Factors Determining Mobile Banking Adoption in Mauritius

Vidisha Gunesh Ramlugun
Department of Finance and Accounting, University of Mauritius, Mauritius
Harsha Issuree
Student, Department of Management, Faculty of Law and Management, University of Mauritius

Abstract:
This study aims at providing an insight on the factors influencing behavioural intention towards M-banking adoption in Mauritius. Five factors which influence customers' behavioural intention in the adoption of mobile banking were identified from the Extended Technology Acceptance Model (TAM). A self-administered questionnaire and an online survey platform were used for primary data collection. The findings of the study indicated that perceived usefulness, perceived ease of use, perceived credibility, perceived self-efficacy, had a positive relationship on behavioural intention to adopt mobile banking services. Conversely, the perceived financial cost was the only factor found to be insignificant. The main limitation of the study is that it focuses on only five constructs influencing behavioural intention towards M-banking adoption. Since the field of M-banking is relatively an innovative and developing one, the integration and examination of additional constructs would provide a better understanding of M-banking acceptance. The results obtained from this study may help financial institutions to better craft their strategies to prompt potential customers in adopting mobile banking. In addition, the paper purports to contribute to the scarce literature on M-banking in Mauritius.

Key words: M-banking, Extended TAM, Mauritius

1. Introduction

Technological advancement has proved to be a panacea for the success of all businesses today. Likewise, banks have understood that if they want to remain competitive, they will have to align their products to customers' needs. Disruptive technologies have transformed the way banks reach out to customers. Jeyabalan (2013) suggests that mobile banking (M-banking) presents itself as one of the most efficient channels available to customers who want fast and effective service, anytime and anywhere. Banking institutions have started to expand their M-banking services with the aim of meeting consumer demands and improving consumer experiences with this relatively new technology. Furthermore, one of the many advantages of M-banking is that it provides consumers with the opportunity to access round the clock banking services via a mobile device, tablet or a mobile phone (Crosman, 2011). However, while it is believed to be an evolution of internet banking, M-banking has not yet established itself as massively as internet banking (Koenig-Lewis et al, 2010). In spite of the purported advantages of M-banking, its acceptance among consumers has fallen short of industry's expectations. Nonetheless, as any other technological advancement, M-banking comes with its own set of benefits and challenges and consequently has become a debatable issue amongst the 'educated' and 'professionals'. Whilst some argue that transactions carried out on the internet or through other similar technologies are not safe and practical, others prefer to take a more optimistic approach by categorising M-banking as safe, flexible and fast (Chowdhury and Ahmmad, 2011). Earlier studies conducted on M-banking have conveyed a set of interesting and varying results. Wu and Wang's (2005) study on middle class populations revealed that the cost of M-banking was not as significant to them as was the perceived "risk, compatibility and usefulness" of the service. On the other hand, Karnani (2009) argues that cost plays a major role in the choice of M-banking. Moreover, the study carried out by Sripalawat et al. (2011) investigated positive and negative factors which influence the acceptance of M-banking in Thailand. Positive factors found were subjective norms, perceived usefulness, perceived ease of use, and self efficacy while negative factors were device barrier, perceived risk, lack of information, and perceived financial cost. In addition, from a managerial perspective, M-banking offers new opportunities for banks. Luo et al., (2010) suggest that M-banking provides a platform for banks to reduce operating costs, moderate transaction errors as well as possible frauds, produce additional revenue in the form of commissions and service fees, and improve consumer retention and brand loyalty. While literature abound on factors influencing M-banking adoption in developed countries, limited research has been conducted in small island developing states. For instance, the study conducted by Ramdhony and Munien (2013) in Mauritius fails to investigate important areas such as perceived risk, perceived credibility, and

perceived financial cost. Prior research suggests that these factors have an important impact on adoption levels. Hence, it is hoped that this research will bridge in the gap and would provide insightful guidelines that could determine factors influencing the intention to use M- banking in Mauritius. Furthermore, unlike internet banking, M-banking, has not seen a fast evolution and hence is considered to be at its infancy stage in Mauritius. For instance, although M-banking has already been launched, so far only four banks have introduced M-banking as one of their core services. Therefore, the main objective of the study is to investigate factors influencing M-banking adoption and whether Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Perceived Risk (PR), Perceived Self-efficacy (PSE) and Perceived Financial costs (PFC) influence M-banking adoption. The study aims to find out which critical success factors affect M-banking adoption with the aim of assisting banks in crafting appropriate strategies to attract customers to this new service.

2. Review of Literature and Hypothesis Development

2.1. Extended Technology Acceptance Model
Technology Acceptance Model (TAM) has been one of the most frequently used frameworks when it comes to investigating the factors that influence the adoption of information systems. Developed from Fishbein and Ajzen's existing Theory of Reasoned Action (TRA), TAM studies factors which influence consumers' intentions of accepting or rejecting information systems (Wu and Wang, 2005). The model advocates that adoption of a new information system can be explained by two factors: perceived usefulness and, perceived ease of use. The widespread acceptance of TAM is justified by the explicit approach it uses to address factors that influence consumers' reasons of using particular information systems, while TRA is more of a general theory of human behaviour (Mathieson et al., 2001). One benefit that comes from using TAM or extended TAM is that these models have broadly been tested and validated which lead to their widespread acceptance. Another advantage is that these models can easily be modified and/or extended by using other theories or constructs (Venkatesh and Davis, 2000; Luarn and Lin, 2005). Nevertheless, TAM has its weaknesses and cannot be the sole model/method used to try to understand factors that influence consumers' acceptance (Moon and Kim, 2001). Based on results obtained from prior studies, one of the challenges of TAM is the lack of some vital variables that influence acceptance, such as, "trust-based construct and resource-based construct" (Luarn and Lin, 2005). Singh et al., (2010) propose that perceived usefulness and perceived ease of use are the main components of new technology acceptance even though they cannot explicitly explain consumers' attitude and behaviour when it comes to M-banking. This leads to the addition of some constructs to the original TAM with the aim of aiding in the understanding of information system acceptance and usage (Gefen et al., 2003; Wang et al., 2003; Luarn and Lin, 2005). As a result, many other extensions to the original model were suggested (Schepers and Wetzels, 2007; King and He, 2006; Wang et al., 2003). For instance, Venkatesh and David (2000), proposed an extension of TAM, referred to as TAM2 which demonstrates that acceptance of technology is somewhat based on the feeling of what consumers expect from others. The model includes a few social influence processes such as subjective norms, voluntariness, and image as well as cognitive instrumental processes such as job relevance, output quality and result demonstrability. Another significant extension to the model was the addition of trust as a separate factor (Gefen et al., 2003). Likewise, Luarn and Lin (2005) introduced perceived credibility, perceived financial cost, and perceived self-efficacy as an extension of TAM. They suggest that these additions provide a larger platform to aid in the investigation and understanding of the behavioural intentions of consumers in the acceptance of M-banking. Consequently, TAM, after extension, is made up of five fundamental factors which are: perceived usefulness, perceived ease of use, perceived credibility, perceived self-efficacy and perceived financial cost (Luarn and Lin, 2005), which will be investigated in this study.

2.2. Perceived Usefulness
Being one of the most important constructs of TAM, perceived usefulness is defined as being "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis et al., 1989).Within the context of mobile service, perceived usefulness can be described as how well mobile services can be incorporated in day-to-day activities. Kleijnen et al. (2004) suggest that when acceptance grows, the intention to use these services will also automatically grow. According to Kim et al., (2003), an individual usually evaluates the consequences of his/her behaviour and consequently makes a choice based on the desirability of perceived usefulness. This argument is also supported by Luarn and Lin (2005) who suggest that perceived usefulness significantly impacts on the development of initial willingness to use M-banking. Using M-banking services gives the opportunity to consumers to perform banking operations in any location and at any time. Once a consumer feels that such services are directly beneficial to his or her personal and business life, then he or she will be positively influenced to keep using such services (Singh et al., 2010; Lin 2011; Barkhi et al., 2008; Lee et al., 2008; Chung and Kwon, 2009; Luarn and Lin,2005). According to Bhatti (2007), perceived usefulness will hence influence consumers' intentions to accept and use a service, which in this particular context is the M- banking service. In line, extensive research has also shown that perceived usefulness has a strong positive relationship towards behavioural intention (Koeing et al., 2010; Wang et al., 2008; Curran and Meuter, 2005; Nysveen et al., 2005; Cheong and Park, 2005; Yu-Bin Chui et al., 2005). The above-mentioned studies support the claim that perceived usefulness is an important factor when it comes to understanding individual responses regarding information technology. Based on this claim, it can be inferred that it is highly probable that consumers use M- banking services mainly because they find it useful and convenient. Based on this construct, the following proposition is made:

- H1: Perceived usefulness has a direct effect on behavioural intention to use mobile banking.

2.3. Perceived Ease of Use

Davis (1989) describes perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort." A system which is seen as effortless to use will lead to more system usage and will consequently lead to more acceptance on behalf of consumers (Selamat et al., 2009; Teo 2000; Morris and Venkatesh, 2000). Other studies also give support that the greater the perceived ease of use, the more likely will be its rate of adoption and usage by customers (Chung and Kwon, 2009; Amin, 2009., Lee et al., 2007; Luarn and Lin, 2005; Kleijnen et al., 2004; Ramayah et al., 2003). If M-banking services are easy to learn and use, it will positively affect the consumers' intentions of using these (Singh et al., 2010). As far as M-banking is concerned, consumers may find the accompanied services as inconvenient if the system is not user-friendly. In this case, information is fundamental and should clearly include details of the products and services, benefits attached, as well as guidelines on how to use the services. This has a high chance of facilitating the transition between an inconvenient service to a user-friendly one (Wang et al., 2003). Moreover, Riquelme and Rios (2010) suggest that perceived ease of use affects consumers' attitudes toward the adoption of M-banking since is makes use of a complicated system when it comes to performing banking transactions via a small device. However, mixed results have been reported with respect to the rate of adoption of M-banking. Some studies have reported a negative relationship between perceived ease of use and behavioural intention. For instance, studies conducted by Koeing-Lewis et al., (2010) and Pikkarainen et al., (2004) reported no relationship between perceived ease of use and behavioural intention. On the other hand, prior research supports the hypothesis that perceived ease of use significantly affects intention of use (Norzaidi et al, 2009). In view of the above, the following hypotheses are developed:

- H2: Perceived ease of use has a direct effect on behavioural intention to use mobile banking

2.4. Perceived Credibility

Ba and Pavalou (2002) define perceived credibility in the context of M-banking as being "one's judgement on the privacy and security issues of mobile banking." Moreover, credibility is defined by Wang et al. (2003) as "the extent to which a person believes that the use of M-banking will have no security or privacy threats". Research on the banking industry reported that fear of lack of security and privacy concerns serves as a "stumbling block" in the acceptance of M-banking (Howcroft et al., 2002). Consumers' intentions to use M-banking services are most likely to be affected by perceived credibility. It may have a negative impact on consumers' acceptance of a service for past research found that the perceived credibility significantly affects intention of usage (Wang et al., 2003). It is generally agreed that when executing mobile commerce applications, security is the most important factor to be considered. Khodawandi et al (2003) identified 5 major security factors which may lead to successful mobile financial transactions, namely; confidentiality, authentication, integrity, authorization, and non-repudiation. Likewise, Pikkaranein et al., (2004) state that results from other surveys has confirmed that credibility (security and privacy) and risk are main concerns of consumers. In addition, Luarn and Lin (2005) highlighted that when there is a deficiency in appropriate credibility on the part of financial service providers, then there will be a definite lack of trust on the part of consumers when it comes to exposing their finances and divulging their personal information to a third party. The lack of perceived credibility is clear since potential consumers show evident anxiety at the thought of their personal information and/or money being transferred to third parties without their knowledge (Luarn and Lin, 2005). According to Howcroft (2002), consumers often worry that M-banking is risky to them mainly because there is a possibility of the divergence of their personal and financial information. Studies in the area of M-banking have also reported that perceived credibility is significantly related to the adoption of M-banking (Wang et al., 2006). Hence, lack of credibility diminishes the possibility of adoption (Luarn and Lin, 2005). Koenig-Lewis et al. (2010) conclude that credibility has a significant negative impact on risk and consequently on intention to use M-banking. This means that the higher the credibility of a new technology (in this case, M-banking), the lower the risk associated with it hence the higher the willingness of usage. Nonetheless, Karjaluoto et al., (2002) stated that risk and security does not impede the use of m-banking. In light of the above, the following hypothesis is proposed:

- H3: perceived credibility has a direct effect on behavioural intention to use mobile banking.

2.5. Perceived Self Efficacy

Many previous academic studies (Wang et al., 2003; Agarwal et al., 2000; Venkatesh, 2000) have well documented the extent to which perceived self-efficacy is vital in Information System (IS). Perceived self-efficacy presents itself as being a major risk-factor in predicting sustainability of a new technology (Ellen et al., 1991). In the context of M-banking, perceived self-efficacy is defined as the "judgement of one's ability to use mobile banking" (Venkatesh, 2000). Agarwal et al., (2000) state that there is empirical evidence to support the casual relationship between perceived self-efficacy and behavioural intention. Luarn and Lin (2005) found that perceived self-efficacy has a significantly positive impact on behavioural intention to use IS. Luarn and Lin (2005) deem perceived self-efficacy as a necessary capability in using M-banking According to Brown et al. (2003), self-efficacy is not a direct determinant that affects individual consumer behaviour when it comes to the adoption of M-banking while Venkatesh et al., (2003) highlighted the fact that self-efficacy is an indirect determinant "captured by effort expectancy and fully mediated by effort expectancy." On the other hand, studies in the field of M-banking support perceived self-efficacy as an important determinant that influences consumers' decisions of whether or not to use M-banking (Dasgupta et al., 2011; Sripalawat et al., 2011; Luarn and Lin 2005). When consumers possess the personal ability to perform a task, they are most likely inclined to accept and use it. In other words, a consumer will be more inclined to use M-banking if he or she possesses the ability to perform it. Hanudin et al., (2012) suggest that perceived self-efficacy could be improved if consumers are to be more exposed to education programmes, seminars, or short courses in this field. These will facilitate the instillation of skills and knowledge of M-banking in individual consumers.

In respect of the above, the following hypothesis is thus proposed:

- H4: Perceived self-efficacy has a direct effect on behavioural intention to use mobile banking.

2.6. Perceived Finance Cost

Khalifa and Shen (2008) and Wang et al., (2006) propose that when it comes to the adoption of m-commerce, cost is an important factor to be considered. Perceived cost can be defined as the extent to which a person believes that the use of mobile banking will cost money, Luarn and Lin (2005). The cost of using M- banking comes in many forms and may include transaction cost such as bank charges, mobile network charges that comes from sending communication traffic (short message service (SMS) or data) as well as device cost. Perceived cost of acquisition is usually considered as one of the main barriers to the adoption of innovative new technologies. While consumers are concerned about transparent and quantifiable costs of acquisition and use, they usually also face a variety of hidden transaction costs and this is may impact negatively on their decisions when it comes to the adoption of mobile commerce (Wu and Wang, 2005). Kleijnen et al., (2004) also aver that perceived costs could be a major barrier when it comes to the adoption of M-banking. Costs have a considerable consequence on behavioural inclination to use cell phones for, business purposes (Wu and Wang, 2005). The study of Wessels and Drennan's (2010) which aimed at analysing the effect of cost on usage intention revealed a negative relationship between perceived cost and intention to use M-banking. This is further confirmed by previous studies (Khalifa and Ning, 2008; Luarn and Lin, 2005; Cruz et al., 2010; Siau and Sheng, 2005). Hence, the higher the costs of using new technologies, the lesser will be its popularity and use. Moreover, according to Sripalawat et al., (2011), it was recently found that perceived financial cost was a prominent factor that influences consumers' acceptance and adoption of M- banking. Given that cost is an extremely important factor when using an innovation, lowering the cost of use will most likely result in the adoption of the innovation by consumers who are price-conscious. Nonetheless, studies from Koeing et al., (2010), Petrova and Yu (2010), no significant relationship between cost and behavioural intention was observed. So the following hypothesis is formulated:

- H5: Perceived finance cost has a negative effect on behavioural intention to use mobile banking.

3. Data and Methodology

In order to assess factors leading to the utilisation of M-banking, self-administered questionnaires and the usage of an online platform were the main instruments used for the purposes of data collection. The questionnaire consisted of three parts. Part A included mobile banking and general banking behaviour; part B comprised of the five factors which could influence the behavioural intention towards mobile banking usage while part C gathered information on the demographic profile of respondents. The questions in the second part of the survey instrument were measured using five-point Likert-type scales, with anchors ranging from 1 (strongly disagree) to 5 (strongly agree) for all questions, except for the items measuring self efficacy, which ranged from 1 (not confident at all) to 5 (very confident). Constructs used in the questionnaire were similar to the study of Venkatesh and Davis, 2000; Wang et al., 2003; Luarn and Lin, 2005, with minor wording changes to tailor them to the M-banking context. The population of Mauritius is estimated to be 1,293,549 as at the end of 2012 and a sample size of 384 was required to achieve a confidence interval of 95% (Saunders et al., 2005). Hence, for the purpose of this study, convenience sampling method was used which is coherent with the approach adopted by several researchers in many previous studies pertaining to technology adoption (Featherman and Pavalou, 2003; Luarn and Lin, 2005, Wu and Wang, 2005; Koeing et al., 2010; Revels et al., 2010; Ramdhony and Munien, 2013). However, owing to the large sample size, a snowballing approach was also adopted, whereby respondents were requested to distribute the questionnaire to their acquaintances so as to receive a faster response. 384 questionnaires were distributed, out of which 353 were returned, and 347 were deemed to be usable. Statistical package for social scientists (SPSS version 21.0) was used to conduct the analysis. Cross tabulation were used for descriptive part of the analysis, while Pearson Correlation and Multiple Regression were used to test for the relationship between the independent and dependent variables.

4. Results

4.1. Profile of Respondents

The demographic profile of respondents is presented in table 1 below. Gender distribution comprised of 47 % male and 53 % female. The majority of respondents lie between the age group 25-34, comprising about 59.2 % of the sample. In addition, it is worthy to note that 47.7 % of the sample has an undergraduate qualification which adds to the validity of the data collected.

Attributes	n	Percentage
Gender		
Male	162	46.6
Female	186	53.4
Age group		
18 – 24 yrs old	96	27.6
25 – 34 yrs old	206	59.2
≥ 35 yrs old	46	13.2

Education level		
Primary	6	1.7
Secondary	74	21.3
Undergraduate	166	47.7
Postgraduate	102	29.3
Number of years of use		
Not Applicable	183	52.6
<1 year	34	9.8
1 – 2 years	80	23.0
3 – 5 years	51	14.7

Table 1: Demographic Profile of Respondents

With regards to the number of years of M-banking usage, 23% have been using the service for 1 to 2 years, 14.7 % have been using same for 3 to 5 years while the remaining 9.8 % users have been using the service for less than a year. It is noted that the number of adopters are relatively low in percentage and around 52 % do not use the service. This can be explained by the fact the customer adoption remains the main barrier to the development of M-banking. This can adversely impact on banks, which in turn will not be willing to further invest in the development of M-banking services if it is not significantly adopted by customers.

4.2. Factor Analysis and Reliability Analysis
A factor analysis was carried out to confirm whether the items were correctly loaded to the corresponding factors identified before. According to Hair et al, 2006, item loadings which are greater than 0.30 is considered to be significant, while those greater than 0.40 is considered to be more important and greater than 0.50 is considered to be very significant. Results show that item loadings of the independent variables are higher than 0.6. The reliability of the measurement items was tested using Cronbach's Alpha. Accordingly, all alpha values loaded were greater than 0.7 and therefore measures were considered reliable (Nunally, 1979). In addition, no substantial increases in alpha for any of the scales could have been achieved by eliminating items. The results of the factor analysis and composite reliability index are shown in Table 2.

Latent variables	Items	Factor loadings	Cronbach's Alpha
Perceived Usefulness (PU)	Using mobile banking would enable me to conduct my banking transactions more quickly	.787	0.893
	Using mobile banking would make it easier for me to conduct banking	.877	
	I would find mobile banking useful in conducting my banking transactions	.762	
Perceived ease of use(PEOU)	Learning to use mobile banking is easy for me	.901	0.929
	It would be easy for me to become skilful at using mobile banking	.831	
	I would find mobile banking easy to use	.840	
Perceived credibility(PC)	Using mobile banking would not divulge my personal information	.896	0.902
	I would find mobile banking secure in conducting my banking transactions	.868	
Perceived self efficacy(PSE)	I could conduct my banking transactions using the mobile banking systems if I had just the built-in help (system manual) facility for assistance	.655	0.819
	I could conduct my banking transactions using the mobile banking systems if I had seen someone else using it before trying it myself	.898	
	I could conduct my banking transactions using the mobile banking systems if someone showed me how to do it first	.875	
Perceived financial costs(PFC)	It would cost a lot to use mobile banking	.891	0.760
	There are financial barriers (e.g., having to pay for handset, internet access cost and communication time) to my using mobile banking	.898	
Behavioral intention(BI)	Assuming I have access to mobile banking systems, I intend to use them	.824	0.962
	Given that I may have access to mobile banking systems in the future, I predict that I will use them	.781	

Table 2: Factor Analysis and Scale Reliabilities
*Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy = 0.824; Bartlett's Test < 0.001

4.3. Correlation Analysis

Pearson correlations were carried out to examine bivariate relationships between the variables. Composite scores were computed for PU, PEOU, PC, PFC, PSE and BI. The scores were then used in further analysis. Field (2005) avers that correlation coefficients should be below 0.8 to avoid multicollinearity. No multicollinearity setback was found in this study.According to Wong and Hiew (2005), correlation values ranging from 0.10 to 0.29 are considered weak, from 0.30 to 0.49 are medium, and from 0.50 to 1.0 are strong. Results from table 3 demonstrate that all variables PEOU, PC, and PSE, except for PFC have medium to strong correlation coefficients and are significant at 0.01 levels.

	Perceived Usefulness	Perceived Ease of Use	Perceived Credibility	Perceived Self-Efficacy	Perceived Financial Cost	Behavioural intention
Perceived Usefulness (PU)	-					
Perceived Ease of Use (PEOU)	.659**					
Perceived Credibility(PC)	.445**	.337**				
Perceived Self-Efficacy (PSE)	.307**	.297**	.424**			
Perceived Financial Cost(PFC)	-.053	-.143**	-.114*	.032		
Behavioural Intention(BI)	.637**	.526**	.568**	.479**	-.018	-

Table 3: Correlation Analysis
*Note: **Correlation is significant at the 0.01 level (2-tailed)*
* Correlation is significant at the 0.05 level (2-tailed)

4.4. Regression Analysis

Multiple regression analysis was carried out in order to analyse the effect between Perceived Usefulness, Perceived Ease of Use, Perceived Credibility, Perceived Financial Cost, Perceived Self-Efficacy and behavioural intention to adopt mobile banking. In a multiple regression, the Variance Inflation Factor (VIF) is used as an indicator to check for multicollinearity. As a rule of thumb, a value of 10 is usually recommended as the maximum level of VIF (Hair et al., 1995; Kennedy 1992). As shown in Table 4, all tolerance levels are greater than 0.1 and none of the predictor variables have a VIF greater than 10, thus no multicollinearity problems exist. Hence, results show that no variable is measuring the same relationship of another variable or group variables in the same model. Moreover the F statistics report a significant relationship between the independent variables and behavioural intention (F $(5,342) = 86.699$, $p < .05$, $R2 = 0.559$, R2 adjusted = 0.553). The analysis shows that PU (t = 7.097, $p < 0.05$), PEOU (t = 2.887, $p < 0.05$), PC (t = 6.504, $p < 0.05$), PSC (t = 2.085, $p < 0.05$) significantly impact on behavioural intention to adopt mobile banking. However, PFC (t = 1.27, ns) had no significant relationship with behavioural intention. Therefore H1, H2, H3 and H4 are supported. PFC was found to have no significant relationship with behavioural intention and therefore H5 is not supported.

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.155	.233		-.666	.506		
Perceived Usefulness(PU)	.406	.057	.359	7.097	.000*	.505	1.980
Perceived Ease of Use(PEOU)	.166	.057	.141	2.887	.004*	.542	1.843
Perceived Credibility(PC)	.265	.041	.279	6.504	.000*	.700	1.430
Perceived Self-Efficacy(PSE)	.232	.046	.207	5.085	.000*	.782	1.279
Perceived Financial Cost(PFC)	.044	.035	.047	1.270	.205	.957	1.045
R2	0.559						
Adj. R2	0.553						
Sig. F	0.000						
F-value	86.699						

Table 4: Results of Multiple regressions Analysis
*Note: *Correlation is significant at the 0.05 level (2-tailed*

5. Discussion

The findings reveal that there is a strong significant positive relationship between perceived usefulness and behavioural intention to use M-banking. This is consistent with previous literature, according to which perceived usefulness have a strong positive relationship with regards to behavioural intentions (Koeing et al., 2010; Wang et al., 2008; Cheong and Park, 2005; Yu-Bin Chiu et al., 2005; Curran and Meuter, 2005; Nysveen et al., 2005). M-banking can be very useful to customers in the sense that they can conduct their banking transactions 24 hours a day. Thus, customers are likely to develop a positive attitude and adopt M-banking services if they find that the service useful and beneficial to them in their daily activities (Barkhi el al., 2008; Chung and Kwon, 2009; Laurn and Lin, 2005). The results also reveal that perceived ease of use is significantly related to the behavioral intention to use m-banking. This is consistent with prior studies of Selamat et al., (2009) and Teo (2001), who reckoned that people are more likely to accept and use a system which is perceived to be easy to use. Similarly, prior research has confirmed that a greater perception of ease of use will lead to a higher probability for bank customers to adopt mobile banking (Chung and Kwon, 2009; Guriting and Ndubisi, 2006; Luarn and Lin, 2005; Kleijnen et al., 2004; Ramayah et al., 2003). Similarly, perceived credibility was found to have a positive relationship with M-banking adoption. Hence, it can be posited that when mobile banking is perceived as secure, the adoption rate by bank customers would be higher. The findings of this study is consistent with those of Hanudin (2012) and Noraizadi et al., (2011), who found that perceived credibility has an impact on behavioural intention. Security and privacy issues, which are two important dimensions of perceived credibility, have to be sufficiently developed in order to increase the likelihood of M-banking adoption (Rao and Troshani, 2007; Luarn and Lin, 2005; Wang et al., 2003). Likewise, bank customers' are more likely to adopt M-banking services given that it is secure. Furthermore, findings demonstrate that there is a medium positive relationship between perceived self-efficacy and behavioural intention to use m-banking. Accordingly, the greater the ability perception to succeed in using M-banking, the higher will be its adoption rate. The result is consistent with the findings of previous studies which reported that perceived self-efficacy has a positive effect on behavioural intention (Wang et al., 2003; Luarn and Lin, 2005). This finding is further supported by Dasgupta et al., (2011), Sripalawat et al., (2011), Agarwal et al., (2000), Venkatesh (2000) and Luarn and Lin (2005). On the other hand, there is no significant relationship between perceived financial cost and behavioural intention to use M-banking. This could mean that respondents might not view cost as a barrier to the usage of mobile banking services. This finding is consistent with Petrova and Yu 2010 and Koeing et al., 2010, who also did not find cost to have a direct effect on respondent's m-banking adoption. A possible explanation to this, could be that people might possibly outweigh the cost factor to mobile banking utility, benefits in case of an emergency or urgent need. Moreover, respondents might also find the cost of mobile banking in Mauritius to be affordable, thus the latter not being a major barrier to mobile banking usage. This is contradictory to the findings of previous authors (Khalifa and Ning, 2008; Wessels and Drennan, 2010; Cruz et al., 2010; Luarn and Lin, 2005; Siau and Sheng, 2003) who found that Perceived Cost negatively affects the intention of mobile banking usage.

6. Managerial Implications

This study reveals that perceived usefulness, perceived credibility, perceived self efficacy and perceived ease of use in their order of influencing power, were the salient features in predicting consumers' intention to adopt mobile banking. Therefore, if banks want to increase the rate of adoption among users of mobile phones, they should aim at increasing consumers' awareness about, the usefulness, credibility, effectiveness and advantages of using mobile banking. For instance, the importance of the perceived usefulness of the intention to adopt and use M-banking highlights the need for banking organisations to be proactive and strive to show existing consumers as well as potential consumers the ways in which M-banking may improve their daily lives should they wish to achieve the full potential of M-banking. Banking organisations will attract more customers if they were to simplify the usage of mobile banking services while continuing to design more user-friendly system interfaces. Findings suggest that consumers who are highly knowledgeable about M-banking are more likely to be readily prepared to use its services. Thus, it is in the benefit of banking organizations to provide a complete user-friendly manual on M-banking which provides a platform for existing consumers as well as potential consumers to better understand the characteristics and benefits of M-banking. Also, in the aim of enhancing self-efficacy, banking organizations may start "training sessions" and "awareness campaigns" on M-banking to facilitate familiarity with mobile technologies among existing as well potential consumers. It is vital for banking organizations and service providers to demonstrate higher security in the delivery of M-banking services as this may help in yielding higher consumers' acceptance and adoption. It would be advisable for banking institutions to invest in security measures such as firewalls, intrusion detection and other applicable security software. Banking institutions might find it beneficial to ensure optimum development and enforcement of other security devices related to M-banking.

7. Limitations and Future Research

Despite the fact that M-banking services have been launched a few years back, the rate of adoption of M-banking is still low in Mauritius. Thus, based on the Extended Technology Acceptance Model, the paper has examined the relationship between perceived usefulness, perceived ease of use, perceived credibility, perceived financial cost, perceived self-efficacy, and behavioural intention. Findings revealed that there is a positive relationship between perceived usefulness, perceived ease of use, perceived credibility, perceived self-efficacy, and behavioural intention. The results also demonstrate that respondents will be more likely to accept M-banking services if the M - Banking is found to be an easy and fast way of conducting banking transactions. It can also be concluded that the probability of adoption rate will increase if customers find M-banking services convenient and relatively easy to use. Likewise, the same holds true for perceived credibility whereby customers are more likely to develop a positive behavioural intention

towards M-banking adoption if they perceive M-banking to be secure and effective. Furthermore, perceived financial cost was the only factor found to be insignificant in this study. This research purports to provide financial institutions with information on factors influencing customers to adopt M-banking services. This will help them craft appropriate strategies accordingly so as to encourage more customers to adopt these services. The main limitation of the study is that it focuses on only five constructs influencing behavioural intention towards M-banking adoption. Since the field of M-banking is relatively an innovative and developing one, the integration and examination of additional constructs would provide a better perceptive of M-banking acceptance. In addition, the model studied is cross-sectional and the adoption of a longitudinal study would be more beneficial in predicting the factors likely to influence behavioural intention in the M-banking arena. The increase in experience plays a significant role in influencing individual's perceptions over time (Mathieson el al., 2001). Thus a longitudinal study will enable researchers and practitioners have a better understanding of M-banking adoption behavior. This would also contribute to the enhancement of the "causality" and "interrelationships" amidst variables, which are significant in the understanding of mobile banking acceptance. In addition, the study did not test the moderating effects of demographic characteristics (Gender, Age, and Education) onto M-banking behavioural intention which could be used in future research.

8. References

1. Agarwal, R., Sambamurthy, V. & Stair, R.M. (2000). Research report: The evolving relationship between general and specific computer self-efficacy-an empirical assessment, Information systems research, 11 (4), 418-430.
2. Amin, H. (2009). An analysis of online banking usage intentions: an extension of the technology acceptance model. International journal of business and society, 10 (1), 27-40.
3. Ba, S. & Pavlou,P.A. (2002). Evidence of the effect of trust building technology in emerging markets: price premiums and buyer behavior. MIS Quarterly, 26 (3), 243-268.
4. Barkhi, R., Belanger, F., & Hicks, J. (2008). A model of the determinants of purchasing from virtual stores. Journal of organizational computing and electronic commerce, 18 (3), 177-196.
5. Bhatti, T. (2007). Exploring factors influencing the adoption of mobile commerce. Journal of internet banking and commerce, 12 (3), 1-13.
6. Brown, I., Cajee, Z., Davies, D., & Stroebel, S. (2003). Cell phone banking: predictors of adoption in South Africa – an exploratory study. International journal of information management, 23, 381-394.
7. Cheong, J.H. & Park, M.C. (2005). Mobile internet acceptance in Korea. Internet research, 15 (2), 125-140.
8. Chowdhury, S. & Ahmmad, N. (2011). Factors affecting consumer participation in online shoing in Malaysia: the case study of university students. European journal of business and economics, 5 (4), 49-53.
9. Chung, N. & Kwon, S.J. (2009). The effects of customers' mobile experience and technical suort on the intention to use mobile banking. Cyber psychology and behaviour, 12 (5), 539-543.
10. Crosman, P. (2011). Banks Have Yet to Create the Killer A for Mobile Banking - Bank Systems & Technology. [ONLINE] Available at: http://www.banktech.com/channels/banks-have-yet-to-create-the-killer-a/229201117.
11. Cruz,P., Neto,LBF., Muñoz-gallego,P. & Laukkanen, T. (2010). Mobile banking rollout in emerging markets: evidence from Brazil. International Journal of bank marketing, 28 (5), 342-371
12. Curran, J.M. & Meuter, M.L. (2005). Self-service technology adoption: comparing three technologies. Journal of services marketing, 19 (2), 103-114.
13. Dahlberg, T., Mallat, N., Ondrus, J. & Zmijewska, A. (2008). Past, present and future of mobile payments research: a literature review. Electronic commerce research and alications, 7 (2), 165-181.
14. Dasgupta, S., Paul, R. & Fuloria, S. (2011). Factors affecting behavioural intentions towards mobile banking usage: empirical evidence from India. Romanian journal of marketing, 3 (1), 6-28.
15. Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13, (3), 319–340.
16. Davis, F.D., Bagozzi, R.P. & Warshaw, P.R. (1989). User acceptance of computer technology: a comparison of two theoretical models. Management Science, 35 (8), 982-1002.
17. Ellen, P.S., Bearden, W.O & Sharma, S. (1991). Resistance to technological innovations: an examination of the role of self-efficacy and performance satisfaction. Journal of the academy of marketing science, 19(4), 297-307.
18. Featherman, M.S. & Pavlou, P.A. (2003). Predicting e-services adoption: a perceived risk facets perspective. International journal of human-computer studies, 59 (4). 451-474.
19. Field, A. (2005). Discovering statistics using SPSS, 2nd ed., London: sage.
20. Gefen, D., Karahanna, E. & Straub, D.W. (2003). Trust and tam in online shopping: an integrated model. MIS Quarterly, 27 (1), 51-90.
21. Guriting, P. & Ndubisi, N.O. (2006). Borneo online banking: evaluating customer perceptions and behavioural intention. Management research news, 29(1), 6-15.
22. Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1995). Multivariate data analysis (3rd ed). New York: Macmillan.
23. Hair, J.F.Jr., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2006). Multivariate data analysis, sixth ed. Prentice-hall international, New Jersey.

24. Hanudin, A., Rostinah, S., Masmurniwati, M.A., & Ricardo, B. (2012). Receptiveness of mobile banking by Malaysian local customers in Sabah: an empirical investigation. Journal of internet banking and commerce, 17 (1), 1

25. Howcroft, B., Hamilton, R., & Hewer, P. (2002), Consumer attitude and the usage and adoption of homebased banking in the United Kingdom. International journal of bank marketing, 20, 111-121.

26. Jeyabalan, K. (2013), A study on mobile banking in nationalised banks with reference to Coimbatore city, International refereed research journal,IV, 1(2, 37-42)

27. Karnani, A. (2009). Romanticizing the poor, available at: http://www.ssireview.org/pdf/romanticizingthe poor.pdf (accessed on 20 January 2013).

28. Kim, H.W., Chan, H.C. & Gupta, S. (2007). Value-based adoption of mobile internet: an empirical investigation, available at: http://dx.doi.org/10.1016/j.dss.2005.05.009. (Accessed on 23 April 2013).

29. Khalifa, M. & Ning Shen, K. (2008). Explaining the adoption of transactional b2c mobile commerce. Journal of enterprise information management, 21, (2), 110 - 124.

30. Kleijnen, M., Wetzels,M. & Ko de Ruyter. (2004). Consumer acceptance of wireless finance. Journal of financial services marketing, 8 (3). 206.

31. Khodawandi, D., Pousttchi, K. & Turowski, K. (2003). Acceptance of mobile payment procedures in Germany. Proceedings of the 3rd international workshop mobile commerce, Augsburg, Germany.

32. Karjaluoto, H., Mattila, M. & Pento, T. (2002). Electronic banking in Finland: consumer beliefs and reactions to a new delivery channel. Journal of financial services marketing, 6 (4), 346-361.

33. Kennedy, P. (1992). A guide to econometrics. Oxford: Blackwell.

34. King, W. R.; He, J. (2006). A meta-analysis of the technology acceptance model. Information & Management, 43 (6), 740-755.

35. Koenig-Lewis, N., Palmer, A. & Moll, A. (2010). Predicting young consumers' take up of mobile banking services. International journal of bank marketing, 28 (5), 410-432.

36. Lee, K.S., Lee, H.S. & Kim, S.Y. (2007). Factors influencing the adoption behaviour of mobile banking: a South Korean perspective. Journal of internet banking and commerce, 12 (2), 1-9.

37. Lin, H.F. (2011). An empirical investigation of mobile banking adoption: the effect of innovation attributes and knowledge-based trust. International journal of information management, 31, 252-260.

38. Luarn, P. & Lin, H.H. (2005). Toward an understanding of the behavioural intention to use mobile banking. Computers in human behavior, 21 (6), 873-891.

39. Luo, X., Li, H., Zhang, J. & Shim, J.P. (2010). Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: an empirical study of mobile banking services. Decision support systems, 49 (2), 222-234.

40. Mathieson, K., Peacock, E. & Chin, W.W. (2001). Extending the technology acceptance model: the influence of perceived user resources, available at: http://dx.doi.org/10.1145/506724.506730 (accessed on 29 April 2013).

41. Morris, M.G. & Venkatesh, V. (2000). Age differences in technology adoption decisions: implications for a changing workforce. Personnel psychology, 53, 375-403.

42. Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen,V., Salmenkivi, S., Raulas, M., and Leäniemi, M. (2007). An empirical study of the drivers of consumer acceptance of mobile advertising. Journal of Interactive Advertising, 7 (2), 41-50.

43. Moon, J.W & Kim,Y.G. (2001). Extending the tam for a world –wide web context. Information and management, 38 (4), 217-230.

44. Norzaidi, M. D., & Salwani, M. I. (2009). Evaluating technology resistance and technology satisfaction on students' performance. Campus-Wide Information Systems, 26 (4), 298-312.

45. Nunally, J.C. (1978). Psychometric theory. Second ed. Mcgraw-hill, New York.

46. Nysveen, H., Pedersen, P.E. & Thorbjorsen, H. (2005). Intentions to use mobile services: antecedents and cross-service comparisons. Journal of the academy of marketing science, 33 (3), 330-346.

47. Petrova, K. & Yu, S. (2010). Sms banking: An exploratory investigation of the factors influencing future use. International journal of E-Services and mobile alications, 2 (3), 19-43.

48. Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. & Pahnila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. Internet Research, 14 (3), 224-235.

49. Ramayah, T., Jantan, M., Noor, M.N.M. & Ling, K.P. (2003). Receptiveness Internet Banking by Malaysian Consumers. Asian Academy of management journal, 8 (2), 1-29.

50. Revels, J., Tojib, D., & Tsarenko, Y. (2010). Understanding consumer intention to use mobile services. Australian Marketing Journal, 18,. 74-80.

51. Ramdhony, D. & Munien, S. (2013). an investigation on mobile adoption and usage: a case study of Mauritius, 3rd proceedings Asia-Pasific business research conference, 25-26 February 2013 Malaysia.

52. Rao, S. & Troshani, I. (2007). A conceptual framework and propositions for the acceptance of mobile services. Journal of theoretical and alied electronic commerce research, 2 (2), .61-73.

53. Riquelme, H.E. & Rios, R.E. (2010). The moderating effect of gender in the adoption of mobile banking. International journal of bank marketing, 28 (5), 328-341.

54. Saunders, M., Lewis, P. & Thornhill, A. (2005). Research methods for business students. 3rd ed. Delhi: Pearson education (Singapore) pte ltd.
55. Selamat, Z., Jaffar, N. & Ong, B.H. (2009). Technology acceptance in Malaysian banking industry, European journal of economics, finance and administrative sciences, 1 (17), 143-155.
56. Siau, K., & Shen, Z. (2003). Building customer trust in mobile commerce. Communications of the acm, 46 (4), 91-94.
57. Singh, S., Srivastava, V. & Srivastava, R.K. (2010). Customer acceptance of mobile banking: a conceptual framework. Sies journal of management, 7 (1), 55-64.
58. Schepers,J.A & Wetzels,M.B. (2007). Meta-analysis of the technology acceptance model:investigating subjective norm and moderation effects, Available at http://www.jeroenschepers.nl/pdf/JeroenSchepers.nl%20-%20Schepers%20and%20Wetzels%20(2007)%20-%20A%20meta%20analysis%20of%20the%20technology%20acceptance%20model.pdf.(accessed on 13 April 2013).
59. Sripalawat, J., Thongmak, A. & Ngramyarn, A. (2011). M-banking in metropolitan Bangkok and a comparison with other countries, Journal of computer information systems, 51 (3), 67-76.
60. Teo, T. S. H. (2000). Using the internet for competitive intelligence in Singapore. Comp. int. rev, 11, 61–70.
61. Venkatesh, V. (2000). Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model. Information system research, 11 (4), 342-365.
62. Venkatesh V. & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: four longitudinal field studies. Management science, 45 (2), 186-204.
63. Venkatesh,V., Ramesh, V. & Massey, A. (2003). Understanding usability in mobile commerce. Communication of the acm, 46 (12), 53-56.
64. Wang, Y.S., Lin, H.H. & Luarn, P. (2006). Predicting consumer intention to use mobile service. Information systems journal, 16 (2), 157-179.
65. Wang, Y.S. & Liao, Y.W. (2007). The conceptualization and measurement of M-commerce user satisfaction. Computers in human behavior, 23(1), 381-398.
66. Wang, C., Lo, S. & Fang, W. (2008). Extending the technology acceptance model to mobile telecommunication innovation: the existence of network externalities. Journal of consumer behaviour, 7 (2), 101-110.
67. Wessels, L. & Drennan, J. (2010). An investigation of consumer acceptance of m-banking. International journal of bank marketing, 28 (7), 547-568.
68. Wong, C.C. & Hiew, P.L. (2005). Diffusion of mobile entertainment in Malaysia: drivers and barriers. Enformatika, 5, 263-6.
69. Wu, J. & Wang. S. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. Information & management, 42 (5), 719-729.
70. Yi-Shun Wang, Yu-Min Wang, Hsin-Hui Lin, Tzung-I Tang, Determinants of user acceptance of Internet banking: an empirical study, International Journal of Service Industry Management 14 (5).
71. Yu-Bin Chiu, Chieh-Peng Lin, Ling-Lang Tang, (2005). Gender differs: assessing a model of online purchase intentions in e-tail service. International Journal of Service Industry Management, 16 (5), 416 - 435