



Assessment of the relationship between the quality of banking services based on SERVQUAL model with customer satisfaction (Case Study: Maskan Bank of Mazandaran Province)

Hamed Amiri Bourkhani¹ and Masoud Yousefzadeh²

1. Department of Public Administration, Qaemshahr Branch, Islamic Azad University, Qaemshahr, Iran.

2. Department of Public Administration, Assistant Professor, Qaemshahr Branch, Islamic Azad University, Qaemshahr, Iran.

Original Article:

Received 28 Jan. 2016 Accepted 25 Feb. 2016 Published 25 April. 2016

ABSTRACT

The aim of this study is to investigate the relationship between Maskan bank service quality and customer satisfaction by using of the SERVQUAL model in the Maskan Bank of Mazandaran province. In this study, statistical population is all the customers, which in the course of two months of January and February 2014, referred to Maskan Bank supervision of Mazandaran, which the number of people are estimated at around 6000 people. Among the statistical population, according to Morgan table were selected 361 people as a sample. To select the statistical sample in this study, we used simple random sampling method. The research method in this study is descriptive-survey. To analyze the data, we are using the Kolmogorov-Smirnov, T test, Fisher and Friedman test. The results of analyzing research data showed that there is not a significant difference between expectations and perceived service from the customer perspective of Maskan Bank supervision of Mazandaran province in reliability dimension. There is not a significant difference between expectations and perceived service from the customer perspective of Maskan Bank supervision of Mazandaran province in responsiveness dimension. There is not a significant difference between expectations and perceived service from the customer perspective of Maskan Bank supervision of Mazandaran province in tangible items dimension. There are significant differences between the five elements affecting on the quality of service (tangible items, reliability, responsiveness, assurance and empathy) to influence on the quality of services provided by Maskan Bank supervision of Mazandaran province and assurance dimension, which has more importance and then assurance dimension is the least important.

Keyword:

Service Quality,
SERVQUAL, Tangible,
Reliability,
Responsiveness

* Corresponding author: **Bourkhani**

Peer review under responsibility of **UCT Journal of Management and Accounting Studies**

INTRODUCTION

In today's world, enterprises and economic organizations know their success and growth and development depends on the customer satisfaction and employee satisfaction and improves service quality and always providing and offering their products and services, in accordance with their interests and demands. Creativity and innovation and changes in the trend of the firm are the result of a series of long-term goals based on the origin of the market and are the views and ideas that meet today's needs and makes high. Economic globalization, the collapse of trade borders and more competitive markets, and the increasing expectations and requirements of customers has caused producers are forced to pay attention to the demands and requirements of customers. The producer's accurate understanding of the needs of the spiritual, cultural, social, and technological and ethical of customers has caused production with the more attractive for consumers, which in turn, will lead to increased sales and significant economic and social prosperity for manufacturers. Nowadays, financial services sector is subject to changes, which previously has not been experienced in history. These changes have had a dramatic effect, both on the structure of the industry as well as the nature of competition. Maintain and continually strengthen the relationship with customers and continuously improve service quality, which is only one-way, banks should pass it using defensive strategies and increase your current customer retention. (Heydarinejad, 2005).

Banking and financial services constitute an important part of the service industry. (Mulford, 1982). The prospect of financial services in the world is rapidly changing. (Yinghua Liu, 2009). The mitigation and structural changes and much technology have occurred in order to move towards a more integrated global banking environment in the banking world. (Lasser & et al., 2000). The banks by providing a variety of benefits and competitive services and restructuring services for the use of the fast technology, and in order to meet the needs of changing customers are being spread across borders. Because of these actions has changed the nature of banking services and communicate with customers. Highly competitive and rapidly changing environment that banks are forced to work at it, pushing them to revise their attitude towards customer satisfaction and optimize the quality of service. (Jiu et al., 2001). Many companies have realized the fact that consistent delivery of services with superior quality than competitors, can be in bringing powerful competitive advantage. (Golchinfar, 2001). All matters, that nowadays, we refer them virtual banking, are the risk factors on the quality of banking services, which have been carried out in order to achieve top quality service. Therefore, we can mention the quality of the service as the brains software of banking operations. (Barjis & et al., 2002).

In this context, the aim of this study is that according to the conditions and expectations of banking customers within the country, we let's identify important factors in increasing and improving the quality of banking services in Maskan banks from the customer's perspective, based on the SERVQUAL model, which is provided by Parasuraman & et al. Since the organization's customers played a key role in the process of organizational activities with the thoughts and their policies,

their effect on the fate of the organization, therefore, not only a understanding of their clear needs is about the principles and institutions, but also to predict, determine and conducting their hidden needs and designing and implementing programs and services to meet this need. Research has shown that 96% of customers did not complain in relation to the bad behavior and bad quality goods and services, and that, return not 90% of dissatisfied customers. Each of these customers, at least say their dissatisfaction with the 9 people, and 30% of dissatisfied customers convey their dissatisfaction more than 20 people. Research also shows that to attract a new customer is five times more expensive than maintenance of current customers. (Divandari & Delkhah, 2005). Held Saser Reich research (1990), showed that the bank with a 5% increase in their key customer retention and rewarding, more than 85% adding to their profitability. Hayzderj demonstrated that, generally keeping current customers, much cheaper than finding a new customer, however, is that both of these processes are difficult and expensive. A loyal customer may spend a lot of money over the years their relationship in the bank. Especially if encouraged this client and receive high quality services that organization promises to deliver it. Thus, interaction with existing customers is very cost less than the search for a new client. (Heydarnejad, p. 4, 2005).

2. Research literature**2.1. Bank History**

Following the victory of the Islamic Revolution, the Maskan Bank was formed in 1979, according to bank mergers scheme (Act 07 / June / 1979 Council of the Islamic Revolution) from the integration of mortgage banks, building, construction Investments Iranian banks and 13 companies following savings and mortgage (Kourosh, Ekbatan, Pasargadae in Tehran and other provincial capitals including Hamadan, Kermanshah, Mazandaran, Golestan, Semnan and Abadan) in this section, summarized the history of each. Mainstream, new compounds, which entitled Maskan Bank, began his banking activities in construction and housing in every respect, was the bank's mortgage.

2.2. Concept of customer, satisfaction and customer expectations

The customer in the banking system is distinct from the company and production and services. In manufacturing companies, customer buys your goods put to use at home, work or elsewhere. Also, most service companies after the services and wages, their relationship comes to an end customer, while the bank as institutions deposit receiving, mediated between funds, on the one hand, the surplus collected funds or funds of depositors and on the other hand, are supposed to consumers. But what banks distinguish from this company and the products and service enterprises is that the bank funds put at the disposal of its customers, customer funds returned again to the bank. In fact, the customers are the providers of banks (Heydarnejad, 2005, p. 14). The customer can be defined individually, which buys a product or service. There are two distinct types of core customers, who referred to internal and external customers. Customer satisfaction is one of the critical issues for today's organizations. Today, the organization's success or failure is determined based on the customer's satisfaction from the

products or services. Customer satisfaction is increased customer loyalty and loyal customers to provide more money spent on the organization's products or services, encouraging others to purchase from the organization and are willing to pay a higher fee to purchase the products. Again purchases will rise and reducing customer complaints. Satisfied customers are less sensitive to price, purchase additional products and less affected by competitors and are more loyal. (Zineldin, 2000).

Total Quality Management is an entrepreneurial approach, which is based on the participation of all employees and with the aim of achieving long-term success through customer satisfaction.

Satisfaction in marketing literature defined in different ways (Fecikova, 2004):

- Satisfy customer needs and wants
- Satisfaction as pleasure
- Customer evaluations of the quality of goods and services
- General attitude of the customer to a service provider

In the marketing literature, such is said that the customer satisfaction, which has two dimensions: the exchange dimension and general dimension. The concept of customer

satisfaction exchange focuses on customer survey for each of the purchases is done. The general concept of customer satisfaction is concerned with the assessment and overall customer feel about the whole conflict and purchases from the brand. In fact, it can be said that the customer satisfaction generally dimension, is a function of the all satisfaction or his dissatisfaction in previous exchanges. Integration customer's satisfaction (or general) is evaluating overall customer from all the shopping experience and consumption of a good or service in a long period of time. However, exchange satisfaction has obtained information about the encounter and experience of a person with a particular product and service in a special case. Overall satisfaction is the better index about the performance of past, present and future of the company. This important, since it is the customers are doing decision again your buying based on all their experiences with a brand until now, not on the basis of a purchase in particular times and places.

Although every successful marketer wants to offer services that provide customer satisfaction, but, this is not their only goal. Companies and institutions cannot ignore the fundamental objectives of its work, such as achieving competitive advantage or make a profit.

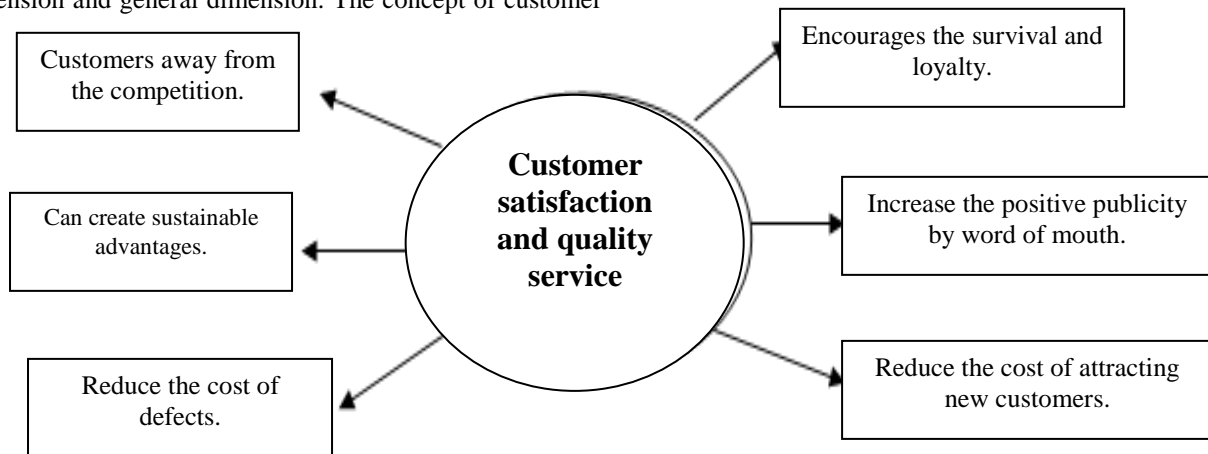


Figure1. The benefits of customer satisfaction and quality of service

As Figure 1 shows, customer satisfaction creates many advantages for the company and higher levels of customer satisfaction, which leads to customer loyalty. Good customer retention in the long run is more beneficial than continuing to attract new customers to replace customers that have cut relations with the company. Customers who have a much satisfaction from the organization expressed their positive experiences for others and thus, they are by advertising for the organization, as a result, reduce the cost of attracting new customers. (Lovelock and Wright, 2003, p. 175).

2.3. Quality of services and survey measures indexes of SERVQUAL model

Services are "doing things that offer a collection of benefits to customers." In the banking system, services may be offered by ATM, advisor or a combination of these two (cashier). Services, whether public or private and profit or non-profit have four important features, which distinguish them from the goods. These four features include: intangible of services, inseparability, dissimilar and mortality, which we will describe each. (Heydarnejad, 2005).

2.3.1. Intangibility of services

Services are intangible that cannot be seen, touched or made them feel before buying. Therefore, the buyers of services to reduce risk will be looking for evidence that the evidence of the quality of service. It should be noted that judgments and conclusions buyers about the quality of a service is derived from his observations about the places, people, equipment, communication tools and price. (Heydarnejad, 2005). For example, in the banking system, a bank teller is evaluated in terms of number of transactions and the accuracy of the fund at the end of the day. Kindness and courtesy in these activities don't evaluate for customers. But these features evaluate among the intangibility of services and customers them as quality of service. For proper use of this feature, the task of providing the services is that if possible in a way, a tangible service. For example, consider the bank, which wants to create in the mind of the customer, which is a fast and excellent service. The bank should be tangible returns this position at all levels of customer contact for him. The Bank should create the impression that it banking services is fast and good. Should be decorated inside and outside the bank. To deal with customers must be accurate programmed

the waiting lines must not seem a long, background music should be gentle and calm, the staff must constantly be working, their clothes are stylish. Used tools like computers, photocopy machines, tables and chairs should be new and fashionable. Advertisements and other mobile communication devices selected with simple and clear, and the choice of words and images accurately and completely has implications on the efficiency of the banks, and bank status transmits efficiently. The bank must choose a name and sign for their services; they may show speed and efficiency. (Cutler and Armstrong, 1998).

2.3.2. Inseparability of services

Tangible and palpable goods stored after production. Then sold and may take some time to reach to the consumer. In the case of services, the situation is the other way. Service, at first sold, then produced and consumed simultaneously. So serve, no matter it providing is a person or machine, is inseparable from your provider. If the person is a service provider, he is part of the service. In most cases, consumers are not able or not willing to separate "service" to the provider and the status and conditions of service. For example, if customers are dissatisfied with from the attitude of bank employees, however, the bank services are high quality, but customers will not be satisfied from the bank. Essentially, inseparability has limited flexibility to service providers. For example, the banks were at a specified location and customers should refer to this place. But today, due to increased competition, the banks in order create convenience for customers focused on the extent of the branches by using ATM use the Internet to offer their services and so on.

2.3.3. Dissimilar and discontinuities

Having proven quality is important for all products and especially bank services are more important. Quality banking services are often different and discontinuous. Why? Because banking services offered by the employees, and employees have different capabilities and different behaviors and even different functions, therefore, is different the quality of their services together. For example, a bank branch offers banking services with a quality level, while the other branch offers the same services with the other qualities. This problem does not exist for goods.

2.3.4. Mortality

Services are mortal, means that services cannot be stored for sale or next token. When demand is steady, mortality services do not cause problems, but the institution, when faced with problems the demand for their services will fluctuate. For example, the bank branches is possible that in some hours or some days are faced with congestion customer, which is causing disruption in customer service and increase the waiting time to receive services. To solve this problem, banks can use from automatic cashier machines. (Heydarnejad, 2005).

2.4. Communication quality of service with customer satisfaction

Many researchers have tried to explain the relationship between customer satisfaction and service quality and provide modeling. Issues that in most of these studies have been reviewed, words that, if these two concepts are distinctly different concepts and which of these two concepts, which precedes another. In fact, whether it is

customer satisfaction, which will lead to quality of service, or it is quality of service, which is leading to customer satisfaction. Most research in this area has shown that the two concepts are distinct and different concepts (Oliver, 1993). The usual explanation for the difference between customer satisfaction and quality of service, in this case, provided that quality of service is an attitude and an overall assessment of long-term, while satisfaction is related to a specific transaction. (Bloomer et al., 1998). In measuring satisfaction, what the consumer expects are considered.

Oliver (1993) explained the differences between quality services and satisfaction with the following:

- 1- The dimensions that constitute judgments of quality are limited to the provision of services, but about satisfaction may be judgments of customer caused by a wide range of factors, not only limited to the provision of services.
- 2- The judgments of quality of service caused by ideals and excellence in relation to service delivery, while, satisfaction judgments created based on the expectations/norms.
- 3- Perceived quality of service is not dependent to the experience of the environment service or service provider, while the perception of satisfaction is dependent on past experience.
- 4- It is believed that, quality of service, more determined by external cues (price, reputation), while satisfaction is more due to the conceptual implications (equality, regret).

But what about that, satisfaction is priority over service quality or the quality of service will lead to satisfaction, the research has found conflicting results. Parasuraman & et al. (1988), argued that high levels of perceived service quality are leading to increased customer satisfaction. In their view, if the customer expectations from his perception are more than services provided are upset him, but if the customer's perception of service performance is higher than expected him, this issue will lead to customer satisfaction. So, in their opinion, this quality of the service that is leading to customer satisfaction.

But there is another perspective in this regard, which shows, customer satisfaction is conducive to quality of service. The basis of this theory has defined quality of service as "the primacy or superiority of a nature". The definition of service quality in collective terms refers to a universal concept, which should be based on their general attitude root is directly related to behavioral intentions. (Bitner, 1990). Bitner carried out a study on 145 tourists in an international airport, showed that experimentally, the customer satisfaction will lead to quality of service. Bolton and Drew have used the assumption that the quality of service is equivalent to an attitude as the basis for the preceding customer satisfaction on the quality of service.

3. Conceptual framework

According to theoretical principles, conceptual model is as follows:

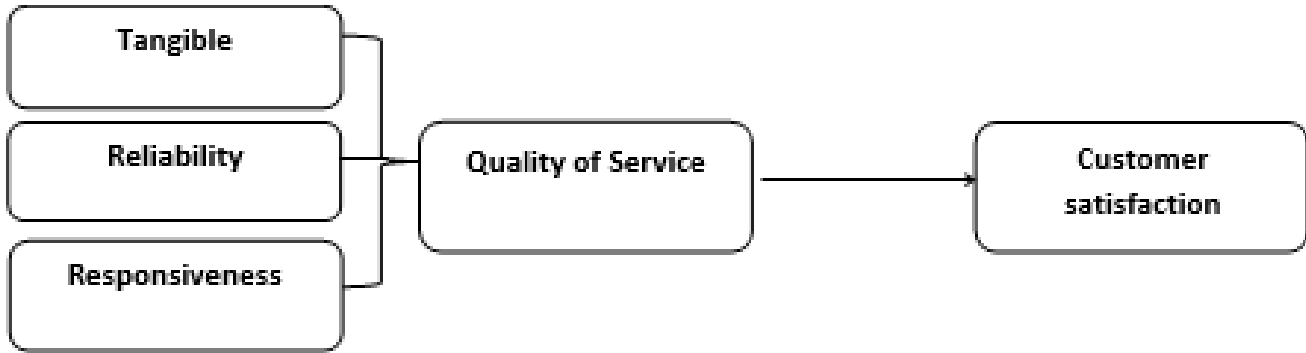


Figure2. Research Conceptual Model - Parasuraman et al (1985)

4. Research methodology

4.1. Research hypotheses

1. There is a significant difference between expectations and perceived service from the customer perspective of Maskan Bank supervision of Mazandaran province in reliability dimension.
2. There is a significant difference between expectations and perceived service from the customer perspective of Maskan Bank supervision of Mazandaran province in responsiveness dimension.
3. There is a significant difference between expectations and perceived service from the customer perspective of Maskan Bank supervision of Mazandaran province in tangible items dimension.
4. There are significant differences between the five elements affecting on the quality of service (tangible items, reliability, responsiveness, assurance and empathy) to influence on the quality of services provided by Maskan Bank supervision of Mazandaran province and assurance dimension, which has more importance and then assurance dimension is the least important.

4.2. Statistical Society

The population of this research is all the customers, who in the course of two months of January and February 2014, referred to the Maskan Bank supervision of Mazandaran province. According to information obtained the total number of customers that over a period of two months referred to these areas, there are about 6000 people, and to select the sample size referred to by Krejcie and Morgan table and obtained samples 361 people.

4.3. Methods and tools for data collection

In this study, the main tool for data collection was a questionnaire, which was to contain three questions of demographic characteristics (age-gender and educational level), and the hypotheses measured by a standard questionnaire of SERVQUAL, and the purpose of research, the questions divided in a Likert scale of five options.

4.4. Validity and reliability

Because in this study, the primary means of gathering information and measure the variables are the questionnaire, the validity is of particular importance. (Hafeznia, 2004). In this study, by standardized questionnaire and its frequent use by researchers using the professors was approved for validity. The most common reliability testing is Cronbach's alpha coefficient, which is also used in this study. Thus, 32 questionnaires were distributed among the participants and calculated Cronbach's alpha coefficient between the data collected. The Cronbach's alpha reliability coefficient is between zero and one, which zero indicates a lack of reliability, and a positive one showing full reliability. In this study, by using SPSS software was obtained the reliability of the questionnaire, which indicated that the questionnaire is possessed of high reliability, which in this study, the reliability of the questionnaire of expectations sector is equal to 0.838, and the questionnaires of perceptions is equal to 0.853.

4.5. Data analysis method

For processing and analyzing the results of the questionnaire used for statistical analysis SPSS16 software, which is comprised of two parts, descriptive statistics and inferential statistics. Tests used are:

- ✓ Kolmogorov-Smirnov test to evaluate data distribution uniformity.
- ✓ Independent sample t-test to evaluate the tested variables.
- ✓ Pearson correlation test to evaluate the relationship between variables tested.

5. Results and Findings

5.1 Society statistical descriptions

Of the 361 respondents, 127 people were women and 234 people were men, 29 people were diploma, 31 people were associate degree, 221 people were graduate and 80 people were masters and higher, and of these, 58 people have less than 30 years, 116 people have between 31 and 40 years, 98 people have between 41 to 50 years, 47 people have between 50 and 60 years, and 32 people have more than 60 years of age.

5.2. Kolmogorov-Smirnov test: testing the normality of variables

In the statistics, used of parametric tests, when the data distribution is normal and used by non-parametric tests, when data distribution is not normal. So, at first, we have to

pay to examine the data normality with the Kolmogorov-Smirnov test. Normality test results related to the components of the study are shown in Table1.

H_0 : Data distribution is normal. Sig. ≥ 0.05
 H_1 : Data distribution is not normal. Sig. < 0.05

Table1. Kolmogorov-Smirnov test table for examine the normality of expectations variables

	Expectations			
	Physical evidence	Reliability	Responsiveness	Perceived service
number of samples	361	361	361	361
Kolmogorov-Smirnov	1.003	0.713	0.985	1.086
Sig	0.113	0.203	0.145	0.086

Table2. Kolmogorov-Smirnov test table for examine the normality of perceptions variables

	Perceptions			
	Expectations	Physical evidence	Reliability	Responsiveness
number of samples	361	361	361	361
Kolmogorov-Smirnov	0.695	0.702	1.022	0.574
Sig	0.237	0.222	0.1	0.365

Source: research findings

Table1, and the values obtained ($P < 0.05$ = significance level) show that the H_0 is approved. So, with a confidence interval of 95%, it can be argued that the both variables follow a normal distribution. Therefore, it can be used the parametric methods for this research.

5.3. Hypotheses testing

In table 3, the mean value, standard deviation, t value, degrees of freedom and sig, to mean difference of variable of tangibles, reliability, responsiveness, assurance and empathy come in groups of expectations and perception. According to that table, the value of sig is more than 0.05, which is indicative of the fact that, tangible, reliability, responsiveness, has not differences together in groups of expectations and perception.

Table3. Difference test table

		Mean	Standard deviation	t	df	Sig
Tangibles	Expectations - Perception	0.02285	0.87122	0.498	360	0.619
Reliability	Expectations - Perception	0.03878	0.66670	1.0105	360	0.27
Responsiveness	Expectations - Perception	0.04640	0.77331	1.140	360	0.255
	Expectations - Perception	0.03017	0.56666	1.012	360	0.312

It is used to prioritize the similarity among the variables. In this test, is much bigger average rating, the importance of variable is the most, and when sig is less than 0.05, rejected the claim of being same rating.

According to table 4, the credit variable mean rate is more than any other variable, so, the variable reliability is more important than other variables and since, the value of sig is less than 0.05, the null hypothesis is rejected, means that variables are not similar in terms of rankings.

Table4. Friedman Test

Tangibles	Reliability	Responsiveness	Chi-square statistic	Sig.
3	3.8	3.64	353.01	0.000

6. Discussion and conclusion

In general, there is not a significant difference between the expectations and perceptions value of Maskan bank customers of Mazandaran province supervision of the quality of services provided by the bank. Due to the fact that customers or clients are a special priority as the reason and the survival of an organization, therefore, investigate various aspects of related to the customer is very necessary. Companies and institutions have found that retaining existing customers is very profitable than attracting new customers. Keep old customers is four to six times less

costly than creating new customers. Loyal customers not just on price sensitivity, but also act as a supporter of an organization and as a result, also help to attract new clients in the organization. Therefore, maintaining customer is always the most important factor, which service provider organizations are involved with it, because since that will increase day by day markets, any organization cannot be sure about customer loyalty. Many customers appear satisfied as soon as he found an opening turn to a competitor and the bank in this competitive environment should be used by:

- ❖ Differentiation and diversification of services (creating an atmosphere of safety and security, make a distinction by using the more favorable interest rates, make a distinction by using provide unique goods or services, differentiated through modern banking services).
- ❖ Promote technological tools and the development of electronic banking with an emphasis on ease and reliability to the customer.
- ❖ Maximum caution and foresight when assessing credit risk, accelerating to the non-strategic asset sales.
- ❖ Forming a young team to create unique competitive advantages for banks (through the creation of interdisciplinary teams of creative youth) to pay to keep your customers and your competitive position.
- ❖ Dear manager of Maskan Bank of Mazandaran province supervision can be considered and analyzed the results (the degree of importance of variables, which specified in the Friedman test, the effect of independent variables on the dependent variables of the research, the bank's current situation, and the effectiveness of each index on the customer orientation) and act, in order to institutionalize customer orientation in the organization and keep your customers.

According to the research literature of this study, the results of this research are in line with the results of Keshavarz research (2007), and the antithetic with the results of Rasulov and colleagues (2001).

References

- 1) Hafeznia, Mohammad Reza (2004), an introduction to research methods in the humanities, Tenth Edition, Tehran: Samt.
- 2) Heydarnejad, Yousef., (2005), evaluation of customer satisfaction from bank loans in the Mellat banks of Mazandaran Province, Master's thesis, Mazandaran, Faculty of Humanities and Social Sciences.
- 3) Divandari, Ali. (2005), adaptive processes designed to carry customer-oriented strategy in the Iranian commercial banks, policy-oriented management doctoral dissertation, Saadat, Esfandiar (Supervisor).
- 4) Kotler, Philip and Gary Armstrong (1998). Principles of Marketing, Translation Bahman Foroozandeh, Second Edition, Isfahan, Amoozeh publishing.
- 5) Christopher Lovelock and Lauren Wright (2003), Principles of Marketing Services, the translation of doctor Abolfazl (Ardeshir.) Tajzadh namin.
- 6) Golchinfar, Shadi. (2001), examining factors on customer satisfaction of Refah bank, Tehran University, School of Management.
- 7) Barjis, J. et al, (2000), organizational simulation, Delf University of Technology.
- 8) Bitner MJ. Evaluating service encounters: the effects of physical surroundings and employee responses. *Journal of Marketing*, 54, 2. 1990. 69-81.
- 9) Bloomer, J., De Ruyter, K., and Peters, P., 1998. Investigating Drivers of Bank Loyalty: The Complex Relationship between Image, Service Quality and Satisfaction. *International Journal of Bank Marketing*. 16 (7), 276-86.
- 10) Fecikova, I. An index method for measurement of customer satisfaction. *TQM magazine*, 16, 1. 2004. 57-66.
- 11) G. Chi, Christina & Gursoy, Dogan, (2001), Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. *International Journal of Hospitality Management* 28 .pp 245-253.
- 12) Kotler, Phlip. (1995), *Marketing Management, Analysis Decision*, Prentic Hall, 8th End.
- 13) Lasser, W.M., Manolis, C. and Winsor, R.D. Service quality perspectives and satisfaction in private banking. *Journal of Services Marketing*, 14, 3. 2000. 244-271.
- 14) Mulford, C. L. & Klonglan, G. E., (1982), *Creating coordination among organizations, USA: North Central Region Extension Sociology Committee*.
- 15) Oliver, R. A conceptual model of service quality and service satisfaction. *Advances in-services Marketing and Management*, 2. 1993. 65-85.
- 16) Parasuraman, A., Zeithaml, V.A. and Berry, L.L. A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49. 1985. 41-50.
- 17) Yinghua Liu 1, Soo Cheong (Shawn) Jang, Employee satisfaction, customer satisfaction, and financial performance: An empirical examination, 2009, 245-253.
- 18) Zaydin S., Ozer G., Arasil and O; "Customer Loyalty and the effect of switching costs as a moderator variable", *Marketing Intelligence & Planning*, Vol. 23, No. 1. (2005), pp. 89-103.