

## Barriers and Challenges In Process of Deployment and Implementation of Electronic Banking Systems in Parsian Bank

Ali Eyni Delijani<sup>a</sup>, Jalal Feizollahi<sup>b</sup>, Hazhir Akbari<sup>c</sup>, Sara Golban<sup>d</sup>, Ali Khooyeh<sup>e</sup>, Amir Fartash<sup>f</sup>,  
Seyed Mohammad Kazem Azizi<sup>g</sup>

<sup>a</sup>Department of Business Management, Rasht Branch, Islamic Azad University, Rasht, Iran

<sup>b,c,d,e,f,g</sup> M.A. Student of Business Management, Rasht Branch, Islamic Azad University, Rasht, Iran

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### ABSTRACT

Without doubt, the internet is caused revolution in communication system of world. Banking is also due to the increasing utilization of communication, not the exception and has joined the global communications. Ferguson has divided the implementation barriers and administrative improve of electronic banking to two intra organizational and extra organizational. Category of extra organizational including organizational environment and environmental policies and intra organizational category includes 4 main factors (technological, managerial, organizational, and cost). It should be noted that Ferguson's theory as the theoretical framework has been considered in this study. Present research is a descriptive - analytical and research method is causal - comparative that has performed as survey. Research population of research is including Electronic banking experts in Parsian Bank that are approximately 50 people. Study method is field and data collection tool was interviews with experts and a questionnaire that it was adjusted to guidance advisor and guide. Because researcher studied all of statistical population and taken census, therefore in data analysis was used descriptive statistics and calculation of population mean. According to performed surveys is concluded that Organizational factors is as the first and most effective factor and then respectively the technological factors, Managerial factors and finally, cost factors have an impact on the implementation and improvement of electronic banking.

**Keywords:** Electronic Banking Systems, Organizational Factors, Managerial factors, Technological Factors, Cost Factors.

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### 1. INTRODUCTION

With the development of information technology in various fields of human life there are new concepts and phenomena that can be cited Electronic commerce<sup>1</sup>, electronic banking, electronic services, electronic government, electronic insurance and e-Learning (Myrna, 2001, p1). The bank, like any organization, need to improve their relationships with customers (Ziakhosooi & et al, 2011). Electronic banking<sup>2</sup> is one of the achievements of e-commerce phenomenon. With the increasing volume of e-commerce growth in the world and According to need to trade and banking operation to transfer financial resources, E-banking plays an essential role in e-commerce. In general, electronic banking is meant to provide all banking services including the transfer of resources through public and available communication network of computer (Central Bank, 2002, p2). Money has supply and demand like every another product (Salimi & et al, 2011). Implementation of electronic banking in any country has requires to a different infrastructure that recognizing infrastructure and identifies problems and challenges in during implementation and improvement of electronic banking is appropriate guide in achieving success of Banks. Modern organizations are located in complex global competitive environment that it is due to environmental changes, organizational and technological. The rapid growth of information technology and the internet has changed the nature of work in organizations. Thus the appropriate use of technology in business seems essential factors for survival of organizations in today's competitive environment. Entering information technology and internet to the field of financial transactions, while facilitating this exchange, has greatly reduced the amount of financial costs. So all the world's major banks is looking to enter faster and more serious in the electronic exchange markets and providing services through internet banking to their customers. Electronic banking is defined as perform all matters banks in an electronic environment that customer access to the bank perform a very fast, comfortable, in all day and night, regardless of location and time. On the other hand, banks can offer their services with greater efficiency and lower costs (Sarafizadeh, 2004, p196).

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<sup>1</sup> E-Commerce

<sup>2</sup> E-banking

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\*Corresponding Author: Ali Eyni Delijani, Department of Business Management, Rasht Branch, Islamic Azad University, Rasht, Iran.

## 2. LITERATURE REVIEW

Iran's position among countries exploitation of information and communication technologies (ICT) is in the category countries following the development of these technologies. It include management networks of production, processing, distribution and optimized consumption efficiency systems to enhance information (Hejber Kiani, K; Akhavan, Sh, 2007, Eilbeigi & et al, 2012). ICT development, in light of the evolution of computer science in the business world is changing dramatically (Gilaninia ,Boeini & et al, 2011). With this explanation can be acknowledged that our country still in programs of ICT development is in the primary step and it is require that for the development and improvement of electronic banking provide field of ICT development. Develop appropriate communication infrastructure can be effective in incorporated into the banking system with electronic devices. Hardware and software development tools in the field of electronic banking such as ATM machines, digital telephone systems, credit cards, smart cards and ... Preparing the legal framework and a systematic of electronic banking, expansion of public culture towards electronic banking question is require for the deposit of electronic banking in Iran. In our country, it felt the need to use these aspects of information technology and consequently measures such as the use of ATM systems, network, LAN, WAN and proffered customer service is being done through the internet (Eyni Delijani, 2008).

Thus main question in research including: What are problems of improve and administrative e-banking in Iran? Do intra organizational factors (technological, managerial, organizational, and cost) have a role in the implementation and improvement of electronic banking?

### 2.1. *Electronic banking:*

Electronic banking is as the main elements of modern economy (Gilaninia & et al, 2011). Banking has become currently processing services industry of information. Informatics industry developed rapidly caused major changes in the money and banking systems and has created new concepts such as electronic cash, ATM machines, home banking, telephone banking, Internet banking and virtual banking (Calisti; Willott & Emma, 2001, p2). The concept of electronic banking and its performance is not yet fully known for many people (Alipour & et al, 2012)

Banking has a different level and can presented specific definition for them. What can be seen at all levels is using computer software systems. Electronic banking means the optimal integration of all activities of a bank through the deployment of modern information technology based on banking processes, according to organizational structure of banks That provides services to customers (Kahzadi, 2001, pp22-23).

According to the Basel Committee: electronic banking is applied create low cost products and services through electronic channels. These products may include bills, loans, deposit management, electronic payments and creation of electronic payments of products and services as electronic money (Basel Committee, 1998, p3). On the other hand can say that an electronic bank is an institution that has no physical branches and that In fact bank does not need the paper, is not limited to specific geographic areas and provide twenty-four hour service to customers (Copenhagen stock exchange, 2001, p117).

### 2.2. *Technological factors*

Technological factors means inappropriate of telecommunication infrastructure, lack of software and hardware facilities, lack of security in communication networks, inadequate bandwidth, lack of internal expertise and low technical expertise and lack of customer awareness towards electronic banking services.

### 2.3. *Managerial factors*

Managerial factors include lack of transparency in policy making, lack of strategic management and long-term planning, lack of management support, inadequate commitment of management, management perspective in the field risk and risk cost, poor management of information technology.

### 2.4. *Organizational factors*

Organizational factors, including lack of proper infrastructure for IT, multiplicity of decision making centers, lack of coordination among departments, inappropriate of current procedures, too shift managers.

### 2.5. *Cost factors*

Cost factors include the cost of investment in the telecommunications field, development cost and updated satellite and computer networks and cost of connect to the web and design, much time on electronic banking and tangible financial return (Eyni Delijani, 2008).

## 3. Research Hypotheses

1 - Technological factors are barriers of implementation and improvement of electronic banking in Parsian Bank.

2 – Managerial factors are barriers of implementation and improvement of electronic banking in Parsian Bank.

3 – Organizational factors are barriers of implementation and improvement of electronic banking in Parsian Bank.

4 - Cost factors are barriers of implementation and improvement of electronic banking in Parsian Bank.

**4. Research Methodology**

Current study according its nature is descriptive and type of causal and comparative. Professionals and experts in the study of electronic banking in Parsian bank were considered as statistical population. These people include managers and professionals IT, and electronic banking in Parsian Bank headquarters, Parsian e-commerce companies and Caspian Company (Supplier Company of services and electronic banking application systems in Parsian Bank) that available number of people is 50 people in Parsian Bank, so all of statistical population has been selected to receive the desired results and were examined. Thus In this study doesn't have sampling. In this study, to review the status of electronic banking in Parsian Bank is done by develop appropriate questionnaires, interviews with managers IT in Parsian Bank. Also, from questionnaire has also been used to review and identify problems and the main barriers of components and improving of electronic banking in Bank Parsian. It should be noted that method of doing research is field.

**5. Data Analysis**

Table 1) compared table of current and ideal state in hypotheses

Hypotheses	The mean difference of ideal State	The mean difference of current State	The mean difference between current and ideal State
The first hypothesis (the technological dimension )	4.6119	2.6640	1.9479
The second hypothesis (the management dimension )	4.4652	2.5277	1.9375
The third hypothesis (the organizational dimension )	4.4270	2.3370	2.0963
The fourth hypothesis (the cost dimension )	4.2998	2.6291	1.6708

**First hypothesis:** according to obtained result can say that from the perspective of respondents, technological factors are barriers to implementation and improving of electronic banking in Parsian bank and because amount of difference between current and ideal State is equal to 1.9479 (it is among 1 and 2). According to table amount being an obstacle of this factor in the path of implementation and improving in electronic banking in Parsian bank is in the middle to low. On the other hand with evaluation of results of questionnaire about questions related to the technology can be seen that in respondents' idea, most current gap is related to security factor of space exchange information in electronic banking system and after knowledge and awareness amount of customer to e-banking service.

**Second hypothesis:** according to obtained result can say that from the perspective of respondents, managerial factors are barriers to implementation and improving of electronic banking in Parsian bank and because amount of difference between current and ideal State is equal to 1.9375 (it is among 1 and 2). According to table amount being an obstacle of this factor in the path of implementation and improving in electronic banking in Parsian bank is in the middle to low. On the other hand with evaluation of results of questionnaire about questions related to the management can be seen that in respondents' idea, most current gap is related to appropriate orientation when the need for risk analysis and then knowledge and skills of management in the branches in implementation of electronic banking.

**Third hypothesis:** according to obtained result can say that from the perspective of respondents, organizational factors are barriers to implementation and improving of electronic banking in Parsian bank and because amount of difference between current and ideal State is equal to 2.0963 (it is among 2 and 3). According to table amount being an obstacle of this factor in the path of implementation and improving in electronic banking in Parsian bank is in the middle to high. On the other hand with evaluation of results of questionnaire about questions related to the organization can be seen that in respondents' idea, most current gap is related alignment factor and non-interference policy and implementation and monitoring in electronic banking and then planning for the training of human resources knowledge and skills to electronic banking.

**Fourth hypothesis:** according to obtained result can say that from the perspective of respondents, cost factors are barriers to implementation and improving of electronic banking in Parsian bank and because amount of difference between current and ideal State is equal to 1.6708 (it is among 1 and 2). According to table amount being an obstacle of this factor in the path of implementation and improving in Electronic Banking in Parsian bank is in the middle to low. On the other hand with evaluation of results of questionnaire about questions related to the organization can be seen that in respondents' idea, most current gap is related to costs of advertising and information for the education and culture encourage and promote the use of electronic banking and then providing financial cost of investment in communications infrastructure (network).

But if want to prioritize factors required for implementation and improvement of electronic banking in Parsian Bank can be achieved by using descriptive statistics and comparison of the mean difference between current and ideal State. As a result factors needed to implementation and improvement in Electronic Banking in Parsian Bank from the perspective of respondents to the questionnaire are prioritized as follows:

Table 2) the degree of investigate the importance of examining barriers

Row	Factors considered in study as a barrier	The mean difference between current and ideal State	The degree of investigate the importance of examining barriers	the amount of Being an obstacle factors in the path electronic banking
1	Organizational factors	2.0963	First degree	Middle to high
2	Technological factors	1.9479	Second degree	Middle to low
3	Managerial factors	1.9375	third degree	Middle to low
4	Cost factors	1.6708	fourth degree	Middle to low

## 6. Conclusions and Recommendations

According to research results, technological factors, Managerial factors, organizational factors and cost factors can discussed as a barrier implementation and improvement electronic banking in Parsian Bank and thus are considered among factors required for the implementation and improvement electronic banking in it.

Based on the findings of this research, effective organizational factors current state in route implementation and improvement electronic banking than other investigated factors in Parsian Bank is located in inappropriate state and so it's better to pay more attention to its issue in this regard is essential to observe the following points:

- In order to clarify organization purpose and route in the field of electronic banking, common meetings will be formed between staff and executive directors so that they achieve a common perspective in this field. On the other hand should effort in meetings make decisions of staff managers in the field of electronic banking have also attended executives' managers and considered their idea and their full participation attract in the implementation of decisions and processes.
- In order to train and update the knowledge, attitude and skills of human resources for the e-banking should occur more accurate and comprehensive planning and be followed constantly. On the other hand can be holding seminars about familiar with concepts of electronic banking and its needs, goals, benefits, structure and function of electronic Bank, the organization knowledge promote in this field.
- In vision document should specified the objectives, strategies and programs and priorities and administrative procedures of the work be clear completely and comprehensive, This document should be characterized orientation and move of strategic towards electronic banking in domestic and international activities until based on it be developed operational planning for implementation.
- For full and suitable implementation of electronic banking should be identified standards and index related to electronic banking and identified operational processes.
- Note that to achieve electronic banking goals and complete success in it should be in network of banking cooperation, coordination and alignment of necessary and the other hand electronic banking will improved with providing common services and help to grow and improve the banking network, It is recommended that organizations through meetings among organization with other banks take steps in this direction.

Based on research findings technological barriers is after the organizational barriers and it is secondary importance. Therefore to overcome these barriers following actions are recommended:

- To provide information security against unauthorized access to network and high reliability of network should be used equipment and appropriate technology (including network, hardware and software) and on the other hand organization itself can to provide services and support from applied systems of electronic banking such as design and develop and update the database and quickly solve of problems and defects of system and network in order to provide it has necessary reliability, Therefore is suggested that facilities and equipment be allocated to this sector.
- Organization public awareness level about tools and modern techniques of banking and the correct use of it to customers do complete information.
- Development of qualitative and quantitative specialist force be placed on the agenda. Of course, through retraining of existing forces and adopt appropriate methods to attract and retain specialists in the field of electronic banking can be overcome over the problem of shortage specialist force in this field.

Based on research findings managerial factors are after technological factors, organizational factors. So it is better that be considered more than a cost factor and by managers and organizations is essential in order to observe the following points:

- Training courses regarding in the fields of the above are formed for managers and is used consultants with experience in this field.

- Organization in identifying and development of appropriate and qualified managers in the field of electronic banking and more effort to keep them in organization.
- With holding seminars and training courses, knowledge and attitudes and skills of managers promote in the field of electronic banking and exploiting it and consistent with the structure and to give them training management practices based on information technology and appropriate with electronic banking.

Based on research findings, among the factors examined in this study, cost factors are in the final grade of important. However, the situation of ideal and proper for the implementation and improvement of electronic banking is far and it is considered barriers in the path of implementation and improvement of electronic banking in Parsian banks. It is better to be done to resolve this problem the following actions:

- Providing financial cost in basic systems and electronic banking software, computer hardware and infrastructure requirements for banks which is considered a type of investment.
- Conducting advertising costs and information about education and culture encourage and promote the use of electronic banking tools to customers, promote brand to organization various ways in public media, internet, bill boards and advertising boards.
- Offering special rates and distinctive to customers compared to other competitors and gain the trust of customers and create positive perceptions of them regarding the use of electronic banking services and to overcome their fear and doubt toward modern banking.
- Purchase and distribution of points of sales in stores and motivate and encourage sellers to use it (eg with regard to lower fees).

## REFERENCES

- Alipour,H;Gilaninia,Sh; Mousavian,S.J.(2012). Explanation New Channels of Services Distribution in the Banking Industry, *J. Basic. Appl. Sci. Res.*, 2(3)2901-2908.
- Basle Committee.(1998). Risk management for electronic banking and electronic money activities,(available by: <http://www.bis.org>)
- Castisti,Monique;Willmott,Steven Emma Rollon ,(2001).e.banking service for automated agent-based trading,(available by:<http://www.agentcities.org>).
- Central Bank.(2002).guidelines for electronic banking (available by:<http://www.centralbank.org>).
- Copenhagen Stock Exchange (CSE).(2001).the electra trading systems,blue book Denmark.(available by:<http://www.bportugal.pt>).
- Eilbeigi Asli,Sh;Gilaninia,Sh; Mousavian,S.J; Taghinejad,M;Daneshvar Ghorbani,N;Seyedin,K;Dehban,M; Zadbagher Seighalani,F.(2012). Application of Information Technology in Increasing Exports (Case study: Iranian official customs), *J. Basic. Appl. Sci. Res.*, 2(3)2708-2816, 2012.
- Eyni Delijani,A.(2008). Examination of Barriers and challenges in implementing and improving Electronic Banking in Parsian Bank, Master of Business Management thesis, Islamic Azad University, Rasht.
- Gilaninia,Sh;Fattahi,A;Mousavian,S.J.(2011). Behavioral Factors Tend to Use the Internet Banking Services Case Study: System (SABA), the Melli Bank, Iran, Ardabil, *International Journal of Business Administration*, Vol. 2, No. 3,pp 173-179.
- Gilaninia,Sh; Mousavian,S.J;Salimi,M.A;Aziz Zadeh,A;Makarehchian,A;Zadbagher Seighalani,F.(2012). Economic Growth in Iran and Effective Factors on Its Changes, *J. Basic. Appl. Sci. Res.*, 2(2)986-994.
- Gilaninia,Sh; Mousavian,S.J; Ghorbani Ghavidel Boeini,S;Najafpour,A;Najibzadeh,M;Esmaeili,H; Babaei,M; Zadbagher Seighalani,F.(2011). Challenges Application of E-Commerce in Iran, *Interdisciplinary Journal Of Contemporary Research In Business*, VOL 3, NO 8,pp 497-507.
- Hejber Kiani,K;Akhavan,Sh.(2007). Examine Effect of ICT on employment in the industries of Tehran, *peyknoor*, No. 4.
- Kahzadi,N.(2001). Electronic banking: pre needs, constraints and methods of its implementation in Iran, *Peak Development*, No. 27.
- Myrna, Z. Weiss,(2001). “Business to business e-commerce: Moving Into the value center of the Internet”, vital speeches of the Day New York.
- Sarafizadeh,A.(2004). Information technology in organizations, Mir Publishing, First Edition.
- Zia Khosoosi. E; Gilaninia,Sh; Mousavian.S. J ; Alipour. H; (2011). CRM Application Impact on Customer Satisfaction in Financial and Credit Institutions (Case study: Financial and Credit Institutions in Guilan, Iran), *Journal of Basic and Applied Scientific Research* , 1(8),pp956-963,[www.textroad.com](http://www.textroad.com).