

Factors Affecting Acceptance of Mobile Banking in Developing Countries

Ashour A. N. Mostafa & Bilal Eneizan

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v8-i1/3812>

DOI: 10.6007/IJARBSS/v8-i1/3812

Received: 04 Jan 2018, Revised: 29 Jan 2018, Accepted: 31 Jan 2018

Published Online: 06 Feb 2018

In-Text Citation: (Mostafa & Eneizan, 2018)

To Cite this Article: Mostafa, A. A. N., & Eneizan, B. (2018). Factors Affecting Acceptance of Mobile Banking in Developing Countries. *International Journal of Academic Research in Business and Social Sciences*, 8(1), 333–344.

Copyright: © 2018 The Author(s)

Published by Human Resource Management Academic Research Society (www.hrmars.com)

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen

at: <http://creativecommons.org/licences/by/4.0/legalcode>

Vol. 8, No.1, January 2018, Pg. 333 - 344

<http://hrmars.com/index.php/pages/detail/IJARBSS>

JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at
<http://hrmars.com/index.php/pages/detail/publication-ethics>

Factors Affecting Acceptance of Mobile Banking in Developing Countries

Ashour A. N. Mostafa & Bilal Eneizan

The Higher Institute of Science and Technology, Libay. Aassistant Professor, Jadara University,
Jordan

Email: Eng.ashour.mostafa@gmail.com

Abstract

This study aimed to investigate factors influencing the acceptance of mobile banking in Libya. To assist in identifying these factors, a detailed research was carried out to identify the current problems faced by the Libyan banks customers, the acceptance of mobile banking in different countries around the world, the importance of adopting this technology to both parties: banks and customers in Libya. The sample elements consisted of 319 existing customers within the banking in Tripoli. They were selected at random depending on their willingness to participate in the research study. A survey was developed to obtain responses from various segments of the society. The findings showed that factors facilitating conditions, perceived self-Efficacy, Perceived ease of use, and perceived usefulness, and have significant impacts on consumer's behavioral intentions for the acceptance and usage of mobile banking technology in Libya.

Keywords: Mobile Banking

Introduction

As developments of technologies, both financial institutions and consumers are occupying advantages of the efficiencies which they bring. On the one hand, the cost of financial transactions have become lower when using an electronic device than at a banks branches (Garcia-Alba et al., n.d.), and the modern technologies provide for consumers the convenience to obtain a financial service wherever they may find themselves where mobile communication exists (The World Bank, 2009). If consumers value this mobility, it is possible that consumers, who have presently used electronic transactions via PCs, may accept adaptation transactions via mobile devices. After all, consumers prefer (evidence suggest) to obtain their services from various channels rather than a single one (Howcroft et al., 2002).

Although the wide adaptation of mobile devices in numerous countries around the globe, (already 70 percent in Korea, 95 percent in Finland, more than 40 million subscribers in India, and

more than 300 million in China, Gillespie (2007) it is estimated that only half of the current internet banking users would begin to use the mobile service by 2010.

This research examines to analysis the factors which can influence adaptation of mobile banking among current users of internet banking in Libya. This paper is structured as follows: First, the introduction. Second, theoretical framework and proposed model. The third and fourth sections explain the methodology and data analysis. Finally, discussion, conclusion and future research.

Theoretical Framework and Proposed Model

Perceived self-Efficacy (SE)

Compeau and Higgins (1995) conducted a study stated that self-efficacy refers to belief of user on his/her ability in executing specific tasks. Thus, self-efficacy in accordance with the mobile internet banking concept, is considered as user's critical analysis in the mobile internet banking usage. Additionally, the perceived self-efficacy and behavioural intentions were empirically verified by the underlying relationship between these two aspects (Amin et al., 2007; Yi & Hwang, 2003). These underlying relationships describe the direct link between the specific aspects involved in the consideration process where the performance of a particular aspect affects the performance of others.

Meanwhile, in the integration of Information technology with banking experiences, the perceived self-efficacy is regarding the improvement of quality, such improvements will increase the users' behavioural intention to utilize the implemented system. On the other hand, if the perceived self-efficacy is not attained the demanded standard, particularly in the system's features or by the providers that offered the services, the behavioural intention will eventually be massively decreased. Therefore, the deliberation of the underlying relationship between these aspects should be related to the implementation technology. Such relation was offered by the study of Luarn and Lin (2005) which shows the self-efficacy positive effects with the behavioural intention to use Information System. Moreover, Hernandez et al. (2009) also corroborated a research to identify the immediate positive impacts of self-efficacy on the PEOU and PU for services of the mobile banking. The study presumed that individuals will accept mobile internet banking services on the basis of their abilities to use it. In this regard, the following hypotheses are devised in this research in relations to mobile internet banking context:

Hypothesis 1: The Perceived self-efficacy has a significant impact on the Perceived Usefulness of mobile internet banking.

Hypothesis 2: The Perceived self-efficacy has a significant impact on the Perceived Ease of Use of mobile internet banking.

Facilitating Conditions (FC)

Facilitating conditions can be defined as the amount of support needed to access some information and gain some benefits from the offered services, hence, users are expected to possess the expertise, information, knowledge, and the capital to accept the implications of the technology. In this regard, compared to internet banking, mobile internet banking is still a

relatively novel concept; therefore, users need to possess some fundamental knowledge about mobile applications and mobile services in order to use offered services, particularly concerning how to access information by using the functions of the mobile across its platforms. Furthermore, mobile internet banking elucidate that the users should handle the cost pertaining the use of technology and this boosts the cost of information and communication technology (ICT). This feature distinguishes the adaption of mobile internet banking from other modes of technology adaptation. Consequently, this may hinder the successful implementation of the mobile internet banking technology; this is because, if mobile internet banking services incur a high cost on users, users will ultimately favour the traditional ways for doing their banking transactions regardless of mobile internet banking advantages. In the meantime, the study by Triandis's (1980) mentioned that facilitating conditions involve the inclusion of service types.

Furthermore, this aspect is also concerned with the extents of it influences on individuals and how it affects the use of the prospective technology, besides that, the workplace context in the implementation of technology requires the access to support and provision training based on the facilitating conditions. In relation with this, numerous studies in this research area have adopted the technology acceptance model that empirically outcome on the prospective effects on the users due to the Perceived Usefulness or Perceived Ease of Use (Amoako-Gyampah & Salam, 2004; Jiang et al., 2000; Thompson et al., 1994). Call to mind, the scope of past researches, the aspect of facilitating conditions is considered as functional combination of the degree of acceptance of the considerable innovations in information system (Jones et al., 2002; Lu et al., 2004). This aspect is warranted by researchers conducted by Hung et al. (2003) as well as Lu et al. (2004) which studied the level of acceptance of the integration of the services of Wireless Application Protocol (WAP) in Taiwan. WAP refers to the technical standards used to access information over mobile network. Consequently, the integration of WAP services has improved mobile networking environment particularly the interactions between data services. In this study, the facilitating conditions are reflected as important aspects in identifying the acceptance behaviour of individuals towards the services of wireless application protocol. Based on these findings, these hypotheses have been proposed as follows,

Hypothesis 3: Facilitating Conditions have a significant impact on the Perceived Usefulness of mobile internet banking.

Hypothesis 4: Facilitating Conditions have a significant impact on the Perceived Ease of Use of mobile internet banking.

Perceived Usefulness and Perceived Ease of Use

The Perceived Usefulness refers to the degree of user's dependence or an individual's dependence to the system offered, particularly on the improvement of the performance in the specific part. The Perceived Ease of Use is related to the belief of the user or individual in the system presented with regard to the anticipated abolition of physical stresses and mental stresses in the specific aspect. Consequently, technology acceptance model requires user's belief to decide which way or approach to take in relation to the system implemented. In return, this belief can assist the development of the purpose for the consumer to use the service or product.

Besides that, in general, Ajzen (1991) turned out that technology acceptance model is a process of adapting the Theory of Reasoned Action (TRA). This theory (TRA) was developed as an overall model in comparing to the certain nature of TAM. Thus, this study was conducted based on two main reasons pertaining to the implications of TAM: first, the predictive power of TAM which easy the application of the model in the broad nature of information system devices (Luarn & Lin, 2005; Nysveen et al., 2005; Pikkarainen et al., 2004). Moreover, TAM can facilitate the understanding of main constructs of this present study, which are the Perceived Usefulness, the Perceived Ease of Use, the attitudes towards the use and the behavioural intentions of use (BI).

In the meantime, many researchers have acknowledged that PU and PEOU constructs need to be valid in order to comprehend the user's objectives in regard the acceptance of the use of Information System in banking sector (El-Gohary, 2012; Abbas & Hamdy, 2015).

Conversely, the validity of the constructs is made up by user's dependence on the specificity of technological implication; for instance, there are certain constructs in Mobile technology that can help better reflection on the adaptation of emerging technologies (Amin, 2007). In relation to this, Examining TAM implication concerning mobile internet banking needs has required to formulate the hypotheses as follow;

Hypothesis 5: The Perceived Usefulness of mobile internet banking has a significant impact on the behavioural intentions for utilizing mobile internet banking.

Hypothesis 6: The Perceived Ease of Use of mobile internet banking has a significant impact on the behavioural intentions for utilizing mobile internet banking.

Behavioural Intention

Behavioural intention may be explained as the intended use of a system before its real use and its predictions for the future (Jiang, 2000). Many models have been developed for analysing and predicting the users' intentions mobile applications. For examples (Abbas & Hamdy, 2015) they have determinants of continuance intention factor in Kuwait communication market. Amin (2007) also studied the analysis of mobile credit card usage intentions. Luarn & Lin (2005) studied the understanding of the behavioural intention to use mobile banking. Based on TAM theory, perceived use of ease and perceived usefulness effect positively on the behavioural intention of the users (Abbas & Hamdy, 2015).

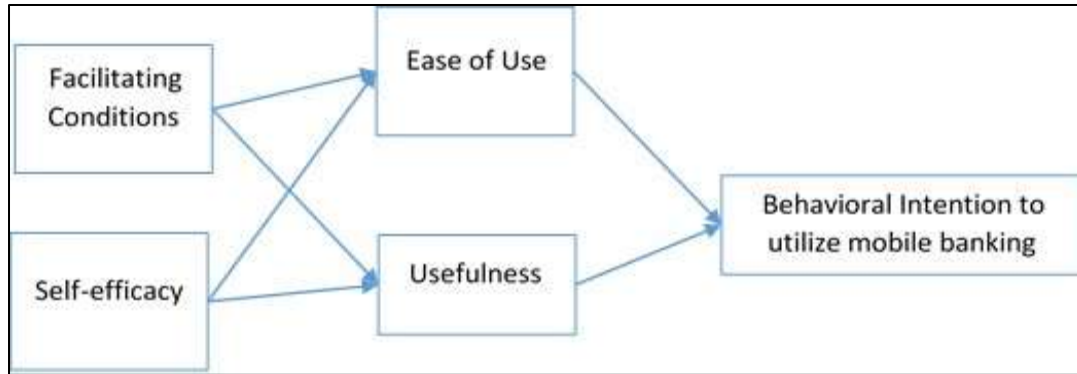


Figure 1: Acceptance Factors Model

Methodology

Quantitative approach will be used in this study to achieve the study objectives. The researcher will collect the data using questionnaire from the customers of Libyan banking in Tripoli. The aim of this study is to investigate the factors that effecting the adaptation of mobile banking in Libya by customers. In order to achieve the aim, the researcher will use the multiple linear regression analysis to identify the relationship between the external and internal factors. Statistical Package for Social Scientists (SPSS) 21 will be used to conduct the analysis.

The population represents the total number of Libyan bank's customers in Tripoli, which is estimated at 100,000 customers. A sample size of 382 existing customers was selected out of a population of 100,000. The sample elements consisted of 382 existing customers within the banking in Tripoli. They were selected at random depending on their willingness to participate in the research study. Only 319 questionnaires were received and entered to the analysis.

Scales Reliability and Validity

It is shown in Table 1 that the Cronbach's alpha values ranged between 0.71 to 0.76, where 0.76 was the top of the field of "Perceived ease of use", while 0.71 was lowest for the field of "Self-efficiency, Behavioral intention", and the value of Cronbach's alpha (0.86) is the highest value and acceptable for the application. Table 1: Result of the Internal Consistent of Tested is tested by Using Cronbach's Alpha

Dimensions	Cronbach's Alpha
Behavioral intention	0.71
Perceived ease of use	0.76
Perceived usefulness	0.73
Self-efficiency	0.71
Facilitating conditions	0.72
Total	0.86

The Sample of the Study

A collection of 319 users was consisted for the study, and they were randomly selected from the population of the study.

Gender

As shown in Table 2, the male gender percentage has reached to 41.4%, unlike the female gender that has reached to 58.6%.

Table 2: Frequency and Percentage for Gender (n=319)

Gender	Frequency	Percentage
Male	132	41.4 %
Female	187	58.6 %
Total	319	100.0 %

Table 3 shows that the "Age" of category 31-40 years has reached to (43.3%), while the 15-20 years' category has reached to lowest percentage (6.6%), as shown in table 3.

Table 3: Frequency and Percentage for Age (n=319)

Age	Frequency	Percentage
15-20	21	6.6 %
21-30	125	39.2 %
31-40	138	43.3 %
Above 40	35	11.0 %
Total	319	100.0 %

Table 4 shows the percentage for "use the mobile banking" highest reached (84.6%) for Already using mobile banking, but the lowest percentage reached (15.4%) for Not yet using it. table 4 shows that.

Table 4: Frequency and Percentage for Use the Mobile Banking (N=319)

Do you use the mobile banking	Frequency	Percentage
Already Using Mobile Banking	270	84.6 %
Not Yet Using It	49	15.4 %
Total	319	100.0 %

Hypotheses Testing

Hypothesis 1: Perceived self-efficacy has a significant impact on the Perceived Usefulness of mobile internet banking. To test the validity of the hypothesis was applied simple regression analysis, Table 5 shows that.

Table : The results of simple regression analysis for the Hypothesis 1

Model Summary				
Model	R	R Square	F	Sig.
1	.461 ^a	.213	85.731	.000

a. Predictors: (Constant), Perceived usefulness

The table 5 shows the values of (R) and (R square) are statistically significant, which indicates Perceived self-efficacy has a significant impact on the Perceived Usefulness of mobile internet banking, which indicates acceptance of the hypothesis.

Hypothesis 2: Perceived self-efficacy has a significant impact on the Perceived Ease of Use of mobile internet banking. To test the validity of the hypothesis was applied simple regression analysis, Table 6 shows that.

Table : The results of simple regression analysis for the Hypothesis 2

Model Summary				
Model	R	R Square	F	Sig.
1	.386 ^a	.149	55.557	.000

a. Predictors: (Constant), Perceived ease of use

The table 6 shows the values of (R) and (R square) are statistically significant, which indicates Perceived self-efficacy has a significant impact on the Perceived Ease of Use of mobile internet banking, which indicates acceptance of the hypothesis.

Hypothesis 3: Facilitating Conditions have a significant impact on the Perceived Usefulness of mobile internet banking. To test the validity of the hypothesis was applied simple regression analysis, Table 7 shows that.

Table 7: The results of simple regression analysis for the Hypothesis 3

Model Summary				
Model	R	R Square	F	Sig.
1	.412 ^a	.170	64.848	.000

a. Predictors: (Constant), Perceived usefulness

The table 7 shows the values of (R) and (R square) are statistically significant, which indicates Facilitating Conditions have a significant impact on the Perceived Usefulness of mobile internet banking, which indicates acceptance of the hypothesis.

Hypothesis 4: Facilitating Conditions have a significant impact on the Perceived Ease of Use of mobile internet banking. To test the validity of the hypothesis was applied simple regression analysis, Table 8 shows that.

Table 4.2: The results of simple regression analysis for the Hypothesis 4

Model Summary

Model	R	R Square	F	Sig.
1	.365 ^a	.133	48.669	.000

a. Predictors: (Constant), Perceived ease of use

The table 8 shows the values of (R) and (R square) are statistically significant, which indicates Facilitating Conditions have a significant impact on the Perceived Ease of Use of mobile internet banking, which indicates acceptance of the hypothesis.

Hypothesis 5: The Perceived Usefulness of mobile internet banking has a significant impact on the behavioural intentions for utilizing mobile internet banking. To test the validity of the hypothesis was applied simple regression analysis, Table 9 shows that.

Model Summary

Table 9: The results of simple regression analysis for the Hypothesis 5

R	R Square	F	Sig.
.256 ^a	.066	22.295	.000 ^b

a. Predictors: (Constant), Perceived usefulness

The table 9 shows the values of (R) and (R square) are statistically significant, which indicates the Perceived Usefulness of mobile internet banking has significant impacts on the behavioural intentions for utilizing mobile internet banking, which indicates acceptance of the hypothesis.

Hypothesis 6: The Perceived Ease of Use of mobile internet banking has a significant impact on the behavioural intentions for utilizing mobile internet banking. To test the validity of the hypothesis was applied simple regression analysis, Table 10 shows that.

Table 10: The results of simple regression analysis for the Hypothesis 6

Model Summary

Model	R	R Square	F	Sig.
1	.756 ^a	.571	422.068	.000

a. Predictors: (Constant), Perceived Ease of Use

The table 10 shows the values of (R) and (R square) are statistically significant, which indicates The Perceived Ease of Use of mobile internet banking has significant impacts on the behavioural intentions for utilizing mobile internet banking, which indicates acceptance of the hypothesis.

Discussion, Conclusion and Future Research

The main aim of this study is to identify and examine the factors that effecting the adoption of mobile banking from customer perspective. The findings indicated that self-efficiency and facilitating conditions effect positively on ease of use and usefulness. Therefore, H1, H2, H3, H4 were supported. In addition, the findings indicated that there is a significant impact of perceived ease of use and perceived usefulness on customer's behavioral intentions. Therefore, H5 and H6 were supported. The findings of this study were supported by previous work such as (Amoako-Gyampah & Salam, 2004; Jiang et al., 2000; Thompson et al., 1994).

The findings of this study may help the banks especially Libyan banks to consider the adoption and implementation of mobile banking services. The adoption of mobile banking will help the banks to provide high service quality to the customers, thus, the loyalty and satisfaction of customers will be also high.

Future research could be conduct the proposed model in other countries, especially developing countries. In addition, future research could be study the adoption and acceptance of mobile banking from the banks perspective.

References

- Abbas, H. A., & Hamdy, H. I. (2015). Determinants of continuance intention factor in Kuwait communication market: Case study of Zain-Kuwait. *Computers in Human Behavior*, 49, 648-657.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human. Decision Processes*, 50(2), 179–211.
- Amin, H. (2007). An Analysis of Mobile Credit Card Usage Intentions. *Information Management and Computer Security*, 15(4), 260–269.
- Amin, H., Baba, R., & Muhammad, M. (2007). An Analysis of Mobile Banking Acceptance by Malaysian Customers. *Sunway Academic Journal*, 4(1), 1–12.
- Amoako-Gyampah, K., & Salam, A. F. (2004). An Extension of the Technology Acceptance Model in an ERP Implementation Environment. *Information and Management*, 41(6), 731–745.
- Cano, M. D., & Domenech-Asensi, G. (2015). A secure energy-efficient m-banking application for mobile devices. *Journal of Systems and Software*, 84(11), 1899-1909.
- Dai, H., & Palvi, P. C. (2009). Mobile Commerce Adoption in China and The United States: A Cross-Cultural Study. *ACM SIGMIS Database*, 40(4), 43–61.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, And User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319–340.
- Elgahwash, F., & Freeman, M. (2014). Improving Online Banking Quality in Developing Nations: A Libyan Case. ACIS.
- El-Gohary, H. (2010). *E-Marketing: Towards A Conceptualization of a New Marketing Philosophy E Book Chapter*. In M. Cruz-Cunha, & J. Eduardo Varajão (Eds.), *E-Business Issues, Challenges and Opportunities for SMEs: Driving Competitiveness*. USA: IGI Global.

- Garcia-Alba, J., Wilke-Meins, R. and Navajas, S. (n.d.), M-banking: Extending the Reach of Financial Services through Mobile Payment Systems: The Multilateral Investment Fund, The Inter-American Development Fund, Washington, DC.
- Gillespie, P. (2007), "Mobile banking: does it have a future?", available at: www.forrester.com/Research/LegacyIT/Excerpt/0,7208,25430,00.htm.
- Hernandez, B., Jimenez, J., & Jose Martin, M. (2009). The Impact of Self-Efficacy, Ease of Use and Usefulness On E-Purchasing: An Analysis of Experienced E-Shoppers. *Interacting with Computers*, 21(1–2), 146–156.
- Howcroft, B., Hamilton, R. and Hewer, P. (2002), "Consumer attitude and the usage and adoption of home-based banking in the United Kingdom", *International Journal of Bank Marketing*, Vol. 20 No. 3, pp. 111-21.
- Hung, S. Y., Ku, C. Y., & Chang, C. M. (2003). Critical Factors of WAP Services Adoption: An Empirical Study. *Electronic Commerce Research and Applications*, 2(1), 42–60.
- IBP, Inc. (2015). *Malaysia Banking & Financial Market Handbook, Strategic Information and Regulations* (Vol. 1). Washington: Int'l Business Publications.
- Jiang, J. J., Hsu, M. K., Klein, G., & Lin, B. (2000). E-Commerce User Behavior Model: An Empirical Study. *Human Systems Management*, 19(4), 265–276.
- Jones, E., Sundaram, S., & Chin, W. (2002). Factors Leading to Sales Force Automation Use: A Longitudinal Analysis. *Journal of Personal Selling and Sales Management*, 22(3), 145–156.
- Kumar, P., & Ramprosad, M. (2016). *Informatics Practices for Class 11*. New Delhi: S. Chand Publishing.
- Lin, L. S., Wijaya, C. D., Cheng, L. & Satirareungchai, T. (2015). *Watching the Digital Space*. DBS.
- Lu, J., Yu, C., & Liu, C. (2004). Facilitating Conditions, Wireless Trust and Adoption Intention. *Journal of Computer Information Systems*, 46(1), 17-24.
- Luarn, P., & Lin, H. H. (2005). Toward an Understanding of the Behavioral Intention to Use Mobile Banking. *Computers in Human Behavior*, 21(6), 873–891.
- Murugiah, L., & Akgam, H. A. (2015). Study of Customer Satisfaction in the Banking Sector in Libya. *Journal of Economics, Business and Management*, 3(7), 674-677.
- Nysveen, H., Pedersen, P. E., & Thorbjørnsen, H. (2005). Explaining Intention to Use Mobile Chat Services: Moderating Effects of Gender. *Journal of Consumer Marketing*, 22(5), 247–256.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahlila, S. (2004). Consumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model. *Internet Research*, 14(3), 224–235.
- Suki, N. M., & Suki, N. M. (2011). Exploring the relationship between perceived usefulness, perceived ease of use, perceived enjoyment, attitude and subscribers' intention towards using 3G mobile services. *Journal of Information Technology Management*, 22(1), 1-7.
- (The) World Bank (2009), "The infinite potential of mobile banking", available at: <http://psdblog.worldbank.org/psdblog/2009/11/the-infinite-potential-of-mobile-banking>.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1994). Influence of Experience on Personal Computer Utilization: Testing a Conceptual Model. *Journal of Management Information Systems*, 11(1), 167–187.
- Triandis, H. C. (1980). *Values, Attitudes, and Interpersonal Behavior*. In H. Howe & M. Page (Eds.), *Nebraska Symposium on Motivation* (Vol. 27, pp. 195–259). Lincoln, NB: University of Nebraska Press. 195.

- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 425–478.
- Yi, M. Y., & Hwang, Y. (2003). Predicting The Use of Web-Based Information Systems: Self-Efficacy, Enjoyment, Learning Goal Orientation, And The Technology Acceptance Model. *International Journal of Human-Computer Studies*, 59(4), 431–449.