Service Quality, Customer Satisfaction and Customer Loyalty in RAJA Rail Transportation Company

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ABSTRACT: This research paper attempts to study the relationship between service quality and customer satisfaction and loyalty provided by Raja Rail Transportation Company. This research is applied in terms of purpose and descriptive-survey in terms of method. The statistical population consists of all the passengers using trains of Raja Rail Transportation Company at Tehran stations for intercity travels during winter 2013. There were 384 passengers calculated as the size of statistical sample, which was collected through random stratified selection from 6 major routes of passenger trains of Raja Rail Transportation Company. A total of 430 questionnaires were handed out on the trains traveling across these routes, 385 of which were completely filled out. The data collection tool was questionnaire, reliability of which was calculated by Cronbach's alpha at 0.963. Furthermore, the one-tailed Spearman's correlation coefficient test was used to test the hypotheses and to obtain final results, which indicated there was a positive relationship between service quality and customer satisfaction and loyalty provided by Raja Rail Transportation Company. Moreover, there was a positive relationship between customer satisfaction and customer loyalty.

Keywords: Service quality, customer satisfaction, customer loyalty, Raja Rail Transportation Company.

INTRODUCTION

Due to the challenges of today's business environment, organizations are not merely seeking to attract new customers, but are adopting the strategy of maintaining the current customers and promoting their loyalty to the organization. In such circumstances, the objective is to establish a long-term relationship with interest groups, most importantly, the customers, so that more customers could be preserved and loss of customer could be prevented and ultimately, corporate market share and profitability could be guaranteed in the long-run (Osman et al, 2009; Yoo, 2008). It can be stated that loyalty originates from a belief in service quality, a psychological decision, and a positive and favorable attitude and it is realized in repeated and stability of consumer’s buying behavior (Castro et al, 2004). Therefore, managers and researchers have, over the last few decades, been focusing on service quality, since it significantly contributes to business performance, costs reduction, customer satisfaction, and customer loyalty and it has attracted profitability (Seth & Deshmukh, 2005).

Providing customers with better services leads to higher frequency of buying and widespread positive word-of-mouth advertising to potential customers. The other direct effect of service quality is boosted capability of the organization for efficiently delivering services to customers, since the organization has found out what customers want and need. Hence, it cuts down on, or even removes, unnecessary services, increasing the corporate profitability through bolstering efficiency and effectiveness in service delivery (Chang & Chen, 1998). Regarding the fact that service delivery based on customer desired values can play a remarkable role in ensuring customer satisfaction and loyalty toward repeating the buying experience, the present research intends to examine the relationship between service quality and customer satisfaction and loyalty. In order to realize the goal of studying such relationship in the Iranian transport industry, Raja Rail Transportation Company has been chosen, because an administrational change from tradition to modernity has occurred following the entry of private sector in the national rail transportation system, providing the public community with a right of free choice, to the extent that competitiveness in the national rail transport market has grown over the last years. Such competitive environment has compelled companies delivering such services to pay further attention to highly desirable service quality and make greater efforts to ensure customer satisfaction and...
loyalty. Hence, the present study attempts to answer the question whether or not the future market of the Iranian transport industry will be influenced by customer loyalty to the quality of provided services.

**Literature Review**

**Service quality**

Service quality is a function of the correlation between customers’ basic expectations and their experience and impression before and after receiving the service. Unlike quality of goods, service quality can be evaluated based on both delivery process and the outcome of the delivered service (Fitzsimmons, 2008). When evaluating the service quality, customers tend to judge according to certain subjective criteria formed prior to experiencing the new service. The expectations from a provided service are mostly influenced by the prior experience as a customer. In case customers lack personal past experience, they might make a pre-purchase decision based on factors such as commercial advertising and word-of-mouth advertising. Over time, certain criteria are formed by service institutions for customer expectations. These criteria are strengthened through customer experience as well as factors driven by the company including commercial advertising, pricing, apparent facilities and service employees. Customers tend to compare what they expect to achieve with what they actually receive after the buying stage. In fact, they consider how satisfied they are with service delivery and its outcome, judging the service quality at the same time. Although service quality and customer satisfaction are interdependent, they are not actually equal to one another. Many researchers believe that customer opinion about quality is based on long-term evaluations after receiving a company’s service, while customer satisfaction is a short-term emotional response to the experience of a particular service (Seyed Javadein, 2010).

**Customer satisfaction**

Customer satisfaction is the consumer feeling or attitude toward a service or product recently used (Jamal & Naser, 2002). Satisfaction implies that there is a positive feeling created in a customer or recipient of a service. As a matter of fact, such feeling is induced by satisfied customer expectations and successful supplier performance. A feeling of excitement or dissatisfaction is seen whenever the customer expectations, and received goods or services are at the same level, or the goods fall higher or lower than the customer expectation (Dadkhah, 2009).

**Customer loyalty**

Loyalty is an old term generally used for describing a passionate faithfulness or an intense attachment to a country, ideal or frequent use of something. Based on Reichheld’s view, companies should regard customers as a kind of capital, but such approach is rarely taken by companies; because customer loyalty can be a permanent source of income over the coming years and customer loyalty lasts as long as customers feel to have received higher value (including superior quality versus the price) in comparison to what they could have achieved by changing their supplier and purchasing from another supplier (Reichheld, 1996).

As viewed by Oliver (1999), loyalty refers to a strong commitment to repurchasing a top or superior product or service in future, so that the same brand is chosen for purchase despite the influential marketing efforts made by potential competitors, therefore one can say that customer loyalty is properly associated with the word “choice”, since customers remain royal to a certain kind of goods with a special label. That very tendency toward choosing a particular product leads to loyalty (Lin & Wang, 2006).

**the relationship between quality and customer satisfaction and loyalty**

Juran (1998) argues that customer satisfaction is a state of mind where the customers think that the product features are compatible with their personal expectations. He also considers customer dissatisfaction or discontent as a separate concept, defining it as follow: Customer dissatisfaction is a state where the product defects and flaws bring about customers’ inconvenience, complaint and criticism (Kavoosi & Saghaei, 2009). Juran believes that customer satisfaction and customer dissatisfaction are not two opposite terms: in fact, customer satisfaction derives from product features or provided services which encourage customers to purchase and use that product or service. On the other hand, customer dissatisfaction originates from service or product defects and deficiencies leading to customers’ complaint and displeasure (Shahin & Teimouri, 2008).

In some studies, quality and satisfaction have been used interchangeably, while in some other studies, the two terms have been distinguished. It can be argued that satisfaction is a decision made after a buying experience in the past, while quality is different. A customer may admit that a company’s services are qualified, but it does not represent satisfaction of the customer who might have been displeased by high prices, although he/she may believe that the services are qualified (Storbacka et al, 1994). Moreover, Caruana found out that customer satisfaction plays a mediator role in how service quality affects customer loyalty. In other words, service quality can be effective on loyalty through customer satisfaction and it is considered as an important input for fulfilling customer satisfaction (Caruana, 2002).
The relationship between customer satisfaction and customer loyalty

According to the studies conducted so far, it has been proved that ensuring customer satisfaction would gradually lead to a feeling of customer loyalty and trust in an organization. Apart from returning to their favorite organization for frequent purchase of products and reuse of services, loyal customers play a significant role in boosting profitability and improving the mental image of the organization in potential customers as an additional factor contributing to the company’s product and service advertisement through endorsement and recommendation to relatives, friends and other people.

In this regard, Simon, a management theorist argues that when an organization succeeds in attracting a new customer, his/her satisfaction becomes the beginning point of a long-term relationship between the customer and organization. According to a study conducted by a research center, it was indicated that 90% of dissatisfied customers belonging to an organization never return to use the products or services provided by that organization. Furthermore, each of these dissatisfied customers told their problem to at least 9 other people, 13% of whom later on retold the issue to more than 20 other people (Kavoosi & Saghaei, 2009).

Conceptual Model

The conceptual model proposed in this research has been illustrated in Figure 1 as below:

![Conceptual model of the research](image)

Hypotheses

The main hypothesis

There is a positive relationship between service quality and customer loyalty in Raja Rail Transportation Company.

Sub-hypotheses

First sub-hypothesis: there is a positive relationship between service quality and customer satisfaction in Raja Rail Transportation Company.

Second sub-hypothesis: there is a positive relationship between customer satisfaction and customer loyalty in Raja Rail Transportation Company.

METHODOLOGY

The present research is an applied research in terms of purpose and is a descriptive-survey research in terms of method. The statistical population consists of all the passengers using trains of Raja Rail Transportation Company at Tehran stations for intercity travels during winter 2013. Using the Cochran formula, the sample size was calculated to be 384 passengers who were selected through a random stratified procedure from among passengers traveling from Tehran across 6 major rail routes of Raja Rail Transportation Company. A total of 430 questionnaires were handed out to the passengers traveling across these routes, 385 of which were completely filled out. For that purpose, a 30-item questionnaire was designed for assessing the customer opinions by a five-point Likert scale. The item 1 to 22 in the questionnaire were specified to the measurement of service quality, items 23 to 27 were about customer satisfaction and finally, items 28 to 30 were about customer loyalty. In order to assess service quality, the five criteria for quality were employed, including physical and tangible evidences, reliability, responsiveness, assurance and empathy, which altogether contain 22 measurement indices. Indices of customer satisfaction measurement are the customer general feeling, reasonable ticket price, fixed locations for tickets sales, customer services, and handling customer dissatisfaction. These indices have been selected from Yee et al. (2009) and Jianjun & Canming (2011) studies. Furthermore, the customer loyalty was assessed through 3 indices including willingness to travel again, recommendation to other people, customer return to improved service quality (Jianjun & Canming, 2011). In order to ensure reliability of the questionnaire, a pre-test was administered, 30 questionnaires were handed out to the passengers, and their reliability was calculated as equal to 0.963 by Cronbach’s alpha. As for hypotheses testing and obtaining relevant results, the one-tailed Spearman’s correlation coefficient was used.
Table 1. Results obtained from reliability assessment of the questionnaire devised by the researcher.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of indices</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality</td>
<td>22</td>
<td>22</td>
<td>0.961</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>5</td>
<td>5</td>
<td>0.776</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>3</td>
<td>3</td>
<td>0.905</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>30</td>
<td>0.963</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

Demographic description of the sample

385 questionnaires of the total 430 questionnaires were completely filled out by the passengers. Table 2 shows the demographic characteristics of the respondents.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels</th>
<th>Percentage</th>
<th>Variable</th>
<th>Levels</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>61.3</td>
<td>Occupation</td>
<td>Employee</td>
<td>29.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>38.7</td>
<td>Housewife</td>
<td>8.1</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>Married</td>
<td>66.2</td>
<td>Self-employed</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>33.8</td>
<td>Student</td>
<td>26.2</td>
<td></td>
</tr>
<tr>
<td>Age (years old)</td>
<td>Under 20</td>
<td>3.6</td>
<td>Frequency of using trains</td>
<td>Every week</td>
<td>14.8</td>
</tr>
<tr>
<td></td>
<td>20-30</td>
<td>48.1</td>
<td></td>
<td>Every 15 days</td>
<td>7.8</td>
</tr>
<tr>
<td></td>
<td>30-40</td>
<td>27.8</td>
<td></td>
<td>Every month</td>
<td>27.5</td>
</tr>
<tr>
<td></td>
<td>40-50</td>
<td>13</td>
<td></td>
<td>Every year</td>
<td>34.8</td>
</tr>
<tr>
<td></td>
<td>50-60</td>
<td>5.7</td>
<td></td>
<td>Other</td>
<td>15.1</td>
</tr>
<tr>
<td></td>
<td>60-70</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As indicated in the results above, male respondents outnumber female ones. Moreover, married individuals take up the larger population of the sample as compared to the single individuals. In terms of age, people between 20 to 30 years old (i.e. 48.1%) are almost twice as many as those between 30 to 40 (i.e. 27.8%). Other age groups made relatively lower contributions.

The results suggest that employees take up the largest portion of the passengers in terms of occupation. Furthermore, the self-employed people, students, other occupations and housewives rank the next rungs, respectively. Finally, using trains every year for intercity travels takes up the highest frequency, while every 15 days falls at the lowest frequency of using trains.

RESULTS OBTAINED FROM THE HYPOTHESES ASSESSMENT

Results obtained from the hypotheses assessment can be seen in Table 3, data of which shows that the correlation coefficient between service quality and customer loyalty has been calculated to be 0.601. Since the P-value at significance level of 1% is 0; the null hypothesis is rejected and the first hypothesis implying there is a positive relationship between the two variables is proved true. Similarly, this relationship was directly investigated by Caruana (2002) and the results indicated that there is a positive relationship between service quality and loyalty. The key role of service quality, however, contributes to customer satisfaction; i.e. customer satisfaction is a mediator factor between service quality and customer loyalty. Hence, improvement in service quality can potentially boost customer satisfaction, leading in turn to increased customer loyalty. In a study conducted on sports services industry, Seyed Javadein et al. (2011) directly investigated such relationship between perceptual quality and customer loyalty. The results indicated that service quality is effective on customer loyalty through customer satisfaction and there is no direct relationship confirmed between perceptual quality and customer loyalty.

Unlike what found out in the mentioned study, the results of the present study confirm that there is a direct relationship between service quality and customer loyalty, which has never been explored in other studies available to the researcher. In fact, the relationship between service quality and customer loyalty has been studied through the effect of service quality on customer satisfaction and then the effect of customer satisfaction on customer loyalty. This relationship has not been directly explored, for instance, in other studies reviewed by the present research such as Yee et al. (2009), Teng (2007) conducted on the Taiwanese Railways as well as Jianjun & Canning study conducted on the Chinese High-speed Rail Transportation industry, this relationship has not directly examined, and the service quality has rather been identified as effective on loyalty only through customer satisfaction. Even in the study conducted by Allameh & Noktedan (2011) entitled “Analysing the Influence of Service Quality on Customer Loyalty”, such relationship has not been directly investigated, i.e. the effect of service quality on loyalty has been tested through customer satisfaction, while the results obtained from both sub-hypotheses proposed in the present study along with the results obtained from the main hypotheses are consistent with the mentioned studies.

With regard to the second hypothesis, since the measured correlation coefficient is 0.687 and the P-value at significance level of 1% is 0, the null hypothesis is rejected; i.e. the first hypothesis implying there is a relationship between service quality and customer satisfaction is proved true. This finding is consistent with
The correlation coefficient between the two variables of customer satisfaction and customer loyalty has been measured to be 0.671. Since the P-value at significance level of 1% is 0, the null hypothesis is rejected and the first hypothesis implying there is a positive relationship between the two variables is proved true. The result obtained from this hypothesis is consistent with results obtained from studies done by Yee et al. (2009), Teng (2007) and Jianjun & Canming (2011).

The noteworthy point to make is that regarding the obtained results, the highest correlation coefficient has been achieved by the relationship between service quality and customer satisfaction. Then we have correlation coefficient between customer satisfaction and customer loyalty and ultimately the correlation coefficient between service quality and customer loyalty fall at the lowest. Therefore, it can be concluded that, similar to other studies, customer satisfaction plays an essential role in the relationship between service quality and customer loyalty. In other words, identifying the service quality factors effective on customer satisfaction can lead to strengthened customer loyalty.

Later in analysis of the results, the indices of service quality and customer satisfaction are ranked and assessed in terms of their effects on the relationship between service quality and customer satisfaction as well as the relationship between customer satisfaction and customer loyalty. The results showed that among 22 indices of service quality, the indices of interest expressed for solving the problems of passengers, the employees’ tendency toward helping out passengers, modest treatment of employees toward passengers, feeling of safety in passengers when dealing with employees have had the highest impact on service quality. Moreover, other indices including presenting correct reports (i.e. issuing correct tickets), properly-organized documents, (i.e. sufficient information placed on the tickets), delivering services in due time (i.e. the on-time movement of trains), accomplishing the promised tasks or services within due time (i.e. timely arrival of trains at destinations), and accurate notification of the service schedule (i.e. the trains timetable) have had the lowest impact on the service quality, thus above mentioned indices had had the highest and lowest impact on the relationship between service quality and customer satisfaction, respectively. Furthermore, in the rankings, the most effective customer satisfaction indices include, respectively, dissatisfaction management (the procedure of handling complaints), customer service (welfare services provided during the travel on train), general feeling of satisfaction, reasonable prices, and fixed places for ticket sales.

**CONCLUSION**

The present study has examined the relationship between service quality and customer satisfaction and loyalty in Raja Rail Transportation Company. For this purpose, a researcher-designed questionnaire was constructed. Having been confirmed its validity and reliability, the questionnaire was handed out among a total of 430 sample passengers through random stratified selection. At the end, 385 completely filled-out questionnaires were analyzed. For hypotheses assessment, the one-tailed Spearman correlation coefficient was used at significance level α=1%. In this study, the relationship between service quality and customer satisfaction and loyalty was investigated within a framework of 3 hypotheses. The final results suggested that there is a positive relationship between service quality and customer satisfaction, between service quality and customer loyalty, and between customer satisfaction and customer loyalty. The achieved correlations coefficients indicate that the two variables of service quality and customer loyalty with the coefficient of 0.601, variables of service quality and customer satisfaction with the coefficient of 0.687, and the two variables of satisfaction and loyalty with the coefficient of 0.671 are correlated to one another. By comparing the obtained coefficients, it can be concluded that despite there is a positive relationship between service quality and customer loyalty, the highest correlation coefficient was scored by the relationship between service quality and customer satisfaction and the lowest value was scored by the relationship between service quality and customer loyalty. Hence, the highest effect of service quality on customer loyalty is because of its effect on customer satisfaction. In other words, high quality of services leads to higher satisfaction, which in turn leads to strengthened loyalty. Therefore, concerning the results obtained from hypotheses assessment and ranking of indices mentioned in the previous section, if Raja Rail Transportation Company can potentially promote customer satisfaction and consequently customer loyalty provided that the company determines to improve service quality taking into account the following measures: interpretation of the prospect, mission, objectives and strategies at lower levels aimed at informing employees of the significance of how to communicate with customers; improving the employees knowledge about the significance of respecting customers and expressing good manners and modest treatment; paying attention to customer demands, assisting customers and handling their problems; a wider review on passenger needs so as to determine the appropriate times for trains travelling

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>R</th>
<th>α</th>
<th>P-value</th>
<th>N</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main hypothesis</td>
<td>Service quality – Customer loyalty</td>
<td>0.601</td>
<td>0.01</td>
<td>0.000</td>
<td>385</td>
<td>Proved</td>
</tr>
<tr>
<td>First sub-hypothesis</td>
<td>Service quality – Customer satisfaction</td>
<td>0.687</td>
<td>0.01</td>
<td>0.000</td>
<td>385</td>
<td>Proved</td>
</tr>
<tr>
<td>Second Sub-hypothesis</td>
<td>Customer satisfaction – Customer loyalty</td>
<td>0.671</td>
<td>0.01</td>
<td>0.000</td>
<td>385</td>
<td>Proved</td>
</tr>
</tbody>
</table>
schedule. Appropriate interpretation of the trains schedule, preparing appropriate brochures and creating facilities for customer access to the brochures at all stations and travel agencies; making sure the brochures are updated in all distribution places while maintaining seasonal changes in trains schedule; preparing special brochures for each route so that information regarding the approximate departure and arrival hours at every station across that route are made available to passengers; conducting an impact study on reasons of delayed departure and arrivals of trains through comprehensive research and identification of the most effective factors through statistical studies; reducing the booking mistakes in tickets through figuring out the sources of wrong information; a review on passenger needs for the registered information on tickets and how the information is displayed on them, so as to ensure the compatibility of the information with passenger needs. Focusing on the mentioned measures can potentially improve service quality and ultimately increase customer satisfaction for passengers travelling by the trains of Raja Rail Transportation Company. On the other hand, since the passengers expressed little satisfaction with train ticket prices and the distribution places, Raja Rail Transportation Company ought to make great efforts to improve service quality by balancing the ticket prices and the service value purchased by the customer, because customers believe such balance has not been maintained yet. Furthermore, increased passenger access to brochures perfectly guiding to the places of ticket sales can improve customer satisfaction and consequently lead to strengthened customer loyalty.

REFERENCES


