and technology are showing tremendous growth. However, the numerous benefits brought by the use of mobile banking do not indicate that the consumers will be eager to adopt the new mobile banking services offered in Malaysia. Therefore, the main purpose of this study was to determine the factors influencing the behavioural intention to adopt mobile banking among Universiti Putra Malaysia students. The data were collected from 200 respondents through a set of self-administered questionnaires, where descriptive analysis, Pearson's correlation analysis, and multiple regression analysis were employed to analyse them. The findings then showed that performance expectancy, habit, and perceived credibility were significant predictors for behavioural intention among students, whereby performance expectancy was underlined as the most significant predictor. The findings of the study have thus offered several implications that would be beneficial to service developers, banks, and future researchers alike.

Keywords: Behavioural intention; Effort expectancy, Habit, Hedonic motivation, Mobile banking; Perceived credibility, Performance expectancy; Social influence

1.0 Introduction

In today's world and age of information proliferation, mobile technology is growing at a rapid pace over the years (Mahad, Mohtar, Yusoff, & Othman, 2015), whereby this will allow people to use a quicker and smarter service in order to make life easier and better. Most of the people have their own smartphones (Stieglitz & Brockmann, 2013), wherein mobile phone or smartphone has become a very common and almost inevitable device. This is attributable to its usability that is incorporated into daily human

activities, ranging from personal daily routine and entertainment to financial transactions. Besides, the use of mobile devices usage has now become more important in the daily life of most people as it helps them to keep in contact and communicate with the rest of the world (Yu, 2009).

Previously, people have engaged with the use of internet banking but the trends are recently moving towards mobile banking (Bhatt, 2016). Since the introduction of mobile banking, it has allowed consumers many kinds of benefits as a variety of banking activities can be performed by using mobile devices or smartphones with internet support from anywhere. These activities include fund transfers, account balance checking, bill payment, transaction and statement viewing, trading, account alert setup, and many more. Consumers can assess mobile banking across 24 hours in a day without travelling to physical bank branches for personal transactions (Yu, 2009).

Despite the numerous benefits brought by the use of mobile banking, it does not mean that the consumers will be eager to adopt the new mobile banking services. In Malaysia, it remains under-utilised (Mahad, Mohtar, & Othman, 2016). The Internet penetration rate of 80.6%, for example, is far higher than the mobile banking penetration rate of only 36.3%. Therefore, mobile banking is still in its early stages and the possibility of it not known by the people of Malaysia is present (Mahad et al., 2016). Besides, a report from the Malaysian Communications and Multimedia Commission (MCMC) revealed that the mobile phone penetration rate is 131.8% per 100 inhabitants in the year of 2017 (MCMC, 2017). In contrast, the mobile banking penetration rate is four times lower. Even though mobile is relatively new in Malaysia in the context of electronic banking, it is considerably important for bank service providers to investigate the factors affecting the intention to adopt vital measures. This is necessary to highlight the issue and attract more users in using this new system (Mahad et al., 2015). Furthermore, this issue may be related to the system being still at the early stages and is quite new to the people. Therefore, the need to observe the consumer acceptance of mobile banking and study the factors affecting their intention to apply the system is obvious (Baba & Muhammad, 2012). In the current study, the factors implemented include performance expectancy (Jeong & Yoon, 2013), effort expectancy (Venkatesh, Morris, Davis, & Davis, 2003), social influence (Venkatesh et al., 2003), hedonic motivation

(Venkatesh, Thong, & Xu, 2012), habit (Venkatesh et al., 2012), and perceived credibility (Mian & Rizwan, 2013).

Previously, a large amount of studies has been conducted on mobile banking adoption by using different theories, primarily using the technology acceptance model (TAM) and its extension (Alalwan, Dwivedi, Rana, & Williams, 2016; Govender & Sihlali, 2014; Koenig-Lewis et al., 2010; Gu, Lee, & Suh, 2009). In contrast, research of mobile application adoption employing the Unified Theory of Acceptance and Use of Technology (UTAUT) or its extension (UTAUT2) is still very scarce (Vinnik & Management, 2017). Regardless, the UTAUT2 model has shown substantial improvements in the variance explaining behavioural intention and technology use (Venkatesh, Thong, & Xu, 2012). Therefore, it is employed in this study as the foundation to investigate the factors influencing the intention for mobile banking adoption. Besides, the current batch of university students mostly belonging to generation Y is the ideal population for studying the mobile banking adoption as they are born into the time of technology and surrounded by electronic gadgets (Iqbal & Bhatti, 2015). Hence, this research adopts the UTAUT2 model to study the factors influencing the intention for mobile banking adoption among UPM students.

2.0 Literature Review

2.1 Mobile banking

Initially, mobile banking services had started in the form of short message service called SMS banking (Chandran, 2014), whereby the first application was based in Finland (Barnes & Corbitt, 2003). Mobile banking is known as a subset of “mobile commerce”; it is defined as a platform in which the customer communicates with a bank via a mobile device, such as a smartphone or personal digital assistant (Koksal, 2016). It has thus become a wireless communication technology used for an added value for banking activities specifically (Rahmani, Tahvildari, Honarmand, Yousefi, & Daghighi, 2012).

To date, numerous studies have been conducted with a focus on mobile banking by applying different frameworks and settings. In the context of Saudi Arabia, Sohail and Al-Jabri (2014) have determined the attitude of mobile banking users and non-users based on these innovation attributes. Here, perceived risk, compatibility, and trialability are found to be the most significant factors affecting Saudi consumers’

decision to adopt mobile banking. Meanwhile, Germany-based study by Rilling (2015) has investigated the critical factors of mobile banking acceptance for young consumers, which discovers that perceived compatibility has the most substantial impact on behavioural intention. Meanwhile, perceived credibility, performance expectancy, effort expectancy, and social influence are found to significantly influence the attitude towards mobile banking, which in turn affects behavioural intention.

In the Malaysian context, Daud et al. (2011) have investigated the critical success factors of mobile banking adoption. Data were collected from 300 banking users, whereby the findings stated that perceived usefulness, perceived credibility, and awareness positively influenced the intention to adopt mobile banking. Besides, Baba and Muhammad (2012) have examined mobile banking acceptance among bank customers in Labuan and Kota Kinabalu. Here, it is suggested that perceived usefulness, perceived ease of use, perceived credibility, and perceived self-efficacy are essential determinants, whereas normative pressure is a weak determinant for the intention towards mobile banking adoption.

However, the above literature review shows that a majority of the studies that have examined the intention to use mobile banking is geared for banking consumers, while less are for students. This may be due to the general perception that students are less likely to be involved in banking activities. Thus, this research focuses on the factors influencing the behavioural intention for mobile banking adoption among students in UPM.

2.2 Factors affecting the behavioural intention to adopt mobile banking

2.2.1 Performance expectancy

Performance expectancy refers to the degree to which that the user perception of mobile banking helps to attain gain and perform well in banking tasks (Venkatesh et al., 2003). Past studies have revealed that it has a positive impact on the behavioural intention to adopt electronic banking services (Albugami & Bellaaj, 2014; Tarhini, El-Masri, Ali, & Serrano, 2016; Zhou, Lu, & Wang, 2010) in the context of consumers in Iran (Ghalandari, 2012), Jordan (Alalwan, Dwivedi, & Rana, 2017), and among students in Malaysia (Zendehdel & Paim, 2015).

Moreover, in the Malaysian context, Tan and Leby Lau (2016) have demonstrated that the strongest predictor of behavioural intention is performance expectancy. They further mentioned that the generation Y consisting of college and university students were more aware of the mobile banking performance and the related benefits. Therefore, previous findings suggest that performance expectancy is conclusively playing a significant role in the behavioural intention of an individual to adopt mobile banking services. In this study, it is expected that people would prefer to use and adopt the system more if they find the services useful. Thus, it is proposed that:

H₁: Performance expectancy has a significant and positive influence on the behavioural intention in adopting mobile banking among the students of UPM.

2.2.2 Effort expectancy

Effort expectancy is the degree of ease that an individual associates with the use of a system (Venkatesh et al., 2003). Accordingly, Tan and Leby Lau (2016) have found that the generation Y population consisting of college and university students in Kuala Lumpur prefer the mobile banking system, which is easy to be learned and used. This is attributable to the tendency for someone who feels that mobile internet is easier to operate and need less effort to feel more confident and pleased to reach the desired performance (Zhou et al., 2010). Meanwhile, Ghalandari (2012) has suggested that effort expectancy has a positive relationship in influencing user behavioural intention for the acceptance of electronic banking services. The users are willing to adopt these services when they feel comfortable in using them accordingly. A study by Krishna Kishore and Sequeira (2016) has also discovered that behavioural intention in mobile banking is related to the effort expectancy, specifically among Indians who stay in rural areas.

In this new era of electronic life, the people have more knowledge and experience in using technology products or services than in the past years. However, Manaf Mcom and Ariyanti (2016) have stated that effort expectancy has a positive relationship but it is not less significant for the intention of mobile payment users. Besides, some findings have shown that even though advanced technology in smartphones has contributed to the fast growth of mobile banking (Lee, Kim, & Noh, 2017), some drawbacks come along with it. Certain

limitations in the device can influence the perceived ease of use or effort expectancy due to its features, such as bigger data storage, longer battery life, and screen size (Jeong & Yoon, 2013). Consumers always look for the easier and quicker process and environment for banking activities (Jeong & Yoon, 2013). Thus, the factors affecting one's intention to use mobile banking are based on their performance and effort expectancy. Based on the previous findings discussed above, this study proposes that:

H₂: Effort expectancy has a significant and positive influence on the behavioural intention in adopting mobile banking among the students of UPM.

2.2.3 Social influence

Social influence describes an individual's perception of the importance of others believing that they should use a technology (Venkatesh et al., 2003). Zendehdel and Paim (2015) have thus concluded that it is an essential predictor in affecting intention in the Malaysian context. They further stated that social factors such as family, friends, and colleagues could easily influence the consumers, while mass media had a vital role in affecting them to use mobile internet services as well.

However, Arenas-Gaitán, Peral-Peral, and Ramón-Jerónimo (2015) have indicated that social influence is not a significant factor to influence behavioural intention in internet banking. In contrast, it is only substantial when the opinion of the person is relatively imprecise, especially first-time experiences. According to Alqeisi (2009), online users rely more on their own beliefs and value rather than asking the opinions of others. They may hence formulate their perceptions and intentions based on their direct experience.

In short, based on the findings of social influence factor above, some of the researchers have found that it is a positive factor (e.g. Shankar, 2016; Yu, 2012; Zendehdel & Paim, 2015). However, others have argued that it does not play a significant role (e.g. Arenas-Gaitán et al., 2015; Escobar-Rodríguez & Carvajal-Trujillo, 2013) towards behavioural intention. Regardless, one cannot deny that social influence may be another issue in the adoption of mobile banking, whereby this study considers it as one of the critical factors that will influence the behavioural intention to adopt mobile banking. This is attributable to an individual potentially being aware that it is useful only

when they observe their peers and family using it and receive good recommendations from them (Perdigoto & Picoto, 2014). Thus, it is proposed that:

H₃: Social influence has a significant and positive influence on the behavioural intention in adopting mobile banking among the students of UPM.

2.2.4 Hedonic motivation

Hedonic motivation is the feeling of pleasure and enjoyment that a person obtains from using new technology (Venkatesh, Thong, & Xu, 2012). Here, findings of previous studies have also shown mixed results concerning its influence on behavioural intention. For example, Arenas-Gaitán et al. (2015) have demonstrated that hedonic motivation does not play a role in affecting the behavioural intention in internet banking, whereas Alalwan and Williams (2014) have collected the data from Jordanian banking customers to find that it is recognised as a predictor to consumer intention. Meanwhile, Brown and Venkatesh (2005) have also argued that hedonic motivation is the enjoyment or pleasure resulting from the use of new technology and found that it can play an important role in determining their adoption. Here, the new technology that users feel happy to use will be more appealing to them.

Since the use of mobile banking can trigger the feelings of pleasure and enjoyment due to its novelty (Alalwan, Dwivedi, & Williams, 2013), the current study proposes that the factor of hedonic motivation will affect the intention for the adoption of mobile banking as well.

H₄: Hedonic motivation has a significant and positive influence on the behavioural intention in adopting mobile banking among the students of UPM.

2.2.5 Habit

Habit is known as the extent to which an individual tends to operate their behaviours automatically because of prior learning (Venkatesh et al., 2012). This is a strong predictor of future technology use and shaped by experiences, knowledge, and skills learned over time (Limayem, Hirt & Cheung, 2007). A study done by Liao Chechen (2006) among the university students in Taiwan has revealed the

influence of habit on the intention to use e-commerce. Meanwhile, Baptista and Oliveira (2015); Masa'deh, Tarhini, Bany Mohammed, and Maqableh (2016); and Morosan and DeFranco (2016) have also found that it is one of the factors influencing behavioural intention in mobile banking, e-learning system, and mobile payment behaviours in hotel booking. These studies have been done in the context of Africa, Lebanon, and the United States, respectively.

Based on the afore mentioned previous studies, it can be concluded that most have found habit to yield a positive relationship with the behavioural intention across different settings. Therefore, the need to examine this construct in terms of the behavioural intention for mobile banking adoption among university students can be perceived. Along this vein, the following hypothesis is constructed:

H₅: Habit has a significant and positive influence on behavioural intention in adopting mobile banking among the students of UPM.

2.2.6 Perceived credibility

According to Jeong and Yoon (2013), perceived credibility is defined as the extent to which an individual perceives that mobile banking usage will be free from security and privacy concerns. Here, Wang, Wang, Lin and Tang (2003) have claimed that the two critical dimensions in this construct are security and privacy, following which perceived credibility is indicated with a significant and positive impact on behavioural intention for Internet banking. Consequently, it has been utilised as a new item to reveal security and privacy concerns in the usage intention of e-banking (Ba & Pavlou, 2002).

Furthermore, Jeong and Yoon (2013) have examined factors influencing the adoption of mobile banking in Singapore, whereby their results show that perceived credibility has a positive influence on the consumer behavioural intention to adopt the system. Similarly, Talukder, Quazi, and Sathye (2014) have also established that it has a significant impact on the behavioural intention and usage of mobile phones in Australia. Meanwhile, studies in Malaysia such as Daud et al. (2011) and Mian and Rizwan (2013) have examined the critical success factors affecting the adoption of mobile banking. Their findings reveal that perceived credibility has a positive effect on user attitude, thus influencing the intention towards mobile banking. If the customers perceive that the mobile banking system is credible/capable of

performing their financial transactions without any error, their perception of privacy and safety risk will decrease and these individuals will easily opt for this new system of banking (Mian & Rizwan, 2013).

From the above literature review, it is clear that perceived credibility is significantly influenced by the behavioural intention for mobile banking adoption as the people perceive security and privacy as essential dimensions before adopting the new system. Thus, it is proposed that:

H₆: Perceived credibility has a significant and positive influence on behavioural intention in adopting mobile banking among the students of UPM.

3.0 Methodology

This study aimed to determine the factors influencing the behavioural intention for mobile banking adoption among students by employing a quantitative research method, particularly by using the survey method. The location chosen in this study was Universiti Putra Malaysia (UPM), Serdang, Selangor Darul Ehsan. First, the state of Selangor was chosen due to it recording the second-highest mobile penetration of 164.7% (Hand Phone Users Survey, 2017). Besides, UPM supplied the student population with the intention to adopt mobile banking as they would need to use the services to pay their university fees. A total of 200 students intending to utilise mobile banking from five faculties were chosen to participate in this study through the systematic sampling method. All five faculties were involved for the purpose of obtaining the total sample size determined, whereby the projected size would be more manageable and sufficient to represent UPM's student population. Consequently, the respondents were chosen by identifying every fifth student who entered the five faculties until a total of 200 respondents was obtained; here, the target sample size from each faculty was 40 students maximum. This method was chosen as it allowed the selected data to be evenly distributed. Meanwhile, the faculties were selected by using simple random sampling procedure, namely the Faculty of Human Ecology, Faculty of Modern Language and Communication, Faculty of Veterinary Medicine, Faculty of Biotechnology and Biomolecular Sciences, and Faculty of Economics and Management.

A self-administered questionnaire was employed as the instrument for study data collection. It comprises four sections as

follows: section A to gauge the respondent demographic profiles, section B to reveal the patterns of mobile banking usage, section C to measure the six factors influencing the behavioural intention for mobile banking adoption, and section D to investigate the behavioural intention for adopting mobile banking. The measurements for all main variables in this study are adapted from previous studies as shown in Table 1. A total of 31 items was included, thereby consisting of six constructs (i.e. factors) and six items for the behavioural intention construct. These items were measured using a 5-point Likert scale ranging from “strongly disagree” to “strongly agree”. Following this, all measurements were proved to have excellent and high reliability by using the Cronbach’s alpha test in which values above 0.8 were obtained for all, except for performance expectancy (alpha = 0.704). Furthermore, the measurements achieved good validity following testing via content validity (i.e. by referring to experts of the field) and construct validity (i.e. by exploratory factor analysis). Moreover, Bartlett’s test of sphericity was carried out based on a Chi-square transformation of the correlation matrix determinants, revealing results that were significant ($p=0.000$). Then, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded 0.987, which was well above 0.5 and indicated that the factor analysis was appropriate. Moreover, the principal component factor analysis with varimax rotation was constructed to reduce the 31-item scale into fewer factors and find the similarity among these variables concurrently. Using the eigenvalue of one or greater, six constructs emerged (with total variance explained = 71.452). Byrne (2001) has previously proposed that ‘an assessment of model adequacy must be based on multiple criteria that take into account theoretical, statistical, and practical considerations’ (p.88). Therefore, several criteria were considered for the study, including items with factor loading with cross-loading and total variance explained. These factors were judged to have acceptable reliability and good construct validity considering the exploratory nature of the study.

Table 1 : Sources of Construct Measurement

Construct Measurement (Number of items)	Sources
Performance Expectancy (5)	Adapted from Venkatesh et al. (2003), Venkatesh et al. (2012), Tan and Leby Lau (2016)
Effort Expectancy (5)	Adapted from Venkatesh et al. (2003), Venkatesh et al. (2012), Foon and Chan (2011).
Social Influence (6)	Adapted from Venkatesh et al. (2003), Venkatesh et al. (2012), Tan and Leby Lau (2016).
Hedonic Motivation (5)	Adapted from Venkatesh et al. (2012); Salimon, Yusoff, and Mohd Mokhtar (2016); Yang (2013).
Habit (5)	Adapted from Venkatesh et al. (2012), Verplanken and Orbell (2003).
Perceived Credibility (5)	Adapted from Luarn and Lin (2004), Luarn and Lin (2005), Verma (2016).

Next, all data collected were analysed by using the Statistical Package for Social Science (SPSS). In particular, Pearson's correlation analysis was implemented to examine the relationship between each factor influencing the behavioural intention for mobile banking adoption. Besides, multiple regression analysis was employed to determine the most significant predictor of behavioural intention for mobile banking adoption.

4.0 Findings and Discussion

4.1 Respondent background

From a total of 200 respondents, 66.0 per cent of females and 34.0 per cent of males successfully completed the survey. This presented the gender disparities in favour of females in data collection. The highest contributed respondents are with 26.0 per cent whom they come from 22 years old. It is then followed by 21- and 23-years old respondents which represented with 16.0 per cent and 15.5 per cent of respondents. Only a minority of respondents come from less than 20 years old which only accounted for 6.0 per cent. Besides, the sample size consisted of four different ethnicities, namely Malay, Chinese, Indian, and others. Among the respondents, more than half were Malays, while 31.5 per cent were Chinese, 12.5 per cent were Indian,

and only 4.0 percent were of other ethnicities such as mixed, Bumiputera Sabah, and Iban.

In terms of educational background, most of the respondents were pursuing their bachelor's degree, which accounted for 83.5 per cent. Meanwhile, the remaining 9.5 and 7.0 per cent were undertaking their Master's programme and PhD, respectively. Furthermore, out of the 200 respondents, those who were studying in the third year comprised a higher overall percentage of 29.5 per cent. This was followed by second- and third-year students at 26.5 and 24.0 per cent of respondents, respectively. Meanwhile, respondents from the first year of study consisted of a lower percentage of 20.0 per cent only.

4.2 Patterns of Using Mobile Banking

A majority of the respondents (84.5%) was found to have utilised the mobile banking services, while the remaining 15.5 per cent had yet to use it. This indicated that most of the students in UPM were exposed to the new mobile banking technology, while some were still left behind the advance technology usage. Out of the majority who used it, 27.0 per cent of the respondents did so about 1-2 times monthly and represented the highest percentage. Therefore, some of the students have not fully utilised the convenience of mobile banking. In contrast, students who had fully utilised the system consisted of 26.0 and 22.5 per cent, respectively, who used it 3-4 times per month or even more than four times.

Based on data collection, 33.0 per cent of respondents were found to have used the mobile banking services for 1-2 years, which represented the highest percentage. In comparison, only 11.0 per cent had used it for less than one year, whereby 27.5 and 13.0 per cent of respondents had used these services for 3-4 year and more than four years, respectively. This revealed that some of the respondents were exposed to these services for quite an extended period of time.

In this study, banking activities usually performed by the respondents via mobile banking included checking the account balance, paying bills (i.e. phone bills, electricity bills), transferring money between one's own account, making payments to other people, and others. In particular, 85.2 per cent of them used it to transfer money between one's own account, while 82.8, 78.1, and 55.0 per cent of the respondents employed it to check their bank account balance, make payments to other people, and pay bills, respectively. Furthermore, the

study respondents also used mobile banking to buy top-up, engage in fixed deposits, and make online purchases. All of these activities, however, accounted for only 6.0 per cent of respondents. In a nutshell, they were more likely to transfer money between their own accounts by using mobile banking to another account.

4.3 Relationship between Factors Affecting the Behavioural Intention for Mobile Banking Adoption

Regarding the results shown in Table 2, all factors examined are found to have a significant relationship with the behavioural intention for mobile banking adoption. Besides, they generated positive r-values each, which indicated that all factors had a positively linear relationship with the behavioural intention for mobile banking adoption. Consequently, this shows that all of the study hypotheses are supported.

Nevertheless, effort expectancy had the most robust relationship ($r=0.559$) with behavioural intention compared to other factors. This suggests that the degree of ease of use is strongly associated with the use of mobile banking system; the students will increase the system usage if they think that mobile banking is easy to use and operate. This finding is consistent with Ghalandari (2012), who has found that effort expectancy has a significant relationship with the behavioural intention for mobile banking adoption.

Furthermore, the factor of performance expectancy reportedly had the second-strongest relationship with behavioural intention, indicating that respondents who perceived a high level of performance expectancy would have a high behavioural intention to adopt mobile banking. The respondents would be more motivated to use such services if they believed that it would help them improve their performance. This is consistent with the study of Alalwan et al. (2017), which has demonstrated that performance expectancy is another strong predictor of behavioural intention. In contrast, the results of social influence were less explicit among all other factors, whereby it yielded the least robust relationship ($r\text{-value} = 0.398$) with behavioural intention. The intention of respondents to use mobile banking was thus affected by their social interactions but it was less significant compared to other factors. These results confirm those obtained by Shankar (2016), who has reported that social influence is the least influential factor in comparison with other factors.

In conclusion, all hypotheses generated in this study were supported as the p-values obtained were 0.000, which was less than the significant value of 0.01. Besides, effort expectancy was found to be the most substantial and positive relationship, while social influence yielded the weakest positive relationship among all factors. However, this initial result will be further evident following multiple regression analysis as discussed in the next section.

Table 2 : Relationship between All Factors and Behavioural Intention

Variable	Behavioural Intention	
	Pearson Correlation	Sig. p-value
Performance expectancy	0.546	0.000
Effort expectancy	0.559	0.000
Social influence	0.398	0.000
Hedonic motivation	0.479	0.000
Habit	0.486	0.000
Perceived credibility	0.519	0.000

**Correlation is significant at the 0.01 level (2-tailed)

4.4 The Predictors of Behavioural Intention for Mobile Banking Adoption

Multiple regression analysis was thus carried out to find the influence of performance expectancy, effort expectancy, social influence, hedonic motivation, habit, and perceived credibility on the behavioural intention for mobile banking adoption. Table 3 shows the predictors of behavioural intention for mobile banking adoption via multiple linear regression analysis accordingly.

Table 3 : The Predictors of Behavioural Intention for Mobile Banking Adoption

Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std Error	Beta		
Constant	2.308	1.370		1.684	0.000
Performance Expectancy	0.299	0.088	0.267	3.387	0.001
Effort Expectancy	0.093	0.085	0.094	1.091	0.276
Social Influence	0.042	0.041	0.061	1.020	0.309
Hedonic Motivation	0.110	0.049	0.138	2.232	0.027
Habit	0.154	0.047	0.194	3.248	0.001
Perceived Credibility	0.220	0.054	0.245	4.045	0.000

Note: $R^2=0.510$, Adjusted $R^2=0.495$, $F=33.460$, $p=0.000$

According to the findings above, the model was significant at 0.000, which was less than the alpha value of 0.001. The F-value was significant at 33.460, thus revealing that the overall regression model for all factors affecting behavioural intention was correct and adequate in explaining the behavioural intention for mobile banking adoption. Besides, the coefficient of determination (Adjusted R²) for the examined regression was 0.495, thereby showing that 49.5% of the total variations on behavioural intention could be explained. The predictors included in the model of behavioural intention were performance expectancy, effort expectancy, social influence, hedonic motivation, habit, and perceived credibility.

Among the above predictors, four significant constructs were found to positively and significantly influence behavioural intention. Sequentially, perceived credibility was noted to be a significant predictor with its beta-value of 0.245 and significance at $t = 4.045$ and $p= 0.000$. This is followed by the factors of performance expectancy ($\beta=0.267$, $p=0.001$), habit ($\beta=0.194$, $p=0.001$), and hedonic motivation ($\beta=0.138$, $p=0.027$). In contrast, effort expectancy and social influence were deemed not significant predictors as their p-values were larger than the alpha value set at 0.01. When compared to the results of Pearson's correlation analysis as shown in Table 2, the current findings give a more insightful interpretation of the model. Even though relationships were found to be significant in the former analysis, an examination to test their influences together on behavioural intention

showed that only four significant predictors remained significant in the latter analysis. This showed that the four predictors of perceived credibility, performance expectancy, habit, and hedonic motivation significantly influenced the behavioural intention for mobile banking adoption even in the occurrence of other factors. Thus, they were among the outstanding predictors. Further analysis of the beta value revealed that performance expectancy was best predictor in forecasting the respondent behavioural intention with a beta value of 0.267, which was the highest value among other significant predictors. This showed that it was the most critical factor that would be emphasised by respondents and it might lead them to adopt mobile banking in the future.

5.0 Conclusion and Implications

Today, the advancement of mobile technologies has affected the banking industry globally, thus leading to the introduction of mobile banking services. The findings of this study revealed all factors had a significant and positive relationship with the behavioural intention for mobile banking adoption. Since mobile banking in Malaysia is yet to be fully known by the general population, an understanding of the factors influencing the behavioural intention for this service is crucial to researchers and bankers alike. The information and results obtained in this study will be handy for them to discover and analyse potential customers thereby allowing more accurate strategies to increase the adoption of mobile banking.

In particular, performance expectancy appeared to be the most significant predictor affecting the behavioural intention for mobile banking adoption. This means that students are more impressed with the performance of mobile banking in which they think that it can help them in performing banking activities. Overall, it can be concluded that the future generation will start to adopt mobile banking services due to their high efficiency, accessibility, and flexibility, as well as good security. Therefore, achieving the implementation of mobile banking services requires the banks to take into account the factors detailed in this study and design various promotions for an increased level of awareness among the customers.

The results of this study provide several important implications for relevant parties, such as financial service developers, banks, and future researchers. First, financial service developers can identify the useful information and ideations about various factors that can be

further improved. This study provides better insight into designing and implementing a mobile banking service that yields better acceptance of the consumers. The findings further illustrate that performance expectancy, habit, and perceived credibility are the significant predictors of behavioural intention. Thus, service developers can develop a better function of mobile banking facilities in terms of their efficiency, flexibility, accessibility, and security features to fulfil the consumer needs for improving their performance.

Besides, the findings of this study can be directed to the banking and financial practitioners in recognising the variety of factors affecting mobile banking adoption among consumers. Here, the factors of performance expectancy, effort expectancy, social influence, hedonic motivation, habit, and perceived credibility have a positive relationship with behavioural intention, which can be used by banks to generate accurate strategies accordingly for an increased adoption of mobile banking. This can aid in providing better-quality mobile banking services for the customer and motivating them for its adoption.

Last but not least, this study bring multiple implications for future researchers as it will improve the existing literature. Here, the findings and proposed framework will serve as a practical guideline for these scholars to enhance their future attempts. For instances, future research works can employ performance expectancy, habit, and perceived credibility as supplementary factors when using another model or theory to investigate the mobile banking issue as they are found to be significant predictors for behavioural intention. In other words, future researchers can explore or design another framework to investigate the factors that may significantly affect the behavioural intention. In short, the relevant parties such as financial service providers and banks should cooperate to enhance the mobile banking services and provide a positive impression in attracting more consumers to adopt them for a brighter future.

References

- Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. <https://doi.org/10.1016/j.ijinfomgt.2017.01.002>

- Alalwan, A. & Williams, M. (2014). Examining factors affecting customer intention and adoption of internet banking in Jordan. *UK Academy for Information Systems Conference*, 3. Retrieved from <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1002&context=ukais2014>
- Alalwan, A., Dwivedi, Y. K., & Williams, M. D. (2013). Examining consumer adoption of mobile banking in Jordan. *Journal of Enterprise Information Management*, 29(1), 118 – 139.
- Albugami, M. & Bellaaj, M. (2014). The continued use of internet banking: combining utaut2 theory and service quality model. *Journal of Global Management Research*, 10(1), 11–28.
- Alqeisi, K.I. (2009). Analyzing the use of UTAUT model in explaining an online behaviour: internet banking adoption. *Brunel Business School Theses Marketing*.
- Al-Tarawneh, J. M. (2016). Factors influencing the adoption of mobile banking services in Jordan from the perspective of customers: *Overview and Pilot study*,
- Arenas-Gaitán, J., Peral-Peral, B., & Ramón-Jerónimo, M. A. (2015). Elderly and internet banking: an application of UTAUT2. *Journal of Internet Banking and Commerce*, 20(1), 1–23. https://doi.org/10.1007/978-3-531-92534-9_12
- Ba, S. & Pavlou, P. A. (2002). Evidence of the effect of trust building technology in electronic markets: price premiums and buyer behavior. *MIS Quarterly*, 26(3), 243-268.
- Baba, R. & Muhammad, M. Z. (2012). An analysis of mobile banking acceptance by Malaysian customers. *Sunway Academic Journal*, (4), 1–12.
- Baptista, G. & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior*, 50, 418–430. <https://doi.org/10.1016/j.chb.2015.04.024>
- Barnes, S. J., & Corbitt, B. (2003). Mobile banking: concept and potential. *International Journal of Mobile Communications*, 1(3), 273. <https://doi.org/10.1504/IJMC.2003.003494>
- Bhatt, A. (2016). Factors affecting customer " s adoption of mobile banking services. *Journal of Internet Banking and Commerce*, 21(1), 1–22.
- Byrne, B.M. (2001). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

- Chandran, R. (2014). Pros and cons of mobile banking. *International Journal of Scientific and Research Publications*, 4(1), 2250–3153.
- Daud, N. M., Ezalin, N., Kassim, M., Seri, W., Wan, R., Said, M., & Noor, M. M. (2011). Determining critical success factors of mobile banking adoption in Malaysia. *Australian Journal of Basic and Applied Sciences*, 5(9), 252–265.
- Escobar-Rodríguez, T. & Carvajal-Trujillo, E. (2013). Online drivers of consumer purchase of website airline tickets. *Journal of Air Transport Management*, 32, 58–64. <https://doi.org/10.1016/j.jairtraman.2013.06.018>
- Foon, Y. & Chan Y.F. (2011). Internet banking adoption in Kuala Lumpur: an application of utaut model. *International Journal of Business and Management*, 6(4), 161–167. <https://doi.org/10.5539/ijbm.v6n4p161>
- Ghalandari, K. (2012). The effect of performance expectancy, effort expectancy, social influence and facilitating conditions on acceptance of e-banking services in iran: the moderating role of age and gender. *Middle-East Journal of Scientific Research*, 12(6), 801–807.
- 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. <https://doi.org/10.5430/bmr.v2n1p31>
- Koksal, M. H. (2016). The intentions of Lebanese consumers to adopt mobile banking. *International Journal of Bank Marketing*, 34(3), 327–346. <https://doi.org/10.1108/IJBM-03-2015-0025>
- Krishna Kishore, S. V., & Sequeira, A. H. (2016). An empirical investigation on mobile banking service adoption in rural Karnataka. *SAGE Open*, 6(1), 1–21. <https://doi.org/10.1177/2158244016633731>
- Lee, K., Kim, J., & Noh, M. (2017). Influence factor on intention to use mobile banking, (January). *International Journal of Bank Marketing*, 3(7), 300-332.
- Liao Chechen, P. P. & L. H.-N. (2006). The role of habit and web quality in e-commerce. *International Journal of Information Management*, 26(6), 469– 483.
- Limayem, M., Hirt, S.G., & Cheung, M.K., (2007). How habit limits the predictive power of intention: the case of information systems continuance. *MIS Quarterly*, 31(4), 705-737.

- Luarn, P. & Lin, H. H. (2005). Towards an understanding of the behavioral intention to use mobile banking. *Computers in Human Behavior*, 21(6), 873–891.
<https://doi.org/10.1016/j.chb.2004.03.003>
- Mahad, M., Mohtar, S., Yusoff, R. Z., & Othman, A. A. (2015). Factors affecting mobile adoption companies in Malaysia. *International Journal of Economics and Financial Issues*, 5(1), 84–91.
- Mahad, M., Mohtar, S., Othman, A. A.. (2016). Examining the influences of risk towards adoption of mobile banking in Malaysia: an extended decomposed theory of planned behaviour. *Labuan e-Journal of Muamalat and Society*, 16(10), 1–15.
- Malaysian Communications and Multimedia Commission. (2017). Communication and multimedia facts and figures. Retrieved from
[https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/3Q2017- Infographics.pdf](https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/3Q2017-Infographics.pdf)
- Manaf Mcom, N. R., & Ariyanti, M. (2016). Exploring key factors on technology acceptance of mobile payment users in Indonesia using modified unified theory of acceptance and use of technology (Utaut) Model Use Case. *Abc Easy Tap*, (4), 40–44.
- Masa'deh, R. (Moh'd T., Tarhini, A., Bany Mohammed, A., & Maqableh, M. (2016). Modeling factors affecting student's usage behaviour of e-learning systems in lebanon. *International Journal of Business and Management*, 11(2), 299.
<https://doi.org/10.5539/ijbm.v11n2p299>
- Mian, T. S. & Rizwan, M. (2013). Determinants of customer intention to use mobile banking: an empirical research based on extended technology acceptance model. *Journal of Basic and Applied Scientific Research*, 3(11), 201–211.
- 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.
<https://doi.org/10.1016/j.ijhm.2015.11.003>
- Perdigoto, M. & Picoto, W. (2014). Analysing intention and action in mobile banking. *Portuguese Journal of Management Studies*, 17(2), 133–152.
- Rahmani, Z., Tahvildari, A., Honarmand, H., Yousefi, H., & Daghighi, M. S. (2012). Mobile banking and its benefit. *Arabian Journal of Business and Management*, 2(5), 37–40.

- Rilling, S. (2015). *Mobile banking acceptance among young consumers in Germany: an empirical analysis, (September)*. Norwegian Business School.
- Salimon, M. G., Yusoff, R. Z., & Mohd Mokhtar, S. S. (2016). The influence of e- satisfaction, e-trust and hedonic motivation on the adoption of e-banking and its determinants in Nigeria: a pilot study. *Mediterranean Journal of Social Sciences*, 7(1), 54–63. <https://doi.org/10.5901/mjss.2016.v7n1p54>
- Shankar A. (2016), Factors affecting mobile banking adoption behaviour in India. *Journal of Internet Bank Commerce*, 19(3), 72-89.
- Sohail, M. S., & Al-Jabri, I. M. (2014). Attitudes towards mobile banking: Are there any differences between users and non-users? *Behaviour and Information Technology*, 33(4), 335–344. <https://doi.org/10.1080/0144929X.2013.763861>
- Stieglitz, S. & Brockmann, T. (2013). The impact of smartphones on e-participation. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 98(2), 1734–1742. <https://doi.org/10.1109/HICSS.2013.623>
- Talukder, M., Quazi, A., & Sathye, M. (2014). Mobile phone banking usage behaviour: an Australian perspective. *Australasian Accounting, Business and Finance Journal*, 8(4), 83–104. <https://doi.org/10.14453/aabfj.v8i4.6>
- Tan, E. & Leby Lau, J. (2016). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, 17(1), 18–31. <https://doi.org/10.1108/YC-07-2015-00537>
- 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 & People*, 29(4), 830–849. <https://doi.org/10.1108/ITP-02-2014-0034>
- Venkatesh, Viswanath; Morris, Michael G.; Davis, Gordon B.; and Davis, Fred D. (2003). User acceptance of information technology: towards a unified view, *MIS Quarterly: Management Information Systems*, 27(3), 425-478.
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information: extending the unified theory of acceptance and use of technology. *MIS Quarterly* 36(1), 157-178.

- Wang, Y. S., Wang, Y. M., Lin, H. H., & Tang, T. I. (2003). Determinants of user acceptance of internet banking: An empirical study. *International Journal of Service Industry Management*, 14(5), 501-519.
- Yang, H. C. (2013). Bon appétit for apps: young American consumers' acceptance of mobile applications. *Journal of Computer Information Systems*, 53(3), 85–96.
<https://doi.org/10.1080/08874417.2013.11645635>
- Yu, C.-S. (2012). Factors affecting individuals to adopt mobile banking: empirical evidence from the UTAUT Model. *Journal of Electronic Commerce Research*, 13(1), 104–121.
- Yu, S. (2009). *Factors influencing the use of mobile banking: the case of sms-based mobile banking*. Auckland University of Technology, New Zealand.
- Zendejdel, M. & Hj Paim, L. (2015). Predicting intention of mobile internet usage in Malaysia: extending the unified theory of acceptance and use of technology. *A Contemporary Business Journal Taylor's Business Review*, 5(1), 2232–172.
- Zhou, T., Lu, Y., & Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, 26(4), 760– 767.
<https://doi.org/10.1016/j.chb.2010.01.013>