Assessing the Service Quality of Northern Railway by using SERVQUAL Model

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Abstract

The present study aims to put forth the evaluation of determinants of the passenger satisfaction on service quality of Indian Railway. Nowadays Service Quality of Indian Railway has a very high influence on Passenger Satisfaction. Railway has a greater potential to draw economic benefits from its operations if their service quality is improved. Railway can perform well only if the passengers are satisfied with the service they provide, but Railways are missing the passenger service as compare to Airline Services. Various studies have described a number of dimensions regarding the Service Quality of Indian Railway. Five dimensions of Service Quality SERVQUAL were taken in this research paper which is Tangibility, Reliability, Responsiveness, Assurance and Empathy. The result indicates that a larger gap has been found in Reliability and Assurance dimensions of Railway service quality and the most important factors determining satisfaction of passengers are basic facilities, safety & security, punctuality and employee behavior towards passengers. It was found that the dimensions that influence the good services were Reliability and Assurance.

Keywords:

SERVQUAL, Northern Railway, Passenger Satisfaction, Assurance and Reliability

Introduction

Indian Railway is lifeline of the nation, founded in April 16, 1853, 160 years ago. The headquarters is in New Delhi. Some services provided by Indian Railway are freight services, parcel carrier and catering, tourism services and other related services owned by Government of India. Indian Railway is the largest rail network in Asia and the world's second largest under one management. It is a multi-gauge, multi-traction system covering 115,000 kilometers, with 7500 stations as on December 2012 across the length and breadth of the country. It transported over 25 million passengers daily. It is the largest employer in the organized sector in India, with a workforce of 1.3 million. For administrative purposes, Indian Railways is divided into 17 zones. Northern Railway, the Jewel Set in the Crown of Indian Railways, has embarked on the mission to vanquish distances and create its own

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With the competitors nowadays, customers are becoming more demanding with Quality of services. They want value for money that is they expect the service quality that they received from the service providers equals or exceeds what they had paid for (Mitra Lagerstrom, 2002). In the service industry, the core values for consumers include not only the uniqueness of products but also other factors such as physical facility, style, image, and quality of service (Lin, 2007). Furthermore, customer loyalty always follows satisfaction, which is determined from the service quality offered by the provider. It is also one of the most frequently used indicators to measure the success of a marketing strategy (Wen et al., 2005). Service quality can be measured in terms of Customer Perception, Customer Expectation, Customer Satisfaction, and Customer Attitude (Sachdev and Verma, 2004). Traditionally, the performance indicators for public transport are divided into two categories: efficiency and effectiveness. Under the efficiency category, the measures are concerned with the process that produce the services while the effectiveness category are used to determine how well the services provided are with respect to the objectives that are set for them (Pullen,1993). (Rust and Oliver, 1994) define satisfaction as the "Customer Fulfillment Response," which is an evaluation as well as an emotion-based response to a service. (Allen and Dicesare, 1976) considered that quality of service for public transport industry contained two categories: user and non-user categories. Under the user category, it consists of speed, reliability, comfort, convenience, safety, special services and innovations. For the non-user category, it is composed of system efficiency and demand. (Sillock, 1981) conceptualized service quality for public transport industry as the measures of accessibility, reliability, comfort, convenience and safety.

Review of Literature

Various studies being conducted in recent past that are relating to consumer satisfaction and service quality have been reviewed as given below:-

Parasuraman et al. (1985) identified key determinants of service quality as perceived by service providers and consumers, namely, reliability, responsiveness, competency, accessibility, courtesy, communication, credibility, security, understanding, knowing the customer, and tangibility to formulate a service quality framework.

Eboli and Mazzulla (2007) measured customer satisfaction in the context of public transportation on various factors including availability of shelter and benches, cleanliness, overcrowding, information system, safety, personnel security, helpfulness of personnel, and physical condition.

Vanniarajan and Stephen (2008) explored the attributes that are used to evaluate the service quality of Indian Railways; which are reliability, assurance, empathy, tangibles, and responsiveness. It was found that passengers were moderately satisfied on these dimensions.

Khan Rubayet Rahaman Md. Arifur Rahaman (2009) studied the service quality attributes which effects satisfaction of Railway passenger findings show that, overall service satisfaction depend on eight distinct service quality attributes. It implies the service with worst situation, overall satisfaction of service and need for priority improvement to support further orientation, addition and betterment of service to draw maximum economic and development benefit for those linking regions.

Fazlina Waris et al. (2010) identified that the factors that most influence the good services were punctuality, frequency, speed, space, reliability, comfort, safety, train operations, services status.

Geetika, Shefali Nandan (2010) identified components of service quality of Indian Railways at Railway platforms on the basis of sufficiency of seating space, lighting, fans, drinking water and sanitation, clarity of announcements, reservation chart display, affordability of refreshments, quality of refreshments, security of self, security of luggage, behavior of porters, behavior of Railway staff, management of parking.

M. Devi Prasad (2011) has given the five dimensions

used to measure Service Quality is quality in service delivery and Social Responsibility, Assurance, Empathy, Reliability, Responsiveness and Tangible.

Rida khurshid et al. (2012) highlighted the current issues of transport sector that how service quality effects customer satisfaction. Customer satisfaction is considered to be the most important factor whether it is meant for a product or a service. In case of failure to satisfy customer study considered some factors from which customers were not satisfied and those factors were Non availability of seats for females, less security, Mental Harassment, Time problems.

K. P. Balakrishnan (2012) explored the relationship between Railway service quality attributes and customer satisfaction based on passenger perception. Waiting arrangement, Seat condition, Spacing between the seats, Spacing for moving on a train, Luggage storage facilities, Window condition, Environment inside the train, Condition of toilet inside the train, Food, Security inside the train, Journey time, Train announcement, Waiting arrangement, Ticketing time, Information availability, Toilet facilities at the station, Security at the station, Safety caution, Announcement at the station and behaviors of the staffs at the station were the important factors for the relationship.

Sheeba. A. A and K. Kumutha devi (2013) used factor analysis to identify the most and least important factors of customer satisfaction on service quality. The factors determining the service quality of the Indian Railways in train service that lead to the customer satisfaction were Availability of Seats, drinking water, power supply, sanitation quality, neatness in compartment, presence of creatures & insects, self safety, safety of belonging, affordability, quality, medical service, availability of doctors, right time service, information accessibility, behavior of staff, behavior of co- passengers.

S.Gandhimathi and S.Saravanan (2013) analyzed the customer satisfaction towards Indian Railways services at Coimbatore junction study identified Empathy, Frequency, Speed, Reliability, and comfort for customer satisfaction.

S. Gamdhimathi (2013) found some factors that passengers use to evaluate the service quality at Railway stations. These are reasons cost, sufficiency of seating space, lighting quality, fans in platform, drinking, water and sanitation, clarity & frequency of announcement, reservation chart display service, security of self.

Research Methodology

Objectives of the study

The main objectives of the present study are as following:-

1. To study the various determinants of passenger satisfaction on Service Quality.

2. To suggest suitable service quality initiatives for Indian Railway for improvement in their services.

Need of the Study

The study will look into the various determinants of Passenger Satisfaction on Service Quality. It will also help to find the perception of people towards Indian Railway service. It will also suggest suitable service initiatives for Indian Railway. It is a comprehensive study because there not much work has been done on this topic in Punjab region.

Sampling Design

These respondents were interviewed through a pretested, well structured questionnaire which was administered personally.

Methods of Data Collection

The present study is mainly based on primary data collected from 100 respondents. The survey was conducted during the period of January 2015 to February 2015. The demographic characteristics of the respondents depict that the majority of respondents were in the age group of 20-40 years and 66% of them were females and most of them were graduate.

Research Tools

Seven point likert scale has been used to study various determinants of Passenger Satisfaction on Service Quality, SERVQUAL Model used for analyzing the key determinants of Service Quality (Parasuraman et al, 1985).

Analysis

A descriptive research design was used to gain an insight into consumer's perception about the services offered by Indian Northern Railways with respect to five dimensions of SERVQUAL scale. Primary data were collected for the research. An undisguised structured questionnaire, SERVQUAL, (Parasuraman et al, 1985) with modified attributes to suit Railway Services was used for the research. The respondents were asked to provide belief rating for services offered by Northern Railways. For the purpose of selecting the samples for the study, convenient sampling technique is used. A sample size of 100 respondents was selected.

Table 1: Age of Respondents		
	Frequency	Percent
0-20	8	8.0
20-40	88	88.0
40-60	4	4.0
Above 60	00	00
Total	100	100

Source: Primary Data

The perusal of the table number 1 reveals that majority of the respondent lies in the age group of 20-40. Out of total, 80 percent lies in this range.

Table 2: Gender of Respondents		
	Frequency	Percent
Male	34	34.0
Female	66	66.0
Total	100	100.0

Source: Primary Data

Table 2 depicts that out of total respondent, 66 percent are female & 34 percent are male.

Table 3- Qualification of Respondents		
	Frequency	Percent
Matric	4	4.0
Graduation	64	64.0
Post Graduation & above	32	32.0
Total	100	100.0

Source: Primary Data

Table 3 shows the qualification of respondents. Majority (64%) of the respondents are graduates.

Before carrying out any analysis on primary data the foremost requirement is to test the reliability of data. The data reliability has been tested by using the statistic cronbach alpha. The cronbach's alpha comes out to be .849. As per the standards, the value needs to be greater than 0.6. Thus, it can be concluded that data is suitable.

Table 4: Reliability Statistics	
Cronbach's Alpha	N of Items
.849	22

(Source: IBM SPSS statistics version 21)

Results and Discussions

As it is discussed that the customers are becoming more demanding with the quality of the services and it is one of the main factor which can make the northern Railways to be competitive. The Service quality can be measured in terms of customer perception, customer expectation, customer satisfaction, and customer attitude. Therefore, 5 main determinants of Passenger Satisfaction on Service Quality have been taken into account for the measurement of service quality. These determinants are further categorised into 22 statements. Table 5.1 and 5.2 demonstrates the respondents' Perceptions and Expectations regarding the services provided by Northern Railways and furthermore, the gaps have been calculated for the various dimensions.

Table 5.1 Mean score of 22 Statements				
Attributes	Expectations (E)	Perceptions (P)	Gap (E)-(P)	% of satisfaction
1.Modern Equipment & Infrastructure	5.67	3.96	1.71	69.84%
2.Neat Physical Facilities	5.84	3.2	2.64	54.79%
3.Comfortable Seats	5.91	3.4	2.51	57.53%
4.Visual Appealing	5.71	4.65	1.06	81.44%
5.Accuracy in Record Keeping	5.81	3.98	1.83	68.50%
6.Train Schedule	5.91	3.34	2.57	56.51%
7.Employee Service Efficiency	5.83	3.17	2.66	54.37%
8.Staff understand Inquiries	5.84	3.31	2.53	56.68%
9.Punctuality of Trains	5.98	3.42	2.56	57.19%
10.Ready to Help	5.67	3.35	2.32	59.08%
11.Staff deals in Caring Way	5.65	2.77	2.88	49.03%
12.Solution of Complaints	5.73	3.02	2.71	52.71%
13.No Time to Response	5.29	4.47	0.82	84.50%
14.Trust for making all trips	5.66	4.66	1	82.33%
15.Safety	5.77	3.36	2.41	58.23%
16.Polite and well manner staff	5.83	3.17	2.66	54.37%
17.Safety of Luggage	5.97	3.16	2.81	52.93%
18.Give Attention to Individual	5.79	3.14	2.65	54.23%
19.Coordination	5.84	3.11	2.73	53.25%
20.Services at the First Time	5.78	3.17	2.61	54.84%
21.Best Service Provider	6.00	3.39	2.61	56.50%
22.E-Ticketing Service	6.16	5.23	0.93	84.90%

Table no. 5.1 reveals the Expectation, Perceptions of the respondents regarding different attributes involving modern equipment & infrastructure at all stations & trains, Railway provides neat physical facilities like lighting, seating & toilets, seats are comfortable in trains, time table, display boards & waiting charts are visually appealing, etc. Here the gap between Expectations and Perception has been calculated and percentage of satisfaction of different respondent regarding the above said attributes has also been calculated.

TABLE 5.2: MEAN SCORES OF FIVE DIMENSIONS				
Dimensions	Expectations (E)	Perceptions (P)	Gap (E)-(P)	% of satisfaction
Tangibility	5.7825	3.8025	1.98	65.90%
Reliability	5.874	3.444	2.43	58.65%
Responsiveness	5.585	3.4025	2.1825	61.33%
Assurance	5.914	3.608	2.306	60.75%
Empathy	5.8075	3.5875	2.22	61.97%
Overall result	5.7926	3.5689	2.2237	61.72%

Average mean has been calculated for analysis of gap for the various dimensions namely Tangibility, Reliability, Responsiveness, Assurance, Empathy. To measure the service quality of service industries, the main thrust is basically on the customer's Expectations i.e., how to meet customer's expectations.

Figure 1: Percentage of satisfaction under major service quality dimensions
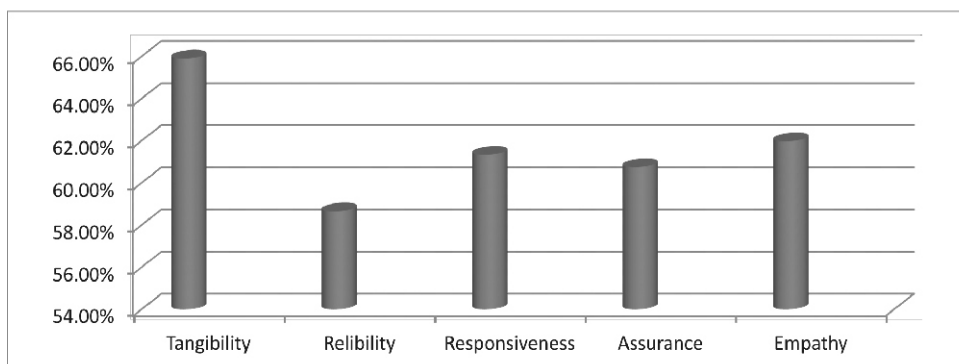
For the present analysis, five dimensions has been considered namely Tangibility, Reliability etc. it has been observed that tangibility dimension has lesser gap which involving modern equipment & infrastructure, physical facilities, comfortable seats & visual appealing. The major gap has been found in Reliability & Assurance involving record keeping, scheduling, employee service efficiency, inquiries, punctuality, trust, safety, polite & safety of luggage etc.

Conclusions and Policy Implications

For the improvement of competiveness of Railway service quality assurance is one of the important factors to be concluded. In the present paper 100 respondents has been enquired about the service quality of Northern Railway. The result indicates that a larger gap has been found in Reliability and Assurance dimensions of service quality of Railway. Therefore present study suggests that there is need for proper time management of trains and training of Railway staff to be more responsive towards passenger's requirement & need. Safety measures need to be improved so that passengers may feel safe while travelling. In other words, more of human touch is required which is missing in Northern Railway passenger services. The improvement of these aspects will help in improving the service quality gaps and ultimately will improve the competitiveness of Indian Railways.

Limitations of the Study

1. The biasness of the respondents may affect the result of the study so for as primary data is concerned.Because of the biases of the respondents the result of the study may not be the same for all places.

2. The survey has been conducted in north Punjab only. It may not reflect the public opinion at large.

3. The sample size has been small (100) which may not reflect the broader picture.

4. Time and cost constraints.

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