Open Access Library Journal
2022, Volume 9, e6458
ISSN Online: 2333-9721
ISSN Print: 2333-9705

Mobile Banking Adoption among Undergraduate Students in Kuwait University

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How to cite this paper: Alghareeb, S. (2022) Mobile Banking Adoption among Undergraduate Students in Kuwait University. *Open Access Library Journal*, **9**: e6458.
https://doi.org/10.4236/oalib.1106458

Received: March 28, 2022
Accepted: June 17, 2022
Published: June 20, 2022

Abstract

The purpose of this study was to investigate the applicability of Technology Acceptance Model (TAM) factors of usability and ease of use as possible indicators for the adoption of mobile banking services among undergraduate students at Kuwait University. The survey instrument contained validated statements from a variety of sources. The questionnaire was administered to a convenient sample of 300 students studying in classes after seeking the consent of respective instructors teaching in those classes. All the student participants cooperated and answered the questionnaire. We achieved a response rate of 100 percent. Data were coded in SPSS and analyzed for tabulation, frequencies, and measures of central tendency. In this study, validated measures of TAM were held tenable, validating this theoretical model. The results revealed that the participant perceptions supported their intention for further adoption of mobile banking. They held a positive approach to perceived usefulness, perceived risk, social impact, and design aesthetics in their TAM acceptance.

Subject Areas

Education

Keywords

Mobile Banking, TAM Factors

1. Introduction

Recently, mobile applications have made new inroads in the provision of services in diverse areas, marking an important role in improving the lives of individuals. Mobile applications have become effective tools for improving online interactions, social engagements, and, enhanced and richer transactions. Computer Agency for Information Technology of Kuwait (CAIT) reported that in 2016

there were 88% cellular mobile users whereas 72% used the Internet. The same report indicated that business companies conducted 60% of Internet banking.[1]

There has been a marked increase in transactions done online rather than visiting branches of banks. Customers can even open a new bank account using their mobile phones. Moreover, banks offer services like fee payments for schools and phone bill payments with the best customer service anytime and anywhere. Therefore, many banking institutions have shifted to mobile banking in Kuwait.

Banks have used mobile banking as an instrument to increase transactions among customers. In addition, mobile banking is considered to be instrumental in the growth of customers. This technology has offered a variety of new services including e-payment, 2-way data transmission and accessing financial information. On the other hand, mobile banking has become a viable substitute for e-banking (Shaikh and Karjalutot, 2015) [1]. In 2018, Boubyan bank experienced a high rate of mobile transactions, exceeding one million per month, which is almost equal to the number of transactions made through automated teller machines (ATM). It is expected that the usage of smart phones will increase in the coming years (Boubyan Bank, 2019)[2].

The objective of this paper is to investigate several factors that affect user's intention to adopt mobile banking in Kuwait, including the usefulness factor, risk factor, social impact and design for aesthetics. This has been achieved by using the Technology Acceptance Model (TAM).

Youth pursuing undergraduate services are the most vibrant user community for mobile applications. Banks are making a special effort for enticing this user community to the mobile applications these banks are offering.

2. Focus of Study

This study applies TAM model as the framework for investigation. The model stipulates investigation of factors behind user adoption of mobile banking. Two basic construct of the TAM model are related to usefulness and ease use, resulting in the amount of use (or adoption in this study). It implies that the study should explore the factors that encourage or discourage users in their adoption of mobile banking.

This study was conducted in a higher education of Kuwait, a member nation of the Gulf Cooperation Council (GCC). The undergraduate students of the College of Social Sciences of Kuwait University participated in this study.

3. Literature Review

3.1. Technology Acceptance Model (TAM)

This study is based on Technology Acceptance Model (TAM). This model is a

[1]Consolidated Kuwait National ICT Indicators Report (2016). Kuwait Central Agency for Information technology. Available at: https://www.e.gov.kw/sites/kgoArabic/Forms/Final_Consolidated_English_Report_single_Pages.pdf

[2]About Boubyan Bank. Available at: http://www.bankboubyan.com/en/news/boubyan-launches-all-new-mobile-banking-app/

product of many fields like sociology, psychology, business and management information systems. Compared to other approaches, TAM was perceived the most productive approach for investigating IT acceptance and use (Ajzen & Fishbein, 1975 [2], 1980 [3]). Glavee-Geo, Shaikh and Karjaluoto (2017) [4] mentioned how TAM has been widely used to explore user's ability in accepting a technology.

The goal of TAM is to explain the factors that affect use of computer acceptance. Hence, the TAM consists of two main independent variables; perceived usefulness (PU) and perceived ease of use (PEOU). The TAM has been constructed to know about user's adoption behaviors and attitudes and beliefs the users hold about certain technology (Venkatesh & Davis, 2000) [5]. Moving on to perceived usefulness, it reflects the degree to which the user realizes and believes that the new technology would help them in task performance (Davis, 1989) [6].

Legris, Ingham and Collerette (2003) [7], examined role of perceived ease of use and perceived usefulness in the use of technology. In order to provide a better explanation of user's adoption intention and behavior, an extension of TAM may be made through perceived mobility, institutional support and self-efficacy. Many mobile banking adoption studies extended the original TAM with additional factors such as perceived risk, personal innovation, perceived cost of use to match lifestyle and perceived security (Meharad & Mohammadi, 2016) [8].

Sabri (2004) [9] and Yaseen (2005) [10] applied TAM in organizations in the Arab World and found them late adopters of Internet and applications. Although Internet usage has a high percentage, many IT studies show Arabs are still not accepting IT due to many cultural and economic reasons (Abu Shanab, 2010 [11]; Al Sukkar & Hasan, 2005 [12]; Akour, 2005 [13]).

3.2. Mobile Banking

Mobile banking is a type of m-commerce (Mallat, Rossi, & Tuunainen, 2004) [14]. Donner and Tellez (2018) [15] mentioned that mobile banking has many terms such as m-payments, m-transfers and m-finance. Furthermore, mobile banking is one of the m-commerce applications that allow consumers to conduct banking services through mobile technology and products such as mobile phones, tablets, watches and other smart devices.

Mobile banking provides many services like using text in banking, accessing and doing banking transactions and services through mobile applications or bank websites. Mobile banking services were first launched in European countries in the 1990's such as Germany, Spain, Sweden and United Kingdom. The first text-based mobile banking services were introduced in Kenya.

Mobile banking services is a part of m-commerce applications and a beneficiary of the growth of mobile technology. Use of mobile banking services is not limited to only enabling consumers to do the traditional banking transactions (*i.e.* transferring, checking balance, opening new account, etc.). It also enables consumers to do advanced transactions (*i.e.* trading stocks, depositing checks, etc.). Mobile banking has powerful features and advantages when compared to

the traditional banking channels like ATMs and bank branches.

The increased use of smart technologies such as smart phones and tablets has led to the growth of mobile banking, thus providing personal experience of mobile banking services. These services include smart phones and applications that have benefitted banks in extending their reach. It also enhances customer experiences by providing services 24/7 and improving the operational efficiency by reducing customers' waiting time at bank branches (Shaikh, 2013) [16].

Even though there are many benefits in adoption of mobile banking, usage of mobile banking is not as widespread. In a study, 50% of smart phone users stated that they had never used their mobile phone in conducting banking transactions. The reasons associated with non-adoption of mobile banking services might be related to security and privacy issues (Zhang, 2018) [17].

3.3. Perceived Usefulness

Perceived Usefulness (PU) is defined as the degree to which a person believes that using a system would enhance or increase his or her performance (Glavee-Geo, Shaikh & Karjaluoto, 2017) [4]. PU allows users to perform tasks faster and to increase work productivity, performance and efficiency (Davis, 1989) [6]. The amount of information individuals received from mobile banking is an important factor that influenced adoption of this service. Also, it refers to the benefits that allow users to decide whether to adopt mobile banking in their lives (Gandhi, 2017) [18]. Hence, PU is the belief that a user adopts new technology, if the user perceives it as useful (Premkumar, 2008) [19].

During the last few years, mobile banking services have been considered effective tools to conduct transactions online as compared to traditional offline transactions (Mortimer, 2015) [20]. Mobile banking offers consumers many facilities such as conducting transactions with faster speed, avoiding waiting times, access to services 24/7, information transparency, and convenience (Akturan & Tezcan, 2012 [21]; Riquelme & Rios, 2010 [22]).

3.4. Perceived Risk

Based on the consumers' use of technology, consumer attitude is based on whether mobile banking is secure or not (Federal Reserve System, 2012) [23]. Some users have a fear of using mobile phone for payments. This fear is due to the activity of hackers, fraud, theft and losing mobile phones that contain stored data (Gandhi, 2017) [18]. Bobbitt and Dabholkar (2001) [24] found that using phones, mail-order and internet for purchasing is riskier than using traditional brick and mortar.

Public relations deal with reviewing consumer behavior and attitude towards any service offered by systems such as online banking, mobile services, and mobile banking. It refers to two important elements which are security and privacy risk (Thakur & Srivastava, 2014) [25]. Security risk is referring to users' perceptions about security of online environment in terms of payments, storing and

transmission of information (Kolsaker & Payne, 2002) [26]. Furthermore, security risk is one of the technical aspects that ensure integrity, confidentiality and authentication (Flavian & Guinaliu, 2006) [27]. Many researchers stated that security is one of the main elements to study user attitude towards online banking (Shih, 2004 [28]; Cheng, 2006 [29]; Puschel, 2010 [30]). Customers would increase their online purchasing when they feel that information on the credit card is safe (Thakur & Srivastava, 2014) [25].

Privacy risk refers to the chance where the online business environment utilizes user's personal information inappropriately violating customer's privacy (Nyshadham, 2000) [31]. According to Gerrad and Cunningham (2003) [32], customers are concerned that their profiles in banks might be shared with other banking companies and banking groups in order to sell other products.

3.5. Social Impact

Internet technology has pulled users to the social era (Bernoff & Li, 2008) [33], where every user can communicate and interact with unknown consumers (Cook, 2008) [34]. Acrand, Promtep, Brun, & Rajaobelina (2017) [35], defined sociality as the social benefits that come from communication with others like banking customers and employees through mobile phones and tablets. Sociality is a main element to deliver service quality and examining user attitude towards organizations that offer online services. Additionally, in mobile banking environments, sociality exists with banking representatives not with friends, and being connected with banking representatives that allows users to chat online at any time they may need (Nambisan & Watt, 2011) [36]. Moreover, some segments of online consumers seem to use interactive web-based features to communicate socially (Aljukhadar & Senecal, 2011) [37]. Hanafizadeh (2014) [38] established social interaction as a need to adopt many technologies like mobile banking services. By creating a forum of social platform for banks to provide customers access and facilitate customer interaction would help boost the relationship through delivering better benefits in a long-term relationship (Bauer, 2005) [39]. Also, it would enhance customer perception of website and online interaction (Cyr, 2007) [40].

3.6. Design Aesthetics

Design aesthetics is defined as the service functions for customers in mobile device (Acrand *et al.*, 2017) [35]. Design aesthetics have a direct relationship with mobile banking service quality. Website pages should effectively and adequately demonstrate page's content and should be well laid out. Graphics should be well-balanced and carefully selected to attract user's attention to a certain brand to enhance website design and performance (Rosen & Purinton, 2004 [41]; Hausman & Siepke, 2009 [42]).

Content and design provide brand identification by influencing customer's sense of aesthetics; sharing features of a brand. For example, consumers buy Ap-

ple Incorporated products which represent a lifestyle and simplicity (Acrand *et al.*, 2017) [35].

Mobile commerce considers design and aesthetics as tools that influences user's loyalty indirectly, as it affects user's intention to adopt mobile services (Chung and Shin, 2010) [43]. Urban (2009) [44] noted that website design has a positive influence on online trust. Kim and Niehm (2009) [45] stated that there is a positive relationship between user's satisfaction and website design.

4. Methodology

This study used a quantitative approach. Survey was used for data collection; a questionnaire was distributed among undergraduate students from the College of Social Sciences at Kuwait University (KU). In this section we have provided description of participants, data collection instruments, data collection mechanism, the pretest and response rate.

4.1. Participants

The undergraduate students from the College of Social Sciences at KU participated in this study. Three-hundred students from information skills and scientific research (131) courses participated in the study.

4.2. Data Collection Instrument

The questionnaire was divided into three sections. The first section included demographic information for participants including gender and age. The second section consisted of close-ended questions inquiring if the participants had a banking account, and whether they used mobile banking application. The third section included questions that examined mobile banking adoption factors using Likert scale. TAM adoption statements were taken from a variety of resources as shown in Table 1.

The statements are primarily reflective of the two constructs of *ease of use* and usefulness.

4.3. Data Collection

The questionnaire was translated into Arabic language and a faculty member revised it.

Permission of faculty members was taken for visiting classes and getting their assistance in having the questionnaire answered by the students present in class. The participant students had enrolled in the course on *information skills and scientific research* (131) offered by the Department of Information Studies. Three-hundred usable responses were collected, keyed-in and analyzed.

5. Findings

5.1. Profile

The demographics information of participants is shown in Table 2. Participants

Table 1. Sources used for statements about TAM adoption.

Statement	Factor	References
1) Using mobile banking would make it easier for me to conduct banking transactions. 2) I would find mobile banking useful in conducting my banking transactions. 3) Mobile banking would help me to access anytime.	Perceived Usefulness	(Puriwat, & Tripopsakul, 2017) [46] (Gandhi, & Sheorey, 2017) [18]
1) Using Mobile banking for handling my bank transactions is something I would do. 2) I would use mobile banking for my banking needs. 3) I'm satisfied with mobile banking services.	Adoption Intention	(Puriwat, & Tripopsakul, 2017) [46] (Gandhi, & Sheorey, 2017) [18]
1) I think that online transactions carried out on mobile are secure. 2) Using pin code in mobile banking application may be lost. 3) I think that my personal information may get leaked.	Perceived Risk	(Gandhi, & Sheorey, 2017) [18] (Puriwat, & Tripopsakul, 2017) [46]
1) People around me suggest to me using mobile banking. 2) I can chat online with customer services representative of the institution when I need it in my mobile.	Social impact (Sociality)	(Gandhi, & Sheorey, 2017) [18] (Puriwat, & Tripopsakul, 2017) [46]
1) The design of the mobile application is well created 2) The design (such as colors, font size, animation, etc.) of the mobile application is attractive.	Design Aesthetics	(Puriwat, & Tripopsakul, 2017) [46]

Table 2. Profile (N = 300).

Factor	Dimension	Frequency	%
Gender	Female	172	57.33%
	Male	128	42.67%
Age	18 or below	13	4.36%
	19 - 24	239	80.20%
	25 - 30	28	9.40%
	31 or above	18	6.04%

were divided for age and gender.

Out of 300 respondents who participated in the study, 172 (57.33%) were female and 128 (42.67%) were males. In terms of age, participants aged 18 or below were 13 (4.36%), and mostly the participants were aged between 19 - 24 (239, 80.2%), followed by 25 - 30 (9.40%), and 18 were 31 or above (6.04%). A typical student appeared to be in youthful age group.

5.2. Mobile Bank Application

Out of 300 respondents who participated in the study, 294 (98%) indicated that they had bank account. In Table 3, a breakdown of those participants is provided for having accounts in different banks.

It was found that out of 300 respondents, 126 were mobile users in Boubyan Bank, and 41 used Kuwait Finance House mobile applications, followed by 30 respondents who were National Bank of Kuwait mobile application users, and 4 used mobile applications of the Gulf Bank of Kuwait. Each of the four other banks had only one student user from amongst the participants. It is obvious that Boubyan bank had maximum number of users for its mobile applications.

5.3. Practices and Perceptions

Table 4 shows the participant responses by the following statements in descending order from the highest mean score to the lowest mean score. Standard deviation score were also given.

Four statements, receiving the highest mean scores, were related to the ease and satisfaction the participants experienced with the use of mobile applications. The mean scores fell in the close range of 4.41 - 4.68. These mean scores are quite high, indicative of a general sentiment of satisfaction these participants had with mobile applications.

One statement was about the use of the application of using pin codes, which is related to security of banking transactions. This statement received the mean score of 4.35. Two statements had about the same mean score as these were bracketed around 4.24 and 4.25. First statement was again about satisfaction of banking needs. The 2nd statement was related to the aesthetics maintained in the design of mobile application. This is a vital dimension for which the participants felt that they were generally satisfied. Other three statements were also expressive of general satisfaction these participants with mobile banking.

Five statements received mean scores in the close range of 3.77 - 3.95. The one with sore of 3.95 was related to feeling of security the participants perceived

Table 3. Breakdown of accounts in banks with mobile applications (N = 300).

Bank	Frequency
Boubyan Bank	126
Kuwait Finance House (KFH)	41
National Bank of Kuwait (NBK)	30
Gulf Bank of Kuwait (GBK)	4
Kuwait International Bank (KIB)	1
Commercial Bank of Kuwait (CBK)	1
Burgan Bank	1
Bank of Muscat	1

Table 4. Practices and Perceptions (N = 198).

Statements	Mean	Standard deviation
Mobile banking helps me to access banking services any time.	4.68	0.58
Using mobile makes it easier for me to conduct banking transactions.	4.55	0.64
I find mobile useful in conducting my banking transactions.	4.46	0.68
I'm satisfied with mobile banking services.	4.41	0.73
I always use pin code in mobile banking application.	4.35	0.90
I use mobile for my banking needs.	4.25	0.80
The mobile application is created well.	4.24	0.85
I think that banking transactions on mobile are secure.	3.95	1.01
The design (such as color, font size, animation, etc.) of the mobile application is attractive.	3.92	0.90
I can chat with customer services representative of the institution when I need it using mobile.	3.85	1.18
I always use mobile for handling my bank transactions.	3.79	1.03
People around me suggest that I use mobile banking.	3.77	1.11
I'm afraid that my personal information may get leaked when using mobile banking.	2.28	1.26

about their banking activities. The last statement in the table, having the lowest mean score of 2.28, was also about the same factor. Fewer participants rated the perception of *I'm afraid that my personal information may get leaked when using mobile banking.* It may be interpreted as if there prevailed a general perception of security when the participants were engaged in mobile banking.

Another mean score for adoption intention to use mobile for banking needs was 4.25. Another factor received a high mean score of 3.95 according to the statements that describe risk. The social impact factor received the mean score of 3.77 in relation to suggestions for using mobile banking

6. Discussion

The purpose of this study was to investigate the factors that affected the intentions of students to adopt mobile banking services. The factors were based on a well-known theory of Technology of Acceptance Model (TAM). From the theoretical point of view, this study provided an understanding of the factors that influenced mobile banking adoption. In addition, the findings of this study are synchronous with the findings reported in the literature on mobile banking adoption. Mobile banking adoption is influenced by the nature of the application used by individuals. Results showed that perceived usefulness, perceived risk, social impact and design aesthetics influenced students' intention to adopt mo-

bile banking.

Results revealed that perceived usefulness scores received the highest mean score as students found mobile banking useful and easier to conduct banking transactions and access the application at any time. In addition, it was found that there was a low risk perceived for mobile banking usage. These results indicate that using mobile banking services is safe and secure.

Moreover, results showed that social impact got a high mean score and it might have influenced student attention to adopt mobile banking, as students were influenced by suggestions from people around them in their use of mobile banking. Also, if the banking application offered the possibility to chat with customer services if required, it eased the process of mobile banking adoption on the whole.

Design aesthetics scored a high mean score that might have influenced students' adoption of mobile banking. Hence, application design, attractiveness and the overall creation might have influenced the adoption intention. Results indicated that perceived usefulness, perceived risk, social impact and design aesthetics influenced students' intention to adopt mobile banking. Puriwat and Tripopsakul (2017) [46] confirmed that perceived usefulness and ease of use and service quality could significantly influence the intention to adopt mobile banking.

These results indicated that 66% of students used mobile banking applications, while 34% did not use mobile banking applications. In addition, students reported that the most used mobile banking application was Boubyan Bank at 67% while Kuwait Finance House was the next most used at 22%, next was the National Bank of Kuwait at 16%, followed by the Gulf Bank of Kuwait at 2.1%, and the least used were Kuwait International Bank, Commercial Bank of Kuwait, Burgan Bank and the Bank of Muscat, all at 0.5%.

Mobile phone usage has increased during the last few years. Hence, it offered many opportunities for banks to set their strategies to reach their customers. Using mobile banking applications in conducting bank transactions would make it easier and more useful for individuals, by reducing the need to visit bank branches to conduct any bank transaction. The factors that may affect the adoption of mobile banking would be changing with transformations in technological advancements.

A limitation in the conduct of this study was that the data collection was limited to students in the College of Social Science at Kuwait University. Therefore, a larger sample covering multiple colleges needs to be included and surveyed.

It is recommended that students should know about the advantages and the facilities of mobile banking applications, to reduce visiting the branches or ATM. Moreover, banks should increase the efforts of spreading the awareness for using mobile banking applications and ensuring faster adoption of this technology as it may help to increase the added value.

Conflicts of Interest

The author declares no conflicts of interest.

References

[1] Shaikh, A.A. and Karjaluoto, H. (2015) Mobile Banking Adoption: A Literature Review. *Telematics and Informatics*, **32**, 129-142. https://doi.org/10.1016/j.tele.2014.05.003

[2] Fishbein, M. and Azjen, I. (1975) Belief, Attitude, Intention and Behavior. Addison-Wesley, Reading, MA.

[3] Ajzen, I. and Fishbein, M. (1980) Understanding Attitudes and Predicting Social Behvior. Prentice-Hall, Englewood Cliffs, NJ.

[4] Glavee-Geo, R., Shaikh, A.A. and Karjaluoto, H. (2017) Mobile Banking Services Adoption in Pakistan: Are There Gender Differences? *International Journal of Bank Marketing*, **35**, 1090-1114. https://doi.org/10.1108/IJBM-09-2015-0142

[5] Venkatesh, V. and Davis, F.D. (2000) A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, **46**, 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

[6] Davis, F.D. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technologies. *MIS Quarterly*, **31**, 19-34. https://doi.org/10.2307/249008

[7] Legris, P., Ingham, J. and Collerette, P. (2003) Why Do People Use Information Technology? A Critical Review of the Technology Acceptance Model. *Information & Management*, **40**, 191-204. https://doi.org/10.1016/S0378-7206(01)00143-4

[8] Mehrad, D. and Mohammadi, S. (2017) Word of Mouth Impact on the Adoption of Mobile Banking in Iran. *Telematics and Informatics*, **34**, 1351-63. https://doi.org/10.1016/j.tele.2016.08.009

[9] Sabri, H.A. (2004) The Application of Information Technology and Decision-Making Orientations in Jordanian Organizations under the National Culture, the Competitive Conditions, and Uncertainty. *Al-Zaytoonah Journal for Studies and Research*, **2**.

[10] Yaseen, S. (2005) Application of Information Technology in the Arab World. General Management Institute, Riyadh, Saudi Arabia.

[11] Abu Shanab, E., *et al.* (2010) Internet Banking and Customers' Acceptance in Jordan: The Unified Model's Perspective. *Communications of the Association for Information Systems*, **26**, 493-524. https://doi.org/10.17705/1CAIS.02623

[12] Al Sukkar, A. and Hasan, H. (2005) Toward a Model for the Acceptance of Internet Banking in Developing Countries. *Information Technology for Development*, **11**, 381-398. https://doi.org/10.1002/itdj.20026

[13] Akour, I., *et al.* (2005) An Exploratory Analysis of Culture, Perceived Ease of Use, Perceived Usefulness, and Internet Acceptance: The Case of Jordan. *Journal of Internet Commerce*, **5**, 83-108. https://doi.org/10.1300/J179v05n03_04

[14] Mallat, N., Rossi, M. and Tuunainen, V.K. (2004) Mobile Banking Services. *Communications of the ACM*, **47**, 42-46. https://doi.org/10.1145/986213.986236

[15] Donner, J. and Tellez, C.A. (2008) Mobile Banking and Economic Development: Linking Adoption, Impact, and Use. *Asian Journal of Communication*, **18**, 318-332. https://doi.org/10.1080/01292980802344190

[16] Shaikh, A.A. (2013) Mobile Banking Adoption Issues in Pakistan and Challenges Ahead. *Journal of Institute of Bankers Pakistan*, **80**, 12-15.

[17] Zhang, T., Lu, C. and Kizildag, M. (2018) Banking "On-the-Go": Examining Consumers' Adoption of Mobile Banking Services. *International Journal of Quality and*

Service Sciences, **10**, 279-295. https://doi.org/10.1108/IJQSS-07-2017-0067

[18] Gandhi, A. and Sheorey, P. (2017) Mobile Banking Adoption in a Developing Country Like India. *Drishtikon*: *A Management Journal*, **8**, 29-42.

[19] Premkumar, G., Ramamurthy, K. and Liu, H.N. (2008) Internet Messaging: An Examination of the Impact of Attitudinal, Normative, and Control Belief Systems. *Information & Management*, **45**, 451-457. https://doi.org/10.1016/j.im.2008.06.008

[20] Mortimer, G., Neale, L., Hasan, S.F.E. and Dunphy, B. (2015) Investigating the Factors Influencing the Adoption of m-Banking: A Cross Cultural Study. *International Journal of Bank Marketing*, **33**, 545-570. https://doi.org/10.1108/IJBM-07-2014-0100

[21] Akturan, U. and Tezcan, N. (2012) Mobile Banking Adoption of the Youth Market: Perceptions and Intentions. *Marketing Intelligence & Planning*, **30**, 444-459. https://doi.org/10.1108/02634501211231928

[22] Riquelme, H.E. and Rios, R.E. (2010) The Moderating Effect of Gender in the Adoption of Mobile Banking. *International Journal of Bank Marketing*, **28**, 328-341. https://doi.org/10.1108/02652321011064872

[23] Federal Reserve System (2012) Current Use of Mobile Banking and Payments. https://www.federalreserve.gov/econresdata/mobile-devices/2012-current-use-mobile-banking-payments.htm

[24] Bobbitt, L.M. and Dabholkar, P.A. (2001) Integrating Attitudinal Theories to Understand and Predict Use of Technology-Based Self-Service: The Internet as an Illustration. *International Journal of Service Industry Management*, **12**, 423-450. https://doi.org/10.1108/EUM0000000006092

[25] Thakur, R. and Srivastava, M. (2014) Adoption Readiness, Personal Innovativeness, Perceived Risk and Usage Intention across Customer Groups for Mobile Payment Services in India. *Internet Research*, **24**, 369-392. https://doi.org/10.1108/IntR-12-2012-0244

[26] Kolsaker, A. and Payne, C. (2002) Engendering Trust in e-Commerce: A Study of Gender-Based Concerns. *Marketing Intelligence & Planning*, **20**, 206-214. https://doi.org/10.1108/02634500210431595

[27] Flavián, C. and Guinalíu, M. (2006) Consumer Trust, Perceived Security and Privacy Policy: Three Basic Elements of Loyalty to a Web Site. *Industrial Management & Data Systems*, **106**, 601-620. https://doi.org/10.1108/02635570610666403

[28] Shih, H. (2004) An Empirical Study on Predicting User Acceptance of e-Shopping on the Web. *Information & Management*, **41**, 351-368. https://doi.org/10.1016/S0378-7206(03)00079-X

[29] Cheng, T.C.E., Lam, D.Y.C. and Yeung, A.C.L. (2006) Adoption of Internet Banking: An Empirical Study in Hong Kong. *Decision Support Systems*, **42**, 1558-1572. https://doi.org/10.1016/j.dss.2006.01.002

[30] Puschel, J., Mazzon, J.A. and Hernandez, J.M.C. (2010) Mobile Banking: Proposition of an Integrated Adoption Intention Framework. *The International Journal of Bank Marketing*, **28**, 389-409. https://doi.org/10.1108/02652321011064908

[31] Nyshadham, E.A. (2000) Consumer Perceptions of Online Transaction Security—A Cognitive Explanation of the Origins of Perception. *AMCIS* 2000 *Proceedings*, **111**.

[32] Gerrard, P. and Cunningham, J. (2003) The Diffusion of Internet Banking among Singapore Consumers. *International Journal of Bank Marketing*, **21**, 16-28. https://doi.org/10.1108/02652320310457776

[33] Bernoff, J. and Li, C. (2008) Harnessing the Power of the Oh-So-Social Web. *MIT*

Sloan Management Review, **49**, 36-42.

[34] Cook, S. (2008) The Contribution Revolution: Letting Volunteers Build Your Business. *Harvard Business Review*, **86**, 60-69.

[35] Arcand, M., Promtep, S., Brun, I. and Rajaobelina, L. (2017) Mobile Banking Service Quality and Customer Relationships. *International Journal of Bank Marketing*, **35**, 1068-1089. https://doi.org/10.1108/IJBM-10-2015-0150

[36] Nambisan, P. and Watt, J.H. (2011) Managing Customer Experiences in Online Product Communities. *Journal Business Research*, **64**, 889-895. https://doi.org/10.1016/j.jbusres.2010.09.006

[37] Aljukhadar, M. and Senecal, S. (2011) Segmenting the Online Consumer Market. *Marketing Intelligence & Planning*, **29**, 421-435. https://doi.org/10.1108/02634501111138572

[38] Hanafizadeh, P., Behboudi, M., Koshksaray, A.A. and Tabar, M.J.S. (2014) Mobile-Banking Adoption by Iranian Bank Clients. *Telematics and Informatics*, **31**, 62-78. https://doi.org/10.1016/j.tele.2012.11.001

[39] Bauer, H.H., Hammerschmidt, M. and Falk, T. (2005) Measuring the Quality of E-Banking Portals. *International Journal of Bank Marketing*, **23**, 153-175. https://doi.org/10.1108/02652320510584395

[40] Cyr, D., Hassanein, K., Head, M. and Ivaniv, A. (2007) The Role of Social Presence in Establishing Loyalty in E-Service Environments. *Interacting with Computers*, **29**, 43-56. https://doi.org/10.1016/j.intcom.2006.07.010

[41] Rosen, D.E. and Purinton, E. (2004) Website Design: Viewing the Web as a Cognitive Landscape. *Journal of Business Research*, **27**, 787-794. https://doi.org/10.1016/S0148-2963(02)00353-3

[42] Hausman, A.V. and Siekpe, J.S. (2009) The Effect of Web Interface Features on Consumer Online Purchase Intentions. *Journal of Business Research*, **62**, 5-13. https://doi.org/10.1016/j.jbusres.2008.01.018

[43] Chung, K.-H. and Shin, J.-I. (2010) The Antecedents and Consequents of Relationship Quality in Internet Shopping. *Asia Pacific Journal of Marketing and Logistics*, **22**, 473-491. https://doi.org/10.1108/13555851011090510

[44] Urban, G., Amyx, C. and Lorenzon, A. (2009) Online Trust: State of the Art, New Frontiers, and Research Potential. *Journal of Interactive Marketing*, **23**, 179-190. https://doi.org/10.1016/j.intmar.2009.03.001

[45] Kim, H. and Niehm, L.S. (2009) The Impact of Website Quality on Information Quality, Value, and Loyalty Intentions in Apparel Retailing. *Journal of Interactive Marketing*, **23**, 207-284. https://doi.org/10.1016/j.intmar.2009.04.009

[46] Puriwat, W. and Tripopsakul, S. (2017) Mobile Banking Adoption in Thailand: An Integration of Technology Acceptance Model and Mobile Service Quality. *European Research Studies*, **20**, 200-210. https://doi.org/10.35808/ersj/885