

Service Quality, Customer Satisfaction and Loyalty: A Test of Mediation

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Abstract

The present research was conducted in a bank in Tehran, Iran, in 2009/2010. This report is the outcome of a field research, which aimed to determine the quality of services offered by Sepah Bank, and also to study the relationship between the service quality, satisfaction and loyalty. In this research, the service quality standard model has been used for evaluation of service quality, Gremler and Brown (1996) model with some revision was used for evaluating the loyalty, and the instrument offered by Bitner and Hubbert (1994) was used for evaluation of customer satisfaction. The focus of this research is a Sepah Bank branch around Fatemi St., Tehran, Iran, and 147 customers of this bank were sampled. The results of this research show that in all aspects, customers' expectation, are higher than their perceptions of the Bank's operation, and in fact the quality of offered services is low. Besides, this research findings show that the customer satisfaction plays the role of a mediator in the effects of service quality on service loyalty. These findings are further explored.

Keywords: Service quality, SERVQUAL, Satisfaction, Service loyalty

1. Introduction

The relationship between service behavior and service quality has proven its role and importance in management/marketing (Valarie et al., 1996; Heskett & Sasser, 2010; Hutchinsona et al., 2009). The concepts of service quality and service satisfaction have been highly considered and used in marketing texts and activities, during previous decades. Marketing researchers have praised the advantages of satisfaction and quality, and have mentioned them as indices of an organization competitive benefit (Ruyter, 1997). On the other hand, service loyalty is one of the most important structures in service marketing, due to its final effect on customers' repeated purchases, and in fact, those loyal customers who purchase repeatedly are considered as the base of any business (Caruana, 2002). Although these concepts have been used so many times in the marketing literature, but the relations between these three concepts still remain ambiguous. Therefore, this research intends to study the relation of these three concepts.

1.1 SERVICE QUALITY

The fact that the perceived quality of the product is becoming the most important competition factor in business world has been the reason of naming the present business era as "Quality Era" (Peeler, 1996). Consequently, service marketing intellectuals and researchers have offered several metaphors of this issue. For example, Berry (cited in Kandampully, 1998, p 423) calls it the most powerful competition weapon and Clow (1993) calls it the organization's life-giving blood.

Quality is a multi-dimensional phenomenon. Thus, reaching the service quality without distinguishing the important aspects of quality is impossible. In his discussion of service quality, Gronroos (2000) refers to three dimensions of output technical quality, service performance quality, and organization's mental picture. Also, Lehtinen and Lehtinen (cited in Harrison, 2000) have referred to dimensions of physical quality, interactive

quality, and organizational quality as three dimensions of service quality. Although these attempts have had a major role in division of service quality into process quality and output quality, but they lack enough details. On this basis, Zeithaml et al. (1996) have referred to ten dimensions of service quality in their primary researches. But, in their further researches, they found a strong correlation among those dimensions. Thus, they combined these dimensions and applied the fivefold dimension of Reliability, Responsiveness, Assurance, Empathy and Tangibles as a basis for making a tool for testing the service quality, known as SERVQUAL. In their researches, they emphasize that SERVQUAL is a lasting and reliable scale of service quality (Parasuraman et al., 1994). They also said that this tool is applicable in an extensive spectrum of service domains such as financial institutions, libraries, hotels, medical centers and..., although some of its components should be rephrased, or more components should be added to it. Many researchers have tried to use this tool in different service domains (see table 1).

Services are increasingly becoming a larger portion of many organizations' regionally, nationally, and globally and are considered as a tool for revenue streams. Today's knowledge intensive services businesses require reliable methods of measurement, assessment, and improvement (Spohrer & Maglio, 2008). Service quality is determined by calculating the difference between two scores where better service quality results in a smaller gap (Landrum, et al., 2008). Johnston, et al. (1997) did comprehensive empirical experiments on service quality dimensions offered by Parasuraman, et al. (1985 & 1988) in ten service organizations in England. At first, they presented a list of 12 factors, and then with more researches done, they offered a list of 18 factors. In addition, many researchers have presented different models for testing the quality of banking services, by inspiring from SERVQUAL model.

Avkiran (1994) has introduced a model consisting of four dimensions (personnel's contact, reliability, communication, and access to services), and seventeen components. Also, considering the difference between Islamic banking and Usury banking in nature, Othman & Own (2001) have offered a model called CARTER, consisting of Complaint, Assurance, Reliability, Tangibles, Empathy, and Responsiveness which includes 34 components.

1.2 CUSTOMER SATISFACTION

Customer satisfaction is a key factor in formation of customer's desires for future purchase (Mittal & Kamakura, 2001). Furthermore, the satisfied customers will probably talk to others about their good experiences. This fact, especially in the Middle Eastern cultures, where the social life has been shaped in a way that social communication with other people enhances the society, is more important (Jamal & Naser, 2002). Although satisfaction has been defined as the difference between expectation and performance, but there are differences between quality and satisfaction. For example, Parasuraman et al. (1991) say that satisfaction is a decision made after experience while quality is not the same. On the other hand, in satisfaction literature, expectations for goods is "would", while in service quality literature, expectations for goods is "should".

Cadotte & Turgeon (1988) have introduced another group of factors known as neutral factors. Besides, Liljander & Strandvik (1993) say that experience is not needed for evaluating service quality, and service can be evaluated on the basis of the knowledge about service provider, while satisfaction is an inner view, resulted from customer's own experience from the service. Finally, several researches have been done on the relation between service quality and satisfaction: findings of some of these researches show that satisfaction results in service quality (Parasuraman et al., 1988). Also, the research conducted by Sureshchandar et al. (2002) shows that, there is a two-way relation between satisfaction and service quality.

1.3 SERVICE LOYALTY

Many service organizations have developed customer loyalty programs as a part of relations development activities. Customer loyalty is a complicated concept. Oxford Dictionary defines loyalty as a state of true to allegiance. But the mere repeated purchase by customers has been mixed with the above mentioned definition of loyalty. In service domain, loyalty has been defined in an extensive form as "observed behaviors" (Bloemer et al., 1999). Caruana (2002) argues that behavior is a full expression of loyalty to the brand and not just thoughts.

However, behavior standards (such as repeated purchase) have been criticized, due to the lack of a conceptual basis of a dynamic process (Caruana, 2002). For example, the low frequency of repeated purchase of a special service may be resulted from different situation factors, such as non-availability or absence of a provider. According to this point of view, loyal behavior cannot offer a comprehensive conception of fundamental causes of loyalty. Additionally, repetition may be due to different restrictions resulted from the market. Consequently, the loyalty of this type of customers mainly differs from the loyalty of those customers who seriously support a product, and do have psychological bond with a product and a company. Therefore, customer's loyalty was

considered as an attitudinal structure. For example, this issue appears in the tendency to advise the service offer to other customers. Finally, in addition to behavioral and attitudinal approaches, another approach to customer’s loyalty, called cognitive approach, was introduced. The operational definition of this approach often refers to the first product or service which comes to the mind of a person, while making decision for purchase. Meanwhile, in their definition of this approach, Ostrowski et al. (1993) and Bloemer (1999) refer to the first product or service that a person chooses among products and services.

1.4 REVIEW OF SOME ACCOMPLISHED STUDIES

Despite the importance of service quality, so far a few researches have been done in this field in Iran, but numerous researches have been accomplished outside Iran. At least 293 important articles have been written from 1976 to 1995 on service quality. Meanwhile, if we consider articles in which service quality forms a part of the article, this number will be 4000 articles. These numbers clearly show the importance of service quality, and the researchers’ attentions to this topic (Philip & Hazlett, 1997).

(1) Bloemer, et al. (1998) have presented a model to show how the mental picture, service quality, and customer satisfaction influence customer loyalty. Findings of this research show that the mental picture indirectly and through service quality, influences loyalty. On the other hand, service quality influences loyalty both directly and indirectly (through satisfaction). Besides, this research showed that the reliability and position in the market are relatively important stimulants affecting the loyalty to bank services.

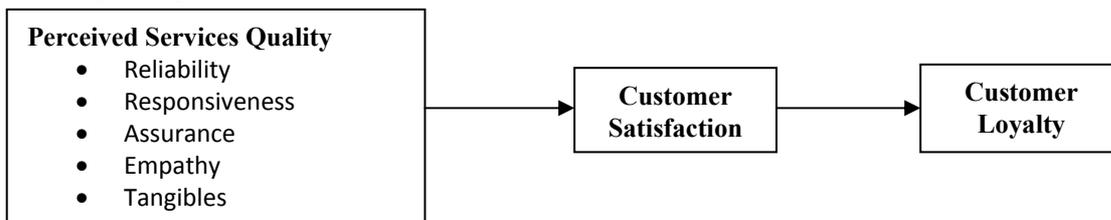
(2) On the relationship between customer satisfaction, service quality and service loyalty in Malta’s banks, Caruana (2002) concluded that customer satisfaction plays a mediator role in the effect of service quality on service loyalty. In fact, service quality affects service loyalty through customer satisfaction. In addition, results of this research show that service quality is an important gateway to customer satisfaction, and explains 53% of the variance.

(3) Yongyui (2003) has presented a model for the relationship between service quality and bank’s reputation. According to the findings of this research, the fivefold dimensions of service quality have direct effect on the bank’s reputation. In addition, on the basis of this research’s findings, the bank’s reputation plays an important role in determination of purchase, repeated purchase, and customer loyalty. This issue has much more importance in banking industry, because service quality cannot be accurately evaluated before purchasing.

(4) On customers’ abandonment behavior in America’s banks, Chakravarty (2003) found that there is a meaningful negative relation among service quality dimensions, responsiveness, empathy, and reliability, with customer’s tendency to abandon the bank. This study in India’s banks show that the concept of service quality in developing countries is a multi-dimensional structure, and in fact the results clearly show that SERVQUAL model provides more evaluating information in relation with service quality gaps, than SERVPERF scale.

1.5 The conceptual model of the research

The following conceptual model has been used in this article.



Research Conceptual model

From the above mentioned model the following main hypothesis are developed:

- H1- Perceived service quality is positively associated with customer satisfaction.
- H2- Perceived service quality is positively associated with customer loyalty.
- H3- Customer satisfaction is positively associated with customer loyalty.
- H4- Customer satisfaction mediates the relationship between perceived service quality and customer loyalty.

1.6 Research questions

This article attends to find answers to the following questions:

- (1) Is there any meaningful difference between customers’ expectations and their perception about Sepah Bank performance?
- (2) What is the relation between three concepts of service quality, customer satisfaction and loyalty?

- (3) What is the relation between five dimensions of service quality, satisfaction and loyalty?
 (4) What is the relation between resulted and processed dimensions of satisfaction and loyalty?

2. Research Methodology

The objective of this research is to clarify the relationship between three variables of service quality, customer satisfaction, and customer loyalty and to describe the understudy conditions and phenomena, in order to better understanding of present conditions, and helping the decision making process. This research can be categorized as descriptive research based on the method of obtaining the considered data. Since these data are made for studying the distribution of statistical population characteristics through sampling of population, this research is a survey done on the basis of cross sectional method.

2.1 Information gathering tool

Based on the literature review and the research design, a questionnaire was prepared consisting of five sections, which the first part was on specifications of the respondent, second part on the fivefold dimensions preference, third part for evaluation of expectations, fourth part for evaluating Bank Sepah's performance from customers view, and finally the fifth part including questions related to customers loyalty and satisfaction. In this research, SERVQUAL has been used for designing questions related to service quality, Gremler and Brown's tool (1996) for evaluating the loyalty, and for customer satisfaction evaluation, a tool offered by Bitner and Hubbert (1994) has been used. The above mentioned tools have been used in many researches conducted on service quality, thus these tools can be considered highly reliable.

To test the evaluating tool reliability, the designed questionnaire was at first distributed between about 26 customers of the bank, and was analyzed after being collected. The results of the primary sample show that Cronbach alpha (α) index is 0.94, indicating high reliability.

2.2 Statistical population and sample

The statistical population of this research is customers of a Sepah Bank branch in Tehran, Iran. Since the statistical population was unlimited, therefore the following formula was used to get the size of the sample:

$$n = \frac{Z^2_{\alpha/2} \delta^2}{E^2}$$

The variance of the obtained answers from the primary sample was 880.87, and by putting it in the above mentioned formula, the reliability level (α) was 95 percent, and estimate accuracy (E) was 5, and the sample size was 136. But since there was a probability that some of questionnaire would not be returned, 250 questionnaires were distributed, which finally 147 questionnaires were collected and analyzed.

3. Data Analysis

At first, descriptive statistics (results have been shown in table 2) was used to study the characteristics of statistical sample, and perceptive statistics (pair student T test, Spearman correlation index, Beta (β) meaningful level test in linear regression and...) was used for analyzing the questionnaires.

Question 1: Is there any meaningful difference between customer's expectations and their perception about Sepah Bank performance in each of the fivefold dimension, and in total?

As shown in table 2, the respondents' expectations in all fivefold dimensions, and in total, is more than Bank's performance in one dimension. Since these means are merely related to the mentioned sample, we have done the T test to study the meaningful explanation of their difference. The results of T test have been brought about in pair, in table 3. Considering the fact that the meaningfulness level in all dimensions is less than 0.05 of error level (and even 0.01), zero premises (there is no meaningful difference between expectation and performance) are failed. In other words, there is a meaningful difference between customer's expectation and the Bank's performance in each of dimensions separately and totally, and customer's expectation in all cases is more than Bank's performance. Thus, it can be said that the service quality is low, totally, and each of the discussed dimensions.

Question 2: What is the relation between three concepts of service quality, customer's satisfaction and loyalty? To do this, following three regression models should be tested:

- (1) Mediator variable regression (customer satisfaction) on independent variable (service quality): in this test, satisfaction will be considered as dependent variable, and service quality as independent variable.
- (2) Dependent variable regression (loyalty) on independent variable (service quality): In this test, loyalty will be considered as dependent variable, and service quality as in dependent variable.

(3) Dependent variable regression (service loyalty) on independent variable (service quality), and mediator variable (customer satisfaction): Table 4 shows that in this test, loyalty is considered as dependent variable, and service quality and satisfaction as independent variable.

As shown in table 4, for the first model, $R^2 = 0.43$ was obtained, and it can be said that 43 percent of the dependent variable changes is explained by the model. In the second model (table 9), $R^2 = 0.458$ was obtained, thus almost 45 percent of the dependent variable changes is shown by the model. As shown, $R^2 = 0.80$ was obtained in the third model, and it can be considered that 80 percent of the dependent variable changes is explained by the model, in other words, a very high percentage of dependent variable changes are identified by the mentioned model. As a result, customer satisfaction partially mediates the relationship between service quality and customer loyalty.

Now, the question is that is there any linear relation between the variable pair understudy in the model? To answer this question, single factor variance analysis test (ANOVA) is used. Data mentioned in table 4 shows:

First model: Considering the test statistic $F = 112.67$ and also zero meaningfulness level of the test, it can be concluded that there is a meaningful linear relation between the two variables.

Second model: The test statistic, $F = 122.41$ and test meaningfulness level is zero. Therefore, since the meaningfulness level is less than error level, zero assumption is denied, and the relation between the two variables is meaningful.

Third model: The test statistic $F = 292.56$ and test meaningfulness level is zero. This means that the zero assumption in 0.05 level is denied, in other words, there is a meaningful linear relation between dependent variable (Y) and at least one of the independent variables.

Therefore, it can be said that although both variables have a meaningful linear relation with the loyalty variable, but the satisfaction variable has a stronger relation with loyalty. Considering the positive sign of Beta index, this relation is in one direction, and loyalty is increased considerably with the increase of satisfaction.

In general, considering the applied models, the third model is better, since the determination index in this model is a higher figure compared with other models. Although the determination index in the second model is close to the third one, but compared with the third model, it is less appropriate, since one of the independent variables has been ignored in this model.

Question 3: What is the relation between five dimensions of service quality, satisfaction and loyalty?

This part will study the relation of each one of service quality dimensions with satisfaction and loyalty. To study the amount of the relation between each one of service quality dimensions with satisfaction and loyalty, Pearson correlation index is used. In tables 5 and 6, the correlation indices of satisfaction and loyalty have been calculated with five dimensions. Considering the first column in both tables, it can be said that all variables have a meaningful linear relation with satisfaction variable, as well as loyalty (meaningfulness level in all cases is less than the error level), and the highest relation is between empathy variable with satisfaction and loyalty. The positive sign of correlation indices shows direct relation of variables, so that in all five dimensions, with the increase of service quality, satisfaction and loyalty will be increased.

Question 4: What is the relation between resulted and processed dimensions, satisfaction and loyalty?

The fivefold dimensions of service quality can be considered from another point of view. In fact, they can be divided into two more general categories of resulted and processed. The resulted dimension includes reliability dimension, and the processed dimension includes other dimensions (tangibles, responsiveness, assurance, and empathy). Now, the question to be answered is which dimension is more important in attracting customer's satisfaction and loyalty? For his reason, Pearson correlation index is used.

Table 7 and 8 show the correlation indices of satisfaction and loyalty variables with resulted and processed dimensions. This tables show that the two variables have a positive meaningful linear relation with satisfaction and loyalty variables, so that the higher service quality in each of the dimensions, the more satisfaction and loyalty.

But in both cases, the processed dimensions have more correlation with satisfaction and loyalty. Therefore, although the result of service received by customers may not be appropriate, but it does not mean that customers consider service quality totally weak. On the other hand, high correlation between the processed dimension and satisfaction and loyalty shows that service challenges have played a more important role in customer's assessment from service quality. Thus, the process of service offer is a good opportunity for increasing the service quality in the view of customers.

4. Conclusion

The results of this research show that in all fivefold dimensions of service quality and also in total, customers' expectations are beyond their perceptions of the bank performance. In fact, findings of this research show that although in all fivefold dimensions of service quality Sepah Bank's performance has been higher than average limit, but its service quality does not satisfy customers' expectations.

Also, it was expected that service quality would be one of the determinants of satisfaction and loyalty. In fact, nearly 43 percent of customer's satisfaction change is explained by service quality. On the other hand, service quality has a direct relation with loyalty, and nearly 45 percent of loyalty changes can be explained by service quality changes. Another point is that if the satisfaction variable enters the model, the resulted determination index will be higher in figure than other cases (0.803). This figure means that nearly 80 percent of loyalty changes can be explained by satisfaction and service quality, although satisfaction plays a more important role in this relation.

In addition, findings of this research show that there is a positive and meaningful relation among all fivefold dimensions of service quality with satisfaction and loyalty, which in both cases assurance and tangibles have the most and the least relation with satisfaction and loyalty. In other words, it sees that tangibles can be considered as health factors, and assurance as motivational factor. In addition, the fivefold dimensions of service quality can be observed from another point of view. In fact, these dimensions can be divided into two more general dimensions of resulted and processed. The resulted dimension includes reliability dimension, and the processed dimension includes other dimensions (tangibles, responsiveness, assurance, and empathy). Findings of this part too, show that both resulted and processed dimensions have a positive and meaningful relation with satisfaction and loyalty. But the important point is that there is significant relation between the processed dimensions and satisfaction and loyalty.

This point is important because although the final output may not satisfy customer's satisfaction, but it does not necessarily mean customer's dissatisfaction. In fact, service encounter plays an important role in customer's satisfaction and loyalty. Considering the above mentioned findings, the Bank's manager should try to gradually reduce the gaps in the first step, and should attempt to make this gap positive, and to surpass customers' expectations, in the next step.

5. Limitation

This research was conducted in one branch of Sepah Bank, thus may not be generalizable to other branches. Therefore, more branches need to be investigated. It is also suggested that other related factors of service quality such as internal marketing, HR, organizational behavior and leadership to be included in the future researches.

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Table 1. Examples of SERVQUAL application in different service domains

Field	some accomplished researches
Professional services	Bojanic(1991),Carman, James (2000)
Medical services	Swartz & Brown (1989); Lam (1997)
Tourism	Tribe & Snaith (1998); Atilgan, et al. (2003)
Libraries	Nitecki (1996); Coleman, et al. (1997)
Information systems	Kettinger & Lee (1994)
Banks	Madhukar G. Angur, et al. (1993)
Restaurants and hotels	Min, Hokey, et al. (2002)
Government services	Mike Donnelly, et al. (1995)
Educational centers (universities and ...)	Pariseau, Susan E., Mc Daniel, J.R

Adapted from (Stewart, 1999)

Table 2. Descriptive statistics results

Characteristics Description		Quantity	Percentage
Gender	Male	116	79
	Female	31	21
Age	Up to 30 years	17	12
	31 to 40 years	112	76
	41 to 50 years	18	12
Education	Diploma and below	100	63
	Associate	21	14
	Bachelor	28	19
	Master and above	6	4
Activity background With Bank Sepah	Up to 7 years	38	26
	8 to 11 years	22	15
	12 to 15 years	54	37
	More than 16 years	24	16
Account type	Interest-free savings	71	48
	Current interest-free	123	84
	Short-term deposit	43	29
	Long-term deposit	25	17
	Credits	10	7

Table 3. Pair samples test for service quality dimensions

Dimensions	Pair Differences				Calculated t	P- Value	Test Result
	Difference of Expectation & Performance	Standard Deviation	Distance of difference (95%)				
			Lower Limit	Upper level			
Empathy	-1.84	1.28	1.64	2.05	17.48	0.00	Supported
Reliability	-1.42	1.19	1.22	1.61	14.38	0.00	Supported
Responsiveness	- 1.21	1.29	1.00	1.42	11.40	0.00	Supported
Assurance	-1.40	1.20	1.20	1.59	14.04	0.00	Supported
Tangibles	-1.27	1.32	1.05	1.48	11.69	0.00	Supported
Total	-1.42	1.00	1.26	1.58	17.17	0.00	Supported

Table 4. Regression equations results of relation between

Dependent variable	Customer satisfaction	Loyalty	Loyalty
R ²	0.437	0.458	0.803
F	112.667 ***	122.410 ***	292.563 ***
Beta: Service quality	0.661 ***	0.667 ***	0.159 ***
Beta: Customer satisfaction			0.783 ***

Table 5. Pearson correlation index test results between fivefold dimensions of Service quality and Satisfaction

Service quality Dimensions	Correlation Index	P-Value	Test Result
Empathy	0.324	0.000	Supported
Reliability	0.437	0.000	Supported
Responsiveness	0.559	0.000	Supported
Assurance	0.719	0.000	Supported
Tangibles	0.604	0.000	Supported

Table 6- Pearson correlation index test results between fivefold dimensions of Service quality and loyalty

Service quality Dimensions	Correlation Index	P-Value	Test Result
Empathy	0.344	0.000	Supported
Reliability	0.453	0.000	Supported
Responsiveness	0.578	0.000	Supported
Assurance	0.737	0.000	Supported
Tangibles	0.596	0.000	Supported

Table 7. Pearson correlation index test results between fivefold dimensions of Service quality and satisfaction

Service quality Dimensions	Pearson Correlation Index	P-Value	Test Result
Resulted Dimension	0.437	0.000	Supported
Processed Dimension	0.704	0.000	Supported

Table 8. Pearson correlation index test results between fivefold dimensions of Service quality and loyalty

Service quality Dimensions	Pearson Correlation Index	P-Value	Test Result
Resulted Dimension	0.453	0.000	Supported
Processed Dimension	0.704	0.000	Supported