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ATTRIBUTES OF SERVICE QUALITY IN SALEM DIVISION OF INDIAN RAILWAYS

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ABSTRACT

Rail transport is an important mode of long-distance transport in India, especially for passenger travel. As on 31 March 2016, the rail network traverses the length and breadth of the country, comprising 119,630 km of track over a route of 66,687 km and 7,216 stations. For long journey, the most preferred mode of transport is train. In recent years, Indian Railways has undertaken several initiatives to upgrade its ageing infrastructure and enhance its quality of service. Though its trying to improve the quality of service but still it lacks behind the expectations of passengers. The paper proposes a model for explaining factors that influence quality of service offered to passengers by Indian Railways. The proposed model was tested using data of 149 passengers who travelled from Coimbatore to various other places. Multiple regression analysis was used to test if Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection and Convenience significantly influenced the service quality of the Provider. All directions have been proved. Results show all the considered dimensions influence the quality of service offered by the provider.

Key Words: Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection and Convenience

INTRODUCTION

Though the Indian Railways enjoys a near monopoly in India, a few private railways do exist, left over from the days of the Raj, usually small sections on private estates, etc. There are also some railway lines owned and operated by companies for their own purposes, by plantations, sugar mills, collieries, mines, dams, harbours and ports, etc. It is the fourth largest railway network in the world. It is one of the busiest networks in the world transporting 8.107 billion passengers and over 1.108 billion tonnes of freight annually, as of 2016.

Almost all rail operations in India are handled by Indian Railways, a state-owned organization of the Ministry of Railways. The urban rail transit systems across the country are operated independently of Indian railways. Indian Railways is the world's largest commercial or utility employer, with more than 1.4 million employees. As to rolling stock, IR owns over 200,000 (freight) wagons, 50,000 coaches and 8,000 locomotives.

REVIEW OF LITERATURE

Raja Gopalakrishnan and Narayan Rangaraj (2010) conducted pointed out allocating seat capacity in a given class of a train to multiple travel segments on Indian railways train route with several stations. The study concluded that the Linear programming model helped Indian Railways to reduce its seat requirements and increase the availability of confirmed seats for various station-to-station demand on several trains. **Mal-Kong Sia (2011)** stated that customer satisfaction had been

found to be multidimensional with four service quality factors, namely critical, satisfies, dissatisfies and neutrals. The aim of this study was to find the relationship of service quality gap and perception for the empirical determination of service quality factors. The study found that the critical with high expectations and high service gaps, dissatisfiers with low expectations, high service gaps and also dissatisfiers with low 9999933service quality factors. Together with the expectation of service gap grid, they can be used for prioritization of corrective actions to improve the service shortfalls. **Devi Prasad Maruvada and Raja Shekhar Bellamkonda (2012)** studied the integrated framework that would lead to quality in railway passenger services, through usage of quantitative and qualitative techniques. The empirical study was conducted at the Secundrabad station of South Central Railways, sampling was done by interviewing randomly selected passengers. The study suggested and concluded that significant relationship among the train service, employee service, train punctuality, platform service, reservation and ticketing and safety and security are having significant positive influence on the overall railway passenger service quality. The railway administration felt that the passenger was pleased if new trains were announced at regular intervals and fares were kept low. Rabiul Islam et.,al.,(2014) examined the factors measuring customers' satisfaction, especially the impact of service quality on customers' satisfaction in public transportation industry in the university town of Sintok located in Kedah province of Malaysia. In order to assess the relationships between service quality and customer satisfaction survey, data were collected from 300 Bus commuters. All hypotheses were tested using Pearson correlations, controlling for the background variables of gender, marital status, ethnicity and education. The results indicate that hypotheses 1 through 5 were supported. Using multiple regressions as a basis for causal paths, a model was developed that examined the influence of all five dimensions of service quality on customers' satisfaction. The model explained 26.9% of the variance which indicates that 26.9% of the changes in the dependent variable are explained by the independent variables. Altogether, independent variables explained 26.9% of the variations. **Nair. K. Sanal *et al*., (2014)** focused on the perception of passengers towards the satisfaction of services provided by Indian railways and to find the extent of satisfaction level among the users of Indian railway services. F-test was used to find out the significance of association between the demographics and the variables selected for the study. The experience of different respondents varied significantly indicating difference in the experiences. There was a mixed response towards the perception whether Indian railways should be privatized or not. The study concludes that Indian railways should not be privatized. **Anbupriya and Subadra (2016)** aimed at knowing the passenger's level of satisfaction of the service quality of Southern Railways which includes the demographic factors and travel details of the respondents. For the purpose of the study 400 respondents were selected by applying convenient sampling method and hypotheses were tested and the results were given.

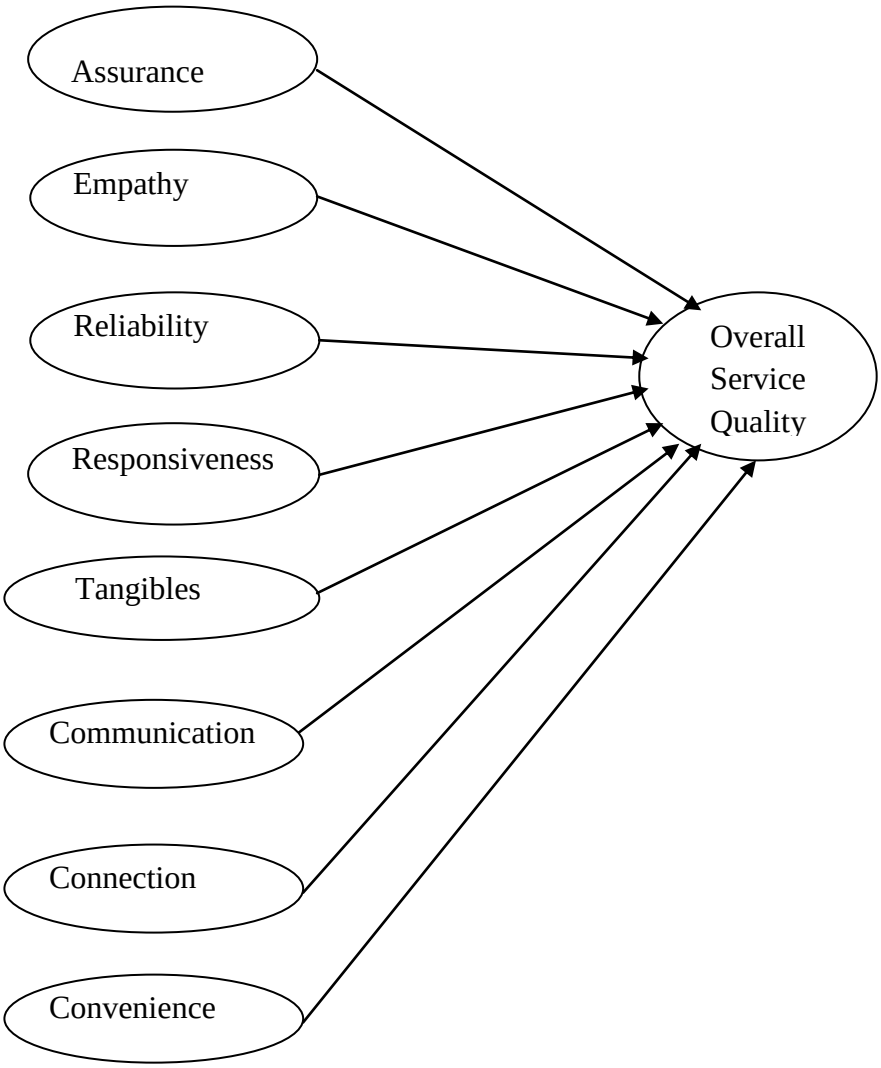
CONCEPTUAL FRAMEWORK OF THE STUDY

The conceptual model of this paper emphasizes on the following variables like Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection and Convenience that would possibly affect the Overall Service Quality in transport sector in Coimbatore.

Hypothesis

H_1 : Assurance has an impact on Overall Service Quality
H_2 : Empathy has an impact on Overall Service Quality.
H_3 : Reliability has an impact on Overall Service Quality
H_4 : Responsiveness has an impact on Overall Service Quality
H_5 : Tangibles has an impact on Overall Service Quality.

H_6 : Communication has an impact on Overall Service Quality
H_7 : Connection has an impact on Overall Service Quality
H_8 : Convenience has an impact on Overall Service Quality.



OBJECTIVES OF THE STUDY

1. To study the various passenger services offered by Indian Railways with specific reference to passenger services in Southern Railway.
2. To identify the attributes towards services provided by Southern Railway

METHODOLOGY OF THE STUDY

A conclusive research design has been used to test the hypotheses, proposed for examining the influence of attributes to the overall Service Quality of passengers in the Railway sector of Erode region. The study is characterized as a descriptive study. The study has based on both primary and secondary sources of data

This research focuses on the passenger's service quality. The survey was carried out through structured questionnaire having close-ended, dichotomous and Likert scale based questions which was rephrased according to the transport industry context.

The questionnaire was adopted from various authors to collect the data. The first part of the questionnaire comprises of the demographic profile of the respondents. The second part of the questionnaire covers questions relating to the service quality. Further the questionnaire contains 46 statements measured with 7-point likert scale ranging from the score of 7(strongly agree), 6(agree), 5(somewhat agree), 4 (Neither agree or nor disagree), 3(disagree somewhat) 2(disagree) and 1(strongly disagree). The details of the questionnaire are shown in the following table.

VARIABLES	No. of Items
SERVICE QUALITY	
Assurance	7 items
Empathy	5 items
Reliability	5 items
Responsiveness	3 items
Tangibles	9 items
Communication	5 items
Connection	5 items
Convenience	3 items
Overall Service Quality	4 items

The total sample size is 149 and the respondents were the passengers of trains in Erode region. Convenience sampling technique was adopted for selecting the sample and it is one of the non-probability sampling procedures. Multiple regression analysis has been employed to examine the associative relationships between the metric dependent variable and the nine independent variables.

RELIABILITY FOR FACTORS RELATED TO OVERALL SERVICE QUALITY

The reliability of scales used in this study was calculated by Cronbach's coefficient alpha. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale.

	Scale Mean if Item Deleted	Cronbach's Alpha if Item Deleted
Overall Service Quality	216.13	0.833
Assurance	213.80	0.795
Empathy	214.48	0.794
Reliability	225.15	0.816
Responsiveness	194.60	0.846
Tangibles	213.53	0.806
Communication	213.53	0.806
Connection	213.55	0.800
Convenience	225.31	0.808
CRONBACH'S ALPHA		0.829

Source: Primary data

It is depicted from the above table that all the nine measurement scale items are reliable as the Cronbach alpha coefficient of 0.829.

RESULTS:

Table No 1: Demographic profile of respondents to the survey (n = 150)

		Frequency	Percent
Age	<25	35	23.5
	25- 40	42	28.2
	40-60	36	24.2
	60 and above	36	24.2
Occupation	Student	05	3.4
	Business man	07	4.7
	Employee	91	61.1
	Others	46	30.9
Gender	Male	65	43.6
	Female	84	56.4
Educational Qualification	School Level	01	0.7
	Graduation	07	4.7
	Post Graduation	85	57.0
	Professionals	56	37.6
Monthly Income Level	Below Rs. 10000	10	6.7
	Rs.10001 - Rs.25000	05	3.4
	Rs.25001-Rs.50000	106	71.1
	Above Rs.50000	28	18.8
Family Members	Three	07	4.7
	Four	115	77.2
	Above Four	27	18.1
Prefer Railway Journey	Cheap cost	04	2.7
	Safety	12	8.1
	Speed	105	70.5
	Affordability	28	18.8

Source: Primary data

Table No 2: Descriptive Statistics

Descriptive Statistics			
	Mean	Standard Deviation	N
Overall SQ	25.13	5.007	149
Assurance	27.46	4.380	149
Empathy	26.78	6.128	149
Reliability	16.11	3.045	149
Responsiveness	46.66	9.886	149
Tangibles	27.73	4.142	149
Communication	15.95	5.163	149
Connection	27.71	4.364	149
Convenience	27.73	4.142	149

From the above table it is clear that the most influential factor for providing quality service in case of railways are Responsiveness (M=46.66) and least influential factor is Communication (M=15.95).

Facilities provided by Indian Railways are Takeaway Bedrolls, Helpline Numbers (1800-111-139), VIKALP scheme, Booking of lounges / retiring rooms online, Booking of meals with IRCTC (E-Catering), Face book pages, Child fare, Accommodation classes, Rail Tour Package Voucher, General enquiries available regarding Accommodation available for a train/date combination, Current Status of reserved tickets ,Time table, Train fare, Trains available between a given pair of stations, Cancellation facility, Payment by credit and debit cards etc.,

Table No. 3 : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.388[a]	0.151	0.108	4.728

Predictors: (Constant) : Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection, Convenience

Table No. 4: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	558.445	7	79.778	3.569	.001
Residual	3152.132	142	22.356		
Total	3710.577	149			

Predictors: (Constant) : Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection, Convenience

Table No. 5: Coefficients

Coefficients[a]							
Variables		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
		B	Std. Error	Beta			
1	(Constant)	12.997	3.081		4.219	.000	Not significant
	Assurance	- 0.084	0.103	-0.075	-0.816	0.416	Not significant
	Empathy	0.198	0.117	0.161	1.688	0.094	Not significant
	Reliability	0.198	0.123	0.148	1.616	0.108	Not significant
	Responsiveness	0.077	0.077	0.095	0.993	0.322	Not significant
	Tangibles	0.019	0.072	0.022	0.264	0.792	Not significant
	Communication	-0.045	0.075	-0.054	-0.599	0.550	Not significant
	Connection	0.291	0.148	0.189	1.968	0.050	Significant
	Convenience	-0.442	0.303	-0.456	-1.459	0.147	Not significant
a. Dependent Variable: Overall Service Quality							

1. Dependent Variable : Overall Service Quality (Y)
2. Independent Variable : Assurance (X_1)
   Empathy (X_2)

Reliability (X_3)
Responsiveness (X_4)
Tangibles (X_5)
Communication (X_6)
Connection (X_7)
Convenience (X_8)

3. Multiple R Value : 0. 388
4. R square Value : 0. 151
5. Adjusted R^2 : 0. 108
6. F Value : 3.569
7. P Value : 0.001(< 0.05)

Multiple Regression Equation $Y= 12.997 - 0.084X_1 + 0.198 X_2 - 0.198X_3 - 0.077X_4 + 0.019X_5 - - 0.045X_6 + 0.291 X_7 - 0.442 X_8$

RESULTS AND DISCUSSION

Multiple regression Analysis

Multiple regression analysis was used to test if Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection and Convenience significantly predicted passengers' overall service quality

The results of the regression indicated the six predictors explained 14.0% of the variance (R^2= 0.15, F(7,142) = 3.569, p<.01) of the dependent variable (Overall Service Quality).

The result of regression analysis is presented in the above table indicating that the eight predictors explained 15 % of the total variability The ANOVA table shows the significance of the combined effect of Explanatory variables in the regression model. The contribution of each explanatory variables requires individual coefficient values. Model was found to be not significant at P< 0.01<0.5. All directions have not been proved.

CONCLUSION

It is concluded that as far as this study is concerned, Assurance, Empathy, Reliability, Responsiveness, Tangibles, Communication, Connection and Convenience doesn't not influence the Overall Service Quality. Though there are many issues and problems faced by the passengers while travelling but it is not put up in front of authorities as they think that there is no use. Since Indian Railways is monopoly organization, it is not much interested about the quality of service it provides.The passengers also didn't expect any service from the service provider. Indian Railways should think over it and try to provide a satisfied service.

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