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Factors influencing customers' change of behaviors from online banking to mobile banking in Tejarat Bank, Iran

Online banking
to mobile
banking

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Abstract

Purpose – The purpose of this paper is to study the influential factors in changing customers' behaviors from online banking to mobile banking based on Tiller and Tad model.

Design/methodology/approach – A quantitative method was used. This study is a practical research work by using 400 people, among whom 384 participants were selected based on simple random sampling.

Findings – The results indicated that the perceived advantage of using mobile banking, the influence of peer groups, source facilitator conditions as well as technology had the highest correlation. Among the influential components on attitude, the highest level belongs to perceived advantage of using mobile bank. Among the effective factors on behavioral control, source facilitator conditions and technology facilitator conditions had the highest correlation.

Research limitations/implications – It is suggested that the provided services be expanded via mobile banking and more customers be encouraged to use mobile banking services. For instance, the transaction of currency, stock, etc. via mobile banking is suggested. It is recommended that mobile banking software should be designed in a way that the process of mobile banking services is very easy for customers. Bank staff and employees should be trained to be active promoters of mobile banking services not only inside branch locations, but in other places and work environments as informers, messengers and models of using mobile banking.

Practical implications – It is recommended that bank managers should make use of the mass media such TV, billboard, radio, press, etc., in order to increase public awareness of mobile banking, and try to take effective steps in creating positive attitude in their customers on using mobile banking.

Social implications – Mobile banking has evolved as a wireless communication interface for producing value by customers in banking transactions. Today's, one of the substantially remarkable modern techniques in providing banking services is the provision of financial and banking services by using smart phones (mobiles). Although the life of using smart phones for banking and financial operations is not too long, significant advancements have been observed in this area within a short time, which could highly promise the extensive development of this modern electronic banking technique in future.

Originality/value – During the last decade, information technology has had tremendous impacts on banking industry through guiding and introducing new financial products with a specific delivering to its customers, enabling the banks to be able to provide distinguished products and special services to their customers safely and reliably. It is more than 200 years since banks have served their customers through their branch systems. However, with the emergence of various types of technology, the nature of providing financial services has greatly changed, with the increasing growth in electronic commerce.

Keywords Technology acceptance model, Mobile banking, Mobile-based banking, Tejarat bank

Paper type Research paper

Introduction

The amazing development of information technology and its expansion into monetary and banking markets across the world has considerably changed current banking methods while providing facilities in customers' affairs. With the increasing growth of electronic commerce transactions across the world and today's commerce need for bank participation in financial resources transfers, electronic banking has become an inseparable part of electronic commerce and plays a fundamental role in its implementation. It is worth noting that electronic commerce is not realized without electronic banking. The rapid growth of informative technology led to significant changes in money and currency shape as well as



resource transfer systems in banking arena. In addition, it has introduced new concepts and definitions as electronic money and its electronic transfer. These two concepts may establish a new type of banking as “electronic-banking.” With the development of internet and its accessibility to all people, the method of service providing has extensively changed in banks and these developments have laid the grounds for the emergence of phenomena such as mobile banking, internet banking and virtual banking (Taghavi Fard and Torabi, 2009).

Currently, banks have provided online banking services for their customers via the internet in most developed countries and customers can easily perform most of their bank affairs by getting connected to banks home pages using their unique account passwords without their presence in banks.

These factors have created a platform for facilitating commercial transactions resulting in competition growth among financial banks and non-bank institutes.

Therefore, Electronic banking is defined as providing certain facilities for the customers who can access banking services without the need for their physical presence in bank using secure interfaces (Motamedi, 2010).

Electronic banking includes all the electronic channels that customers use to access their accounts and transfer money or pay their bills (Yu, 2014).

Mobile-based banking is considered as one of the latest achievements of technology in banking industry, which serves numerous advantages for banks and their customers. Staying in competitive environment, reducing costs, developing more extensive telecommunication activities, possible savings in time and cost, gaining easier access along with higher speed in service providing can be listed as benefits and advantages which mobile-based banking has presented to banks customers. Thus, bank managers’ interest in identifying which factors and elements may lead to the use of services such as mobile-based banking by customers is obviously justified. In addition, finding influential factors in accepting and using such services will provide more appropriate planning in the enhancement of the number of mobile-based banking services users and faster utilization of this modern phenomenon both for banks and users of this high-tech service. A comprehensive use of mobiles and smart phones will provide an opportunity for banks to absorb potential customers in a competitive environment and add to their profitability by introducing one of the electronic banking services in line with customers’ needs and eliminating problems and limitations of traditional banking.

Iran is a young country in electronic commerce and banking, having a long way to reach an acceptable rank. Arrival of modern technology in these two aspects has presented new requirements in processing and exchanging data, tools and proper infrastructures, together with the possible techniques in introducing modern banking services. Based on the experiences of the developed countries and the growth of electronic banking services could help us predict the evolving and increasing process of needs in banking services in Iran to some extent. Referring to the current traditional methods in national banks and the insufficiency of these methods in providing new banking services, it is highly crucial to establish the required infrastructures in banks, which is fortunately highlighted by the related authorities. In addition, certain expansive activities have been completed in the banking system to present electronic banking and other modern banking services (Vafaei, 2009).

Statement of problem

Rapid development of wireless telecommunication technology has resulted in increasing advancements in mobile commerce as a particular application for organizations and customers. Mobile banking is one of the common types of mobile commerce, which allows customers to perform their banking operations in various places via a simple and available device. Although this service has been recognized as a newly established

system within the country, it may encounter an important problem in the process of development which is due to the non-acceptance of its practical usage by the users. Thus, it is essential to follow certain research in order to identify the influential factors involved. This problem is likely to play a considerable impact on the level of application and expansion of mobile banking, since we are facing an updated technology which is not widely welcomed by numerous public customers in Iran. Despite its remarkable advantages and banks' substantial investment, mobile banking has not received satisfactory acceptance and recognition by public users yet. Hence, it is crucially important to determine the key factors involved in accepting and using this new-developed technology (Amadeh and Jafarpour, 2009).

Technology acceptance by target groups has been one of the important research topics in the field of information technology during the last decades. The Decomposed Theory of Planned Behavior (DTPB) is regarded as one of the theories greatly considered by researchers (Taylor and Todd, 1995). The results indicated that this theory provides a logical theoretical framework for understanding the reasons of accepting different types of information systems. In the DTPB, it is argued that three factors of attitude (usefulness, accessibility, compatibility); subjective norm (peer and superior); and perceived behavioral control (resources, technology, self-efficacy) play a significant role in changing behavior and customer decision making and ultimately practical use of system by the customer. As a general principle, more favorable attitude and subjective norm and higher attitude of behavioral control will strengthen the individuals' intention for behavioral adoption (Elahi *et al.*, 2012).

Recently, all organizations are seeking to attract more customers and increase their satisfaction. It is of particular importance in case of banks, which are in frequent contact with customers. On the other hand, competition between banks and interest free loan institutions and other forms of absorbing financial resources are growing rapidly. Nevertheless, creating competitiveness for banks survival is very essential. Modern bank services which are closely integrated with information and telecommunication technology serve as highly important factors in developing competitiveness for banks, inducing customers' attraction and increasing their satisfaction (Amiri, 2009).

Significance of the study

Today's banking industry is changing as fast as possible. With the development of international economy and competitiveness of markets, banks have made great changes. In such conditions, technology is the main force which has broken legal, geographical, and industrial obstacles and developed new services. According to available statistics and figures, the influence coefficient of using mobile is higher than any other technology. This has directed mobile commerce toward a universal (global) revolution, which is increasingly advancing in the developing countries as rapidly as the developed countries.

During the last decade, information technology has had tremendous impacts on banking industry, caused banks to be able to provide distinguished products and services for their customers. It is more than 200 years since banks have served their customers via their branch systems. However, with the emergence of various types of technology, the nature of providing financial services has greatly changed.

Mobile banking has evolved as a wireless communication interface for producing value by customers in banking transactions. Today's, one of the substantially remarkable modern techniques in providing banking services is the provision of financial and banking services by using smart phones (mobiles). Although the life of using smart phones for banking and financial operations is not too long, significant advancements have been observed in this area within a short time, which could highly promise the extensive development of this modern electronic banking technique in future (Wati *et al.*, 2009).

It is worth noting that mobile banking technology has expanded in recent years as a method for maintaining customers' faithfulness and increasing market share. Thus, the present study seeks to examine the influential factors in changing customers' behaviors from online banking to mobile banking, and play an effective role in increasing customers' use of mobile banking.

Mattila *et al.* (2003) emphasized that household income and education play a major impact on the adoption of internet banking among customers in Finland, while the user's perception of the difficulty in using computers as well as lack of personal services in internet Banking in Finland is regarded as the main obstacles in using internet banking.

Research hypotheses

- H1.* There is a significant relationship between the perceived advantage of using banking mobile and bank customers' attitude.
- H2.* There is a significant relationship between the complexity of using mobile banking and bank customers' attitude.
- H3.* There is a significant relationship between the compatibility of using mobile banking and bank customers' attitude.
- H4.* There is a significant relationship between peer groups and subjective norms.
- H5.* There is a significant relationship between superior groups and subjective norms.
- H6.* There is a significant relationship between self-efficacy and perceived behavioral control.
- H7.* There is a significant relationship between source facilitator conditions and perceived behavioral control.
- H8.* There is a significant relationship between technology facilitator conditions and perceived behavioral conditions.
- H9.* There is a significant relationship between bank customers' attitude and behavioral tendency toward using mobile banking.
- H10.* There is a significant relationship between bank customers' subjective norms and behavioral tendency toward using mobile banking.
- H11.* There is a significant relationship between perceived behavioral control and behavioral tendency toward using mobile banking.
- H12.* There is a significant relationship between behavioral tendency toward using mobile banking and customers' actual behavior from online banking to mobile banking.

Method

A quantitative method was used in this study which provides better and wider view of the situations in a fast and more efficient manner. This study was conducted in a real, objective and dynamic organization, based on practical results. The population included 400 customers of Tehran Province Tejarat Bank who used internet banking and mobile banking, among whom 384 were selected based on simple sampling technique to explore factors affecting m-banking adoption. The questionnaires consist of close-ended questions in order to have proper considerate, precise and authentic information about the research problem. The Planned Behavior Theory Questionnaire including 39 questions, along with a sociological questionnaire including age, sex, studies,

monthly income were applied for data collection. In order to insure the reliability of the questionnaire, Cronbach's α coefficient techniques was used. Table I indicates the reliability of the variables included in the questionnaire.

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Data collection

In order to collect data on literature and theoretical issues of this research, the author used library method such as books, and articles, dissertations, websites, [...] were applied while questionnaire distribution, field-survey study and holding analytical meetings with managers and employees were used in order to collect data on research hypothesis.

Hypothesis testing

In order to achieve the above objectives, data were analyzed as shown in Table II.

Variable	α
Perceived advantage	0.82
Complexity	0.92
Compatibility	0.76
Peer groups	0.81
Superior groups	0.79
Self-efficacy	0.71
Source facilitator conditions	0.73
Technology facilitator conditions	0.75
Attitude	0.89
Subjective norms	0.87
Perceived behavioral control	0.84
Behavioral tendency of using	0.89
Actual behavior of using	0.82

Table I.
Reliability coefficient
for the variables

Hypothesis	Standardized coefficient	t-value	p-value	Result
Relationship between perceived advantage and bank customers	0.54	9.66	< 0.01	+
Relationship between complexity of using mobile banking and customers' attitude	0.36	-6.55	< 0.01	+
Relationship between compatibility of using mobile banking and customers' attitude	0.14	2.89	< 0.01	+
Relationship between peer groups and subjective norms	0.44	8.12	< 0.01	+
Relationship between superior groups and subjective norms	0.39	7.10	< 0.01	+
Relationship between self-efficacy and perceived behavioral control	0.09	1.89	< 0.01	-
Relationship between source facilitator conditions and perceived behavioral control	0.41	7.67	< 0.01	+
Relationship between technology facilitator conditions and perceived behavioral control	0.41	7.66	< 0.01	+
Relationship between bank customers' attitude and behavioral tendency to use	0.60	10.97	< 0.01	+
Relationship between subjective norms and behavioral tendency to use	0.44	8.22	< 0.01	+
Relationship between perceived behavioral control and behavioral tendency to use	0.34	6.42	< 0.01	+
Relationship between and behavioral tendency to use mobile banking and customers' actual behavior	0.67	12.35	< 0.01	+

Table II.
Research hypotheses
testing

Results and discussion

Descriptive results for main research variables

The mean values indicate that with regard to average value (number 3), the mean value of all variables except “complexity” is higher than the mean level. The highest mean value belongs to perceived advantage ($M = 4.32$), attitude ($M = 3.95$) and perceived behavioral control ($M = 3.82$). The lowest mean belongs to complexity ($M = 2.45$).

Correlation of variables

The results of Pearson’s correlation test indicated that a positive correlation was observed between attitude, perceived advantage, compatibility ($p < 0.01$) while it was negatively correlated with complexity. Further, a positive and meaningful correlation was observed between subjective norms a peer group ($r = 0.68$), and superior groups ($r = 0.55$). In addition, there is positive and meaningful correlation between perceived behavioral control and with self-efficacy ($r = 0.61$), with source facilitator conditions ($r = 0.63$) and technology facilitator conditions ($r = 0.70$).

The results of the study showed that the intensity of correlation between attitude and behavioral tendency, subjective norms and behavioral tendency, and perceived behavioral control and behavioral tendency is equal to 0.59, 0.5 and 0.52, respectively. The results also indicated that a meaningful correlation was reported between behavioral tendency and actual behavior of using mobile banking ($r = 0.74$).

Correlation analysis of the research components

Among the influential components on attitude, the highest level belongs to perceived advantage of using mobile bank ($r = 0.54$). Regarding subjective norms, peer groups had the highest correlation ($r = 0.44$).

Among the effective factors on behavioral control, source facilitator conditions and technology facilitator conditions had the highest correlation ($r = 0.44$). Finally, regarding behavioral tendency, the highest correlation was observed between bank customers’ attitude and Behavioral tendency to use mobile banking ($r = 0.6$).

Recommendations for research hypotheses

Regarding the results of research hypotheses, the following recommendations are made: First, it is suggested that the provided services be expanded via mobile banking and more customers be encouraged to use mobile banking services. For instance, the transaction of currency, stock, etc. via mobile banking is suggested.

Second, it is recommended that mobile banking software should be designed in a way that the process of mobile banking services is very easy for customers. In other words, people with any level of literacy can easily use mobile bank services without any complexity and inconvenience.

Third, compatibility includes the amount of adjustment which a product or service may have with the needs, beliefs, values, experiences and habits of customers. In this respect, it is recommended that because of the increasingly rapid changes of environment, every six months or every year, a field study should be performed for the customers in order to achieve an accurate understanding of the customers’ basic needs and substantial beliefs. Moreover, based on the improvement of introduced services in mobile banking based on customers’ needs, greater steps can be taken in the direction of changing customers’ attitudes toward this new service.

Forth, bank staff and employees should be trained to be active promoters of mobile banking services not only inside branch locations, but in other places and work environments as informers, messengers and models of using mobile banking.

Fifth, it is recommended that by holding regular meetings with managers of different organizations and explaining the advantages of using mobile banking services, they are more encouraged and motivated toward using mobile banking services and are requested to introduce these special advantages to their employees.

Sixth, banks should enhance the individuals' self-efficacy in using computers and internet banking systems by holding workshops and training courses. They may also provide available and ready-made references such as skilled individuals or groups with strong communicative capabilities and appropriate teaching skills, via online. Telephone and the like for guiding and helping customers in facing problems during internet banking operations in order to improve source facilitator conditions.

Seventh, it is suggested that bank authorities should provide available and ready-made references such as skilled individuals or groups with strong communicative capabilities and appropriate teaching skills via online or telephone for guiding and helping customers in facing problems during internet banking operations in order to improve source facilitator conditions. If customers are informed that banks have necessary experiences and adequate resources such as technological infrastructures, software systems, as well as enough knowledge and skills for performing banking services and operations on mobile, they will certainly use mobile services with more confidence and trust.

Eighth, bank authorities are advised to establish internet banking systems in brochures, home pages, websites, mass media, etc., by providing warranties to customers regarding bank's promise to its commitments in mobile banking services, obliging managers and bank staff to act and behave according to bank ethical rules and regulations, expressing all rules and regulations related to fighting against internet crimes and cyberspace violations clearly, specifying bank responsibility limits in implementing these regulations, introducing call technological infrastructures completely and precisely and providing support solutions for these infrastructures from customers in order to take effective steps in attracting customers' confidence and motivating them to use mobile banking services.

Ninth, banking systems authorities should influence families perceptions and attitudes in creating more tendency to use internet banking services by proper advertisements via mass media and correct marketing.

Tenth, the existence of legal infrastructures and generally internet security may greatly influence customers' trust in using mobile banking. On the other hand, if banks are more principled in their moral commitments toward customers and act according to these rules, they may changes customers' attitudes into mobile banking services. Moreover, in order to create favorable behavioral tendency and interest in customers, it is essential to design systems through which they could gain correct understanding of mobile banking values and advantages compatible with social and cultural norms as well as potential receptors' needs.

In addition, perceived behavioral control in planned behavior theory reflects the perception of internal and external limitations of performing behavior. Perception of factors for facilitating or preventing a behavior is considered as control beliefs. These factors include internal control elements such as information, individual skills and capabilities and external control elements such as opportunities, resources and facilities for performing behavior. It is suggested that bank managers should provide customers' satisfaction and comfort of mobile banking by having full knowledge of internal and external factors.

Finally, it is recommended that bank managers should make use of the mass media such TV, billboard, radio, press, etc., in order to increase public awareness of mobile banking, and try to take effective steps in creating positive attitude in their customers on using mobile banking.

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Further reading

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