Project Report on
"Prospects and challenges of Mobile banking in Bangladesh"

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Letter of Transmittal

Date: August 30,2020

To

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Dhaka, Bangladesh

Subject:“Prospects and challenges of Mobile banking in Bangladesh”

Dear Ma’am,

With due respect, I beg to inform you that, I am a student of BBA, 41th batch & dept. of DBA at Uttara University. I am very glad to submit you my project report prepared on **“**Prospects and challenges of Mobile banking in Bangladesh”

I have given my best effort to prepare the report with relevant information that I have collected from various sources during my project program from 20st June to 25th August 2020.

I pray and hope that the mistake of the report may have, will be kindly excused. So I cordially request to you evaluating this report & enough kind to receive this report.

Sincerely yours

Name: Mahima Akter
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Major: Finance
Program: Bachelor of Business Administration
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Student’s Declaration

I declare that the Project Report on **"Prospects and challenges of Mobile banking in Bangladesh** "includes the results of my own research works, pursued under the supervision of Sonia Rezina, Assistant Professor, School of Business, Uttara University.

I also declare that the internship report is prepared for academic purpose only. This report is not submitted by others.

Name: Mahima Akter

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Major: Finance

Program: Bachelor of Business Administration

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Supervisor's declaration

This is to certify that, Mahima akter is a student of BBA (Major in Finance) of the Department of Business Administration & ID no. 2163011013 has successfully completed Project on **"Prospects and challenges of Mobile banking in Bangladesh" from** 20st June to 30th August 2020. On the basis of her successful completion of Project program, he has prepared the report under my supervision.

I wish her every success.

Sonia Rezina

Assistant Professor

Dept. Of Business Administration

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Acknowledgements

At first, I would like to express my deepest gratitude to almighty Allah for giving me the strength and opportunity to finish the report within the schedule time.

I am also grateful to my supervisor Sonia Rezina, Assistant Professor, School of Business, Uttara University, for her motivating inspiration, direction, suggestions and advices during my project period.

Abstract

Traditional, branch-based retail banking remains the most widespread method of conducting banking transactions countries. With the improvement of mobile technologies and devices, mobile banking has been considered as a salient system because of such attributes of mobile technologies as ubiquity, convenience and interactivity. Regarding such importance, the present study is conducted to promote three aims in banking industry. The first aim of this research is to identify the determinants of attitudes toward mobile banking. The second aim is that this research evaluates the effect of determinants on the attitude toward mobile banking. The ultimate aim is to study the impact of the attitude toward mobile banking on intention to use and adoption to mobile banking. The Present study is a survey which uses questionnaire to collect data. To achieve the aims of this research, 385 users of Saman mobile banking were considered as the sample. To analyze data and to test research hypotheses and model, structural equation modeling (SEM) and confirmatory factor analysis (CFA) were used. Research findings show the significant impact of such determinants as "Perceived usefulness", "Perceived Ease of use", "Trust", "Perceived Financial Cost", "Perceived Risk" and "Credibility" "Compatibility" of mobile banking on "Attitude towards mobile banking" and the significant impact of "Attitude towards mobile banking" on "Intention to use/adopt mobile banking".

Keywords: Mobile Banking, Attitudes toward Mobile Banking, Intention to Use/Adopt Mobile Banking.

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Section:01

1.0 Justification:

According to “Investinganswers.com” Mobile banking refers to the use of a smart phone or any other cellular device to carryout online banking function while away from computer device and perform activities such as monitoring account balances, transferring funds between accounts, bill payment and locating an ATM etc. Mobile banking is currently the latest technology and tool for convenient banking in this futuristic world. With the leap of time mobile banking is becoming immensely popular in Bangladesh. For that reason it is essential to conduct such type of study for evaluating the effectiveness of mobile banking and how further this type of service can be improved.

It’s the time to implement mobile and IT solution system for better financial inclusion. Mobile banking is one of the key components in this respect .As every business is changing, banking business is also and it has become technology based. To drive the wheel of banking it needs to be updated always by inventing new products and services. That’s why I am interested in this topic (mobile Banking).this paper will help the banks in Bangladesh to find way for opening its new door of business and be successful in the competition. The bank customers will be able to bank comfortably.

My study will show how the banks and the customers are evaluating mobile banking operation and also the relationship between the problems faced by the customers, need of adding new service, quality of mobile banking and satisfaction of the mobile banking customers. My study on mobile banking will help to find the possible problems and prospects of Mobile Banking operation in Bangladesh.

Section:02

2.0 Objective:

- To identify the features, benefit and drawbacks of mobile banking services.

- To explain the present scenario and evaluate the competitiveness of major players of Mobile banking in Bangladesh

- To reveal the setbacks and challenges of mobile banking industry and future prospects of mobile banking in Bangladesh.

Section:03

3.0 Methodology:

Both Primary and secondary data needed to conduct a study. But due to corona pandemic primary data collection is not possible. Secondary data is used to accomplish the objectives of the study. A good number of literatures have been reviewed to sharpen the thought on Mobile Banking and its different facets in the context of Bangladeshi banks. Data on various indicators relating to readiness of the banks have been collected from different sources such as Bangladesh Bank (BB) publications and reports, websites of different banks, Bangladesh Institution of Bank Management, World Bank policy paper and Bangladesh Bank mobile banking policy paper about Mobile Financial Services in Bangladesh, Internet, BTRC (Bangladesh Telecommunication Regulatory Commission) and different mobile phone companies websites. It must be emphasized that information is also collected from several dailies, Wikipedia etc. through Internet. Various policies and circulars of BB issued by the Banking Regulation and Policy Department and other departments have also been consulted for preparing this paper. I selected 10 important articles based on my topic. After collect articles numbering those articles from 1 to 10 which help me to preparing report appendixes. After collecting articles at first I read them carefully and marked my important paragraph from those articles.

Section:04

4.0 Discussion:

4.1 Features, benefits and drawback of mobile banking:

Features offered by mobile banking Companies:

(BTRC, October, 2016) The developments in mobile phone density in Bangladesh, with 120.7 million subscribers, present a unique opportunity to leverage the mobile platform to meet the objectives and challenges of financial inclusion.

Most of the companies are offering the below mentioned products and services to all of its users:

Cash In: Individual can load cash in their account through any of the agent or ATMs.

This process is fully free of charge and without any hidden conditions.

Cash Out: Mobile banking allows users to withdraw cash from their accounts from the agents as well as from the ATMs. Companies charge a significant amount for this service.

Send Money: Money can be transferred from one account to another account virtually through mobile banking feature.

Payment: Provides payment solution in the majority of the markets.

Buy Airtime: Helps people to recharge their mobile phone account directly from their phone without wasting energy cost to go to retailer for recharge.

Interest on Savings and Bank account management: Users can enjoy up to 4% of interest annually on their savings in the few of the mobile banking accounts like bKash.

International Remittance: Many companies has signed up agreement with western union and MasterCard to receive money from the foreign countries in behalf of remittance holders which has enabled the people from rural and remote areas to directly receive money from the family members who are living abroad.

4.2 Benefits of mobile banking:

One of the main benefits of mobile banking is the convenience of having banking services close at hand. There's no need to go to a bank or ATM and wait for the bank toopen to check your account balance, transfer money, pay your bills, or even view your statement. Account. You can do it all using your cell phone. Money transfer transactions can end when banks are open, but you can check your account balance or get an account statement regardless of time or day. Your bank account and personal data are completely secure if you use mobile banking services. The bank will provide you with a set of credentials that you can use to log into your account and make transactions. This connection information is transmitted to you securely and since you are the only one who knows your username and password, your account is always secure. Most banks allow you to activate two-step verification where you can only make bank transactions if you enter the one-time password (OTP) sent to your registered mobile phone number.

- Enable quick &easy transfers of money &with greater security.
- With the ability to support transfer of money or services provide great flexibility to the
- Subscriber for making transaction.
- With access to financial service s at anytime and anywhere, mobile banking delivers greater convenience to bank subscriber.
- It is highly flexible for financial community.
- Subscriber registered for the service can settle their bills directly from their mobile phones, with payable amount being deducted from the subscriber account.
- Mobile payment simply collection and processing, speeding up payment cycles & improving operational efficiencies.
- Mobile banking fulfill subscriber everyday needs for banking service, paying utility bills
- Ticketing and other service.

4.3 Drawback of Mobile Banking:

Mobile Banking is not available on all mobile phone. Sometimes, it requires you to install apps on your phone to use the Mobile Banking feature which is available on the high-end smartphone. If the customer does not have a smartphone than the use of Mobile Banking becomes limited. A transaction like transfer of funds is only available on high-end phones. Regular use of Mobile Banking may lead to extra charges levied by the bank for providing the service. Mobile banking users are at risk of getting fake SMS messages and scams. The loss of a mobile customer device often means that criminals can gain access to your mobile banking PIN and other sensitive information's.

Security: Experts generally agree that mobile banking is quite safer than computer banking and the reason for is that very few viruses and Trojans exists or are made for phone. But that does not mean mobile banking is immune to security threats. Mobile banking can be subject to scams like phishing. Many people fall for this trick and lose huge chunk of money and it's quite common in Bangladesh.

Compatibility: Mobile banking is not compatible with every phones and also all bank doesn't provide mobile banking. If an individual does not possess a mobile phone then mobile banking service usually provide limited option to them.

Cost: The cost of banking is deemed cheaper but still a user has to pay data and text messaging fees. Some bank also charge extra charge for using mobile banking service. These charges may pile up to be a significant number especially if a user access mobile banking often.

4.4 Present scenario and evaluate the competitiveness of major players of mobile banking in Bangladesh:

Rotchanakitumanuai and Speech (2003) Investigate:

Why corporate customers do not accept mobile banking, which can assist banks to implement this self-service technology more efficiently. Many Thai banks are currently implementing mobile banking. Banks that offer service via this channel claim that it reduces costs and makes them more competitive.

Major Players in Mobile Banking Industry Bangladesh Bank has allowed license to 28 banks to offer mobile banking services but currently only 18 banks are providing the service according to the website of Bangladesh Bank. Some major companies currently dominating the mobile banking industry are mentioned below:

Table 1 Some major companies currently dominating the mobile banking industry are mentioned below:

bKash	BRAC Bank Ltd.
Bangladesh DBBL Mobile Banking (Rocket)	Dutch Bangla Bank Ltd.
Bangladesh My Cash Mercantile Bank Ltd.	Bangladesh UCash United Commercial Bank Ltd.
Bangladesh Nagad Bangladesh Post Office Ltd.	T-cash Trust Bank Ltd.
Bangladesh OK Mobile Banking One Bank Ltd.	Bangladesh mCash Islami Bank Bangladesh Ltd.
. Mycash Mercantile Bank Bangladesh	

Table 2 Market Share:

Service Name	**Market Share (%)**
bKash	58%
DBBL Mobile Banking (Rocket)	17%
My Cash	3%
UCash	8%
MCash	8%
Others	8%

Table 3 Availability of Agents:

Service Name	Number of Agents	Bank Branches
bKash	160000	300
Rocket	116000	3005
mCash	86238	450
Mycash	95275	730
UCash	105000	107

Table 4 Comparison of service charges among the Mobile Banking Companies:

Mobile Financial Services	bKash	Rocket	UCash	Mycash	MCash
Account Opening	Free	Free	Free	Free	Free
Cash-in(At Agent)	Free	0.9% or BDT 5 (which one is higher)	Free	Free	Free
Cash-out (From Agent)	1.85%	0.9% or BDT 5 (which one is higher)	1%	General: 1.85%; Salary: 0.925%	1.80%
P2P Transfer	BDT 5	BDT 5	BDT 5	BDT 5	BDT 4
Cash-out (From ATM)	2%	Free	N/A	General: 2.00%; Salary: Free	1% or BDT 5 (which one is higher)

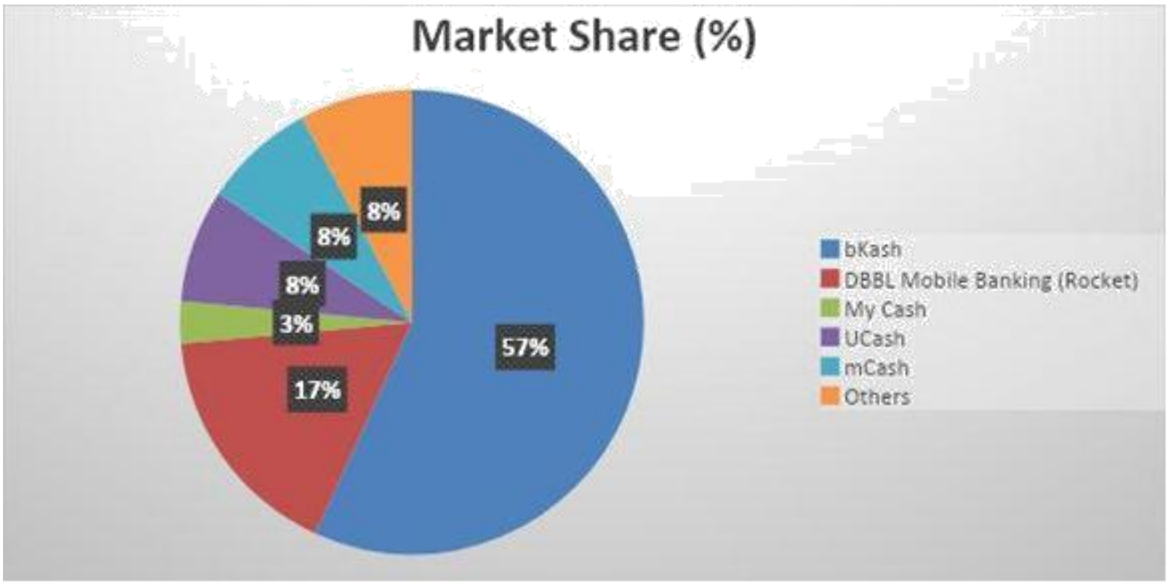

Figure 1 Market Share:

• 4.5 Setbacks and Challenges of mobile banking industry and future prospects of mobile banking in Bangladesh:

Even though the mobile banking industry is growing rapidly at a large scale, it is still in the early phase of its cycle. **Quoted from CEO**of one of the leading mobile banking companies, "There is a long way to go and much still to do to build the business." The technological platform needs to be constantly updated to keep with the huge amount of transactions. Customers need to be encouraged so that they are more cautious while doing transaction. One of the most important challenges faced by companies is the increase of fraudulent activities. A survey report found that more than half of consumers show risky behavior and do not understand the risks of fraud which is alarming. Multi-factor authentication can be seen as a layer of security for the user. However, using it smartly can balance both the security and the efficiency of mobile banking. Young generation is more interested to use mobile banking rather than traditional retail banking but they demand more updated system and user friendly interface integrated apps. So the institution faces this challenge to keep up with the demand of future customers who can be retained for a longer period of time. Banks need to address this critical issue of Privacy and Security as this can be the main setback of their business. As the customers are also concerned will they lose their money if

they lose their handset? Telecom companies also have a responsibility for the safe functioning of the service.

Another core challenge is from the perception of low income users regarding technology. Many users think that they need to grasp advance skill to use the mobile banking technology and another issue raises in their minds that they require advance English to operate the service. If a customer inputs wrong amount of money or wrong account number while sending money to another account, there is no option to recover the money lost. This is a major drawback of this service; I believe the companies are researching about this matter to solve the issue. Because humans are prone to errors and mistake may happen while sending money. Charges set the company while entering and taking out cash increase the additional charges of using the service. This may discourage customers regarding the use of mobile banking. For example: the service charge of bKash is higher than other mobile banking service.

Handset operability:

There are a large number of different mobile phone devices and it is a big challenge for banks to offer mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS. Initial interoperability issues however have been localized, with countries like India using portals like R-World to enable the limitations of low end java based phones, while focus on areas such as South Africa have defaulted to the USSD as a basis of communication achievable with any phone. The desire for interoperability is largely dependent on the banks themselves, where Installed applications (Java based or native) provide better security, are easier to use and Allow development of more complex capabilities similar to those of internet banking While SMS can provide the basics but becomes difficult to operate with more complex transactions.

There is a myth that there is a challenge of interoperability between mobile banking Applications due to perceived lack of common technology standards for mobile banking. In practice it is too early in the service lifecycle for interoperability to be addressed Within an individual country, as very few countries have more than one mobile banking service provider. In practice, banking interfaces are well defined and money movements Between banks follow the IS0-8583 standard. As mobile banking matures, money Movements between service providers will naturally adopt the same standards as in the banking world.

On January 2009, Mobile Marketing Association (MMA) Banking Sub-Committee, Chaired by Cell Trust and VeriSign Inc., published the Mobile Banking Overview for financial institutions in which it discussed the advantages and disadvantages of Mobile Channel Platforms such as Short Message Services (SMS), Mobile Web, Mobile Client Applications, SMS with Mobile Web and Secure SMS.

Security:

Security of financial transactions, being executed from some remote location and transmission of financial information over the air, are the most complicated challenges that need to be addressed jointly by mobile application developers, wireless network service providers and the banks' IT departments. The following aspects need to be addressed to offer a secure infrastructure for financial transaction over wireless network:

Physical part of the hand-held device. If the bank is offering smart-card based security, the physical security of the device is more important.

Security of any thick-client application running on the device. In case the device is stolen, the hacker should require at least an ID/Password to access the application.

Authentication of the device with service provider before initiating a transaction. This would ensure that unauthorized devices are not connected to perform financial transactions.

User ID / Password authentication of bank's customer.

Encryption of the data being transmitted over the air.

Encryption of the data that will be stored in device for later / off-line analysis by the customer.

One-time passwords (OTP's) is the latest tool used by financial and banking service providers in the fight against cyber fraud. Instead of relying on traditional memorized passwords, OTPs are requested by consumers each time they want to perform transactions using the online or mobile banking interface. When the request is received the password is sent to the consumer’s phone via SMS. The password is expired once it has been used or once its scheduled life-cycle has expired.

Because of the concerns made explicit above, it is extremely important that SMS gateway providers can provide a decent quality of service for banks and financial institutions in regards to SMS services. Therefore, the provision of service level agreements (SLAs) is a requirement for this industry; it is necessary to give the bank customer delivery guarantees of all messages, as well as measurements on the speed of delivery, throughput, etc. SLAs give the service parameters in which a messaging solution is guaranteed to perform.

Application distribution:

Due to the nature of the connectivity between bank and its customers, it would be impractical to expect customers to regularly visit banks or connect to a web site for regular upgrade of their mobile banking application. It will be expected that the mobile application itself check the upgrades and updates and download necessary patches (so called "Over the Air" updates). However, there could be many issues to implement this approach such as upgrade / synchronization of other dependent components.

Future Prospect of Mobile banking in Bangladesh:

Based on the 'International Review of Business Research Papers' from World business Institute, Australia, following are the key functional trends possible in world of Mobile Banking.

With the advent of technology and increasing use of smart phone and tablet based Devices, the use of Mobile Banking functionality would enable customer connect across entire customer life cycle much comprehensively than before. With this scenario, current Mobile banking objectives of say building relationships, reducing cost, achieving new Revenue stream will transform to enable new objectives targeting higher level goals such as building brand of the banking organization. Emerging technology and functionalities would enable to create new ways of lead generation, prospecting as well as developing deep customer relationship and mobile banking world would achieve superior customer experience with bi-directional communications.

- Illustration of objective based functionality enrichment In Mobile Banking.
- Communication enrichment: Video interaction with agents, advisor,
- Pervasive transaction capabilities: Comprehensive “mobile wallet”
- Customer education: Test drive for demos of banking services.
- Connect with new customer segment: Connect with Gen Y- Gen Z using games and social network ambushed to surrogate bank’s offering.
- Content monetization: Micro level revenue themes such as music, e-book download.
- Vertical positioning: Positioning offering over mobile banking specific industries.
- Horizontal positioning: Positioning offering over mobile banking across the industries.

Section:5

Future forward

While full effort was given with hard and soul to make this report an ideal one, but some conciliation have to be made due to some limitations being a student where it was hard to get access to some data. Company officials maintain a high level of confidentiality about their many of their data and operations which made it really difficult to get access to some secondary data. Due to this limitation some assumptions had to be made in some sections. Moreover, without working with the institutions it is not enough to bring out a total picture of the industry.

Despite of these limitations, the thesis makes a scope for further study by forwarding few questions in relevant areas:

- Does mobile banking enhance customer service in case of banking activities?
- Is pin security is enough for mobile banking to reduce fraud?
- Does Agents and distributors commission increase cost of mobile banking or Does they getting enough commission for their services they provide?
- Are the functions of mobile banking apps are understandable for all kind of people?
- How does mobile banking provide services in case of foreign remittance?

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Appendix I

Introducing Consulted Articles

SL. No.	Article Tile	Author	Journal Name	Volume & Issue	Year	Publisher
1	Customers‟ perspectives regarding e-banking in an emerging economy	Agarwal R., Rastogi S., Mehrotra A	Journal of Retailing and Consumer Services	Vol. 16 (5), pp. 340 - 351	2009	
2	Problems and prospects of mobile banking in Bangladesh	Ahmed S. M, Shah J. R., Md. A. I., Samina M.	Journal of Information Engineering and Applications	Vol. 1 (6)	2011	
3	Online banking: a field study of drivers, development challenges, and expectations	Aladwani A. M.	International Journal of Information Management	Vol. 21 (3), pp. 213 - 225	2001	
4	Online banking adoption: an empirical analysis	Alain Y. C., Keng B. O., Binshan L., Boon I. T.	International Journal of Bank Marketing	Vol. 28 (4), pp. 267 - 287	2010	
5	A model of trust in online relationship Banking	Avinandan M., Prithwiraj N.	International Journal of Bank Marketing	Vol. 21 (1), pp. 5 – 15	2003	

6	A model of trust in online relationship Banking	Binswanger H. P., Khandker S. R.	International Journal of Bank Marketing	Vol. 21 (1), pp. 5 – 15	2003	
7	A Guide to the Internet Revolution in Banking	Chou D. C., Chou A. Y.	Information Systems Management	Vol. 17 (2)	2000	
8	An adoption model for mobile banking in Ghana	Crabbe M., Standing C., Standing S., Karajaluoto	International Journal of Mobile Communications	Vol. 7 (5), pp. 515 - 543	2009	
9	Adoption And Use of SMS/Mobile Banking Services in Zimbabwe: An Exploratory Study	Dube T., Kosmas N., Collins M., Lloyd C	Journal of Internet Banking and Commerce	Vol. 16 (2)	2000	
10	Factors underlying attitude formation towards online banking in Finland	Heikki K., Minna M., Tapio P	International Journal of Bank Marketing	Vol. 20 (6), pp. 261 - 272	2002	

Appendix II

Complication of Objectives/ Purposes/ Questions/Hypotheses Addressed by the Articles

Articles	Objectives/ Purposes/ Questions/Hypotheses
1	To identify the features, benefit and drawbacks of mobile banking services
2	To explain the present scenario and evaluate the competitiveness of major players of Mobile banking in Bangladesh
3	To reveal the setbacks and challenges of mobile banking industry and future prospects of mobile banking in Bangladesh
4	Both Primary and secondary data needed to conduct a study. But due to corona pandemic primary data collection is not possible
5	Secondary data is used to accomplish the objectives of the study. A good number of literatures have been reviewed to sharpen the thought on Mobile Banking and its different facets in the context of Bangladeshi banks.
6	In addition, Bangladeshi people have also shown a keen interest to use mobile phones for multiple purposes such as listening music and sending text messages. Therefore, it can be confidently assumed that if the mobile phones offer another convenient, easy to use, and secured service, the people of Bangladesh would love to use that service.
7	Do you use mobile banking?
8	Are you aware of mobile banking?
9	**Hypothesis 1:** Perceived usefulness have a positive effect on the attitude toward mobile banking.
10	**Hypothesis 2:** Perceived Ease of using Mobile banking have a positive effect on the attitude toward mobile banking.

Appendix III

Complication of Methods

Articles	Methods
1	A qualitative approach has been adopted to reach in depth the factors which can influence the adoption of mobile banking.
2	I expect that this descriptive approach will provide preliminary insights to understand mobile banking adoption and this will help the managers of the banks to keep in view all these influential factors while taking managerial decision about the mobile banking services.
3	I have conducting the interview for this paper from two different focus group in two different sessions.
4	The data for our research was collected from conducting interview from the focus group. Focus group interview is social oriented by nature and the data collected through social interaction is deep and more informative (Thomas, MacMillan, McColl et al.1995).
5	The interview for each focus group lasted for one hour. I found the recorded interview with their permission so that we do not miss any point during the talk with the respondents.
6	The number of respondents in the 2nd group was six, four of them were male while 2 of them were females they have the smart phones and also have the bank accounts but they were not user of mobile banking and they have no intention to get subscription for mobile banking services.
7	Participants were asked question about their back ground education age their hobbies lifestyle and general interest so that they feel relax and then the real questions were started.
8	In the first group there were 8 participants four of them were males while the four were females.
9	The questions were open ended and respondents were encouraged to express their own point of view that may be arising in his/ her mind during the interview.

10	The discussion in focus group is in a friendly and relaxed atmosphere which can stimulate the expression of differing point of views and opinion (Marshall and Rossman, 2010).

Appendix IV

Complication of Conclusions

Articles	Conclusions
1	Financial services delivery and consumption has experienced major changes during the last years. Technological development has reshaped the business environment.
2	The banking industry is among the leading sectors in adopting and utilizing the internet and mobile technology on consumer markets and consequently its service delivery has undergone changes unprecedented in its history.
3	The development of electronic banking services via electronic channels has made it possible to provide new kinds of added value for customers.
4	The Internet revolution, which has spread visibly since the 1990s, fundamentally changed the banking business sector in terms of the variety of financial services and how they are provided.
5	In particular, the Internet has significantly affected internal banking processes.
6	The biggest change is in banks' service channel, which has changed from branch offices in the past to incorporate ATMs (Automated Teller Machines), phone banking, PC banking, Internet banking and mobile banking.
7	Mobile banking as an emerging service has not been widely adopted by users. Thus it is necessary to identify the factors affecting user adoption.
8	In the present study, the factors affecting the attitude toward mobile banking, including "Perceived usefulness", "Perceived Ease of use", "Trust", "Perceived Financial Cost", "Perceived risk", "Credibility", "Compatibility" which were identified

	and tested in many studies, were tested in the context of Iran (Saman Bank consumers).
9	Also, attitude towards mobile banking has a significant effect on the Intention to use and adoption to Mobile banking.
10	The effect of the Perceived usefulness, Perceived Ease of use, Trust, Credibility and Compatibility on the attitude towards mobile banking and attitude towards mobile banking on intention to use and adoption is liner, positive and direct; and effect of Perceived Cost and Perceived on the attitude towards mobile banking is liner, negative and direct.