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An investigation of the factors affecting customer satisfaction with electronic banking in Isfahan

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Abstract

The increasing growth and development of communications technology has created a major change indifferent aspects of human life and organizational performance. New technologies have changed function and attitudes of individuals and organizations and have become an important aspect in creating new jobs and innovation in organizations. Development of new phenomena such as electronic business, electronic commerce and electronic banking has changed individuals' attitude toward organizations. All organizations look to attract customers and increase their satisfaction to sustain their productivity and efficiency. This issue is particularly important for the banks. New methods in providing banking services is one of the most important factors in creating competitive advantage for banks and attracting customers and satisfying them. Nowadays, Iranian banks have taken several steps in the field of electronic services. The main objective of this study is to investigate the degree of customer satisfaction of e-banking services as well as the factors influencing customer satisfaction. The population of the study consisted of all clients who referred to Isfahan banks. Since there is no definite statistics of individuals' presence in the banks, specific estimate of the total population cannot be provided and the questionnaires were randomly distributed among 200 customers of various branches of banks in the city. Based on the findings of this study, the highest degree of correlation was between the positive experience of electronic banking services and their satisfaction of electronic banking services with the correlation coefficient of 0.777 at the significance level of 0.000. In addition, there is a

significant positive relationship between income level, service provided by personnel and education level with the dependent variable.

Key words: customer satisfaction, electronic banking, positive experience of services, service, customer-orientation.

Introduction

Computer automation programs are considered as an important need for bank customer-orientation and service-orientation. Along with the evolution of computer and specialized technologies, provision of a variety of services and products is an opportunity that no reliable organization can ignore. In this process, the evolution of IT services appears in its latest form, in the form of "quality assurance of services and products", which convinces consumers and enterprise users to take advantage of the economical services of the organization with a validated confidence. However, we can say that one of the characteristics of the present century is the astonishing development of information communication and technology and its application for increasing the speed and quality of services. Banking developments is also affected by the severe increase in speed and quality of services and has caused major changes in this industry. The rapid development of the informatics industry has made major changes in the form of money and resource transfer systems in the field of banking and new concept of banking named electronic banking has emerged (Hasanzadeh & Pourfard, 2003, p.7). All organizations are looking to attract customers and increase their satisfaction to sustain their profitability and productivity. This issue is particularly important for the banks; on the one hand because they are in permanent communication with customers and on the other hand the

competition among banks and financial institutions is increasing. Thus, creating competitive advantage seems necessary for the survival of the banks. New methods in providing banking services, which has a close relationship with information and communication technology, is one of the most important factors in creating competitive advantage for banks and attracting customers and satisfying them (Alimohammadi, 2002, p.34). Iranian banks have taken several steps in the field of electronic services and this study aims to investigate the extent of customer satisfaction with e-banking services as well as the factors influencing customer satisfaction.

In the competitive environment dominating service industries, which pay great attention to the effect of customer satisfaction on his/her commitment and retention, banks should employ new methods to achieve these goals. Moreover, in any country, having an efficient banking system is the most important requirement for e-business development and entry into global markets. In addition, due to technological advances and the increasing need for individuals to use electronic banking services in order to save time and create security in trade, addressing advanced and efficient banking system and paying attention to electronic banking seems necessary (Mirabi et al. 2008). Thus, the purpose of this study is threefold: finding the degree of customer satisfaction with electronic banking, investigating efficient social factors on customer

satisfaction with electronic banking and investigating efficient economic factors on customer satisfaction with electronic banking in Isfahan banks.

Review of literature

Mirveysi (2003) investigated the impact of the banking industry employees' customer-orientation in his study. He mentioned the performance of service organization staff as an influential factor in the service provided for customers of service organizations. The main finding of his study was assessing the effect of the banking industry employees' customer-orientation on banking customer satisfaction and their commitment to rebuy.

Hosseini Hashemzadeh (2009) in another attempt investigated factors affecting customer satisfaction of bank of industry and mine. His findings show that the service quality variable has the highest impact on customer satisfaction and subsequently customers' attitudes toward the bank employees, their assessment of bank regulation, consumer education level and customer centers will predict customer satisfaction respectively.

Tehrani Niknezhad (2007) in an assessment of the influence of electronic banking on commitment, trust and attraction of clients in using the Internet Banking of EN (Eghtesade Novin) Banking Industries shows the degree that e-banking affects commitment, trust and attraction of using e-banking in banking industry. The data of her study were analyzed using structural equation modeling and Lisrel software and results showed that e-banking services have a meaningful relationship with commitment, trust and customer-orientation.

Fathian et al. (2009) in another study investigated the realization of electronic banking in improving Banks' customer

satisfaction in Iran Melli Bank. Their findings show that Melli bank's electronic services which are provided via various ways such as ATM, sale terminals, telephone banking, Internet and mobile, are among the customer needs and this means that the relationship between their development and customer satisfaction degree is a direct-linear relationship.

Bamdad and Rafiei Mehrabadi studied customer satisfaction with the quality of banks' ATM services. They found that the customer satisfaction is on an average level. Despite the lack of high customer satisfaction, they would prefer to use the ATM rather than referring to bank staff. Final, the multiple regression analysis showed that safety of the devices and providence of enough money has the largest share in predicting customer satisfaction.

Evants et al. (2004) in their investigation of electronic banking compared Jordanian banking system and American banking system and specified major differences between Jordanian and American bank web application. Their study shows the gap between web usage in developing and developed countries. The findings illustrated that the difference between these two systems lies in the way services are provided in their websites. American banks use their web sites not only to provide classical operations but also financial calculators, investment advice, and bill payments, while Jordanian banks have exhibited weaknesses in this regard.

Park (2009) in another attempt compared customer satisfaction in the community college and department of employment security operated WIN Job centers in Mississippi. Results showed that those customers who were using the WIN Centers for the first time were more satisfied with the overall services

of community college centers; however, customers who were using the job center for 2-5 times were more satisfied with overall services from the Mississippi Department of Employment Security job centers. Finally, the data also displayed that the customers who had a higher level of education (i.e. 2 or more years of college) were more satisfied with the WIN Job Centers overall than those with a high school diploma or less.

Washburn (2009) in a survey studies customer satisfaction perceptions of dislocated workers served by WIN Job centers in the Mississippi. Four WIN job centers participated in the study. Each of the four WIN job centers rated in the excellent to good rating in satisfaction for staff, facilities, services, self-service facilities and overall satisfaction. Of the five null hypotheses, three were rejected due to there being a statistically significant difference in at least one of the centers with regards to facilities, staff and services.

Krishnan Guru et al. (2004) in a study on electronic banking as assessed by a number of Malaysia Multi-Media university lecturers introduced developments in information technology and telecommunications as the major factor which have made an electronic revolution in the Malaysian banking sector. This change in turn has resulted in new delivery channels for banking products and services such as the automated teller machines (ATM's), telebanking and PC-banking. These changes were all made for customer satisfaction. Among the services introduced, ATM has been the most used and telebanking has the lowest application rate. Based on this study, electronic banking has not yet been settled in Malaysia but it seems that the government is looking for conditions for its settlement.

Conceptual and theoretical framework of the study

Nowadays, the supply of banking services has changed for everyone with the development and availability of the Internet. Electronic funds transfer system is launched through tools such as cards and codes which provides easy access to personal accounts (Venoos and Mokhtaran, 2002: 6). Generally speaking, banking has gone through four periods. The use of coins, paper-based payment systems such as check, electronic payment systems such as cards, Internet databases are stages that payment systems in banking have been through. Today, most countries are in the third and fourth period. This means that most banking activities are performed through electronic systems and the Internet. This is due to the increasing use of e-commerce and information and communication technology. Since monetary transactions and financial affairs are an integral part of trade, along with the expansion of global electronic trade, monetary and financial affairs agencies widely used the information communications technology to support and facilitate electronic commerce. Hence, in recent decades the electronic payment systems are gradually replacing the traditional payment systems. Meanwhile the banks' moving toward electronic banking and financial services has played an important role in the increase of e-commerce (Kahzadi, 2003: 5).

Customers either use the product or results of operations or need them or take advantage of their benefit, since each operation has an aim in an organization and has its own customers (Brinkerhoff and Dressler, 1998: 33). Today, manufacturing or service organizations consider customer satisfaction as an important criterion for

assessing the quality of their work and this procedure has an upward trend. Customer care and satisfaction is something that is competed globally. As in Malcolm Baldrige National Quality Award, almost 30 percent of all the scores are determined by the level of customer satisfaction. The Total Quality Management (TQM) is also not unaware of this important issue and concerns with satisfying customer needs and expectations (Ja'fari and Fahimi, 1998: 53).

People generally understand customer satisfaction from their own perspectives. To guide the market toward profitability and efficiency in customer retention, industrialists, managers and researchers, are forced to redefine their concept of customer satisfaction. Therefore, it is necessary to define and scrutinize the meaning and application to understand more precisely this concept in a university research. Customer satisfaction has been defined as the degree of access to needs, goals or desired end which is the result of a particular transaction and exchange between the customer and the firm (Krishna Sunder, 2009: 34).

Various definitions have been provided with regard to customer satisfaction by marketing theorists. Kotler defines it as the company's actual performance to meet customer expectations. In Kotler's view, if the company can meet customer expectations, customer is satisfied and otherwise he is dissatisfied (Divandari and Delkhah, 2005: 188).

Customer satisfaction is considered as an important variable for evaluation and control in marketing management banking. In the same regard, the role of service quality in financial services has also been featured. Though in the relevant research, sometimes there is a shift in the structure of customer satisfaction and service quality, many

separated the two concepts and draw a relationship between them so that they regard the service quality as a prerequisite for customer satisfaction (Mantino & Smith, 2000). Although they have defined satisfaction as the difference between customer expectations and organizational performance, there are some differences between quality and satisfaction. Among such differences one can point to: 1- satisfaction is a generalized sense after experiencing while the quality is not so, 2- expectations in the literature is related to satisfaction and quality is defined differently. As noted, the concept of service quality is not the same as satisfaction and quality. While these concepts have some commonalities with each other they are basically different. As can be inferred from the definition, satisfaction is an attitude to organizational performance that an individual attains based on his experience with an organization and his positive or negative evaluation which indicates his satisfaction with the organization's performance.

Models for the formation of customer satisfaction

Different processes of formation of customer satisfaction can be classified in different models which draw the relationship between the customer satisfaction and its drivers. The most reliable model for the formation of customer satisfaction is based on one of the most famous theories of customer satisfaction, i.e., "disconfirmation of expectations theory" (Divandari and Delkhah, 2005: 189).

1. Swedish model of customer satisfaction

This model was introduced in Sweden in 1992 as the first model of satisfaction of products and services at the national

level. The primary model in Sweden includes two primary drivers of satisfaction: perceived value and customer expectations. More specifically, perceived value refers to received level of quality compared to the price paid. Quality compared to the price paid is one the indices that the customers use to compare various products and services (Aydin & Ozer, 2005: 487). So, we can predict that if the received value rises, satisfaction will also increase. Another driver of satisfaction is customer expectations of desired product or service. The last link in this model is the relationship between the behavior of complaining customer and his/her loyalty to the company. Positive or negative effects of this agent in a company depend on how the complaints are addressed. Mechanisms of addressing complaints in a company can increase loyalty with appropriate performance and decrease it with weak performance.

2. The American Customer Satisfaction Index

This model was presented in 1994 through the cooperation of American Quality Association with the University of Michigan Business School. This model is based on the Swedish model. American customer satisfaction index is a structured model and includes a number of variables and causal relationships between them. Customer satisfaction index is located in the middle of this chain. Expectations, perceived value and perceived quality are introduced as factors affecting customer satisfaction. On the other hand, the customer loyalty and customer complaints have been introduced as the model outputs. The main difference between this model and the Swedish model is the addition of perceived

quality as a separate factor (Johnson et al. 2000:8).

3. The European Customer Satisfaction Index (ECSI)

United States and Swedish successful experience of designing customer satisfaction index model led European organizations such as European Quality Institute and European Quality Management to create a customer satisfaction index under the European Union support. This model examines customer satisfaction as well as loyalty. The drivers of customer satisfaction in this model include: the customer expectations, perceived quality, perceived value, and customer loyalty constructs (Aydin & Ozer, 2005: 487).

Perceived quality can be examined in two parts: perceived quality of the hardware, which means that part of the quality which is related to the product or service and the other, is the perceived quality of the software which represents part of the quality of the service which represents interactive elements in the service provided such as staff or environmental characteristics (Johnson et al. 2000: 11).

4. Kano model

One of the most studied models of customer satisfaction is the Kano model which often has high efficiency and usability in businesses. Noriaki Kano, one of the known quality theorists, believes that there is a close relationship between quality and customer satisfaction. In Kano's view quality is an inseparable part in all kinds of trade and one of the key factors in global competition. In addition due to increase in the extent of global competition satisfying customer needs only through the current products is not possible but his expectations should be satisfied with new and innovative products and this

demands understanding his exact requirements and needs. Due to this situation, Kano regards quality equal to satisfying the customer requirements, demands and expectations and even considers it beyond his satisfaction. Thus, customer satisfaction is provided, we will have continuity of production and thus long-term benefits are warranted.

Hypotheses

Hypothesis 1: there is a relationship between respondents' income and their satisfaction with services of electronic banking.

Hypothesis 2: there is a relationship between services provided by employees and their satisfaction with services of electronic banking.

Hypothesis 3: there is a relationship between positive experience of services of electronic banking and their satisfaction with electronic banking.

Hypothesis 4: there is a relationship between customers' education level and their satisfaction with services of electronic banking

Hypothesis 5: there is a relationship between levels of customer familiarity with the services provided by banks and their satisfaction with services of electronic banking.

Method

Based on the way data were collected and analyzed, the current attempt is quantitative and in terms of dealing with the type of problem, it is a field study.

Data were collected through the researcher's presence in the various branches of banks in Isfahan and distributing questionnaires among customers. The questionnaire used in this study has been prepared by the researcher after studying previous research and it is in two sections. The first section includes personal and demographic questions. In this section respondents were asked to answer questions about their age, place of birth, education level, income, housing type and ethnicity. The variables in the second part of the questionnaire were assessed in a likert scale. The population of the study consisted of all clients who referred to Isfahan banks. Since there is no definite statistics of individuals' presence in the banks, specific estimate of the total population cannot be provided. In the present study there was quota sampling and data were collected from different parts of the city. The questionnaires were randomly distributed among 200 customers of various branches of banks in the city. SPSS 18 was used for data analysis. For inferential statistics, independent sample t-test and ANOVA were used and for analyzing the relationship between interval variables, regression was used.

Results

Hypothesis 1: there is a relationship between respondents' income and their satisfaction with services of electronic banking.

Table 1: the correlation between income and satisfaction of electronic banking services

Variable	R	Sig
Income	0.650	0.014

Based on the obtained results, there is a significant meaningful correlation ($R = 0.65$) between respondents' income and their satisfaction with services of

electronic banking. The results indicate the effect of the independent variable in explaining the variation observed in the sample population in terms of

satisfaction of electronic banking services. Based on the significance level of 0.014, it can be said that the above hypothesis is confirmed. In other words, there is a relationship between respondents' income and their

satisfaction with services of electronic banking.

Hypothesis 2: there is a relationship between services provided by employees and their satisfaction with services of electronic banking.

Table 2: the correlation between services provided by employees and satisfaction of electronic banking services

Variable	R	Sig
services provided by employees	0.475	0.002

Based on the obtained results, there is a positive relationship ($R = 0.475$) between services provided by employees and respondents' satisfaction of services of electronic banking. The results indicate the effect of the independent variable in explaining the variation observed in the sample population responses in terms of satisfaction of electronic banking services. Based on the significance level

of 0.002, it can be said that the above hypothesis is confirmed. In other words, there is a relationship between services provided by employees and their satisfaction with services of electronic banking.

Hypothesis 3: there is a relationship between positive experience of services of electronic banking and their satisfaction with electronic banking.

Table 3: the correlation between positive experience of services of electronic banking and satisfaction of electronic banking services

Variable	R	Sig
positive experience of services of electronic banking	0.777	0.000

According to results, there is a significant meaningful correlation ($R = 0.777$) between positive experience of services of electronic banking and customer satisfaction of services of electronic banking. The results indicate the effect of the independent variable in explaining the variation observed in the sample population in terms of satisfaction of electronic banking services. Based on the significance level

of 0.000, it can be said that the above hypothesis is confirmed. In other words, there is a relationship between positive experience of services of electronic banking and their satisfaction with electronic banking.

Hypothesis 4: there is a relationship between customers' education level and their satisfaction with services of electronic banking

Table 4: The test of difference in customer satisfaction of electronic banking services in terms of education level

Variable	Frequency	Mean	SD	F	Sig
Diploma or lower	79	33.9	6.04	5.1	0.002
Associate degree	20	29.1	4.81		
BA/BS	67	32.2	5.58		
MA/PhD	16	29.8	5.86		

Table 4 shows the difference in customer satisfaction of electronic banking services in terms of education level. The mean shows that the degree of satisfaction of electronic banking services of customers with diploma degree or lower has the highest mean (33.9) and people with BA/BS or higher than that have lower degree of

satisfaction. And based on the significance level of 0.002, the hypothesis is confirmed.

Hypothesis 5: there is a relationship between levels of customer familiarity with the services provided by banks and their satisfaction with services of electronic banking.

Table 5: The test of difference in customer satisfaction of electronic banking services in terms their familiarity with the services provided

Variable	Frequency	Mean	SD	F	Sig
Low	31	31	8.36	0.9	0.400
Average	89	32.7	5.87		
High	80	32.2	4.63		

Table 5 shows the difference in customer satisfaction of electronic banking services in terms of their familiarity with the services provided. The mean shows that the degree of satisfaction of electronic banking services of customers with low degree of familiarity with bank services is the lowest one (31). According to the significance level of 0.400, the hypothesis is rejected. In other words, there is no significant difference between customer satisfactions of services of electronic banking in terms of their familiarity with the services provided by banks.

Conclusion and suggestions

In this study, it was found that the new banking services provided by banks is not a determining factor in choosing the bank by customers; rather the most important factor is the modernity of banking services. One reason for this might be the fact that both public and private banks are offering similar services. Therefore, banks should offer new services to attract new customers and have existing customers satisfied. Investigating satisfaction of the

electronic services provided by the bank indicated high satisfaction of the customers of these services and only in case of sale terminal device a different trend is observed. In that only 10 percent of participants expressed that they have not experienced difficulty in using terminal sales and more than 80 percent reported dissatisfaction. Investigating the relationship between independent variables and the degree of satisfaction of the electronic banking services indicated that among 5 hypotheses, 4 were confirmed and one was rejected. In sum, it can be said that the relationship between variables of income, education level, the positive experience of electronic banking services and service levels of employees with customer satisfaction of electronic banking services were confirmed and the hypothesis of the relationship between customer satisfactions of services of electronic banking in terms of their familiarity with the services provided by banks is rejected.

An essential step in any research is providing recommendations for future research are also for relevant organizations. Given that scientific

work should be complementary to each other, most recommendations discussed in this section, are based on the researcher's experience and the limitations observed in the research process.

1- Replication of this study at different places and in various times in public and private banks.

2- Comparative analysis of customer satisfaction with banking services of banks which are member of accelerated network and ranking banks in terms of customer satisfaction.

3- Increasing staff skills in giving service to customer and customer orientation.

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