

Factors influencing behavioural intention to use mobile banking among retail banking clients

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How to Cite This Article: De Leon, M.V. (2019). Factors influencing behavioural intention to use mobile banking among retail banking clients. *Jurnal Studi Komunikasi*, 3(2). doi: 10.25139/jsk.3i2.1469

Received: 18-03-2019,
Revision: 21-04-2019,
Acceptance: 22-04-2019,
Published online: 02-07-2019

Abstract Mobile banking enables clients to bank virtually without restrictions to time and place. Despite wide adoption of mobile banking around the world, use of mobile banking is still considered low. Philippines has the lowest digital banking penetration across Asian countries although the country known for the title of "SMS-intensive country in the world". Factor analysis, partial least squares structural equation modelling (PLS-SEM) and ANOVA with bootstrapping were used to test research hypotheses. Findings from 212 Universal bank retail branch clients show that perceived ease of use, perceived usefulness, social influence and trust propensity have significant positive influence on behavioural intention to use mobile banking. Results also show that respondents with matured age (22 years and above), male, at least Bachelor's degree graduate and receiving a monthly income higher than Php 10,001 has higher behavioural intention. This study is relevant for proposing marketing strategies to increase adoption of mobile banking and contribute for further advancement on technology acceptance literature.

Keywords: Mobile Banking; Intention; Technology Acceptance

INTRODUCTION

Banks are driven to adopt new technologies due to increased competition in the banking sector (Alalwan, Dwivedi, & Rana, 2017; Koksal, 2016). Mobile banking is the latest electronic delivery channel. Since internet has evolved to being mobile, mobile phones are used to conduct banking transactions (Koenig-Lewis, Palmer, & Moll, 2010). With the development of mobile banking, banks have become more efficient as they cut operating costs and time, while providing significant convenience to customers, allowing them to conduct banking

transactions without restrictions on time and place (Alalwan et al., 2016; Koenig-Lewis et al., 2010; Koksai, 2016; Zhou, 2011). As such, mobile banking platform utilization leads to quality service delivery (Riquelme and Rios, 2010). Benefits of mobile banking can only materialize if intended users adopt it (Alwahaishi & Snášel, 2013; Davis, 1989; Koenig-Lewis et al., 2010; Laukkanen & Kiviniemi, Shaikh & Karjaluoto, 2015).

The number of internet users in Asia continues to increase from 764.4 million in 2009 to 2.06 billion in 2018 (Internet World Stats, n.d.). As of report on January 2019, internet population in Southeast Asia amounted to 415 million internet users (We are Social, n.d.). Growth in internet users has been driven by more affordable smartphones and mobile data plans according to the new 2018 Global Digital suite of reports from We are Social and Hootsuite ("Digital in 2018", n.d.). In 2018, 57.2 percent of mobile phone users accessed the internet from their mobile phone (eMarketer, & AP., n.d.).

The use of mobile phones or tablets to conduct banking transactions is not as high as expected in both developed and developing countries (Laukkanen, 2007; Riquelme & Rios, 2010; Shaikh & Karjaluoto, 2015). According to Juniper Research (2013), more than 1 billion people around the world are forecasted to use mobile banking by 2017, but that level represents only 15% of the global mobile subscription base of 6.835 billion that accounts for approximately 96% of the world's population (International Telecommunication Union, 2011). Further, approximately half of all mobile subscribers remain unbanked, with limited access to traditional financial services (Shaikh & Karjaluoto, 2014).

GSMA Intelligence Report (2014) states that Philippines is branded as the texting capital of the world because of the high volume of SMS traffic exchange with sent messages of over 520 SMS per connection per month over the Smart network in Q2 2014, as opposed to 371 per connection per month for XL Indonesia, and 64 per connection per month for China Mobile. Based on the global SMS volume, it is estimated that Philippines has generated around 10 percent. As to the number of mobile phone internet users in the Philippines, there are 38.3 million people as of 2018, representing a mobile phone internet penetration rate of only 36 percent (Statista, n.d.). Further, researcher Shane Snow explained that texting became popular in developing countries because of the low cost of a cell phone and SMS plan, and unlimited messaging offer compared with the cost of a computer and a broadband connection (Dimacali, 2010). Filipino mobile users are highly SMS literate, which made the proposition of conducting financial transactions using a smartphone more intuitive.

However, digital banking penetration in the Philippines has been slow based on the study of Ramanathan, Roland & Romano (2014). While 35 percent are digital consumers who perform online purchases thru smartphone, only 9 percent of the consumers have used the smartphone to conduct banking transactions compared with 26

percent in developing Asia. The study concluded that the country has the lowest digital banking penetration across 13 Asian countries. Based on the 1st Quarter 2018 Bangko Sentral ng Pilipinas (BSP) Financial Inclusion Dashboard, mobile banking penetration in the country is 28 percent. Hence, there is a need to investigate factors that influence the intention of Filipino consumers to use mobile banking. This study fills in the gap by providing a deeper understanding of the antecedents for consumer behavioural intention to use mobile banking given there is a dearth of literature that exists concerning developing countries and is much needed at this time (Kim, Shin & Lee, 2009; Lin, 2011).

Further, few attempts have been made to analyse adoption from the point of view of age, education, income and gender (Gefen & Straub, 1997; Porter & Donthu, 2006). Therefore, the study aims to bridge the gap by extending the Technology Acceptance Model (TAM) with demographic factors such as gender, age, education and income.

In this study, the researcher aims to answer the question: what factors influence behavioural intention to use mobile banking?

Based from the variables found in the study on related literature, as well as the result of the model of Kumar, Lall & Mane (2017) which was grounded on the Technology Acceptance Model, the researcher aims to extend the existing model and contribute to the literature on influencers for mobile banking usage in the context of the Philippines. The objective of the study is to determine the significance and extent of the effect of the predictors-perceived ease of use, perceived usefulness, social influence, and trust propensity-on intention to use mobile banking. Further, its purpose is to establish if there are significant differences in the behavioural intention to use mobile banking attributable to demographic factors such as age, gender, educational attainment, and monthly income.

Figure 1 shows the technology acceptance model (TAM), the theoretical foundation for understanding online consumer behaviour on innovative technology adoption. TAM was developed for making forecasts on acceptance and use of new information technologies and systems, by recognizing the factors that drive success for organization's information systems and their adaptability to work (Davis, 1989). It is known for its predictive power (Venkatesh & Morris, 2000) and a popular framework for examining intentions to adopt mobile banking (Shaikh and Karjaluoto, 2015). It emphasizes that an individual's system usage depend upon his/her behavioural intention ascertained by two parameters: perceived usefulness and perceived ease of use (Richa Priya, Aradhana Vikas Gandhi, 2018). According to Davis (1989), perceived ease of use is the degree to which a person believes that using a system would be free of effort within an organizational context while perceived usefulness is the degree to which a person believes that his/her performance will improve by using the system.

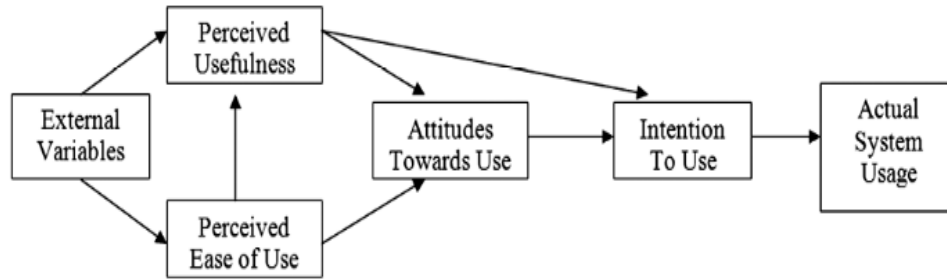


Figure 1: Technology Acceptance Model, Source: Davis (1989)

Figure 2 shows the conceptual framework that this particular study tried to test through structural equation model and ANOVA with bootstrapping. Following the model of Davis (1989), perceived ease of use and perceived usefulness were considered as independent variables. TAM excludes economic and demographic factors and external variables. This model provides the provision to add external variables (Davis, 1989). To extend TAM, social influence and trust propensity were additional constructs based on the study of Kumar et al. (2017). Social influence is the degree to which others influence an individual within his or her social environment (Sharma, Govindaluri, Muharrami, & Tarhini, 2017). Trust propensity represents a person’s disposition to rely on others in various situations (Kumar et al., 2017). When people make a judgment of service without prior knowledge, those with a higher propensity to trust are more likely to assume that the service is dependable (McKnight, Cummings & Chervany, 1998). Further, demographic factors of respondents were included in the model to test if there are significant differences in behavioural intention to use mobile banking attributable to age, gender, educational attainment, and monthly income.

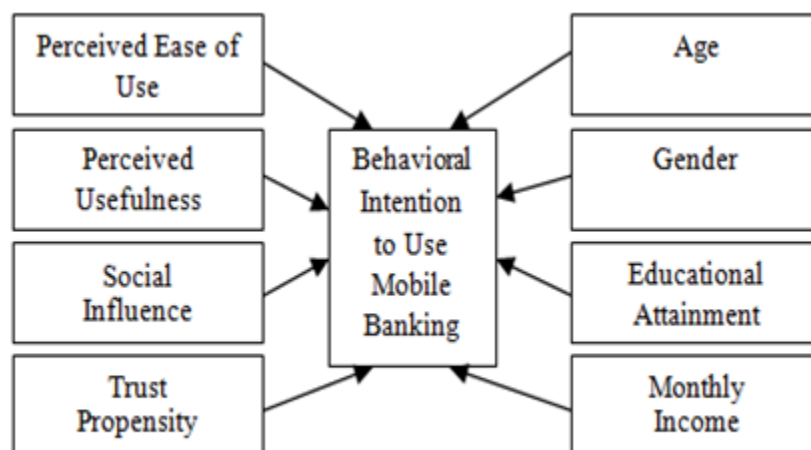


Figure 2. Conceptual Framework

Previous research in the context of perceived ease of use provides evidence of the significant and positive effect on the intention to use (Davis, 1989; Alavi & Ahuja, 2016; Alksasbeh & Alqaralleh, 2017; Gu,

Lee, & Suh, 2009; Hanafizadeh, Behboudi, Abedini Koshksaray, & Jalilvand Shirkhani Tabar, 2014; Koksai, 2016; Kumar et al., 2017; Makanyeza, 2017; Mathew, Sulphay, & Prabhakaran, 2014; Munir & Ilyas, 2017; Mutahar, Daud, Ramayah, Isaac, & Alrajawy, 2017; Richa Priya et al., 2018; Sharma et al., 2017; Singh & Srivastava, 2018). According to the literature review study of Tam & Oliveira (2017), it is one of the significant drivers of intention to use mobile banking. Kumar et al. (2017) investigated the factors influencing management students in India on their intention to use mobile banking and found that perceived ease of use has a significant influence on intention. In the study conducted by Makayeza (2017) on 232 bank customers in Zimbabwe, perceived ease of use did not significantly influence behavioural intention to adopt mobile banking services.

H1: Perceived ease of use has a significant positive influence on behavioural intention to use mobile banking.

There have been numerous empirical studies that found perceived usefulness has a significant and positive effect on the intention to use (Alavi & Ahuja, 2016; Alksasbeh & Alqaralleh, 2017; Gu et al., 2009; Hanafizadeh et al., 2014; Koksai, 2016; Kumar et al., 2017; Makanyeza, 2017; Mathew et al., 2014; Munir & Ilyas, 2017; Mutahar et al., 2017; Richa Priya et al., 2018; Shaikh et al., 2018; Sharma et al., 2017). According to Tam & Oliveira (2017), perceived usefulness is also an important driver of intention to use mobile banking. Perceived usefulness found to have a positive effect on behavioural intention to adopt mobile banking services in the study of Makayeza (2017). Consumers who believed that mobile banking services to be useful adopt the services. Results in the study of Kumar et al. (2017) indicated that the intention to use for management students was significantly impacted by perceived usefulness in respect of mobile banking. Perceived usefulness was identified as one of the essential factors that influence the intention to use information technology.

H2: Perceived usefulness has a significant positive influence on behavioural intention to use mobile banking.

Social norms, subjective norms or normative pressure are terms used for social influence (Makanyeza, 2017). Individuals are likely to adopt the services if they deem that important people in their lives would agree on using mobile banking services. Several researchers found that individual intention to use mobile banking was significantly affected by people surrounding them (Ahmad, 2018; Kumar et al., 2017; Makanyeza, 2017; Shaikh et al., 2018; Sharma et al., 2017; Singh & Srivastava, 2018). Singh, Srivastava and Srivastava (2010) revealed that individual decisions to adopt mobile commerce services were influenced by friends and family members and argued that these users are part of the social network, not just technology users. As concluded in the study of Makayeza (2017), social influence has a positive effect on behavioural intention to adopt mobile banking services. However, the normative pressure did not influence mobile banking adoption in

Lebanon where the service is not yet offered in the country with reference to the study of Koksai (2016).

H3: Social influence has a significant positive influence on behavioural intention to use mobile banking.

Trust propensity is a person's tendency to depend on others in different circumstances (McKnight et al., 1998). Social interactions with parents in early childhood play a critical role in shaping a person's trust propensity based on the social learning theory (Rotter, 1967). When individuals have no experience in mobile banking, his or her initial trust in the said service is therefore expected to be a function of his/her propensity to trust (Gimun, BongSik & Ho, 2009). According to Zhou (2011), individuals with high trust propensity tend to build trust and optimistic towards modern technologies. Based on the study of Kumar et al. (2017), trust propensity is significantly associated with the intention to use mobile banking and strongly affect the intention to use mobile banking. In the study of Koksai (2016), respondents are not confident in their ability to use mobile banking considering that it is not yet offered in Lebanon.

H4: Trust propensity has a significant positive influence on behavioural intention to use mobile banking.

Various findings have been concluded as to the effect of demographic variables on technology adoption (Makayeza, 2017). According to the study of Makayeza (2017) in Zimbabwe, age, gender, education, and income do not significantly influence behavioural intention to adopt mobile banking services.

Results on the study of Sharma (2017) concluded that the most important predictor of mobile banking is age. Younger people are more inclined towards mobile banking adoption. Therefore, there should be more efforts toward informing older people on the usefulness of mobile banking application. Also, older people should find the design of the mobile service easy to use. With respect to gender, men are more willing to adopt mobile banking compared to women. It was suggested in the study that mobile banking applications should include customization dependent on the age and gender of the customer. Lastly, education also shows an effect on adoption. Individuals with lower education tend to be less willing to adopt mobile banking.

Based on the study of Koksai (2016) on the effect of socio-demographic characteristics on the intention to use mobile banking, younger individuals are more inclined to accept and use mobile banking. Consumers earning more than \$3,000 are most likely to adopt mobile banking services. This conclusion is in line with other studies where younger and wealthier customers are more willing to adopt new technologies. However, gender and education did not affect mobile banking adoption in the study.

H5: There are significant differences in the behavioural intention to use mobile banking due to age.

H6: There are significant differences in the behavioural

intention to use mobile banking due to gender.

H7: There are significant differences in the behavioural intention to use mobile banking due to educational attainment.

H8: There are significant differences in the behavioural intention to use mobile banking due to monthly income.

This study is set in a Universal Bank branch in the Philippines. The bank was consistently awarded for providing exceptional digital products and services in Asia. The selected branch was chosen because it has the highest number of accounts from various clients.

The research design primarily used the survey method, featuring the established questions from Kumar et al. (2017). The Likert scales used ranged from 1 (strongly disagree) to 5 (strongly agree).

Factor analysis provides opportunity for forming unobserved factors (sometimes referred as Latent Variables) from observed variables (also called Manifest Variable). In factor analysis the researcher identifies a number for the factors that are investigated through observed variables (Agresti & Finlay, 1997).

As a tool for analysis, partial least squares structural equation modelling (PLS-SEM) was performed to test the effect of perceived ease of use, perceived usefulness, social influence, and trust propensity on behavioural intention to use mobile banking. PLS-SEM is recommended when data does not follow a normal distribution and when the relationships contain multiple mediating relationships (Hair et al., 2014 and Lowry & Gaskin, 2014). In addition, regression on dummy variable (Gujarati, 1999) is equivalent to analysis of variance (ANOVA). It was used in determining the significant differences in the behavioural intention of respondents as it varies through their characteristics. Bias-corrected and accelerated (BCA) bootstrap was included in the regression procedure to remove the bias in the error term that causes the parameters and F-values to be inconsistent.

The sample size was computed based on the recommendation of Hair et al. (2014, p.21). With the maximum number of arrows pointing at a construct, setting the significance level to 0.05, a statistical power of 80% and a minimum R^2 of .10, the recommended minimum sample size is 137. This study was able to gather 212 respondents, which is above the recommended minimum.

The data was gathered through pen-and-paper method from July 16, 2018 – August 8, 2018. The researcher utilized systematic sampling where every 2nd client who finished the account opening process was selected as respondent. Only clients willing to participate in the study was requested to complete the questionnaire.

DISCUSSION

The study was able to gather 212 respondents. The profile of the sample is presented in Table 1.

Table 1. Profile of Respondents

Characteristic	Frequency	%
Gender		
Male	55	26
Female	157	74
Age		
18-24	11	5
22-37	155	73
38-53	40	19
54 and above	6	3
Educational Attainment		
High School (HS)	13	6
Bachelor's Degree (BD)	168	79
Graduate Studies (GS)	31	15
Monthly Income		
Php 10,000 and below	12	6
Php 10,001 – Php 50,000	163	76
Php 50,000 – Php 100,000	29	14
Php 100,000 and above	8	4

As shown in Table 1, the sample was dominated by females (74%). The majority of the respondents (73%) were aged between 22 and 37 years. In terms of education, most of the respondents (79%) had attained at least a bachelor's degree. The highest proportion of the respondents (76%) were earning between Php 10,001 and Php 50,000.

Table 2. Bank Profile of Respondents

Questions	Frequency	%
1. What are the bank products are you currently maintaining?		
Savings	208	98
Checking	67	32
Loan	23	11
Investment	37	17
Insurance	24	11
Credit Card	85	40
2. How many accounts do you maintain?		
One	56	26
Two or More	156	74

Table 2 shows that 208 or 98% of the respondents confirmed that they maintain a savings account. While 85 or 40% of the respondents have a credit card. This shows that less than half of the total respondents are familiar with cashless payments. As to the number of accounts currently maintained, 74% have more than two or more accounts. Since they are maintaining various bank products and different bank accounts, respondents have the flexibility to transfer their funds in an account which is one of the functions available in mobile banking.

Before performing hypothesis testing, data normality check was performed. Table 3 showed results of Shapiro-Wilk normality test. It revealed that the variables had significance value below 0.05.

Table 3. Test of Normality

Variables	Shapiro-Wilk		
	Statistics	df	Significance
Perceived Ease of Use	0.783	212	0.000
Perceived Usefulness	0.801	212	0.000
Social Influence	0.976	212	0.001
Trust Propensity	0.956	212	0.000
Behavioral Intention	0.842	212	0.000
Gender	0.546	212	0.000
Age	0.683	212	0.000
Educational Attainment	0.613	212	0.000
Monthly Income	0.642	212	0.000

In order to conduct factor analysis, there are some considerations. First of all, sample size is important. Some researchers suggest that 10 cases for each item is suitable for factor analysis, however some researchers suggest 5 cases for each item (Pallant, 2001). This study's sample includes 212 subjects which is enough to conduct EFA.

Second, the Kaiser-Meyer-Olkin measure should be greater than 0.5, otherwise the sample is not adequate. The Table 4 shows the KMO and Bartlett's Test results. The KMO measure is .894 which is greater than the required value. Also the p value of Bartlett's test of sphericity is considered and this value should be smaller than .05; p (Sig.) value is .000 for this study which is consistent with the required value. According to KMO and Bartlett's test, the data set is suitable for EFA.

Table 4. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.894
Bartlett's Test of Sphericity	Approx. Chi-Square	3277.585
	df	136
	Sig.	0

Principal axis factor analysis with varimax rotation was conducted to assess the underlying structure for the 15 items of the questionnaire. The assumption of independent sampling was met. The assumptions of normality, linear relationships between pairs of variables, and the variables' being correlated at a moderate level were checked. Five factors were requested, based on the fact that the items were designed to index five constructs: perceived ease of use (PEOUI), perceived usefulness (PU), social influence (SI), trust propensity (TP) and behavioural intention (BI). After rotation, the first factor accounted for 17.887% of the variance, the second factor accounted for 15.170%, the third factor accounted for 15.007%, the fourth factor accounted for 14.157% and fifth factor accounted for 11.258%. Table 5 displays the

items and factor loadings for the rotated factors, with loadings less than .40 omitted to improve clarity.

Table 5. Factor Loadings from Principal Axis Factor Analysis with Varimax Rotation for a Five-Factor Solution for Mobile Banking Intention Questions (N=15)

Item	1	2	3	4	5
TP2: My mobile banking transactions would not be compromised.	.801				
TP4: While using mobile banking transactions would be secure.	.794				
TP3: My trust level on mobile banking would be the same as banking in person through a branch.	.782				
TP1: My privacy related to mobile banking would not be compromised.	.742				
SI2: I would use mobile banking if my social group uses it.		.829			
SI1: I would show my social group that I use mobile banking.		.764			
SI3: I would discuss the features of mobile banking with my social group.		.676			
SI4: I would use mobile banking if people who are important to me would try to convince me.		.567			
PU2: Mobile banking would be useful as it would save my time.			.839		
PU1: Mobile banking would save my travelling expenses to the bank.			.800		
PU3: Mobile banking would be useful because of its convenience to use everywhere.			.584		
BI2: I predict that I shall use mobile banking.				.793	
BI1: I intend to use mobile banking.				.791	
PEOU2: Mobile banking would provide me with easy user interface					.827
PEOU1: Learning to use mobile banking would be easy for me					.655
Eigenvalues	3.041	2.579	2.557	2.407	1.914
Percentage of variance	17.887	15.170	15.007	14.157	11.258
Cumulative Percentage	17.887	33.057	48.064	62.221	73.478

Note. Loadings < .40 are omitted.

According to Anderson & Gerbing (1988), PLS analysis includes two steps: measurement model analysis and structural model analysis. Analysis for measurement model would provide confirmatory assessment of reliability, convergent validity and discriminant validity while the second model will test the hypotheses by determining path coefficients and corresponding significance.

The value of the loading factor of model's variables was initially investigated by running the PLS algorithm function. The results of the model tests are described in Table 6.

Table 6. Measurement Model Results

Construct	Item	Loadings	Cronbach's Alpha	CR	AVE
Behavioral Intention (BI)	BI1	0.972	0.941	0.971	0.944
	BI2	0.972			
Perceived Ease of Use (PEOU)	PEOU1	0.968	0.934	0.968	0.938
	PEOU2	0.969			
Perceived Usefulness (PU)	PU1	0.869	0.859	0.914	0.780
	PU2	0.932			
	PU3	0.846			
Social Influence (SI)	SI1	0.872	0.836	0.891	0.673
	SI2	0.875			
	SI3	0.812			
	SI4	0.711			
Trust Propensity (TP)	TP1	0.847	0.913	0.939	0.794
	TP2	0.900			
	TP3	0.900			
	TP4	0.915			

In Table 6, Cronbach's alpha values range from 0.836 (SI) to 0.941 (BI). All values have met the acceptable value which is $a > 0.60$ according to (Lowry & Gaskin, 2014). Individual item reliability was assessed by examining the factor loadings of all variables with their respective constructs. The result showed that all variables range from 0.711 (SI4) to 0.972 (BI1 & BI2), which met the minimal value of 0.70 (Hair et al. (2014). As to the final measurement of the model's reliability which is the composite reliability, the result showed that all constructs met the requirement of 0.70 (Chin, 1998; Fornell & Larcker, 1981).

Another measurement performed is the convergent validity which refer to the degree of agreement of the same concept (Wang & Yang, 2016) and examined based on the values of average variance extracted (AVE). As shown in Table 6, the AVE for all constructs was above 0.5, which met the requirement (Fornell & Larcker, 1981). Hence, there is a good convergent validity for the scales.

Discriminant validity was also checked by measuring the variance shared between the construct and other constructs (Chin, 1998; Fornell & Larcker, 1981). As seen in Table 7, all square roots of AVE were higher than their respective correlation coefficients with latent variables. Table 7 shows that the Fornell-Kracker criterion is satisfied by the model.

Table 7. Fornell-Larcker Criterion

Latent Variables	Behavioral Intention	Perceived Ease of Use	Perceived Usefulness	Social Influence	Trust Propensity
Behavioral Intention	0.972				
Perceived Ease of Use	0.634	0.968			
Perceived Usefulness	0.606	0.728	0.883		
Social Influence	0.473	0.384	0.289	0.820	
Trust Propensity	0.571	0.456	0.402	0.451	0.891

A test for multicollinearity was also performed by using the variance inflation factor (VIF). According to Kim et al. (2013), data have multicollinearity problem when VIFs are greater than 10.00. VIF values of the indicators ranged between 1.539 and 4.762. Hence, there was no significant multicollinearity among indicators.

The r-squared value of the model showed that the other latent variables explained 55.8% of the variance in behavioural intention to use mobile banking as shown in Table 8.

Table 8. R-Squared Values of the Model

	R Square	R Square Adjusted
Behavioral Intention	0.558	0.549

In analysing structural models, the model fit should be examined. The threshold to look at are the following: (1) standard root mean square residual (SRMR) to be below 0.10 as suggested by Ringle et al. (2015), (2) normed fit index (NFI) to be above 0.90; and (3) root mean squared residual covariance matrix of the outer model residuals (RMS Theta) to be below 0.12. The values of the saturated model revealed in Table 9 indicate that the model fit could be improved in succeeding research.

Table 9. Model Fit Summary

	Saturated Model
SRMR	0.056
NFI	0.832
rms Theta	0.227

After determining the reliability, validity, multicollinearity and goodness-of-fit indicators of the proposed model, its paths can be analysed with greater confidence. Structural equation modelling was used to test H1 to H4. Table 10 features path estimates and p-values which was the result of the PLS algorithm and bootstrapping (J=10,000) procedure performed through SmartPLS 3.0 (Hair et al., 2014; Lowry & Gaskin, 2014).

Table 10. Hypothesis 1-4 Test Results

Paths	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV)	P-Values	Decision
H1: Perceived Ease of Use -> Behavioral Intention	0.250	0.243	0.081	3.110	0.002	Supported
H2: Perceived Usefulness -> Behavioral Intention	0.264	0.272	0.070	3.744	0.000	Supported
H3: Social Influence -> Behavioral Intention	0.179	0.178	0.059	3.013	0.003	Supported
H4: Trust Propensity-> Behavioral Intention	0.270	0.272	0.057	4.761	0.000	Supported

Results in Table 10 show that perceived ease of use, perceived usefulness, social influence, and trust propensity were found to have statistically significant positive influence on behavioural intention to use mobile banking. Therefore, H1, H2, H3 and H4 were supported.

The result implies that clients who believe that the application is easy to use are likely to adopt mobile banking. This conclusion is in line with the current body of literature that the perceived ease of use increases the adoption of recent technology (Davis, 1989; Alavi & Ahuja, 2016; Alksasbeh & Alqaralleh, 2017; Gu et al., 2009; Hanafizadeh et al., 2014; Koksai, 2016; Kumar et al., 2017; Makayeza, 2017; Mathew et al., 2014; Munir & Ilyas, 2017; Mutahar et al., 2017; Richa Priya et al., 2018; Sharma et al., 2017; Singh & Srivastava, 2018).

Similarly, perceived usefulness was found to have a significant effect on behavioural intention to use mobile banking. Individuals who view mobile banking to be useful are likely to adopt the service. This conclusion substantiates the current body of literature on the influence of perceived usefulness on acceptance of mobile banking (Alavi & Ahuja, 2016; Alksasbeh & Alqaralleh, 2017; Gu et al., 2009; Hanafizadeh et al., 2014; Koksai, 2016; Kumar et al., 2017; Makanyeza, 2017; Mathew et al., 2014; Munir & Ilyas, 2017; Mutahar et al., 2017; Richa Priya, et al., 2018; Shaikh et al., 2018; Sharma et al., 2017).

The study found that social influence has a positive effect on behavioural intention to use mobile banking. This implies that the individuals who have the intention to use mobile banking are those with friends, relatives or people close to them would agree to use mobile banking. This result reinforces the findings from Ahmad, 2018, Kumar et al., 2017, Makanyeza, 2017, Shaikh et al., 2018, Sharma et al., 2017 and Singh and Srivastava, 2018.

The study established that trust propensity positively influences behavioural intention to use mobile banking. As customers perceive high trust propensity, they tend to build trust and become more willing to use mobile banking. This finding is in accordance with the studies of Gimun et al., (2009), Zhou (2011) and Kumar et al. (2017).

Table 11. Hypothesis 5-8 Test Results

	B	Sig. (2-tailed)	Standardized Coefficients Beta
(Constant)	3.86	.001	
Age			
1 = 22-37, 0 = 18-21	0.70	.001	.352
1 = 38-53, 0 = 18-21	0.16	.001	.069
1 = 54 and above, 0 = 18-21	0.19	.001	.035
Gender			
1 = Male, 0 = Female	-0.02	.001	-.011
Education			
1 = BD, 0 = HS	-0.15	.001	-.070
1 = GS, 0 = HS	-0.21	.001	-.083
Income			
1 = Php 10,001 – 50,000, 0 = Php10K & below	-0.16	.001	-.076
1 = Php 50,001 – 100,000, 0 = Php 10K & below	0.18	.001	.070
1 = Php 100,001 and above, 0 = Php 10K & below	0.57	.001	.123

Dependent Variable: Behavioral Intention

Table 11 shows that 22 – 37 years old, 38 – 53 years old, and 54 years old and above age brackets have higher behavioural intention than 18 – 21 years old age bracket. The value of standardized coefficients beta (0.352) reflected that 22 – 37 years old age bracket has a higher behavioural intention than age 38 – 53 years old age bracket. The latter (38 – 53 years old age bracket) has a higher behavioural intention than age 54 years old and above age bracket. The results were all significant at 5% level proving that there are significant differences in behavioural intention to use mobile banking due to age. Thus, the study revealed that younger individuals are more inclined to use mobile banking. This finding supports the studies of Koksai (2016) and Sharma (2017).

Male has a higher behavioural intention than female. The female has decreasing behavioural (lower) intention than the males at 5% level of significance. The result that male respondents are more likely to use mobile banking corresponds to the study of Sharma (2017).

High School graduates have a lower behavioural intention than respondents with bachelor-degree graduates and Graduate Studies. Bachelor-Degree graduates have higher behavioural intention than Graduate Studies respondents. The findings that individuals who have completed bachelor's degree and reached Graduate Studies have higher behavioural intention than those who only completed High School level is in line with the study of Sharma (2017).

Respondents with an income of Php 10,000 and below has lower behavioural intention than those receiving an income of Php 10,001 – 50,000. Income group with Php 100,001 and above has higher behavioural intention than the rest of the income groups. The result on clients with higher monthly income have higher behavioural intention to use mobile banking is in line with the study of Koksai (2016).

According to the arguments from studies of Cruz et al. (2010), Mathieson (1991) and Shaikh and Karjaluoto (2015), there are mixed results on the factors influencing the adoption of mobile banking and other innovations. Results of the independent factors differ between markets, countries, contexts, time and types of innovations (Makayeza, 2017).

CONCLUSION

Based on the empirical results, this study offers suggestions to increase intention to use mobile banking. First, perceived ease of use has a positive effect on the behavioural intention to use mobile banking, and so banks should also ensure mobile banking application appear simple, easy to operate and compatible with their lifestyle and needs. Flyers can be used as a simple guide in using the service. Second, since perceived usefulness positively influences intention to use mobile banking, banks should make all efforts to make mobile banking highly useful where entire possible transactions can be conducted through the mobile phone. Banks should inform clients of the usefulness of mobile banking through aggressive marketing promotions. Third, social influence can be used to influence the intention to use mobile banking. As clients interact socially, they may influence others to use mobile banking. This service should be a tool for enhancing a person's social image or status in his/her circle. Hence, banks should encourage influential people in the society. Convinced opinion leaders and celebrities can motivate others. Social networks like Facebook can drive users to adopt mobile banking whichever generation or age group they belong. Fourth, because trust is a critical antecedent factor, banks need to create an atmosphere of secure banking when using the service in order to deal with trust. They should advise clients that the security measures are in place to guard against hacking and cyber theft. Also, they need to inform clients as to how secure or safe the system to increase the confidence in using mobile banking. Lastly, the findings suggest that respondents with matured age (22 years old and above), male, at least Bachelor's degree graduate and receiving an income higher than Php 10,001 have higher behavioural intention. As to the results of the demographic factors, advertisements or promotional tools should highlight old individuals, female regardless of education achieved and income. Endorsers with said characteristics may influence the increase in mobile banking adoption.

For researchers, this study provides a foundation for the further advancement of technology adoption. By specifying these relationships, it challenges the significant gap in adoption research. This study has some limitations which should be addressed in future studies. First, the four constructs used in the study can be integrated with attitude, perceived risk and facilitating conditions to provide a more in-depth analysis of mobile banking acceptance. The demographic profile may be used as moderating variables. Second, the sampling technique

employed in the study may have produced a sample which that might not be a representation of the entire population. Future research can improve on this limitation by increasing the sample size, administer the research using different survey methods and sampling techniques. Finally, a significant limitation which is shared by many consumer adoption studies is that it can only measure adoption intention and not actual behaviour. Hence, future studies should investigate the relationship between adoption intention and actual usage behaviour.

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