Analyzing the Impact of Service Quality Dimensions on Customer Satisfaction and Loyalty in the Banking Industry of Iran

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Abstract
Given the importance of customers in the banking industry, this paper examines the effects of service quality dimensions on customer satisfaction and loyalty. Therefore, in line with how service quality dimensions in a bank forms customer satisfaction and loyalty, it has been tried to identify the constructs of each dimension to the directors and heads of Bank Mellat to help them design and implement appropriate and effective strategies to make their customers loyal. The population of this study is customers of selected branches of Bank Mellat in Iran and the samples consist of 150 of these people and the data have been collected by questionnaires. The sampling approach used to select these people was availability sampling method. After the analysis using structural equation modeling, GFI value equal to 0.93, NFI equal to 0.95, CFI equal to 0.98, RMSEA equal to 0.068 were obtained all of which were acceptable in the range and the model was validated. The results of this study indicate that the dimension of responsiveness has the greatest impact on customer satisfaction and loyalty. Among the dimensions of service quality, two dimensions of reliability and empathy didn’t have significant impact on customer satisfaction.

Key words
Service quality, customer satisfaction, customer loyalty, CARTER

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1. Introduction
In the past two decades, general interests into service quality in research fields showed that quality improvement of services to the customers, will lead to performance improvement and organizational competitiveness (Douglas and Connor, 2003; Rosen et al., 2003). Managers of service units often use criteria and indicators of service quality and customer satisfaction to measure customer needs by the organization.

Based on these criteria and indices, managers of financial institutions show more interest in services especially those which will influence customer’s behavior. They need to know that on the basis of satisfaction and perception of service quality what especial features of their services will influence their customers and lead to loyalty. Contrary to the beliefs about low importance of the service sector, today direct and indirect consequences of economic sectors are considerable. So, with regard to this issue we must know the nature of the services and try to create an advantage over competitors to develop a greater share of the market.

Given the fact that today almost all companies competing in a service industry offer similar products, the best way to convince customers to use bank services is having top quality in services. In today's competitive world, companies put the customers at the center of their attention, and their loyalty is the key to earn competitive advantage for organizations. The role and importance of customers in companies and organizations, due to a direct effect on the growth and survival of the organization in the competitive market and the advantage they have, have caused that today the need for customer satisfaction is understood and accepted philosophically and all organizational units have a tendency toward customers and work towards
customer satisfaction. The aim of this study is to examine the effects of service quality dimensions on customer satisfaction and loyalty in Iranian banking system. To this end, after reviewing the related literature, after reviewing the literature and conceptual model, methodology and research findings were presented. Finally, conclusions and suggestions for future studies were stated.

2. Literature review

Service quality

Service quality has been derived from the field of marketing which values human interaction between a business and its customers. It focuses on the relationship between customer expectation of a service and their perception of the quality of provision. This relationship was introduced in 1982 by Gronroos and is known as the perceived service quality (Gronroos, 2007).

Service quality has been defined in service marketing literature as an overall assessment of service by the customer. Perceived service quality is believed to be resulting from comparison between customers’ prior expectation about the service and their perceptions after actual experience of service performance (Asubonteng et al., 1996; Parasuraman et al., 1985).

Othman (2003) linked service quality to customer satisfaction and customer loyalty, reporting that a satisfied customer will be loyal to the organization, which is a measure for organizational performance. CARTER is a model based on the five SERVQUAL dimension in addition to new dimension called “Compliance with Islamic law” which is suitable for the Islamic banking industry (Islamic house of Kuwait). This dimension includes items such as “run on Islamic law and principles”, “no interest paid or taken on savings and loans”, “provision of Islamic products and services”, “provision of free interest loans” and “provision of profit sharing investment products”. CARTER includes 34 items across six dimensions, which are Compliance, Assurance, Reliability, Tangibles, Empathy and Responsiveness. CARTER is the most well known model in Islamic banking system (Najat, 2010) and has been adopted in many subsequent studies on Islamic banks in different countries (e.g. Shafie, Azmi and Haron, 2004; Ciptono and Soviyanti, 2007).

Customer satisfaction

Generally the customers may be satisfied or dissatisfied after the purchase and consumption of a good or service. Satisfaction is a positive feeling in the customer which will be created after purchasing the good or receiving the service. The above mentioned feeling will be established by the interaction of the customer's expectations and the supplier's performance. If the purchased goods or services by the customer are measured at the same level of his expectations, he will be satisfied. If the level of the purchased goods or services is higher than his level of expectations, he will be very happy. If this level is lower than the expectations, the customer will be dissatisfied.

Customer satisfaction is the full meeting of one’s expectation (Oliver, 1980) and can be described as the feeling or attitude of a customer towards a product or service after it has been used (Evans et al., 2006). In the traditional sense, satisfaction was considered to be transaction - specific construct which resulted from immediate post purchase judgment or affective reaction (Oliver, 1993; Ganguli & Roy, 2011).

Customer satisfaction is also considered from a cumulative satisfaction perspective and is defined as customer’s overall experience to date with a product or service provider (Johnson et al., 2001; Krepapa et al., 2003). Most of the customer satisfaction studies are now using this cumulative satisfaction concept (Gupta and Zeithaml, 2006).

Customer loyalty

The concept of loyalty in customers and creating loyal customers in the business is described as “customer engagement in transactions with specific organizations and buying goods and services frequently” (Susana and Larson, 2004). Loyalty is the adapting variable of customer satisfaction and economic performance.

The matter that seems to be most interesting is the word of mouth advertisements of the satisfied customers which attracts new customers. The satisfied customers, with their word of mouth advertisements, can affect the purchase intention of those who have not had a relation with a certain company (Rowley,
2005). If the positive word of mouth advertisements result in the attraction of new customers, they reduce marketing costs and can increase income (Sit et al., 2009).

Many researcher have used service recommendation to other customer as a proxy for customer loyalty (Caruana, 2002; Collier and Bienstock, 2006; Dabhollkar et al., 2000; Ganesh et al., 2000; Reichheld, 2003). Besides recommendation other items which have been used extensively for measurement of customer loyalty are consideration of the company as the first choice service provider (Caruana, 2002; Zeithaml et al., 1996) and continuing to do business with the same company (Caruana, 2002; Ganesh et al., 2000; Johnson et al., 2001; Olorunniwo and Hsu, 2006; Van Riel et al., 2001; Zeithaml et al., 1996).

**Interrelationships between service quality, customer satisfaction and customer loyalty**

Although customer satisfaction is the goal of all services, this is not the only one and other goals such as competitive advantage and profit making are included and advantages of customer satisfaction will finally lead to higher loyalty in customers. Maintaining customers in the long run rather than continuous attraction of new customers to replace those who have cut ties with the company is more beneficial (Venus, Safaeyan, 2005). In fact, customer satisfaction makes the customers ignore some of the mistakes made by the service institutions which may happen as the consequence of changes in service production. Due to my past experiences, customers easily ignore small errors of the organization and won’t move to the opponents. Actually, this shows the created loyalty in the customer which is directly related to customer maintenance, market share and the organization’s interest. The key to sustainable competitive advantage provides high quality service which will lead to customer satisfaction (Sorshchandar et al., 2002). The prominence of these two concepts will be better shown by theoretical and experimental studies. Thus, the importance of service quality and customer satisfaction is the ultimate goal of service providers.

Service quality is found to be a strong predictor of customer satisfaction (Cronin and Taylor, 1992; Cronin et al., 2000; Dabhollkar et al., 2000; Spreng and Mackoy, 1996). In traditional retail banking service quality dimensions of relational performance, core performance and feature performance were found to be significant predictors of customer satisfaction (Levesque and Mc Douggall, 1996). Various studies have been conducted in similar area, where in banking service quality dimension have been tested as predictors of customer satisfaction (Krepapa et al., 2003; Mc Douggall and Levesque, 2000; Ndubisi and Wah, 2005).

Few studies have investigated the link between each of the service quality dimensions and satisfaction and have reported some mixed results. For instance, Arasli et al. (2005) reported that assurance, reliability, empathy and tangibles dimensions of service quality were predictors of customer satisfaction in the Cyprus banking sector. Similarly, Yavas et al. (1997) found tangibles, empathy and responsiveness to be important predictors of customer satisfaction among bank customer in Turkey. Additional support comes from Zhou (2004), who reported that reliability and assurance were important predictors of satisfaction for bank customer in China. The effects of different service quality dimension on loyalty have also been tested in different service context of package tour operators (Andreassen and Lindestad, 1998), call centers (Dean, 2002), multi-service scenario (Zeithaml et al., 1996) and internet services (Parasuraman et al., 2005). Previous research has suggested that the quality of customer’s service experience aids them develop positive value perceptions about the service provider. The cognitive evaluation of the different service quality dimension will lead to a favorable behavioral response from the customer (Brady et al., 2002; Carrillat et al., 2009).

A substantial amount of research has concluded that satisfaction is an important determinant of customer loyalty (Bearden and Teel, 1983; Cronin and Taylor, 1992; Carunana, 2002; Dick and Basu, 1994; Oliva et al., 1992; Selnes, 1993). The satisfaction/dissatisfaction occurring through a matching or mismatching of expectations and perceived performance is considered to act as an antecedent to loyalty behavior (Bitner, 1990). In a service context, Asuncion et al. (2004) concluded that customer satisfaction was the key factor affecting service loyalty.

Customer satisfaction results in customer loyalty and loyal customers spend more money to purchase the productions or services of the organization while encouraging others to purchase from the organization and tend to pay more to purchase its products. The increase in repurchases reduces customers’ complaints. The satisfied customer is less sensitive towards the price, purchase more products, are less influenced by the rivals and are more loyal (Jahnson et al., 2001).
3. Conceptual model and research hypotheses

CARTER model is a conceptual model used in this study and is shown in Figure 1. The independent variables of this study are service quality dimensions including compliance, reliability, assurance, responsiveness, tangibility and empathy.

The mediator variable of this research is customer satisfaction. The dependent variable of the study is customer’s loyalty.

![Figure 1. Research conceptual model](image)

**Research hypotheses**

- H1. Compliance dimension of service quality has direct positive effect on customer satisfaction.
- H2. Reliability dimension of service quality has direct positive effect on customer satisfaction.
- H3. Assurance dimension of service quality has direct positive effect on customer satisfaction.
- H4. Empathy dimension of service quality has direct positive effect on customer satisfaction.
- H5. Responsiveness dimension of service quality has direct positive effect on customer satisfaction.
- H6. Tangibles dimension of service quality has direct positive effect on customer satisfaction.
- H7. Customer satisfaction has a direct positive effect on customer loyalty.

4. Research methodology

Since the present study is the description of investigated conditions and events in order to understand more about the present condition and assist the decision making process, the data are obtained by sampling and the study is descriptive survey. On the other hand, given to the objectives of the research, it is an applied research.

The statistical population of this research is customer of a Mellat Bank branch in Guilan, Iran. The questionnaire was used to collect data in four cities of Rasht, Anzali, Lahijan, Langerud and Rudsar. To do so, the availability sampling method was implemented. Since the statistical population was unlimited, therefore the following formula was used to get the size of the sample:

\[ n = \frac{z_{\alpha/2}^2 \times \sigma^2}{\varepsilon^2} = 125 \]

The variance of the obtained answers from the primary sample was 809.702, and by putting it in the above mentioned formula, the reliability level (\(\alpha\)) was 95 percent, and estimate accuracy (\(\varepsilon\)) was 5, and the sample size was 125. But since there was a probability that some of questionnaire would not be retumed, 200 questionnaires were distributed, which finally 150 questionnaires were collected and analyzed.
To collect data, a questionnaire including four parts is used. The first part of it is related to service quality taken from the CARTER model. This part includes 34 questions. The second part of the research is related to customer satisfaction and includes 4 questions. The last three questions assess customer’s loyalty. The fourth part includes demographic data of respondents. For each of the variables measured, the range of five option Likert scale questions was used.

To estimate questionnaire validity there are many ways. In this research we used content and construct validity. Reliability is also a technical feature of measuring instruments that shows how much the measuring instrument provides the same result in the same situation. In this research reliability is estimated by Cronbach's alpha. So using the data acquired through questionnaires and by the statistical software program, SPSS, the rate of reliability was estimated using Cronbach's alpha. Cronbach’s coefficient alpha was calculated 0.76 for Compliance, 0.71 for Reliability, 0.87 for Assurance, 0.88 for Responsiveness, 0.77 for Tangibles, 0.85 for Empathy, 0.93 for customer satisfaction, 0.87 for customer loyalty, and 0.96 for general model. These numbers show that the questionnaire used is reliable.

In this research data analysis is done by structural equation modeling using Lisrel 8.5 software. According to Azar (2004) one of the most powerful and appropriate methods of analysis in behavioral and social science research is multivariate analysis because these issues are multivariate and they cannot be solved with two variable approach consisting dependent and independent variables.

4.1. Results of demographic data analysis

Results of demographic data analysis consist of the information below:

Table 1. Demographic findings

<table>
<thead>
<tr>
<th>Frequency percentile</th>
<th>Frequency</th>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.7</td>
<td>34</td>
<td>Female</td>
<td>Sex</td>
</tr>
<tr>
<td>77.3</td>
<td>116</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>18</td>
<td>18 to 22 years</td>
<td>Age</td>
</tr>
<tr>
<td>56</td>
<td>84</td>
<td>22 to 35 years</td>
<td></td>
</tr>
<tr>
<td>19.3</td>
<td>29</td>
<td>36 to 50 years</td>
<td></td>
</tr>
<tr>
<td>12.7</td>
<td>19</td>
<td>Up to 50 years</td>
<td></td>
</tr>
<tr>
<td>38.7</td>
<td>58</td>
<td>Diploma or AA</td>
<td>Educational level</td>
</tr>
<tr>
<td>44</td>
<td>66</td>
<td>BA</td>
<td></td>
</tr>
<tr>
<td>12.7</td>
<td>19</td>
<td>MS</td>
<td></td>
</tr>
<tr>
<td>4.7</td>
<td>7</td>
<td>PhD</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>93</td>
<td>Below 5 years</td>
<td>Activity background with bank Mellat</td>
</tr>
<tr>
<td>20</td>
<td>30</td>
<td>6 to 10 years</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>18</td>
<td>11 to 15 years</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>9</td>
<td>More than 15 years</td>
<td></td>
</tr>
</tbody>
</table>

4.2. Data analysis and findings

To establish a causal relationship between the independent and dependent variables, the proposed model was tested using the Lisrel 8.5 software. To this end, various criteria are used to fit the model. In this research, various indices are used which the results are listed in Table 2. All fit indices confirm the model. $\frac{x^2}{df}$ taken is lower than 3 which show the model fitness. RMSEA values equal to 0.062, and given that it is less than 0.08, the model fit is considered acceptable. Other fit indices such as NFI, CFI, AGFI, GFI show high values close to 1 that is considered as good indicators of fitness model and shows consistency and appropriateness of the model with the data.
**Table 2. Results of model fitting indexes values**

<table>
<thead>
<tr>
<th>Fit indices</th>
<th>General model</th>
<th>Compliance</th>
<th>Assurance</th>
<th>Reliability</th>
<th>Tangibles</th>
<th>Empathy</th>
<th>Responsiveness</th>
<th>Customer satisfaction</th>
<th>Customer loyalty</th>
<th>Norm</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMSEA</td>
<td>1.57</td>
<td>0.75</td>
<td>0.75</td>
<td>1.36</td>
<td>1.89</td>
<td>1.70</td>
<td>2</td>
<td>0</td>
<td>&lt; 3</td>
<td></td>
</tr>
<tr>
<td>NFI</td>
<td>0.062</td>
<td>0.052</td>
<td>0</td>
<td>0</td>
<td>0.049</td>
<td>0.077</td>
<td>0.068</td>
<td>0.08</td>
<td>&lt; 3</td>
<td></td>
</tr>
<tr>
<td>CFI</td>
<td>0.95</td>
<td>0.98</td>
<td>0.98</td>
<td>0.96</td>
<td>0.96</td>
<td>0.99</td>
<td>1</td>
<td>1</td>
<td>&gt; 0.9</td>
<td></td>
</tr>
<tr>
<td>GFI</td>
<td>0.98</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
<td>1</td>
<td>1</td>
<td>&gt; 0.9</td>
<td></td>
</tr>
<tr>
<td>AGFI</td>
<td>0.86</td>
<td>0.94</td>
<td>0.97</td>
<td>0.97</td>
<td>0.95</td>
<td>0.97</td>
<td>0.92</td>
<td>0.93</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>IFI</td>
<td>0.98</td>
<td>0.99</td>
<td>1.01</td>
<td>1.01</td>
<td>0.99</td>
<td>0.94</td>
<td>0.99</td>
<td>1</td>
<td>&gt; 0.9</td>
<td></td>
</tr>
</tbody>
</table>

After logically establishing the fitness of the model with the data, the level of significance among the elements of the model and relations among the variables will be also evaluated. Figure 2 shows the estimated Lisrel parameters tested in the model. T values are one of the parameters of the model in estimating the relationship between the variables which must have a value greater than 1.96 and less than -1.96. Values of this parameter show that all the aspects except assurance and empathy have positive and significant impact on customer satisfaction and loyalty.

**Figure 2. Results concerning the hypotheses**

5. Discussions and conclusions

Based on structural equation model, the direct impact of four of the six dimensions of service quality i.e. compliance, reliability, responsiveness, Tangibility on customer satisfaction is significant and the most effective dimension is responsiveness with 0.37 and the least effective dimension is compliance with 0.14. Besides, four dimensions of the service quality have indirect impact and through the latent variable of customer satisfaction influence customer's loyalty. These effects range from 0.12 (corresponding to the compliance effect) to 0.33 (corresponding to the responsiveness effect). The direct effect of customer satisfaction on customer's loyalty is obtained 0.88. Meanwhile, t-test showed that all values calculated on the level of p<0/05 is significant.
The aim of this study was to investigate the impact of various dimensions of service quality on customer satisfaction and loyalty. Given the research hypothesis, the results showed that responsiveness, tangibility, reliability and compliance have direct and significant effect on customer satisfaction. Testing the hypothesis of this study showed that responsiveness has the greatest impact on customer satisfaction with the rate of 0.37. And this is consistent with previous studies that have reported responsiveness as the most important predictor of customer satisfaction (Ravichandran et al., 2010; Ramdhani et al., 2011). Responsiveness implies the service providers’ willingness and ability to satisfy the customers' requirements. If a service meets the customers' expectations or exceeds it, it has high quality. Appropriate response to the customers' demands is an important issue because the process of banking services mainly depends on how the relationship between the customers and frontline employees is. Therefore, appropriate answer to the customers' demands gains customer satisfaction and also makes the bank more dynamic and successful.

Testing of the hypothesis of the study indicated that tangibility have a significant and positive impact on customer satisfaction. This can be caused by the fact that customers often use tangible signs (such as physical devices etc.) as indicators of service quality. The reported results show that service quality in physical environment is connected to providing services (LeBlank & Neguyen, 1988). According to the banking literature, tangibility is an important predictor of customer satisfaction (Arasli et al, 2005; Yavas et al, 1997; Jamal et al, 2009; Wong & Sohal, 2003). Previous researches showed that tangibility can affect customers' emotional reactions such as pleasure, relaxation and emotional arousal (Vikfield & budget, 1999). Customers may assess properties of the bank or the performance of the bank staff. Lie (2004) focuses on positive impact of tangibility on customer satisfaction (Omar, 2010). Physical environment is a visual stimulus for the service quality of the bank, even if it is not connected to the real supply of the banking services. Due to the increasing intensity of competition, providing services in adorned and equipped places with standard physical, psychological and social indices determine customers' attraction and maintenance. Access to places of safety and convenience are qualities that customers of the bank are dramatically seeking.

Testing of the hypothesis of the study indicated that reliability have a significant and positive impact on customer satisfaction. This is consistent with the previous researches (Neguyen & LeBlanc, 2001; Bellini et al., 2005; Kheng et al., 2010) in which they have reported the impact of this dimension on customer satisfaction positive and significant. Service nature of bank activities is one of the issues that have its own complexities to build reliability. Customers need reliability for monetary transactions. Bank employees have an important role in building reliability because providing services is closely related to a service provider. On the other hand, simple, reliable and efficient technologies can play a significant role in building confidence in customers. Building reliability is necessary for long-term relationship with customers.

Testing of the hypothesis of the study showed that compliance with Islamic rules has positive and significant impact on customer satisfaction. This is consistent with previous researches (Ramdhani et al., 2011; Ghani et al, 2011; Osman, 2009). In which they have reported the impact of compliance on customer satisfaction positive and significant. Compliance with Islamic rules means the ability of law enforcement and governance according to the principles of Islamic Banking and Economics.

Furthermore data analysis indicated that customer satisfaction has positive and significant impact on customers' loyalty. So, it seems logical that to improve levels of customers' satisfaction and loyalty, we must focus on responsiveness, tangibility, reliability and compliance with Islamic rules.

The results showed that assurance and empathy don't have positive and significant impact on customer satisfaction. These results showed general lack of assurance of respondents to the bank and bank staff. Furthermore, the results showed that customer satisfaction is a mediator of the relationship between responsiveness, tangibility, reliability, and compliance with Islamic laws and loyalty. Thus, the importance of customer satisfaction in services is undeniable (Asunsion et al. 2004; Caruanna, 2002).

References


