

Determinants of Passenger Satisfaction on Service Quality in Southern Railways with Reference to Madurai Division

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Abstract

This study analyzes the satisfaction of customers (passengers) on the examination given by southern railways concerning the Madurai division. For this foundation, the factors affirmation, tangibles, timeliness, responsiveness, information system, concern, food and safety, reliability, and security were employed to measure the passenger's perceptions about the service quality of railways. The customers are limited to the Madurai junction and they are selected on a random basis. The core intention of the study is to know about the perception of customers towards service provided by southern railways and to implement a linear regression model to know about the factors influencing customer satisfaction. For this purpose, a sample of 500 questionnaires was collected were frequency analysis, chi-square with cross-tabulation, factor analysis, ANOVA, multiple regression model and descriptive statistics were used as statistical tools for analyzing the data. The study brings to a close that civilizing the quality of service is one of the ways to progress the competitiveness of Railway Passenger Business.

Keywords: Satisfaction, Southern Railways, Madurai Division, Passengers Perceptions and Quality of Service

Introduction

Transport is a vital road and rail network in the economy of India. It assumes a superior role in developing countries since all the sectors of the progress are closely dependent upon the survival of a suitable transportation network. India's transport industry has been planned with a mixed pattern of public and private sector possession. The obvious economic growth in India over the most recent two decades has improved require for all transport services, particularly land transport through road and rail. The development of railways is one of the landmarks in the evolution of human civilization. Indian railways, a historical legacy, are a vital might in the Indian economy.

Statement of the Problem

In summary, to measure the quality service thoroughly in the Railway passenger services, the attributes used in service qual, the public transport industry and the railway service sector should be grouped to form pool items for measurement. Hence attributes in the servqual model were modified and some attributes were added through focus group discussions and the railqual instrument was developed for the measurement of Railway Passenger Services. Our study is to know about the satisfaction of customers in southern railways in the Madurai division. And for that purpose, a survey is conducted with passengers who are traveling in various trains of Madurai division.

Scope of the Study

The study aims to identify the factors for Passenger Satisfaction regarding amenities provided by Southern Railways. Customer Satisfaction has been commonly acknowledged as an indicator of Service Quality. The need of the Study is to recognize important factors influential service quality of Southern Railways that lead to Passenger Satisfaction. The Scope of the Study is to help the Southern Railways to know about the observation of Passengers towards the quality of Services provided by them.

Objectives of the Study

- To find out the perception of customers towards service provided by southern railways.
- To evaluate customer satisfaction among passengers of southern railways based on various dimensions.
- To analyze the dimensions using statistical tools.
- To apply a linear regression model to know about the factors influencing customer satisfaction.
- To suggest the customer perception of the quality of service provided by the railway department.

Hypothesis

- There is no significant relationship between factors related to the level of satisfaction of passengers and age.
- There is no significant relationship between age and acceptance level on catering services in southern railways.

Research Methodology

The study is empirical. The survey was conducted in Southern railways, which include (Madurai, Pudukottai, and Sivagangai districts). The study covered both primary and secondary data. The primary data were collected through field survey. First- hand information about the benefits derived and the various competencies encountered was collected from 500 passengers to know about the level of satisfaction towards service provided by southern railways.

Sampling Design

The study covered to satisfaction on service provided by southern railways to their customers. The study is based on passenger satisfaction towards the southern railway. The samples have no criteria and purpose for Convenience sampling is used for the research.

Fieldwork and Collection of Data

The following dimensions were used for collecting Data: Level of satisfaction of passengers, Responsibility of railway officers, Basic Facilities, Hygiene factors, Safety & Security, Catering, Punctuality, Behavior of staffs, and Facilities inside the Trains

A Framework of Analysis

To suit the requirements of the present study, the tests which have been employed by the researcher are Frequency analysis, Chi-square with cross-tabulation, Factor analysis, Analysis of Variance (ANOVA), Multiple regression model and Descriptive statistics. All the tests in the study were carried out by formulating a suitable hypotheses and were also tested at 5% and 1% level of significance.

Tools for Data Collection

Frequency analysis, Chi-square with cross-tabulation, Factor analysis, ANOVA, Multiple regression model and Descriptive statistics.

Limitations of the Study

- The data were collected only with the passengers of southern railways were the observation may vary with other railways in India.
- The study could not be generalized because the researcher adapted the personal interview method.
- There was a bias in collecting the data as the respondents may give a wrong answer to the questions asked with them.

Analysis and Interpretation

Demographic Profile of the Respondents

Variables	Measuring Group	Frequency	Percent
Gender	Male	357	71.4
	Female	143	28.6
	Total	500	100
Age	Below 18	15	3
	18-25	181	36.2
	26-35	152	30.2
	Above 35	153	30.6
	Total	500	100
Marital Status	Married	149	29.8
	Unmarried	351	70.2
	Total	500	100
Educational Qualification	10th	16	3.2
	Higher Secondary	15	3
	UG	281	56.2
	PG	188	37.6
	Total	500	100
Place of living	Semi rural	40	8
	Rural	167	33.4
	Urban	255	51
	Semi urban	38	7.6
	Total	500	100
Annual Income	Below 5000/month	31	6.2
	5000-10000/month	134	
	10000-20000/month	154	30.8
	Above 20000/month	181	36.2
	Total	500	100
Occupation	Education	188	37.6
	Employment	92	18.4
	Business Trip	89	17.8
	Family Trip	131	26.2
	Total	500	100

Interpretation: The table shows the demographic profile of the respondents. Out of 500 respondents, 71.4% were male and 28.6% were female. 3% are from the age group of below 18, 36.2% are from the

age group of 18-25, 30.2% are from the age group of 29-35, 30.6% are from the age group of above 35. 29.8% are married and 70.2% are unmarried in our survey. 3.2% have completed 10th standard, 3% have completed their higher secondary, 56.2% have completed their UG, and 37.6% have completed their PG. 8% is from the semi-rural area, 33.4% are from the rural area, 51% are from Urban areas, 7.6% are from the semi-urban area. 6.2% are earning below 5000 per month in our survey, 26.8% are earning from 5000-10000/month, 30.8% are earning from 10000-20000/month, and 36.2% are earning from Above 20000/month. It's inferred that most of the respondents are from above 20000/month in our study

Rank Correlation

H0: There is a significant relationship between the rank given and preference towards rail service

H1: There is no significant relationship between the rank given and preference towards rail service.

Ranking on preference towards rail service	X	Y	R1	R2	D	D ²
Low fare	142	148	3	3	0	0
Comforts	147	141	2	4	-2	4
Speed	232	117	1	5	-4	16
Security	112	198	5	1	4	16
Reliability	116	162	4	2	2	4
						40
					1-R	2
					R	-1

Interpretation: The above table shows the relationship between rank given and preference towards rail service as the correlation is at -1. It's inferred that there is no relationship between the rank given and preference towards rail service. And based on the rank, speed was mostly preferred by the respondents.

Linear Regression Model

Comparison between Age and Level of Satisfaction of Passengers

Model	Co-efficients			t	Sig
	Un-standardized Coefficients		Standardized Coefficients		
	B	Std. Error			
Constant	2.168	.114		19.033	.000
Illumination & Signages	.809	.047	.719	17.341	.000
Availability of porters at the station	-.332	.043	-.323	-7.755	.000
R			.918a		
R Square			0.842		
Sig			0.000		

Here, variables Illumination & Signages, Booking Clerk Competency & Behaviour, Cleanliness of Toilets, Cleanliness of Platforms, Punctuality, Safety, Seating, Water, Trolley facilities at the Platform, Linen/Bedroll Cleanliness, Fans and Lights in the Trains are directly proportional to age.

The factors Availability of Porters (Coolies) at the Station, Clarity of Announcement at Stations, Unauthorized Vendors & Passengers, Late Running of Trains, Quality of services, Ambience of Waiting Rooms/Rest Rooms, and Pricing of Food are inversely proportional to the factor age.

Descriptive Statistics

The descriptive tool statistics are used to find out the major factors which have an impact on the attributes based on the average of the mean.

Level of Satisfaction of Passengers

Descriptive Statistics			
Variables	N	Mean	Std. Deviation
Illumination & Signages	500	2.46	.783
Availability of Porters (Coolies) at the Station	500	2.67	.857
Booking Clerk Competency & Behaviour	500	2.70	1.111
Clarity of Announcement at Stations	500	2.48	1.121
Cleanliness of Toilets	500	3.33	1.441
Unauthorized Vendors & Passengers	500	3.07	1.107
Cleanliness of Platforms	500	2.64	1.062
Late Running of Trains	500	2.97	1.218
Punctuality	500	2.88	1.120
Quality of services	500	2.67	.912
Safety	500	2.69	1.028
Ambience of Waiting Rooms/Rest Rooms	500	2.94	1.168
Seating, Water, Trolley facilities at the Platform	500	2.92	1.087
Pricing of Food	500	2.60	.815
Linen/Bedroll Cleanliness	500	2.98	1.071
Fans and Lights in the Trains	500	2.92	1.001

Interpretation: The above table shows the mean score for the level of satisfaction of passengers. The mean score for most of the elements given in the satisfaction of passengers is below 3, which indicates that the satisfaction levels of the respondents are below average.

Correlation between Gender and acceptance Level on Catering Services

Particulars	Correlation	Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Acceptance on affordability towards buying of eatables	-.099	Male	40	20	117	114	66	357
		Female	19	0	84	20	20	143
Acceptance on quality of eatables	.079	Male	41	41	165	63	66	357
		Female	0	0	59	44	20	143

Interpretation: The average correlation for the dimension acceptance level on catering services is

at (-0.001), where it's negatively correlated with gender, which shows that there is no relationship

between gender of the respondents and acceptance level on catering services.

Factor Analysis

KMO and Bartlett's Test Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.576
Bartlett's Test of Sphericity	Approx. Chi-Square	2.946
	df	66
	Sig.	.000

Interpretation: The factors above 0.5 are taken into consideration for the decision making process. The factors are acceptance on allowing in the general compartment, acceptance on wastage of water every day, acceptance on completion to purchase the same at an exorbitant, and acceptance on nonworking of fans.

Findings

- The majority of 71.4% of the respondents were male in our study.
- Most 36.2% of the respondents were from the age group of 18-25.
- The majority of 56.2% of the respondents have completed them under a graduate.
- The majority of 51% of the respondents are from the urban areas in our study.
- Most 36.2% of the respondents are from above 20000/month.

Recommendations

Southern railway department creates awareness among the Passengers. It shows that the railways will make the people aware about the various safety measures such as Railway Protection Force (RPF), Internet Protocol-based Close Circuit Television (CCTV) surveillance system with video analytics and recording facility, Access control, Personal and baggage screening system, Bomb Detection and Disposal System, etc.

Conclusion

The study results that improving the quality of service is to improve the competitiveness of Railway Passenger Business. Collecting feedback from passengers in all stations is essential. According to the passengers, they are dissatisfied with the first

aid and medical services, power supply and quality of water of the trains, handling of theft a case that happens in the train, and occupancy of coach toilets by unauthorized vendors of the railway department. Southern Railway will help passengers to book unreserved/season/Platform tickets quickly, UTS on mobile with the print out facility at ATVMs. These factors should be taken into consideration for increasing the level of satisfaction of passengers in southern railways in the future periods.

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