

The effective factors on the acceptance and willingness of Iranian users toward Electronic banking

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Abstract

At present, e-banking is being considered not only as a competitive advantage, but rather as a competitive necessity for banks. The question that arises for the majority of users of e-banking is whether the e-banking technology in Iran is the same as other countries? Millions of Iranians already take advantage of e-banking technology and the number of e-banking user is increasing every day. In this paper we examines the factors that affect the adoption of e-banking and users tendency to use it and also the willingness of customers in using electronic banking or traditional banking. Research has shown that the factors of comparative advantage, the ability to view the results of using e-banking, the complexity or simplicity of the process, security, existing appropriate legal infrastructure, ease of use, and users' information literacy have an impact on the acceptance of e-banking by users. The results of this paper can help

the managers of developing banks to achieve better distribution solutions for serving the customers.

Keywords: Technology acceptance, Electronic banking, Customer behavior

1. Review of literature

Electronic banking is using the advanced technology of hardware and software-based network and telecommunication for the exchange of financial information and resources in electronic form and does not require the physical presence of the customer in the branch. Electronic banking allows customers to do financial transactions on a secure website in ways like retail banking jobs or virtual bank, financial and credit institution or construction companies. Banking industry constantly responds to changing customer needs and preferences and increased competition from non-banks, changes in demographic and social processes, development of information technology, channel strategies, and government deregulation from financial services sector (Giannakoudi and Bayers, 1999; Lederer, 2001). Success or failure of many banks depends on the manager's ability to

anticipate and react correctly to changes in financial markets. In search of a sustainable competitive advantage in the competitive financial and technological services industry, banks are recognized as they differentiated themselves from other financial institutions through distribution channels. This will be led to the establishment of developing banks and exploiting new alternative distribution channels to reach customers (See, Daniel, 1999; Thornton and White, 2001).

Massive development and spread of information technology to monetary markets and the World Bank, in addition to facilitating bank's customer's service jobs, has also revolutionized current banking methods. With the growth of e-commerce transactions throughout the world and business need to have banks in order to transfer funds; Electronic banking as an integral part of e-commerce has a vital role in its implementation. Dare to say that, without e-banking, e-commerce also will not be achieved. Rapid development of informatics industry causes major changes in the money forms and system of resources transfer in banking field and presented new concepts like electronic money banking and its electronic transfer. This concept creates a new type of banking which is called electronic banking. Electronic banking is defined to create low-cost products and services through electronic channels. These products and services can include billing, loan, deposits' management, electronic payments, and creation of products and services of electronic payments by the same electronic money.

An electronic bank, indeed, is an institution without any physical branch and in fact is a bank that doesn't need paper work, it is not limited to specific

geographic areas and offers 24-hour services to customer.

The electronic bank, is a special type of bank that uses an electronic environment (such as the Internet) to offer services to customers. In fact it can be said that electronic banking is a kind of electronic service. In this type of bank, all the banking operations, including all the bank receipts or deposits of money, verifying signatures, monitoring funds and other banking operations are conducted electronically. The most important type of electronic banking is Internet banking that sometimes these two concepts assume synonyms. Internet Banking means that Bank gives its customers the ability to interact with the Bank through the Internet and thus reduces costs of banks, increases bank's income and make banks more suitable for customers. Also Internet Banking refers to a remote communication channel that provides banking services. These services include a series of old services such as opening a bank account or transferring money and a series of new services like providing electronic-invoices.

Banks in the sphere of commercial transformations are paying serious attention in establishing the structural development in the system of receiving and paying money and providing facilities in the process of customer services. In fact, it can be claimed that one of the reasons for the public acceptance of electronic commerce is banks managers' attention to the importance and necessity of this phenomenon that resulted in their tendency and their serious attention to provide banking structure according to electronic methods.

In line with the objectives and policies of the Government, electronic banking is

one of the ways for creating a virtual city. In that case, the presence of citizens in banks that causes fatigue, spending time and money for them, is avoided. If in a society, electronic banking takes place, we can also hope to the boom of e-commerce there.

According to the current statistics, still half of the people do not welcome this approach because it seems that ATM devices (AMT) are not designed according to the needs of our society today.

In addition, frequent system failures and breakdowns of the devices, the shortage of the device relative to the amount of issued cards in the hands of the people; and the low speed of Internet in Iran also are other reasons for the lack of public interest.

Nowadays each bank tries to provide a financial card for each adult and even immature, and Iranian employee of banks don't have any prohibition on re-issuing the cards to customers. This is applied even for the specific groups; for example all the students' banking and financial services are done electronically via POS, ATM, Internet kiosk and also Web payment.

Although numerous studies have been done related to the electronic banking, but little research has been investigated in the field of acceptance and willingness of users to use electronic banking and also the amount of customers' tendency to use e-banking or traditional banking in Iran. If the promise of increasing efficiency in the banking industry and increasing the convenience of services to the consumer, comes true, then understanding the factors that affect the acceptance of new products, will allow you to create mitigate businesses by technological advances with real benefits that will be

accepted by the majority of customers. In this investigation we discuss about the influence of factors of relative benefits, ability to view the results of the use of electronic banking, complexity or simplicity of electronic banking processes, rates of Security, the existence of appropriate legal infrastructure, ease of use, removing geographical restrictions and information literacy of users in accepting electronic banking. Theoretical and experimental literature pertaining to the acceptance of the technology provides a framework for investigating the adoption of e-banking technologies.

2. Electronic Banking in Iran

History of electronic banking activities in Iran goes back to 1971. In that time, Tehran banks with the possession of between 7-10 ATM machines in their subsidiaries were responsible to have their first automatic cash payment experience only at those specific OEM branches. In the late 1980s, Iran's banks with regard to the application of personal computer, felt the need of banking operations automation and began to computerize banking operations.

During the years 1993 and 1994 the national switch for creating electronic banking was sparked. In June 2002, a set of rules governing the exchanges of information between banking central network called "Shetab" were adopted. Thus Shetab Bureau of the Central Bank established in 2008 and started to work with the goal of providing electronic banking infrastructure and is working since now. After the end of 8 years imposed war, economic difficulties and problems of the traditional banking system in Iran, were demonstrated. Accordingly, Iranian banking and economic policy makers were determined

to reform our banking system, to provide the growth and prosperity of the national economy. So, The Central Bank of the Islamic Republic of Iran prioritized banking automation plan, or e-banking in its first activities with the aim of improving the services offered by banks to customers, and optimum use of the budgets. These activities include optimization methods of banking, branch automation, supervisions and providing a software, hardware and telecommunication model, for the use of country's banks. Nevertheless the history of electronic banking in Iran returns to the past years of 1966s, At that time the Bank known as "Tehran" with installation of two to seven of ATM machines in its branches marked its first automatic cash payment (of course, in its branches).

Although in recent years, electronic banking in our country has had a good progress but to reach an ideal spot there is a long way facing the banking system. On this basis, although providing services to customers have had improvements compared to a few years ago but still there is a long distance comparing to advanced countries, and even many countries in the region, so that the electronic banking system in our country is just limited to Receipts and Expenditures system. However, a lot of substrates in banking affairs that are used in other countries in the form of absentia through this system is not provided still in our country or is running with many problems and obstacles such as providing security. Taking advantage of the electronic signatures in banking transactions is one of these items that although in recent years, efforts have been made in this area but still has not been widely implemented in our country.

Electronic banking in our country now is restricted to pay for water and electricity and telephone bills... Or the ATM to get and pay or transfer funds but compared to other countries we are just beginners. With these conditions, it can be said that what is proposed as electronic banking in our country is limited to Receipts and Expenditures system, though even in this manner due to the lack of the necessary infrastructure or problems with banking system, banks' customers are faced with many restrictions. Performing bank transactions via the Internet due to the limitations of the country's telecom network or providing some safety concerns of users is still in the beginning and unlike many developed countries in the world which often buy and sell their goods and services via the Internet network, our country's share of online shopping is still very insignificant in supplying goods system, and in addition to the lack of familiarity of consumers with this method, there are some concerns on the field of receiving and paying via the Internet.

In spite of existing constraints in recent years, the use of banking system in our culture is fairly well done, that compared with 10 years ago the rate of customers' acceptance especially in receipts and payments has been increased but the use of electronic banking between all segments of society is still not widespread and it seems that we have to create more comprehensive culture in this field and the employed tools in the this system should also be updated. It can be said that in spite of all the advances in electronic banking system in our country, the level of trust for the use of these systems is very low and is nearly 10 to 15 percent; and the majority of the community do not have full trust to this

system. If the conditions provide in such a way that at least 50% of people encourage to perform banking transactions through electronic banking, then, there will be no need to establish multiple branches of banks across the country, the cost of banking system and customers will be reduced appreciably and even it will affect traffic reduction and referring to branches to conduct banking transactions.

Although detailed statistics of electronic banking share in banking exchanges do not exist, but by considering electronic banking operation in various countries of the world, and comparing it with the use of banking system in our country, perhaps it can be said that this system in the most optimistic state has less than 15% proportion from Bank exchanges of customers, however, if this banking system gets the proportion of 50% of Bank exchanges, there will be no need to transfer a large volume of cash, while now in the advanced countries in the world even use of checks as tools of monetary exchange, day to day are becoming obsolete, and most transactions are performing in electronic methods. However use of check is an important tool in our banking system and we observe the vast volume of checks that are returned (Zia Almaleki, 2012).

3. Framework of the research

Technical background was studied through many researches that are linked with the acceptance of innovation. The main focus of these studies is that the technical features may affect the innovation adoption decision. According to the analysis of Tornatzky & Klein (1982) 30 characteristics for innovation is considered (e.g. benefits received, clarity of results, adaptability, communication,

etc.). One of the most critical revisions is technical characteristic of Rogers' theory (1962) that has been developed in the field of acceptance of innovation. Rogers (1962) introduces five characteristics based on the studies and comments of scientists that include benefits received, complexity, adaptability, the ability to view and ability to test (Prescott and Conger, 1995) Tornatzky & Klein (1982) understood that the first three characteristics have the most effect on the acceptance of innovation.

Environmental factors consider those factors that effect organization's activities in the field of its business. (Tornatzky and Fieischer, 1990) when organizations face with complex and changing environment, innovations are necessary (Pfeffer & Leblebici, 1977), past studies have grasped that the intensity of competition can have a significant effect on the acceptance of the innovation (Grover 1993, Tang, 1999, Xu, kraemer, Zho, 2003). On the other hand Valzoach and colleagues (2000) in this regard indicate to the factors associated with suppliers and customers and their effect on the acceptance of e-commerce.

The ability to exam refers to the ability of consumers to test a new technology and assessing its benefits that how much familiarity with electronic banking in various financial institutions affects providing services to their clients. Experimental studies on the acceptance of the technology have shown that a positive relationship always exist between the utility and to a lesser extent, to the ease of use, and the acceptance of a variety of special technologies, ranging from computer software to email.

The relative advantage is a degree in which customers estimate a new product or a new service better than its

alternatives. (Rogers1962). In the case of electronic banking, saving time, money and the convenience have been mentioned as the relative advantages of electronic banking and concerns associated with privacy about online affairs pertaining to the financial management were mentioned as electronic banking problems (Abbate) 1999; Snel, 2000; Karjaluoto et al., 2002).

Observation is a method that through it we understand which innovation is visible and applicable for clients, for example, ATMs in the streets and stores have higher visibility than banking through personal computers at home.

Simplicity or complexity is an extent that through it clients find a new innovation simple and understandable to use. Consumers that don't have previous experience using computer, or those who believe that the use of electronic banking is complex, the acceptance of these technologies may be difficult for them.

Compatibility is an extent that specifies which product or service is compatible with the consumers' needs, beliefs, values, and life experiences and habits. In relation to e-banking, we should consider how much the degree of given technology is compatible with customer's banking behavior and the method of its former financial management. Service innovation is a different technology from other goods so that the acceptance of them may need behaving differently from the usual routine of consumers. (Gatignon and Robertson, 1985).

Among the factors, individual factors affect the acceptance of an innovation. Removing geographical limits and users information literacy are some of these factors.

The amount of user computer literacy is impressive in the use of new technologies in electronic banking. So that users who previously have not used a computer or Internet are less likely to use this technology. Also users, who serve electronic banking as a way to remove geographical restrictions, are more likely to use this technology.

4. Research theoretical framework

According to Davy in 1990 customer decision-making process is the purchase behavior of consumers towards goods and services which involves a five-step decision-making process. These steps include the diagnosis of the problem, search and replace alternatives, select, review, and output. Davy decision making framework considers consumer as information processor, altering the information in the various stages of the decision-making process, and shows that, this trend, at least in terms of theory, applied to a broad range of decisions of consumers.

According to the literature study, relative advantages of variables, ability to view the results of the use of electronic banking, complexity or simplicity of electronic banking processes, the amount of security, the existence of appropriate legal infrastructure, ease of use, information literacy of e-banking users have an effect on the acceptance of e-banking by users.

Based on the literature review of previous studies, we make the following assumptions with regard to the demographic characteristics and social and economic status of compilation.

4.1. Individual characteristics

- 1- Electronic banking is more accepted by individuals with a higher level of information literacy.
- 2- Electronic banking is more accepted by younger people.
- 3- Electronic banking is more accepted by individuals with higher levels of income.

4.2. Electronic banking features

- 4- The relative benefits derived from electronic banking have an effect on the acceptance of electronic banking by customers.
- 5- The ability to view the results of using electronic banking has an effect on the acceptance of electronic banking by customers.
6. The complexity or simplicity of electronic banking processes has an effect on the acceptance of electronic banking by customers.
- 7-The amount of security in electronic banking processes has an effect on the acceptance of electronic banking by customers.
8. Existence of appropriate legal infrastructure has an effect on the acceptance of electronic banking by customers.
- 9- Ease of use of electronic banking systems has an effect on the acceptance of electronic banking by customers.

5. Research methodology

Considering the present study that is investigating the factors influencing the acceptance of electronic banking between

Iranian citizens, the research type in terms of its purpose is practical and in terms of data gathering, is respectively descriptive- scaling. And by collecting data, investigates the factors affecting the adoption of e-banking among Iranian citizens.

5.1. Sampling method

Researcher aim is to identify the community and to determine the parameters related to it. Sample is a subset of community. And include elected members of the community. After investigating and studying sample, researcher can generalize the extracted results to the community.

Since sampling is suitable by using random methods, the questionnaire of this study randomly distributed between individuals in the sample.

Total number of 530 questionnaires were distributed that 510 were given back and due to the incomplete responses, 500 questionnaires were analyzed.

5.2. Method of data collection

Data gathering tool were made according to the researcher-made questionnaire, which is prepared based on the theoretical literature and research history. Its validity and reliability have been specified. Also for the compilation and presentation of theoretical assumptions, library method (books, articles, magazines and the Internet) was used.

5.3. Methods of data analysis

After data gathering, data have been processed and analyzed by SPSS software. Descriptive statistics method is used for analysis of descriptive data and

inferential statistics methods have been used for the hypothesis evaluation.

6. Evaluation of the research hypotheses

Statistical hypothesis for testing hypotheses are as follows:

To test this hypothesis, H1 assumption expresses that the mean score of answers on the confidence level of 95% is greater than 3 and H0 assumption expresses that the mean score of answers is equal or smaller than 3.

H0: $\mu \geq 3$

H1: $\mu < 3$

Based on the results of the analysis of the first hypothesis, there is a meaningful relationship between information literacy level and the positive reception of electronic banking. And thus it can be said that the level of literacy has an impact on the acceptance of electronic banking.

Based on the results of the analysis of second hypothesis, no relationship exists between age and the acceptance of electronic banking.

Based on the results of the analysis of the third hypothesis, there is no relationship between the level of income of individuals, and the acceptance of electronic banking.

Based on the results of the analysis of the fourth hypothesis, there is a meaningful relationship between the relative benefits derived from employing electronic banking and positive acceptance of electronic banking. And thus it can be said that the relative benefits have an impact on the acceptance of electronic banking.

Based on the results of data analysis of the fifth hypothesis there is a meaningful relationship between the ability to view the results of employing electronic banking and the positive acceptance of electronic banking. And thus it can be said that the visibility of results have an impact on the acceptance of electronic banking.

Based on the results of the data analysis of the sixth hypothesis there is a meaningful relationship between the complexity or simplicity of electronic banking processes and the acceptance of electronic banking. And thus it can be said that the visibility of results have an impact on the acceptance of electronic banking.

Based on the results of the data analysis of the seventh hypothesis there is a meaningful relationship between security in electronic banking processes and the acceptance of electronic banking. And thus it can be said that the security procedures have an impact on the acceptance of electronic banking.

Based on the results of the analysis of the eighth hypothesis there is a positive relationship between the existence of legal infrastructure and the acceptance of electronic banking. And thus it can be said that the existence of legal infrastructures has an impact on the acceptance of electronic banking.

Based on the results of the data analysis of the ninth hypothesis there is a meaningful relationship between the ease of use of electronic banking and the acceptance of electronic banking. And thus it can be said that the ease of use has an impact on the acceptance of electronic banking.

7. Research model

According to the results, the research model is as follows.

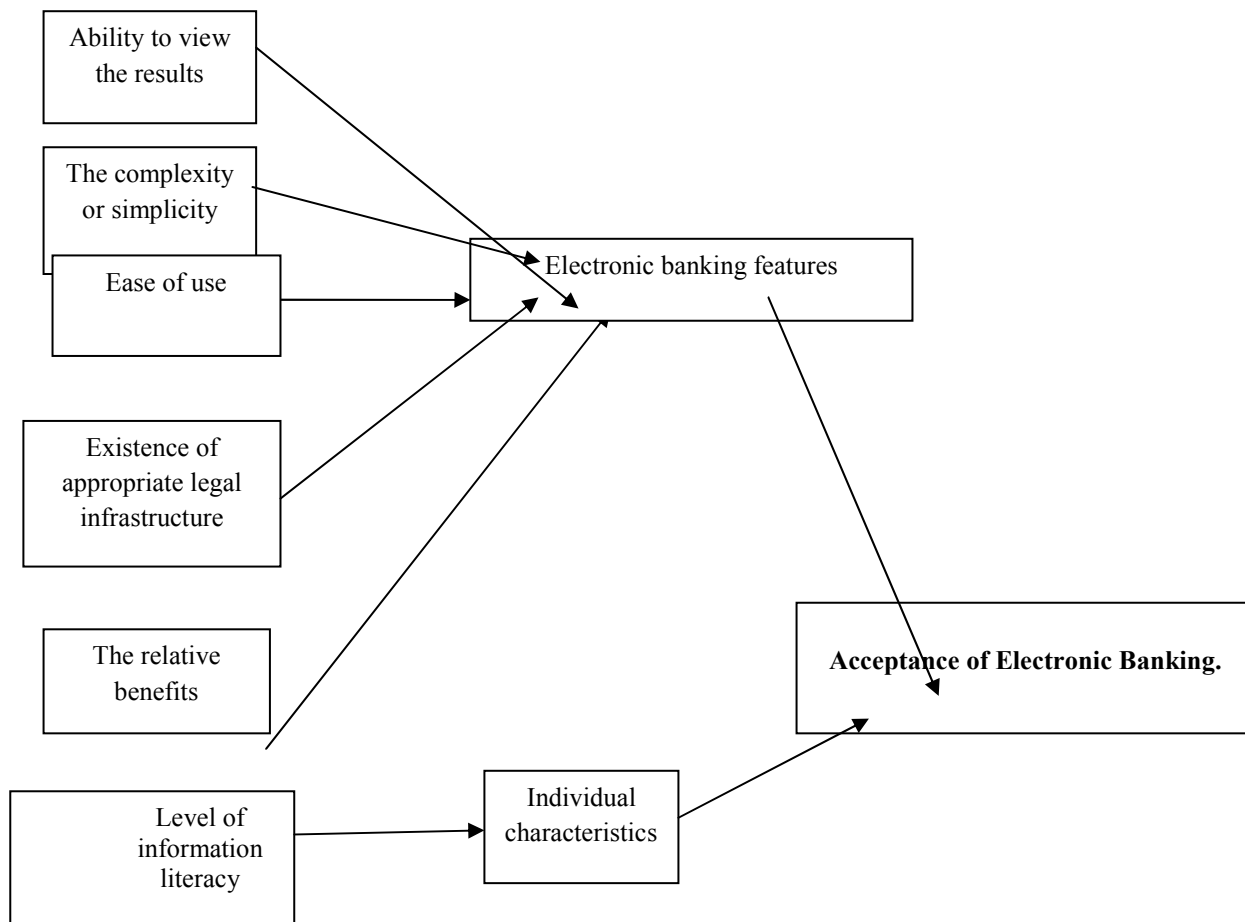


Figure1. Research model

8. Practical suggestions

- 1- Since the benefits of admitting electronic banking has a relationship with the acceptance of electronic banking in

organizations, sufficient and appropriate culture-building in relation to the benefits of accepting electronic banking is a necessity. In this regard, indirect advertising can be used by mass media like radio and television and other media in the direction

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- of familiarizing public culture with electronic banking performance and increasing positive attitudes of individuals towards this technology.
- 2- since the visibility of employing electronic banking results has a relationship with the acceptance of electronic banking in organizations, it is proposed, that successful people who have used information systems properly after implementing these systems in their Organizations and have been able to use electronic banking as a tool to enhance the efficiency and productivity in their activities, they should be introduced as successful users in the field of electronic banking application to others, in this way other people will be aware of facilities that this technology provides for the company and gain knowledge of how to use this technology.
 - 3- According to the conducted research, the readiness of institution clients has a relationship with the tendency to use e-banking, but many banks due to the lack of desire from their commercial partners and customers refuse using e-banking, So it is recommended that organizations with regard to the facilities and special services that provide for e-banking customers, encourage other customers to use electronic banking. in this regard, the organization can offer the following facilities:
 - A) Exchange ideas with these customers
 - B) Organizations that have benefited from Web site provide ability for customers who use electronic banking to personalize their information through Web site.
 - (C) Providing educational pamphlets or training courses for customers to familiarize them on how to use information systems and its applications.
 - 4- Since the amount of security of information systems has a relationship with the acceptance of electronic banking, therefore it is recommended to the bank's managers to help the users to access to the needed information through the development and improvement of security channels.
 - 5- Providing educational programs associated with electronic banking and preparing educational handouts that clarify the benefits of electronic banking and information systems in a simple and clear manner, also training how to use these systems can be a step toward the effective use of information technology basic resources.
- Also, the effective cost management and the effective control of costs, more appropriate utilization of inner and outer specialist information technology, access to the latest technology and training needs assessment of managers and those involved in the Bank in the field of electronic banking and running special courses for these managers can be beneficial.

9. Results & discussion

This study examines the factors affecting the acceptance of electronic banking and e-banking users tendency to use it and indicated that the relative benefits factors, the ability to view the results derived from the use of electronic banking, the complexity and simplicity of processes, the amount of the security, the existence of appropriate legal infrastructures, ease of use, and information literacy of e-banking users have an effect on the acceptance of e-banking by users.

With regard to the factors affecting the acceptance of electronic banking, banks' managers should provide suitable situation for the realization of these factors. Formulating policies to encourage citizens to extend using computer to perform everyday activities, especially in filed of the various e-banking affairs can be useful.

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