



Journal of Applied Sciences

ISSN 1812-5654

science
alert

ANSI*net*
an open access publisher
<http://ansinet.com>

Examination of the Role of Factors Influencing the Acceptance of E-banking

¹Fakhraddin Maeroufi, ²Hadi Nouri and ²Zahra Khosh Iman

¹Department of Management, University of Kurdistan, Sanandaj, Iran

²Islamic Azad University of Kermanshah, Iran

ARTICLE INFO

Article History:

Received: August 29, 2014

Accepted: April 25, 2015

Corresponding Author:

Fakhraddin Maeroufi,
Department of Management,
University of Kurdistan,
Sanandaj, Iran

ABSTRACT

The present review investigates the role of the factors that is influencing the acceptance of E-banking including profitable receipts, security receipts, hidden receipts, high quality service, high quality networks, internet quality, security and trust. However, the most critical factor on the acceptance of E-banking is security and trust which lead to the attraction and loyalty of customers. The present research attempts to investigate the variables table, studies done and research background on this aspect. Also, the study considers the definitions of the components influencing E-banking and presents a new conceptual model for the acceptance of E-banking which shows the direct impact of the above factors on the acceptance of customers to utilize such services. The model can be applied and extended in future studies as well.

Key words: Electronic banking, profitable receipts, hidden receipts, security receipts, high quality network and service, security and trust, high quality internet

INTRODUCTION

Generally, it could be described that E-banking is providing staff with some facilities to enhance their speed and efficiency in presenting banking service at bank branch and also inter-branch and inter-bank processes throughout the world and presenting hardware and software facilities through which customers can perform their desired banking operations overnight through safe and secure communication channels. It could be said that electronic banking is use of communication and network-based software and hardware sophisticated technologies to exchange financial resources and data in an electronic way and there is no need for a customer to attend bank branch, the first step to understand each phenomenon is to present a specified definition of it and its relevant factors and variables (Auta, 2010). One of the most significant achievements of IT is reflected in the area of economy, E-business and E-banking and easy access to internet can provide people with golden opportunities to do business and economic exchanges through access to virtual world. In this regard,

one critical issue related to E-business infrastructures is E-banking and online payment systems (Irahimi, 2006).

STATEMENT OF PROBLEM

E-banking is a special type of banking service which was initially used in USA in 1995 and then it was developed among developed and then developing countries immediately (Wan *et al.*, 2005). Using technology and internet, E-banking enables customers to perform their financial affairs in a virtual environment. The studies conducted on the customers' acceptance of E-banking enhances their understanding of application of E-banking and shows that how such notions and perspectives can influence customers' behavior regarding use of E-banking (Chang, 2002). Banking industry plays a significant role in economic development of effective and profitable financial services and almost all banks tend to develop and enhance their IT system and to increase the number of new banking service. Also, the acceptance of E-banking depends on banking service qualities, as security, having a friendly relationship with customer, accessibility,

time, financial independence play critical roles in E-banking (Hamid *et al.*, 2007). The identification of the factors which affect the customers' intention to use E-banking help banks show an appropriate reaction to such factors and apply their marketing strategies to enhance E-banking and considering the above considerations the present research attempts to investigate the factors influencing E-banking.

SIGNIFICANCE OF STUDY

Recently, information technology in banking industry has changed the way of banking operation fundamentally and customers can perform their banking activities overnight. Electronic banking provides customers with opportunity to establish broad electronic banking transactions by a lower cost and more promptly through bank website, without any temporal and spatial limitation (Pikkarainen *et al.*, 2004).

The identification of the factors which affect the customers' intention to use E-banking help banks show an appropriate reaction to such factors and apply their marketing strategies to enhance E-banking and considering the above considerations the present study attempts to investigate the factors influencing E-banking. The providers of service must be responsive to security factors and find the best solutions to

fight against modern anti-security strategies. As today's customers are more concerned about security considerations, E-banking internet service providers must take security considerations into account as a critical part of their services (Ombati *et al.*, 2010).

As it could be seen in the Table 1, in the present study, the variables used in the proposed model were studied based on the variables used in the three presented models. The trust variables 1, 2 and 3, hidden receipts and security receipts in the models 1 and 2, network and high quality service 1, 2 and 3, high quality internet 1 and 3 are used in the proposed model. Based on the results a final proposed model is obtained in the present study and authors mainly attempt to discover whether such variables can influence E-banking or not.

STUDY BACKGROUND

Although the statistics show increasing trend of transactions through internet, there is still some people who are not fully familiar with internet and IT complexities. Therefore, investigators pay special attention to the factors influencing the acceptance of E-banking and based on the studies done, profitable receipts, security receipts, high quality speed, trust and commitment to banking significantly affect E-banking (Table 2).

Table 1: Analysis of relations between the models

Model 1 (Jing, 2009)	Model 2 (Ahmad <i>et al.</i> , 2011)	Model 3 (Shafei and Mirani, 2011)	Proposed model
Trust	.	Trust	Trust
High quality networks	.	High quality networks	High quality networks
High quality service	High quality service	.	High quality service
.	Legal	.	.
.	Time	Time	.
Security	Security	Security	Security
E-banking	E-banking	E-banking	E-banking
Security receipts	Security receipts	.	Security receipts
Profitable receipts	.	.	Profitable receipts
Hidden receipts	Hidden receipts	.	Hidden receipts
Technology	.	.	.
Up-to-date Information	.	.	.
High quality internet	.	High quality internet	High quality internet

Table 2: A review of the study background

Study title	Reference	Results
A study of the environmental factors influencing the acceptance of E-banking	Rastegar (2008)	Such features including relative advantage, conformity, trust, quality, demography can positively impact the acceptance of E-banking
Factors and drivers of E-banking development in Iran: Case study: Refah Bank	Abdolbaghi (2007)	Factors including speed, easy access to service, reliability, reduction in costs can positively and significantly impact E-banking
A study of E-business role in E-banking	Aghamohammadi (2011)	There is a direct and significant relationship between trust, loyalty, service quality, security and high quality internet
Customers' view toward E-banking in a newly-emerged economy	Bakhshali <i>et al.</i> (2010)	Security and trust are among the most significant factors influencing customers' satisfaction in banking
Acceptance of E-banking among young intellectuals	Amin (2007)	Suitability, easy access and validity are among the effective factors on intention to use E-banking among Malaysian students. Also, the effectiveness of computer can significantly affect the suitability and accessibility of use

FACTORS INFLUENCING E-BANKING

Nowadays, banking has converted into data processing service industry. The high speed of informatics industry has led to the significant changes in banking service systems and monetary sources in the area of banking and has generated some new concepts including electronic cash, auto-payment machines, domestic banking, telephone bank, distance banking, internet banking and virtual banking. In the recent years, E-banking has been widely used and acted as a channel for financial service in IT and banking market competition and one critical challenge to electronic banking is security considerations and trust. As development of technology in every society requires provision of infrastructures for the acceptance of customers, E-banking as a modern technology in banking industry requires security infrastructures for the development and public acceptance (Al-Slamy, 2008).

High quality internet: To consider internet application rate and increasing trend of its development and speed, it will be obvious that the new wave of electronic commerce will prevail everywhere up to the next few years. If we consider such statistics, among 15 top countries in the world in terms of using internet, it is expected that the number of internet users in 2005 will amount to 2 billion in 218 countries and in 2020, 80% of people in the world can connect to high speed internet. On the other hand, Data International Company has predicted that the volume of internet purchase will increase from 12.4 billion in 1997 into 425.7 billion dollar in 2002, which the share of USA is more than other countries. Availability, high speed and high quality networks which can fulfill customers' demands more promptly and properly, are among the critical factors which has attracted customers and has made them loyal (Wen *et al.*, 2001).

High quality service: E-business can provide firm with the opportunity to develop their share in market and enter international market with the minimum cost. In E-business world, firms are able to create good relationship with manufacturers and customers and so raise their sale and access more easily to customers. Also, high quality service can give rise to increased sale and more availability of resources with proper prices (Turban *et al.*, 2005).

Trust: In virtual firms, trust is the most fundamental factor and is one important priority for a manager. A virtual organization is composed of individuals who do not contact directly and utilize telephone and IT devices. So trust and commitment could be regarded as one of the most critical issues for managers in virtual world. The business transactions between partners requires more trust because they must cooperate with each other and generate a relationship between different areas, organizations, customers and other entities. The final result of trust between inside people with outside ones of a firm is more robust relationships and transactions (Teo and Liu, 2007).

High quality networks: It is a series of independent computers which are connected to each other with a single technology. Nowadays, high speed internet and high quality networks act as critical tools for identifying technology industry development and cultural growth of a community. By identifying this importance and preparing an expert development team, Gitinet has attempted to initiate such service in Tehran. Tehran province which takes privilege of a rich economic and cultural context is one of the most critical provinces in Iran in terms of technology development. Some of the most noticeable advantages of Gitinet include proper price, high quality service consistent with international standards and organizational discipline (Venus, 2004).

Security receipts: The messages coded or encoded by staff, managers and users could be utilized in banking system program (Pikkarainen *et al.*, 2004). Design of a security system consistent with needs of customers, understating their needs and security receipts are among the key factors which manager take them into account while designing electronic systems. An investigation of the factors influencing the acceptance of electronic banking in Australia shows that security concerns and ignorance of internet banking are among the most critical obstacles to the rejection of this innovation. The issue of security in computer systems considers problems and mechanisms which as lower level mechanisms provide some mechanisms for establishment of security including encryption and authorization. One of the most critical issues in the implementation of security in a security system is creation of physical security. The lack of security can make other mechanism inactive and neutral. The factors influencing networks physical security could be divided into two categories:

- Security against the penetration of invalid individuals which attempt to get access physically to a network and its resource in order to sabotage or misuse it
- Security against climactic situations and its relevant damages (Alizadeh, 2013)

Profitable receipts: It is an amount of money entering banking system following subtracting banking costs or advertisement or marketing costs (Wan *et al.*, 2005). The optimal use of existing financial resources has been always one critical concern of financial managers and authorities and short-, middle- and long-term planning regarding liquidity flow and optimal use of financial resources can play critical roles in a firm. Therefore, accurate and continuous monitoring of liquidity flow in each firm is of the utmost significance for relevant authorities. We can dare to say that the success and progress of each economic entity is intertwined with the effective management of liquidity owned by that firm. This factor can prevent imposing extra financial costs and on-time and programmed payment of economic entity consumptions. In a distinguished treasury software, the main attempt is to provide sufficient facilities to do necessary internal controls

and the optimal management of economic entities' financial resources for the users of a software (Solaimani, 2002).

Hidden receipts: These are messages which enter into banking system by customers and are received by managers. Web-based applied programs and hidden receipts include sensitive and valuable data and information. To protect confidentiality of such data, the issue of security must be considered from the first days of its formation till the time of establishment and back up. Specifically, confidentiality and security issues play critical roles while implementing and developing program and the programs must be written in a script which minimizes susceptibility. There is not any script to prevent an insecure code. However, there are some scripts which can make insecure codes simpler. To script a secure code, programmer must first be aware of security considerations, security susceptibilities and ways to avoid it. Therefore, it is better for a programmer to utilize all features and facilities provided by a special script (Rezaei, 2011).

Security: Security is lack of access in case of defect in electronic networks and specially maintenance cost and data banks updating. Also, the most critical factor in electronic payment systems is focus on the issue of security. As E-business has provided firms with golden opportunities to develop their market share and enter international market, confidentiality and security must be taken into account more emphatically. This goal could be achieved with the minimum cost and investment and through establishment of an effective relationship and interaction with both producers and customers (Turban *et al.*, 2005). By the development of internet and communication networks, security cannot be considered in a single computer system. Computer systems security means the security of communication networks. Need to convert conventional traditional banking into electronic banking so as to reduce costs, speed in conducting tasks and providing a communication context in today's banks is clear and cut. However, in the present age of communication, with the development of technology, the control of payment systems security becomes increasingly complicated. Coding technique has increasingly developed and so provided proper devices to bring about security. Some of these instruments include private key encryption, public key encryption, digital signature, interconnected functions (Amin, 2007). Need to the security of E-business begins with customer and ends with doing business. Therefore, in such business chain, there are assets which must be protected and must be taken into account to result in the security of E-business which include users' system, transfer texts on communication channels, business and web servers. One example of such critical assets which must be carefully protected is remote communication links and when no action is taken to protect service receiver, security could be endangered (Sengupta *et al.*, 2005).

Considering the studies done and the direct relationship between the variables used in the model and making customers satisfied and loyal, we can conclude that the mentioned

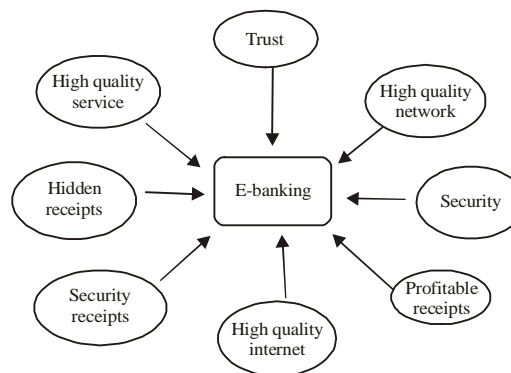


Fig. 1: Proposed model (Ahmad *et al.*, 2011; Jing, 2009; Shafei and Mirani, 2011)

components in Fig. 1 can directly influence the acceptance of E-business and also bring about proper communications and high quality service in long term.

CONCLUSION

E-banking is regarded as a requirement and driver of economic progress in electronic governments and neglecting it not only hinder the economic development of countries but also reverse the progression of economy in these countries and can bring about highly adverse consequences. Based on the above, it could be said that E-banking is one way to construct a virtual city and perhaps it is one of the best part of a city which can convert it into a virtual one because attendance in a real bank cannot arise any pleasurable sense in customers. To achieve success in electronic world and E-business, the first and most fundamental step is implementing some plans to identify hurdles to the application of E-business. One of such hurdles is the lack of sufficient trust and security regarding electronic devices which significance was discussed at the former parts of the study. Overall, E-banking is to provide employees with some facilities to enhance their speed and efficiency to present banking service at bank branch and also inter-branch and inter-bank processes throughout the world; also it is the provision of modern software and hardware facilities through which customers can perform their desired demands without any physical presence through secure and reliable communication channels overnight. Also, the development of E-banking requires taking privilege of some proper social and economic infrastructures. The most important infrastructures include proper communication and relational networks, secure data transfer, proper legal and regulatory infrastructures, preparation of people and economic enterprises to accept and to use E-banking service. Therefore, the present study attempts to investigate the factors influencing the acceptance of E-banking which include trust, high quality internet, high quality service, profitable receipts, security, high quality networks, hidden receipts and security receipts. It must be also noted that to establish link and relationship with different business organizations including

banks, customs, insurance companies, transfer companies, etc. E-banking is a necessary component and the role of banking system is not sufficient solely.

REFERENCES

- Abdolbaghi, A., 2007. The factors and drivers of E-banking development in Iran, case study: Bank Refah. *J. Modern Econ. Commerce*, 5: 1-23.
- Aghamohammadi, Z., 2011. The investigation of effective factors in acceptance of electronic banking, commercial management. 2nd Year, No. 10, August 24, 2011.
- Ahmad, M.S., S. Rashid, M.T Masood and E. Ul Mujeeb, 2011. E-banking: A case study of Askari commercial bank Pakistan. *Manage. Market. Craiova*, 9: 243-254.
- Al-Slamy, D.N.M., 2008. E-commerce security. *Int. J. Comput. Sci. Network Secur.*, 8: 340-344.
- Alizadeh, S., 2013. A review Security in E-banking. *Information Technology No. 67*.
- Amin, H., 2007. Internet banking adoption among young intellectuals. *J. Internet Bank. Commerce*, 12: 1-13.
- Auta, E.M., 2010. E-banking in developing economy: Empirical evidence from Nigeria. *J. Applied Quant. Methods*, 5: 212-222.
- Bakhshali, F., S.M. Hsinyfrd and M. Rahmati, 2010. Investigate the factors influencing the adoption and use of electronic banking (Case Study: National Bank city of Arak). *J. Econ. Perspectives*, 8: 147-168.
- Chang, H.C., 2002. Exploring the digital capital indicators of internet banking in Taiwan. *J. Am. Acad. Bus.*, 9: 210-213.
- Hamid, M.R.A., H. Amin, S. Lada and N. Ahmad, 2007. A comparative analysis of internet banking in Malaysia and Thailand. *J. Internet Bus.*, 4: 1-19.
- Irahimi, A., 2006. E-Business. Homaie Danesh Publications, Tehran, Iran.
- Jing, Y., 2009. On-line payment and security of E-commerce. *Proceedings of the International Symposium on Web Information Systems and Applications*, May 22-24, 2009, Nanchang, China, pp: 46-50.
- Ombati, T.O., P.O. Magutu, S.O. Nyamwange and R.B. Nyaoga, 2010. Technology and service quality in the banking industry. *Afr. J. Bus. Manage.*, 1: 151-164.
- Pikkarainen, T., K. Pikkarainen, H. Karjaluoto and S. Pahnla, 2004. Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Res.*, 14: 224-235.
- Rastegar, A., 2008. The investigation of effective factors in acceptance of electronic banking (Mellat Bank Case Study). *Commercial Management*, winter, Year 3, No. 10.
- Rezaei, R., 2011. The Security of Network Services: Technology Management. 1st Edn., Ferdowsi Publications, Tehran, Iran.
- Sengupta, A., C. Mazumdar and M.S. Barik, 2005. E-Commerce security: A life cycle approach. *Sadhana*, 30: 119-140.
- Shafei, R. and V. Mirani, 2011. Designing a model for analyzing the effect of risks on E-banking adoption by customers: A focus on developing countries. *Afr. J. Bus. Manage.*, 5: 6684-6697.
- Solaimani, F., 2002. The Investigation role of the factors influencing E-banking. *IT*, No. 1382.
- Teo, T.S.H. and J. Liu, 2007. Consumer trust in E-commerce in the United States, Singapore and China. *Omega*, 35: 22-38.
- Turban, E., R.K. Rainer and R.E. Potter, 2005. *Introduction to Information Technology*. 3rd Edn., John Wiley and Sons, New York, ISBN-13: 9780471661368, Pages: 502.
- Venus, D., 2004. E-Business. 4th Edn., Negah Danesh Publications, Tehran, Iran.
- Wan, W.W.N., C.L. Luk and C.W.C. Chow, 2005. Customers' adoption of banking channels in Hong Kong. *Int. J. Bank Market.*, 23: 255-272.
- Wen, H.J., H.G. Chen and H.G. Hwang, 2001. E-commerce Web site design: Strategies and models. *Inform. Manage. Comput. Secur.*, 9: 5-12.