

# An Analytical Study on the Service Quality and Customer Satisfaction of Indian Railway

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**Abstract – In terms of geographical dimension, India is among the largest countries needing efficient means of long-distance transport. Although rivalry exists for different transport modes, the railway has its own unique features and offers passengers more services. This study highlights passenger satisfaction with Indian rail services. The research is limited to the South Western Railway division of Hubli. This analysis will help establish additional policies to enhance passenger satisfaction & serve as a secondary research results.**

**Keywords – Service Quality, Customer Satisfaction, Indian Railway**

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## INTRODUCTION

The Indian service sector has seen a huge explosion & lately has been one of the most important contributors to employment & national income. The weight age of the services sector suggests that the service industry will have a huge effect on India's GDP growth in the near future. The future & role of services in the economy is likely to continue to expand. Service marketing will continue to be seen by marketers in the new millennium as an important area of their survival, while many factors contribute to the growth or constraints on the future of the service economy. The services sector's operations are somewhat different. The services sector includes infrastructure such as trade, transport and communication, financial, real estate & business services, government, social & personal services.

Transport, therefore, is an important Indian economy infrastructure. In developing countries it plays a greater role, as all development sectors are intimately dependent on adequate transport networks. The entire business and commercial framework is focused on the well-established basis of transport. An efficient transport system is therefore a precondition for a country's economic growth. Evident economic growth has been increasing in India for all transport services over the past two decades, particularly road & rail transport. One of the key characteristics of the Indian civilization is the construction of railways that have 64,000 kilometres in length, 2,16,717 rail cars, 39,263 buses, 7,739 locomotives, with an operating capacity of 12,000 passenger trains & 7,000 freight trains every day. Every day it carries nearly 23 million passengers &

more than 2.65 million tonnes. Indian Railways identified models for the supply of passenger facilities that were upgraded. Some stations have been built to provide certain touches and sensitivities to turn them into new stations so that visible changes can be made at stations.

For Railways to survive competitive low-cost airlines and super luxury buses, it is necessary to provide superior quality services to passengers. Improved quality of service determines the competitive advantage of railways, offers market share and profitability. In the effort to distinguish itself from its rivals, the standard of service is widely recognised as a crucial element.

Service quality is the secret to making the difference and gaining a competitive edge for any service organisation. Assessment of railway service quality can provide a true picture about rail passenger services' short journeys. Quality affects the essence and the way businesses manufacture goods or provide services, maybe more than any other factor. Value is just the entrance ticket in the global economy. High-quality service is recognised as necessary for companies that want to effectively operate (Parasuraman et al 1988; Rust and Oliver 1994). The company would struggle against multiple rivals. The next step is how to discern. Only by evaluation of service quality is this distinction and enhancement possible.

The research study focuses on the review of passenger satisfaction with Indian rail services, understand the impact of service quality on

passenger satisfaction with services of the Indian Railways and analyze results & give suggestion to the Indian Railways to develop service quality and passenger satisfaction.

## RESEARCH METHODOLOGY

This study is an empirical research based on analysis method. The current network of the South Western Railway covers a large part of India's south western region, including the states of Karnataka, Goa, Andra Pradesh, and a tiny piece of Tamilnadu. Headquartered at Bengaluru, the Southern Railway comprises 3 divisions namely Hubli, Bangalore, Mysore.

### • Sample size

This analysis is limited to the South West Hubli Division. Eight railway junctions are situated in the chosen South-West Division: Mysore, Banagalore & Ranibennur Chikkajaruru. All of these joints were chosen for the analysis. A total of 800 passengers are chosen from each junction using the convenience sampling approach as a sample. It is considered to be adequate and representative for covering the all the selected junctions.

### • Data collection

The primary & secondary data are utilized in the current analysis. The primary data needed were collected by survey method using a pre-tested, well organised & unregulated questionnaire in the course of an interview with rail passengers. The secondary data needed for this study were collected by annual reports of the Ministry of Railways, by Indian Railways Ministry, by Indian Comptroller & General Audit of India, by RBI Annual Bulletins, by Central Statistic Organization (CSOC), Indian Railways Yearbook for several years, & by the public relations officer.

### • Research instrument

To examine perception of the passengers about service quality, an undisguised structured questionnaire, SERVQUAL, by Parasuraman et al with modified attributes to suit Railway Services was used for the research. The variables include tangibles, reliability, responsiveness, assurance and empathy. The respondents were asked to provide belief rating for services offered by Indian Railways, using seven-point rating scale ranging from 1(low) to 7(high).

A tool based on existing literature, observations, the pilot study & expert opinion was utilized to measure passenger satisfaction level. Indian Railways' attributes of service quality – passenger satisfaction were derived through reviews & exploratory research. Interviews with passengers who often

travel to detect passenger (customer) satisfaction characteristics have been conducted.

These preliminary surveys & reviews served to generate general variables on railway platforms for passenger satisfaction. The literature reviews supported these variables. These were developed for the formulation of a questionnaire. Six customer (passeer) satisfaction (service quality) measurement variables included in the questionnaire as basic facilities, hygiene, security, catering, punctuality & passenger behaviour.

Data were collected from January 2014 to June 2017 through an inquiry carried out on rail passengers.

## DATA ANALYSIS:

### • Demographic variables & level of satisfaction

The demographic variables of the respondents & level of satisfaction with railway services in the study area is given in the succeeding pages.

### • Sex and level of perception

The sex-wise distribution of the respondents and their level of satisfaction with railway services in the study area is shown in table 1.

**Table 1: Sex and Level of satisfaction**

Sex	No. of Respondents			
	Low	Medium	High	Total
Male	157 (73.02)	64 (47.76)	27 (52.94)	248 (62.00)
Female	58 (26.97)	70 (52.24)	24 (47.06)	152 (38.00)
Total	215 (100.00)	134 (100.00)	51 (100.00)	400 (100.00)

Source: primary data, figure in the bracket percentage of the total.

Table 1 shows out of 215 respondents who experiences low level of satisfaction the majority of them are male and nearly 27 per cent are female respondents. Among the respondents who revealed moderate satisfaction about 52 per cent and 48 per cent are male and female respondents respectively. It can be inferred from the table that the male passengers is very much dissatisfied with the railway services in the study area when compared to female passengers.

### • Age & level of satisfaction

The age wise distribution of the respondents & their level of satisfaction with railway services are given in table 2.

**Table 2 Age and Level of Satisfaction**

Age (Years)	No. of Respondents			
	Low	Medium	High	Total
Less 40	14 (06.51)	08 (05.97)	06 (11.76)	28 (07.00)
40 – 50	22 (10.23)	17 (12.69)	15 (29.41)	54 (13.50)
50 – 60	73 (33.95)	56 (41.79)	17 (33.33)	146 (36.50)
Above 60	106 (49.30)	53 (39.55)	13 (25.49)	172 (43.00)
Total	215 (100.00)	134 (100.00)	51 (100.00)	400 (100.00)

Source: primary data, figure in the bracket percentage of the total

It is understood from the table 2 that nearly 10 per cent of the respondents belong to 40-50 years of age. The small portion of the respondents falls in the age group of less than 40 years of age. Therefore, it can be inferred from the table that the passengers above 50 years of age is highly dissatisfied with the railway services in the study area.

#### • Educational qualifications and level of satisfaction

The educational qualifications of the respondents & their level of satisfaction with the railway service in table 3.

**Table 3: Educational qualifications and level of satisfaction**

Educational Qualifications	No. of Respondents			
	Low	Medium	High	Total
Upto HSC	12 (05.58)	08 (05.97)	07 (13.73)	27 (06.75)
Graduate	114 (53.02)	62 (46.27)	22 (43.14)	198 (49.50)
Post Graduate	69 (32.09)	57 (42.54)	10 (19.61)	136 (34.00)
Professional	20 (09.30)	07 (05.22)	12 (23.53)	39 (09.75)
Total	215 (100.00)	134 (100.00)	51 (100.00)	400 (100.00)

Source: primary data, figure in the bracket percentage of the total

Table 3 inferred that the highly educated passengers are very much dissatisfied with railway services in the study area.

#### • Occupation and level of satisfaction

The occupation wise distribution of the respondents and level of satisfaction are shown in table 4.

**Table 4: Occupation and level of satisfaction**

Occupation	No. of Respondents			
	Low	Medium	High	Total
Salaried	108 (50.23)	65 (48.51)	09 (17.64)	182 (45.50)
Professional	19 (08.84)	12 (08.96)	08 (15.69)	39 (09.75)
Business	26 (12.09)	17 (12.69)	21 (41.18)	64 (16.00)
Retired	45 (20.93)	31 (23.13)	09 (17.65)	85 (21.25)
Housewives	17 (07.91)	09 (06.72)	04 (07.84)	30 (07.50)
Total	215 (100.00)	134 (100.00)	51 (100.00)	400 (100.00)

Source: primary data, figure in the bracket percentage of the total

It is understood from the table 4 that out of 215 respondents who experienced low level of satisfaction the majority of them are employees followed by 21% of the respondents are retired persons. About 12% & 9% of the respondents are business people and professionals. Therefore, it can be inferred from the table that the employees and retired persons are highly dissatisfied with railway services in the study area.

#### Income and level of satisfaction

The income of the respondents & level of satisfaction with the overall railway services in the study area is analyzed in table 5.

**Table 5: Income and level of satisfaction**

Annual Income (₹)	No. of Respondents			
	Low	Medium	High	Total
Less than (₹) 2 lakhs	58 (26.98)	39 (29.10)	11 (21.57)	108 (27.00)
(₹) 2 – 3 lakhs	73 (33.95)	52 (38.81)	15 (29.41)	140 (35.00)
(₹) 3 – 4 lakhs	34 (15.81)	22 (16.41)	14 (27.45)	70 (17.50)
(₹) 4 – 5 lakhs	25 (11.63)	11 (08.21)	09 (17.65)	45 (11.25)
Above (₹) 5 lakhs	25 (11.63)	10 (07.46)	02 (03.92)	37 (09.25)
Total	215 (100.00)	134 (100.00)	51 (100.00)	400 (100.00)

Source: primary data, figure in the bracket percentage of the total

Table 5 shows out that about 12% of the respondent's annual income is above ₹. 5 lakhs. Thus, it could inferred from the table that the less income passengers are highly dissatisfied with the railway services in the study area.

#### • Impact of perception on railqual factors on passengers satisfaction

The quality of the railway service is among the important factors contributing to the satisfaction of passengers. The present study attempted to examine the influence of perception on railway variables on the satisfaction of passengers with the aid of multiple regression analysis. The passenger satisfaction score is treated as the dependent variable, while independent variables are treated as the perception score of Railqual factors. The model for fitted regression is

$$Y = a + [b.sub.1][x.sub.1] + [b.sub.2][x.sub.2] + [b.sub.3][x.sub.3] + [b.sub.4][x.sub.4] + [b.sub.5][x.sub.5] + e$$

Y = Score on passengers' satisfaction

[X.sub.1] = Scores of perception on Tangibles

[X.sub.2] = Scores of perception on Reliability

[X.sub.3] = Scores of perception on Assurance

[X.sub.4] = Scores of perception on

Responsiveness [X.sub.5] = Scores of perception on Empathy

[b.sub.1] ... [b.sub.5] = Regression co-efficient of independent variables a = Intercept & e = error term.

Table 7: shows how perception has an effect on passenger satisfaction.

Null hypothesis: The greater the service quality, the higher will be the passenger satisfaction

**Table 7: Service Quality Dimensions on Passenger Satisfaction**

Variables	R	R <sup>2</sup>	F- Statistics
Tangibles and overall passenger satisfaction	**0.37	0.14	21.49
Reliability and overall passenger satisfaction	**0.55	0.30	56.57
Responsiveness and overall passenger satisfaction	**0.94	0.89	1,068.0
Assurance and overall passenger satisfaction	**0.99	0.98	6,468.0
Empathy and overall passenger satisfaction	**0.98	0.99	13,068.0
Overall service quality and overall passenger satisfaction	**0.95	0.91	1,334.67

\*\* Significant at both 1% and 5% level

The significant influencing Railqual factors on passengers' satisfaction are Assurance, Empathy, Responsiveness, Reliability and Tangibles since their respective co-efficient are significant at the 5 and one % level. The table 7 indicates a strong relationship between the service quality and passenger satisfaction. R<sup>2</sup> value is indicating that service quality is a strong predictor of passenger satisfaction. The 'F' statistics reveal the validity of fitted regression models.

## CONCLUSION:

The analysis of the passenger satisfaction reveals that passengers perceive poor satisfaction with Punctuality, Behavior of the employees towards passengers, hygienic condition, basic facilities and catering services. The study further reveals that the overall satisfaction of the passengers is poor in the Indian Railways in the study area. The study indicates that there is a strong relationship between the service quality and passenger satisfaction and service quality is a strong predictor of passenger satisfaction. In the next chapter researcher summarizes major findings and present recommendations to increase service quality and passenger satisfaction in Indian Railways in the study area.

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