REVIEW OF MOBILE BANKING

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Abstract:
Electronic-banking includes all of today's international monetary and financial services that most people are computing environments. Can a bank's customer service and Bank ash money to banks anywhere geographically. In fact, most banks in the form of an electronic entity and More like the Internet and network access, and Many customers are not faced with branch staff, But the same communication space for the use of their services While it is known that even the World Bank has also been able to reach the limits of e-banking And only very few banks are in a virtual atmosphere. Electronic banking procedures and the context of the entity must be prepared to achieve mechanical and electronic. This article is part of the requirements, limitations and achievements as part of e-banking Mobile banking is known to be dealt with. The main services offered, such as groups of teenagers Young business people having one of the most important groups to use mobile banking services are and These disadvantages and limitations of the technology and features of the situation in Iran has also been studied.

Keywords: Mobile Banking, commercial models, Technology.

Introduction:
In the past decade, information technology has a tremendous impact on banking industry. This has caused banks to be able to provide distinctive products and services to their clients. Banking via mobile is one of the newest channels of electronic distribution for banks that technology has increasingly become a vital element for them that increases convenience and added value for the bank and the client. Mobile computing is a dynamic process that is deeply rooted in both sociological and psychological phenomena such as perception, motivation, personality and action.

Offered services:
Services provided through mobile are (7):
1- foreign exchange system
2- Search, view and download of bills
3- Seeing available standing orders
4- Notification of account changes (including balance changing, deposit, withdrawal, payments made, etc.)
5- Transfer of funds
6- Store shopping system
Use of mobile technology in banking sector:
Mobile commerce foundation is developed by mobile banking and fulfillment of financial services related to bank through mobile devices. It includes services in the fields of accounting, broking (agency), and financial information. Many banks around the world often utilize mobile banking increasingly to increase revenue, reduce costs, or increase clients’ satisfaction with promising results.

These facts imply to a positive change in the client’s perception of mobile banking. On the other hand, the technical advances such as global system of mobile communications are presented as a new platform of real mobile applications. Mobile banking is usually defined as banking business with the help of mobile devices like mobile phones and pads. Offered services may include transaction facilities such as other related services that primarily rebound to informational needs like financial activities.

Considering these factors, mobile banking can be defined as follows: “mobile banking refers to provision and fulfillment of financial services related to bank through mobile communication devices”. According to the above definition, mobile banking services include a wide range of services (8).

Adaption of the needs of the target groups:
Nowadays, banks are increasingly faced to smart technologies served to clients who are often moving. As Wolfgang Klein, the director of customers in the Post Bank, an illustrious German bank, states: “today clients are demand ant of the organization of banking transactions per hour while they are moving.” Banks are responsible for this development by offering mobile services.

From the perspective of banks, target groups of mobile banking are divided into three groups (8):

Teenagers: ages 14-18 have important roles in development of mobile telecommunications and related services.

Youth: although this group is familiar with the technology and innovation, they are not very strong financially.

Business people: this group of clients is generally in the age group 26-50. It is thought that they would be one of the most important groups for mobile banking. Despite the benefits of mobile banking system, there are several obstacles and difficulties to set up and use this system as a complementary method and even replace some of conventional banking system in some situations and they can be classified as follows (4):

1-Infrastructural constraints
2- Lack of suitable and qualified manpower
3- Legal barriers
4- Economic barriers
5- social-cultural barriers
6- Political barriers
7- Barriers related to resistance of the employees and managers of banks against changes
8- Security restrictions
9- Technical barriers
Disadvantages of mobile banking:
Disadvantages such as weaknesses of hardware and software of mobile phones, vulnerability of wireless networks and providing mobile banking services in the context of Short Message Services (SMS) are as barriers against formidable waves of evolution of technology and increasing demand for utilization of mobile banking (2).

Mobile banking course:
Development of internet has been revolutionized course of commercial industry of financial services and significant organizations by offering new commercial models and new ways to provide full-time access to customers. The ability to provide online financial services has developed new roles such as online banks, online agents, and financial managers who offer personalized services and also developed role of still accounts for small percentages of industries in financial services. In recent years, the mobile and wireless market has had a high growth in the world and is still enjoying the high growth. According to GSM Association and Ovum report, the number of mobiles was over 2 billion in September 2005 and it is now more than 5/2 billion (2).

According to the study of Celent financial consultant, %35 of domestic online banking will be using mobile banking by 2010; however, it is now less than %1. Over %70 of mass of call centers are going to be led to mobile phones. In Asian countries such as India, China, Indonesia and Philippines, infrastructure of mobile phones is relatively better than infrastructure of phones and in European countries where mobile penetration is very high (at least %80 of users use mobile phones), mobile banking is developing incredibly. Large markets are being opened for financial institutions to offer added value services.

By mobile technology, banks offer a wide range of services to clients such as funds transfer while traveling, receiving stock process that are being updating online or stock trade on traffic. According to the report of Mobilcom, German operator, mobile banking is “applications’ killer” in the next generation of mobile technology. Mobile devices, especially smart phones, are the most promising way to reach keeping current clients and gain new clients with having the ability to serve at any time and any place and also the ability to influence and high growth potential. According to Gartner report, smart phones are growing rapidly, and will be over 20 million in 2006 (6).

In the following figure, different technologies have been compared to each other in providing services on mobile devices.
### Table 1 - Comparison of Different Technologies in Offering of Services on Mobile Devices

<table>
<thead>
<tr>
<th>Call Center</th>
<th>IVR</th>
<th>Applications</th>
<th>WAP</th>
<th>SMS</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average about 25 Euros per call</td>
<td>Low - 4 Euros per minute</td>
<td>No cost</td>
<td>No cost</td>
<td>Very low - about 4 Euros to send a SMS</td>
<td>No cost</td>
</tr>
<tr>
<td>No cost</td>
<td>No cost</td>
<td>Very low - about 1 Euro per KB</td>
<td>Very low - about 1 Euro per KB</td>
<td>Very low - about 10 Euros for each message</td>
<td>No cost</td>
</tr>
<tr>
<td>No installation is required</td>
<td>No installation is required and easy to learn</td>
<td>Require a relatively modest effort of users for installation</td>
<td>No installation is required</td>
<td>No installation is required</td>
<td>The amount of user’s effort for required set up and installation</td>
</tr>
<tr>
<td>The simplest to use</td>
<td>Very simple to use</td>
<td>Very simple like using the keyboard</td>
<td>Relatively difficult because of requiring passwords to enter, and also raise user’s effort due to versatility</td>
<td>Simple for things such as paying bills but difficult for activities such as financial interactions</td>
<td>Very simple to use, but very low function</td>
</tr>
<tr>
<td>Without encryption, but relatively modest security</td>
<td>Without encryption, but relatively modest security</td>
<td>Complete encryption</td>
<td>Complete encryption</td>
<td>No complete encryption, and low security</td>
<td>Without encryption and very low security</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Issues of security and encryption</td>
</tr>
</tbody>
</table>

### Mobile Banking Situation in Iran:

Now banks offer special software’s on their websites so that clients download and install it on their mobile phones in order to take advantages of mobile banking services.

Most of private and public banks offer mobile banking services and you can get account balance operations and recent circulations, transfer funds between your account and others’, pays bills of water, electricity, gas, etc in the shortest possible time with the help of your mobile phone (1).
Technology Acceptance Model (TAM):
TAM was the best model for the utilization of explanation of acceptance and use of technology as a starting point. This model is based on the theory of logic of action and is popular as the economical model. It claims that using personalized system is determined by behavioral intention that is defined by two beliefs: perceived usefulness, the extent to which a person believes that using a system will enhance job performance, and perceived ease of use, the extent to which a person believes that using this system will be free of effort. These two constructs of TAM are considered in this study (5). Technology Acceptance Model relies on three aspects:

1- perception of its relative usefulness: it means that one believes that the efficiency of his work is enhanced by use of technology
2- perception of its relative ease of use: it means that one believes that use of this particular technology is easy (ease of use)
3- subjective norm: it means that one believes that acceptance and use of the technology are acceptable and even important according to the community (subjective norm). The following figure shows the structure of TAM:

The main elements of this model are as follows: perceived usefulness is defined as the extent to which a person believes that using a particular system will improve his job performance. According to previous studies, more useful systems will be used more likely. Perceived ease of use is defined as the extent to which a person believes that using a particular system, based on physical or mental effort as well as learning, does not require too much effort. Systems that are more difficult to learn and use are less likely to be widely used:
Attitude, is positive or negative feelings of a person about performing a behavior behavioral tendency, refers to the possibility of using of the system by a person behavior, and considers using the system completely and consistently.

To explain units of measurement and record, following can be mentioned which are summarized (3) : ((specification of new guidelines of banking in the extent of acceptance of users of mobile banking services in private banks)).

type of study: descriptive-survey; it is asked from statistical population of customers in a private bank in Isfahan that had resisted against studies about offered services in mobile banking system. The technique used to gain credit is Cronbach’s Alpha; smart data analyzing and decision tree are used as data analysis methods. Sampling method was non-random and purposive (predetermined) sampling that is judicative because only a limited class of people, having special knowledge and experience, do not use mobile banking services and become resistant. Adjustment of services and advertisements with the characteristics of final users will accept and attract most of these users, and results in improving electronic banking industry. Mohammadtaghi Taghavifard and Mustafa Torabi did a study in 1389 entitled ((factors affecting use of mobile banking services by customers and their ranking, case study: Tejarat Bank, Tehran branch)), this research is an applicable one according to its purpose, in terms of location it was free, in this study a sample of 666 clients of Tejarat Bank were subjects to examination using descriptive-survey method. Necessary data in the present study was gained by using a questionnaire based on “Likart Scale” multiple choices of 5 options (9).

The questionnaire of the present study has been developed based on research model. The opinions of professors, experts and also managers of bank were used in order to ensure the validity of the study’s questionnaire completely and the final questionnaire was prepared after necessary revisions. In this study, Cronbach’s Alpha method is used for reliability. First, an initial sample of 30 subjects was used for computing Cronbach’s Alpha coefficient. Factors affecting on usage of mobile banking services have been studied by using data analysis of initial sample by SPSS software and by using descriptive and inferential statistics. According to the results, among the characteristics of mobile banking, adjustments factors, cost of use, ability to test and usefulness are more effective in order of priority; while the complexity and perceived risk do not affect so much in this case. Among the psychological characteristics, risking and attitude towards changes are effective factors in order of priority; while leading the opinion does not affect in this case.

**Resources:**


