Original Article

Identifying and Ranking Factors Related to the Extent Citizens Utilize Electronic Banking Services in Various Branches of Agricultural Bank in Kerman City

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Abstract

This study has been carried out in order to identify and rank factors related to the extent citizens use electronic banking services at branches of Agricultural Bank in Kerman City. The study uses a descriptive-correlative method. The statistical population of the study includes all the employees and customers of Agricultural Bank in Kerman City in 2015. Using the simple random sampling method based on Cochran's formula, 384 participants were selected as the sample of the study. In order to gather the required data, a 27-question questionnaire of factors influencing the usage of electronic banking services was used with the validity and reliability of 0.875 and 0.86, respectively. Moreover, a 42-item questionnaire regarding the level of using electronic banking services in the bank was used, whose validity and reliability were 0.88 and 0.84, respectively. The analysis of the obtained data was carried out using SPSS 20 software application, and descriptive and inferential statistics such as mean, standard deviation, Pearson's correlation, and multiple linear regression were used. The results of the study show that technical, personal, organizational, and social factors have a direct and significant relationship with the level of using electronic banking services in branches of Agricultural Bank in Kerman City. Regarding their effects, these factors are ranked as social factors, organizational factors, personal factors, and technical factors. At the end of the study, some recommendations are presented based on the obtained results.

Key words: Technical factors, Personal factors, Organizational factors, Social factors, Services, Electronic banking

INTRODUCTION

Information and communication technology is the economic and social arm and the driving force behind cultural progress in various countries. One of the most important breakthroughs of information and communication technology (ICT) is the introduction of electronic banking. Electronic banking, established through ICT, has various applications in economic, social, cultural, and even political and religious fields (Kadivarian, 2010: 69).

The spread of electronic communication and the access of a large number of people all around the world to the Internet has created an appropriate platform for the establishment of commercial land economic trades. This has increased the level of competition in the banking industry and has been accompanied by the introduction of electronic banking services. In fact, it can be said that the phenomenon of electronic banking is one of the breakthroughs of e-commerce and with the rapid growth of e-commerce around the world and the need for performing easy, fast, and accurate banking operations for transferring financial resources, electronic banking plays a very important role in e-commerce. Electronic banking basically refers to providing customers with access to banking services using secure intermediaries without any physical presence (Kohzadi, 2003: 3).

Electronic banking can be introduced into the banking system using advanced technologies like networks and

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telecommunication to transfer resources (money). In fact, electronic banking is defined as the optimal integration of all the activities of a bank through utilizing modern information technology based on the banking process, which is in turn based on the organizational structure of the banks, allowing the provision of all the services needed by the customers (Venous and Mokhtaran, 2002: 6).

Due to its speed, efficiency, cost-effectiveness, and utilization of opportunities, e-banking has opened a new realm of competition. The advent of the novel phenomenon of electronic exchange of information through various networks, particularly the Internet, on the one hand, and the global village narrative on the other, has created a great change in the banking field (Kadivarian, 2010: 89).

Sadri (2009) classifies e-banking in Maskan Bank into four new tools including the new automated teller machines (ATMs), Point of Sale (POS), internet services, and mobile bank. Providing card services, withdrawal using ATM, transfer of money inside and among banks which are members of the SHETAB network through ATMs, paying utility bills using ATMs, providing bills through ATMs, point of sale devices (POS), telephone bank, and mobile bank are all among the e-banking services of Maskan Bank (Bidabad and Alahyari, 2006: 3).

Based on previous studies, various factors can influence the acceptance of e-banking among users. In this study, some of the factors influencing the acceptance of modern technologies are discussed. Overall, these factors can be divided into three categories based on their nature:

1- Personal factors: previous experience with using similar electronic services, lack of computer anxiety, and demographics such as age, gender, education level, and so on.
2- Organizational factors: maintaining security and privacy, system and web specifications, accessibility, supporting users.
3- Social factors: perceived risk, the presence of required infrastructure, perceived ease of use, and perceived profitability (Hasani, 2010: 89).

The results of Sanayei and Zarepour (2014) indicate the positive impact of perceived quality of conventional services on the attitudes of customers towards the quality of electronic services and the willingness to use e-banking. SafaeeGhadikolaei et al. (2011) showed that the quality of automatic services directly affected the loyalty of customers. Hashemian (2010) concluded that the expected performance, the compatibility of technology's task, the selected effort, and facilitating conditions had a significant impact on accepting e-banking and the satisfaction of the customer. According

to SalehiMaman (2004) locational desirability, awareness of customers, system integration, diversity of services, ease of use, access, and reliability were the six factors affecting the tendency of customers to use ATMs. Bakhshali et al. (2010) argue that the most important reason for not accepting and using e-banking services by the customers is being used to using conventional services. Lagazian and Yaghma (2010) argue that the three factors of performance expectation, effort expectation, and social impacts affect the tendency to use services and the two factors of not willing to use and facilitating factors are influential in using e-banking services. The results of SadeghAmalNik et al. (2006) show that basic infrastructure is the main obstacle for the shift from conventional banking to e-banking in Iran, and legal, social, cultural, knowledge, and technology factors are next on the line. Sahut (2002) shows that in the process of providing banking services, understanding the behavior of customers and their requirements are influential in increasing the quality of electronic services. Ndubisi and Sinti (2004) show that attitude factors such as the importance of banking needs, compatibility, complexity, testability, and risk are influential in accepting internet banking. Poon (2012) shows that factors including ease of use, access, bank management, security and privacy, speed, and cost affect the acceptance of e-banking. Casolaro L and Gobbi (2013) argue that the ratio of the number of ATMs to the number of branches of each bank has a positive correlation with the productivity of that bank.

In recent years, the banking system of Iran has tried to expand e-banking services by investing a lot of capital and along with that the FABA center (the center for creating the culture and training of e-banking in the banking system of the country) and its professional workgroups have tried to improve the quality of these services. Among the measures taken so far we can mention the possibility of receiving banking services through the Internet, ATMs, and POS. It seems that the level of using modern banking services of the country's banking system by the citizens in the context of the e-banking system hasn't grown alongside the investments of the banking system in this field and the usage of e-banking services by the majority of citizens is limited to withdrawing cash from ATMs. Of course, improving telecommunication infrastructure and the culture and awareness regarding the utilization of telecommunication tools (particularly the Internet) for receiving banking services is one of the most important prerequisites of using e-banking, which has overshadowed the efforts of the country's banking system. Therefore, various factors can influence the level of using e-banking services by the citizens including awareness, creating the culture, ensuring the citizens, political factors, social factors, technical factors, and so on. Accordingly, this study tries to identify the factors related to the level of using e-banking services by the citizens in various branches of Agriculture

Bank in Kerman City and to rank them from the point of view of the customers.

METHODOLOGY

The current study is a descriptive-correlative one. The statistical population of the study includes all the customers of Agricultural Bank in Kerman City in 2015, which is an unlimited population, the sampling method is a simple random sampling method and since the statistical population (the customers of Agricultural Bank in Kerman City) is not accurately known, the size of the sample based on Cochran's formula with a 0.05 error equals 384 participants. In order to measure the factors influencing the utilization of e-banking services in this bank, a 72-item questionnaire developed by Moradi (2014) is used. Each item has 5 options, whose scoring includes completely agree (5), agree (4), somewhat agree (3), disagree (2), and completely disagree (1). In order to measure the level of using e-banking by the customers, a 42-item questionnaire developed by Yahyazadeh (2012) is used. This questionnaire includes 42 questions, which measure using ATMs, POS, mobile bank, and internet bank services. Each item has 6 options including never (0), once a week (2), 1-3 times a week (4), 2-5 times a week (5), 3-10 times a week (4), and more than 10 times a week (5). The reliability of the questionnaire on factors influencing the utilization of e-banking services in the bank developed by Moradi (2014) is 0.875 and the reliability of the questionnaire on the level of using e-banking by the customers developed by Yahyazadeh (2012) is 0.88. The reliability coefficient for the questionnaire on factors influencing the utilization of e-banking services in the bank based on Cronbach's alpha is 0.86 and the reliability coefficient for the questionnaire on the level of using e-banking by the customers based on Cronbach's alpha is 0.84. In this study, statistics such as frequency distribution tables and inferential statistics such as Pearson's correlative coefficient and multiple linear regression have been used. All the data analysis is carried out using SPSS software application. And the significance level in this study is $\alpha = 0.05$.

FINDINGS

Descriptive Findings

Inferential Findings

Hypothesis: there is a relationship among technical, personal, organizational, and social factors and the level of using e-banking services by the customers (Table 2).

The analysis of the data shows that the correlation coefficients of the Pearson's test between technical, personal, organizational, and social factors and the level of using e-banking services by the customers are equal to 0.725, 0.8401, 0.780, and 0.880, respectively, with a significance of 0.001, which is smaller than the significance level of $\alpha = 0.05$. Therefore, there is a significant relation between technical, personal, organizational, and social factors and the level of using e-banking services by the customers (Table 1).

The Regression Equation

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

The multiple regression coefficient equals $r = 0.951$, which indicates the level of relation between these factors and e-banking services and since the significance level equals 0.000, which is smaller than $\alpha = 0.05$, this relation is significant. Since the value of R^2_{adj} (adjusted R^2) equals 0.905, all the variables entered into the model explain 0.905 percent of the variance in e-banking services (Table 3).

Moreover, considering the value of calculated $-p$ in the regression model's coefficients test, H^1_0 is rejected at the 0.05 level. Therefore, considering the value of t, we can predict the e-banking services through personal, organizational, and social factors (Table 4).

DISCUSSION

The results of the study show that there is a direct and significant relationship between technical factors and e-banking services in the branches of the Agricultural Bank in Kerman City. These results are in line with the findings of SalehiMaman (2004) who showed that ease of use/access was a factor affecting the tendency of customers to use ATMs. They are also in line with the findings of SadeghAmalNik et al. (2006) who enumerated technical

Table 1: Descriptive statistics of the variables

	Mean	Median	Mode	Maximum	Minimum	Standard deviation
Technical factors	48.08	49	49	65	13	9.96
Personal factors	44.61	44	50	65	13	9.68
Organizational factors	81.84	81	81	104	54	7.94
Social factors	189.55	188	188	233	120	18.65
Level of using E-banking	365.36	362	359	467	212	41.57

and technological factors as one of the factors affecting the usage of e-banking services, and findings of Sameri Azad (2010) who believed computer skills were influential in accepting e-banking, and the findings of Sahut (2003) who believed ease of use and designing a suitable graphical interface were among the factors influencing the attraction of internet customers. Therefore, it can be said that when technical, computer, human resources, and the bank have a good support for performing banking services through ATMs and a good internet connection is provided, people can access internet to use banking services, performing banking operations is easy through the Internet, the banks train the customers on how to perform banking services through the internet (POS, ATM), the customers will have a higher level of tendency and willingness to use e-banking services.

Based on the results, there is a direct and significant relationship between personal factors and e-banking services at branches of the Agricultural Bank in Kerman City. In other words, by increasing personal capabilities and characteristics, the level of using e-bankingservices by the customers increases. These results are in line with the results of Hashemian (2010), who believes risk

regarding personal innovativeness and self-sufficiency and awareness are among the factors affecting the acceptance of e-banking, and the findings of Sameri Azad (2010), who believes the role of computer skills in accepting e-banking is influential, the findings of Sahut (2003), who argues that ease of use is one of the factors affecting the attraction of internet customers, the findings of Hasani (2010), who introduces personal factors as important and effective factors on using e-banking, and the findings of SalehiMaman (2004) who mentions customer awareness and ease of use as factors affecting the tendency of bank customers to use ATMs. Therefore, when the customers can perform their banking affairs through the Internet, and have the necessary skills, capabilities, and knowledge to do so, and when they have sufficient knowledge about various e-banking services and how to use them, and trust internet and electronic operations through these tools, and don't get anxiety while using them, and when they know that doing banking affairs through e-banking services can save them time and money, they can use e-banking services in various situations and conditions to perform their banking transactions.

Based on the results, there is a direct and significant relationship between organizational factors and e-banking services at branches of the Agricultural Bank in Kerman City. In other words, the more prepared the organization is for using e-banking services, the more willing the customers will be to use these e-banking services. These results are in line with the results of Hasani (2010), who introduces organizational factors as important and influential factors in using e-banking services, and the findings of SalehiMaman (2004), who mentions locational desirability, system integration, and diversity of services as factors affecting the tendency of bank customers to use ATMs. Therefore, it can be said that when the speed of performing banking transactions through e-banking tools is high, the customers trust e-banking services to perform

Table 2: Statistics of pearson and spearman's correlative tests regarding the relation between technical, personal, organizational, and social factors and level of using E-Banking services by the customers

Variable	Using e-banking services		
Test	Pearson		Presence of relation
	Correlation coefficient	Significance	
Technical factors	0.725	0.001	Yes
Personal factors	0.8401	0.001	Yes
Organizational factors	0.780	0.001	Yes
Social factors	0.880	0.001	Yes

Table 3: Analysis of variance of the regression model

Source of variance	Sum of squares	Degree of freedom	Average of squares	R	R^2_{adj}	F	$-p$
Regression	184060.279	4	46015.70	0.951	0.905	816.272	0.000
Remaining	19392.037	344	56.372				
Total	203452.315	348	-				

Table 4: Coefficients of the regression model

Variable	Estimated B	Standard error	Standard estimation of β	t	p
Constant	82.27	6.99	-	11.77	0.001
Technical factors	0.062	0.077	0.026	0.80	0.424
Personal factors	0.735	0.092	0.292	7.98	0.001
Organizational factors	1.159	0.061	0.396	18.97	0.001
Social factors	0.535	0.066	0.411	8.12	0.001

banking and financial transactions, and the bank supports the customers while performing e-banking transactions, and when the customers have access to e-banking tools in their working environments and in their homes, when hardware and software equipment required for e-banking is available all over the city, when the internet speed is high enough for performing banking transactions through the Internet, when the bank takes appropriate measures to help customers more easily use e-banking, and when there is a good customer relation management in the bank, the customers will use e-banking services of the Agricultural Bank more easily and more frequently.

Moreover, there is a direct and significant relationship between social factors and e-banking services at branches of the Agricultural Bank in Kerman City. In other words, by increasing and improving social factors, the level of using e-banking services by the customers in the Agricultural Bank also increases. These results are in line with the findings of Hasani (2010), who argues that social factors are among the important and influential factors in using e-banking services, the findings of Lagazian and Yaghma (2010), who believe the three factors of performance expectation, effort expectation, and social effects are influential on tendency to use e-banking services, the findings of Bakhshali et al. (2010), who argue that being used to conventional banking is one of the obstacles for using e-banking services in Iranian society, the findings of SadeghAmalNik et al. (2006), who believe legal, social, and cultural factors are influential in the shift from conventional banking to e-banking. Accordingly, it can be said that when the culture of using e-banking services is promoted through the banks and the media and when banking transactions are easily carried out using e-banking tools, the customers will have a higher level of tendency and willingness to use e-banking services.

FUNCTIONAL RECOMMENDATIONS

- Physical and software equipment should be present in the bank for performing banking services through the ATMs, the customers should get familiar with various e-banking services and e-banking tools, the financial security and privacy of customers must be improved, the culture of using e-banking must be promoted in the society, and the legal prosecution of e-banking crimes must be accelerated and facilitated.
- Technical and computer-related support, human resources, and the bank must be prepared to allow the accurate performance of banking services through ATMs and the internet, access to internet must be provided for performing banking transactions, performing banking transactions through the internet

must become easier, the banks must train customers on how to perform banking transactions through the internet (POS, ATM).
- The customers must try to learn how to perform banking transactions through the internet and get the necessary training in the regard. The customers must be encouraged to accumulate knowledge regarding various e-banking services of the banks and how to use these services. Their trust in internet and electronic transactions must be improved.
- The speed of performing banking transactions through e-banking tools must be improved. The customers must have access to e-banking tools in their working environment and their homes. Software and hardware equipment for e-banking must be provided all over the city. The internet speed must be increased to perform e-banking transactions more easily.
- The culture of using e-banking must be promoted by the banks and the media. The banking transactions must be easily carried out through e-banking tools.

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