

The evaluation of the effect of E-banking service quality on customers' commitment of Parsian Bank of Tehran

Mohammad Hossein Morovati Khams¹, Somaye Moradi²

¹Parand Branch, Islamic Azad University, Tehran, Iran; ²Islamic Azad University, Ravansar Branch, Ravansar, Iran

Abstract

This study investigates the impact of e-banking service quality on customers' satisfaction and commitment. The design of the present study is experimental, and for conducting this study, 384 customers of Parsian Bank of Tehran who have had the experience of using the electronic services of this bank were randomly selected by cluster sampling and data of this study were collected by using of questionnaire tool. The nature of the study is descriptive-survey and descriptive-analytical statistical techniques were used to analyze the data. In the descriptive analysis level, demographic data were analyzed and in the analytical analysis level, data were analyzed by structural equation modeling to confirm or reject the hypotheses. The results of this study indicated that all three hypotheses were confirmed. The perceived quality of e-banking services has positive impact on customers' satisfaction. Finally, the satisfaction of the perceived quality of e-banking services has a positive impact on customers' commitment.

Keywords: Perceived quality of services, electronic banking, satisfaction, commitment, Parsian Bank

Introduction

With intensification of competition between companies in finding customers for their products and services as well as enhancement of any customer's power in today's competitive world, companies should not only be looking to attract new customers but also keeping the old customers and establishing a strong relationship with them should be considered (Rosta *et al*, 2004, p.227).

Banking and financial services constitute an important part of the services industry (Mishkin, 2001, 56). Landscape of financial services is rapidly chang-

ing in world (Lundahl&Veghom&Silver, 2009, p.589). Many modulatory, structural and technological changes have taken place in order to move towards a more integrated global banking environment in the banking industry (Angur&Natarajan&Jaheera, 1999, p.21). Banks by offering a variety of benefits and competitive services and restructuring their service to use the fast technology in order to meet the changing needs of customers, are spreading across the border. The more competitive and rapidly changing environment in which banks are forced to work leads them to revise their attitude toward customer satisfaction and optimizing service quality (Arasli & Smadi & Katircioglu, 2005, p.44). Many companies have found that, consistent offering of superior quality services towards the competitors can bring a strong competitive advantage. All affairs that today we call them virtual banking, have been conducted to achieve the high quality of services. Therefore, quality of services can be named as the brain ware of banking operations (Othman & Owen, 2002, p.8). What the Iranian banks give to their customers as electronic services is an imperfect copying of the modern banking of world today that comes from several reasons, including lack of the required technical, legal, and cultural infrastructure. Insignificant awareness and information of banking affairs' employees and operating staff in connection with e-banking services is one of the serious challenges of this type of banking in our country. If the banking affairs' operating staff can not provide good services to their customers and appropriately help them get better services, they can not expect that the bank customers to be satisfied of the new received services, (Sorayayi *et al*, 2008, p.1).

Consumer's commitment is a complex concept and refers to the willingness to buy again and price analysis of consumer. Development of customer loyalty safeguard the future revenue with existing customers, accordingly, customer loyalty is the ultimate

Corresponding author: Mohammad Hossein Morovati Khams, Parand Branch, Islamic Azad University, Tehran, Iran. Email: morovatimh@gmail.com

goal of companies (Evans & *et al*, 2009, 439). Companies with more committed customers benefit from the increasing sales price, more purchasing power, the desired price increase, better treat of customers and their less willing to price reduction and change of buying rate (Aydin and Ozar, 2005, p.486).

Considering the above contents and explaining the importance of customer commitment, improving the quality of banking services and creating satisfaction is essential that the country's banks engage in continuous evaluation of various factors influencing consumer behavior. Therefore, it is important to note that, due to the limited resources and organizational facilities as well as the necessity of access to commitment, first, factors influencing commitment should be identified and then the effects of mentioned factors should be explained and interpreted. So, according to the resources and facilities and commensurate with the importance of effective factors, the required actions be implemented to actualize the commitment. However, the necessity to examine this subject that how providing the perceived services quality and satisfaction in a bank space determine the commitment in terms of customer is felt. The bank's management to retain customers will be more effective by clarifying the factors influencing commitment (Chakib, 2010, p.3).

Research Hypotheses

H1. The perceived quality of e-banking services has a positive impact on customers' satisfaction.

H2. The satisfaction of the perceived quality of e-banking services has a positive impact on customers' commitment.

H3. The perceived quality of e-banking services has a positive and direct impact on customers' commitment.

Conceptual model of research

In this research, the variables of commitment and perceived service quality have been studied. In research model, the perceived quality variable is proposed as independent variable that affected the dependent variables of satisfaction and commitment of customers. Among the dependent variables, customer satisfaction variable is as a mediator that has been mediated between the effect of perceived quality on commitment. Also, the perceived quality of services has various dimensions such as ease of use, designing, security, secrecy, data, saving time and interaction.

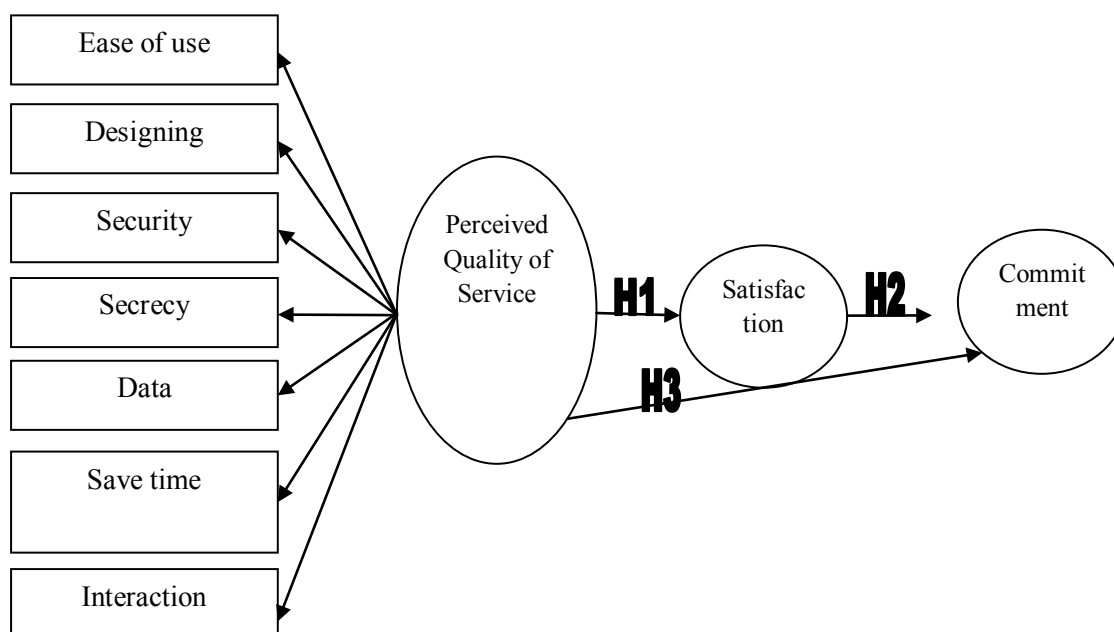


Figure 1. Conceptual model of research (Chakib, 2010, p3)

Methodology

The present study, based on the method and purpose, is classified as follows:

Classification based on the method: The method is descriptive-survey. This study in terms of method is a hypothesis testing which is one of the field studies. In this type of field studies, the hy-

potheses are tested by the data obtained from the sample group (Khaki, 2003, p.202). Data was collected by using a questionnaire which its validity and reliability is examined by its implementation on a small sample group prior to the final sample and by observing any problem, remove it for final implementation.

Classification based on the purpose: The research method, based on the aim, is experiential. The aim of applied research is the development of practical knowledge in a particular field, i.e. the applied research is conducted to application of science and knowledge. The statistical population of this study was all customers of Parsian Bank of Tehran who have had the experience of using the electronic services of this bank. In this study, all banking customers of Parsian Bank in Tehran were selected as the statistical population to investigate the quality of electronic banking on commitment of customers of Parsian Bank. Therefore, the statistical population is assumed to be infinite, by considering the maximum variance (success and failure equal to 0.50) and boundary error of 0.05, 384 subjects were estimated as the sample. (Cochrane) that is collected by three-stage cluster sampling as follows:

$$n = \frac{Z(1 - \frac{\alpha}{2})^2 p(1-p)}{d^2}$$

$$n = \frac{(1.96)^2 * 0.5 * 0.5}{0.05^2} = 384$$

First stage: Tehran Province was divided into four regions North, South, East and West.

Second stage: Three branches were randomly selected from each region. (Totally, 12 branches)

Third stage: By considering the possibility of excluding some questionnaires, 35 customers were randomly selected of each branch. Finally, after taking out the incomplete questionnaires rest have been analyzed.

The required data in the present study were collected through library study method (Peacockery taking tool) including books, papers, available evidences and documents, Internet and field study method through questionnaires. The questionnaire was used for hypotheses testing and investigation of their approval or rejection. This questionnaire was prepared with the help and advice of respected supervisors and advisors as well as the experts in the area of research and banking and

by using of reference article of this research and during the several stages, it was modified and completed. The mentioned questionnaire was given to some customers of electronic services of Parsian Bank and after completion, output of questionnaires were used for statistical analysis. The questionnaire used in this study consists of three following main parts:

The first part relates to the individual characteristics or so called demographic of the tested sample including information such as gender, educations, occupation, income level. The second part relates to the banking operations (the use of electronic services) of the tested sample. The third section relates to the hypotheses testing, including 24 questions related to the perceived quality of e-banking services of Parsian Bank, commitment and satisfaction. In this questionnaire the 5 item Likert scale is used for responding.

Validity of Questionnaire

As regards the questionnaire of this study was designed based on the foreign model of standard questionnaire. Therefore, it has required reliability to a large extent. Also, to completely ensure about face and content validity of the questionnaire, the views of supervisors and advisors were used and any needed corrections have been included. Also, the confirmatory factor analysis model was used to ensure about the construct validity (the explanatory rate of each variable by the corresponding questions).

Reliability of the questionnaires

In this study, the internal consistency was used to estimate reliability. The most important indicator of internal consistency is Cronbach's alpha test, which shows that, test questions to what extent measure the capability or single attribute. Cronbach's alpha coefficient can be calculated in two stages, the experimental implementation stage and the final implementation stage of questionnaire. In order to calculate the alpha coefficient in experimental implementation stage, 30 subjects were selected as sample then through data analysis of preliminary sample, the Cronbach's alpha coefficient of whole questions of questionnaire was determined 0.912. Thus, it can be said that the research questionnaire's questions has appropriate and desirable reliability. Also, Cronbach's alpha coefficient of whole questions of the questionnaire was determined 0.946 in the final implementation stage.

Table 1. Questions related to variables and the reliability coefficient of each of them

| Variable | Relevant questions | Number of Questions | Cronbach's alpha in experimental stage (30) | Cronbach's alpha in final stage(384) |
|---------------------|--------------------|---------------------|---|--------------------------------------|
| Designing | 1-2 | 2 | 0.83 | 0.78 |
| Ease of use | 3-6 | 4 | 0.75 | 0.85 |
| Security | 7-10 | 4 | 0.72 | 0.78 |
| Interaction | 11-12 | 2 | 0.68 | 0.64 |
| Data quality | 13-15 | 3 | 0.73 | 0.69 |
| Secrecy | 16-17 | 2 | 0.78 | 0.80 |
| Save time | 18-19 | 2 | 0.87 | 0.75 |
| Commitment | 20-21 | 2 | 0.74 | 0.75 |
| Satisfaction | 22-24 | 3 | 0.73 | 0.85 |
| Total questionnaire | 1-24 | 24 | 0.93 | 0.95 |

Descriptive statistics for the demographic characteristics of the study

This section provides descriptive statistics about the demographic characteristics of the sample. Identifying the demographic characteristics of the sample is useful in this regard that contributes to the general characteristics of the investigated community and its general properties are specified for other researchers. Furthermore, this identification leads to the generalization of results to other populations, or this information could be used in designing the future research questions for other communities.

Demographic characteristics

Gender: Female frequency with 134 people and the frequency percentage of 34.9%, in contrast, frequency of 246 male with 64.1% of the sample size, so, males have formed the dominant category.

Education: Respondents were divided into four categories according to the education which 13.3% of them were under diploma and diploma, 18% associate degree, 61.2% bachelor and 6% of them had M.A. and higher.

Occupation: Respondents were classified into four groups based on occupation. 14.6% were private sector employees, 40.1% of public sector employees, 36.5% with free job and 7.8% were unemployed.

Income: Respondents were classified into four groups based on income. 10.4% had under the half million income, 50.3% with half to 1 million income, 32.8% with 1 to 2 million income, and 2.9% had more than 2 million income.

Measurement model or confirmatory factor analysis

In methodology of structural equation model, first, resident is needed until the construct validity be studied to determine the chosen indicators have sufficient accuracy to measure their desired constructions. For this purpose, the confirmatory factor analysis is used.

Structural equation model fitting

The most common indicators that have been reported in most studies are available in below Table. If one of these indicators is not acceptable, it can not be a reason to reject the model but indicate the relative weakness of model that this weakness may be due to sampling, the sample population or other factors. Generally, whatever the value of these indicators is close to 1, model is in good condition in terms of fit. As the table indicates, in this study, the model in terms of goodness of fit is in good condition.

Table 2. Fitness indicators of structural equation model

| Index | The reported amount |
|---------------------------|---------------------|
| Fitness Index | 0.83 |
| Soft Fitness Index | 0.96 |
| Comparative Fitness Index | 0.95 |
| Adjusted Fitness Index | 0.77 |

Structural model (path analysis model)

After passing the confirming stages of measurement model, at this stage, the relationships between constructs of research can be tested. The relationships between latent variables and latent variables (structural model or path analysis model) which are shown in Figure 2

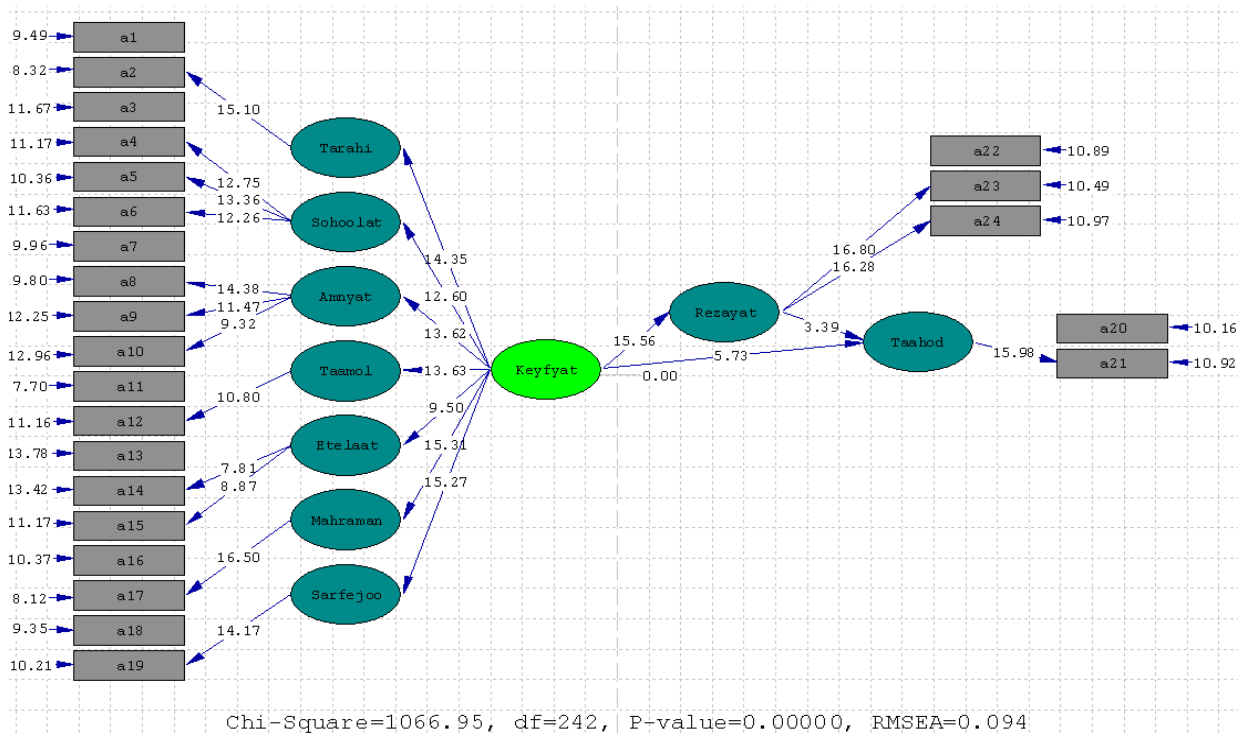


Figure 2. t-value for considering the significance of the estimated path coefficients of the structural model (path analysis model)

Research Hypotheses Testing

H1. The perceived quality of e-banking services has positive impact on customers' satisfaction.

H0: The perceived quality of e-banking services has no impact on customers' satisfaction.

H1: The perceived quality of e-banking services has an impact on customers' satisfaction.

According to the results of a structural equation model, the standardized coefficient between the two variables is 0.88. The significant coefficient between these two variables is 15.56 (more than 1.96) indicates that this relationship is significant. Therefore, the null hypothesis is rejected and hypothesis one is confirmed. This means that the perceived quality of e-banking services has a positive impact on customer.

H2. The satisfaction of the perceived quality of e-banking services has a positive impact on customers' commitment.

H0: The satisfaction of the perceived quality of e-banking services has no impact on customers' commitment.

H1: The satisfaction of the perceived quality of e-banking services has an impact on customers' commitment.

According to the results of a structural equation model, the standardized coefficient between the two

variables is 0.37. The significant coefficient between these two variables is 3.39 (more than 1.96) shows that this relationship is significant. Therefore, H0 is rejected and H1 is confirmed. This means that the satisfaction of the perceived quality of e-banking services has a positive impact on customers' commitment.

H3. The perceived quality of e-banking services has a positive and direct impact on customers' commitment.

H0. The perceived quality of e-banking services has no impact on customers' commitment.

H1. The perceived quality of e-banking services has an impact on customers' commitment.

According to the results of a structural equation model, the standardized coefficient between the two variables is 0.62. The significant coefficient between these two variables is 5.73 (more than 1.96) shows that this relationship is significant. Therefore, H0 is rejected and H1 is confirmed. This means that the perceived quality of e-banking services has a positive impact on customers' commitment.

Recommendations and Implications

Recommendations are presented according to the obtained results:

Due to the positive impact of the perceived service quality on satisfaction and commitment of customers of Parsian Bank (hypotheses 1 and 3) it is proposed that, by conducting various cases and programs, including the following try to improve the perceived service quality and consequently, increase satisfaction and commitment of their customers:

- Through the following methods provide the confidence and security in e-banking:
 - Preventing the unauthorized access of hackers.
 - Senior management commitment to security issues.
 - Trying to inform users about the utilized security procedures.
 - Investment and budget allocation for security issues.
 - Applying the most advanced security systems.
 - Reinforcement of websites and portals through collaboration with suppliers of security.
 - Complete and updated the content of your website as much as possible. Also, by poll of customers about the website content and their preferences about it, attempt to improve your website content.
 - Considering aspects such as being straightforward, logical structure of the site and the menus that are easy to understand.

If the customers wait too long until the websites or portals of electronic banking to appear or come up, so, leave it, the problem of coming up speed (download) of web site is critical. The following methods can be applied to speed up the implementation of site:

1. Compression and reduce the size of graphic files
2. Use tables in the web pages and give information
 - Confidentiality of data is necessary to protect them against abuse. The use of important security procedures for protection of customers' critical information through modern banking methods can help this bank to protect the privacy information of customers.
 - Facilitate the processes of electronic banking as much as possible and design the electronic banking instructions in a way that following of these instructions become easy and simple.
 - Designing leaflets and brochures about conducting various methods of electronic banking, as well as informing about it by short TV commercials which improve the customers' perception of ease of use.
 - Designing the bank port in a way that entering to it become quickly and easily and designing the provided information's screen in the appropriate place and the most important information be shown wider to be used easily.

According to the positive impact of customers' satisfaction on customer commitment to Parsian Bank (hypothesis 2) is suggested by conducting several studies attempt to identify other effective factors on customers' satisfaction and try to improve the identified factors. Totally, the following recommendations are presented to improve customer satisfaction:

- * Reinforce the contact information about e-banking sector through various methods, general information, details of services and policies related to customer and support them. As well as quickly respond to customers' questions until they feel that banks employees follow customers' problem.

According to the respondents' suggestions to improve the quality of e-services quality, the following issues recommended:

- Upgrade the ATM system to increase working speed of system and saving time and cost of customers.
- Existence of responsive reference to solve the electronic problems of customers even on holidays and non-official hours
- Appropriate informing and training to various segments of society based on the education level and age groups with special attention to the elderly and low literacy individuals.
- Creating customer loyalty should be a priority for the organization. Customer loyalty programs should follow two objectives. The first objective is to increase the sales revenues through enhancement of purchase and profit and the second objective, creating a close relationship between the brand and the current customers that its results is to keep the current key customers. The reason of general popularity of these programs is that the profit increases in a significant amount through access to these programs.
 - Considering that the cost of attracting a new customer is much more than the cost of maintaining a customer, banks must try to convert their complain and dissatisfied customers into satisfied customers. This would not happen unless by identification and investigation of ambiguities and resolve the ambiguities that have been raised for complainant customers.
 - Different methods can be considered to identify the views of the complainant customers. One of these methods refers to the use of performance improvement standards and satisfaction of customer about the services providing.

Limitations of the study

1. Lack of utilization of many electronic banking services by customers.

2. Time limitations according to the type of the study, the community span, distribution of statistical sample and data collection instruments, collection of required data took more time.

Recommendations for future research

Based on the findings of present research, the following suggestions are recommended for future research:

1. Studying the role of the website quality on customers' satisfaction in internet banking.
2. Studying the role of the perceived security of electronic banking on customers' satisfaction.
3. Studying the role of the word of mouth advertising in acceptance of electronic banking.
4. Studying the role of demographic variables (gender, age, education and income) in acceptance of the electronic banking
5. Investigating the factors influencing customers' trust in e-services using of bank

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