

ASSESSING CUSTOMER SATISFACTION IN INDIAN RAILWAY SERVICES

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ABSTRACT

Transportation is essential factor for the development and growth of the economy. The economy is continuously getting dependent on the increasing capacity, and the rationality of transport. Railway transportation is a means of conveyance by which passengers and goods (or) cargos are transported using special purpose wagons, high capacity wagons, bigger train loads, closed-circuit rakes which facilitates around the clock operations with a significant focus to render customer satisfaction. Indian Railways is the best economical transportation that is suitable for long distance traveling, and movement of bulk cargos. In this paper, the main focused is on the services of Indian railways and satisfaction of customer towards the services provided by Indian Railways. The eminent role of Indian railways in the economy makes it important to study its service quality. The data for this study has been collected from 401 passengers and appropriate tools were used to find out the satisfaction level of passengers from various services offered by IR.

Keywords: Transportation, Indian Railways, Services, Customer Satisfaction, Passengers.

INTRODUCTION

Services are playing an important role behind many country's economies. Service quality is the key factor in creating the difference and obtain competitive advantage for any service organization. IR services has been used by the people all over the nation across geographical boundaries, and it offer some benefits to almost every category of passengers. Indian Railway is backbone of the country with its splendid performance from last 151 years. IR has 114,600, kms of complete track over a route of 66,000, kms and 7,600, stations. IR has the biggest network of railway in Asia and with the biggest railway system under a single management (Thijs & Staes, 2008). Indian Railways have employs around 1.6 million people, making itself the 2nd largest commercial or utility employer in the world (Pervaiz & Bawa, 2024; Tao, 2005). During the last decade, IR has observed momentous developments counting more reliance on technology, redesigning the berths and coaches' management, use of self-service technologies, quality improvements in services, etc. Indian railway, therefore, tried its best to improve the satisfaction and attitude of the customers (Varshney, 2016). Service is an act or performance offered by Indian Railway to passengers. Passengers prefer railway services because it is their frequent mode of conveyance and it related to their life also. (Kumar S, 2009), the quality of services generate income to railways and at the same time passengers benefited by its service. Indian railways focusing on its quality of services, passengers' need to aware more about its services (Alhider, 2018).

The Indian Railways are considered as a central nerve system of our nation, it plays an

important role in the industrialization and the development of the modern world. From the inception of this service, customers are expected better service from the service providers. Utility being the wants satisfying factor, the railways are compelled to deliver what the services which is enriched and satisfying the customers' needs (Varadarajan & Jayachandran, 1999). The modern market is highly competitive, innovative and also customers are conscious with the market situation. In this scenario, Indian railways are to be self-equipped to compete with its services delivery. The Indian railway is the best and the effective mode for transferring great number of people, especially in the density populated urban centers and remote areas in a vast country like India (Bhola & Singh, 2018; CAG, 2007). Therefore, offering such type of services, described by elevated levels of value are significant so as to redo the clients of the services and draw in new clients (Bawa et al., 2024). The Indian railways is playing as imposing business model specialist organization job in the business front, it is the main player; consequently, a restraining infrastructure has been made (which his lawful). In the market viewpoint, larger part clients of Indian railways are ignorant/semi taught and low/center pay with no/low cognizance for quality parts of services (Kulshrestha et al., 2026). Indian railways give the helpful, open, and reasonable method of transportation to its customers. As Indian railway is enjoying monopoly status in the country, there is no competition and service provider has space for ignoring features like, quality of service, product promotion and customer satisfaction (Bawa & Sing, 2019).

Despite being a choice with no thin contender (being a Government association), the railways languishing brings over an exploration as far as its clients mentality and inclinations towards the organization (Choudhary & Rao). Working performance of Indian Railways have direct impact on passengers including introduction and maintenance of trains. Though many efforts are made by Indian Railways to provide more amenities to the passengers, still passengers faces many issues (Krmac & Djordjević, 2017). Indian railway should take steps to improve services so as to prevent the transfer of commuters from railways to other modes of transit (Bawa et al., 2020).

LITERATURE REVIEW

(Kumar & Gopinath 2019), in research titled "A Study on Customer Satisfaction towards Amazon" focused on the customer pattern of purchasing, and also analyze the level of satisfaction from the various services delivered by the Amazon. They also stated that the customer loyalty is always consider as the power force for the connection between the attitude of individual's relative and repeat patronage. They suggested that to increase the satisfaction level it is important to focus on consumer necessities.

(Anand Kumar & Srinivas, 2018) in a study titled "A literature review: A glance of railways" have described that trains as a means of transport for passengers and goods. Further, the study discussed that rail transport is much better than road transport as it runs on a prepared and directionally directed by the tracks it has to run on. Rail is transported is fuel-efficient transport in comparison to road transport. It can carry the bulk of passengers and goods from one place to another place easily.

(Nobar & Rostamzadeh, 2018), in a study "The impact of customer satisfaction, customer experience and customer loyalty on brand power: Empirical evidence from hotel industry" have tried to inspect the influence of customer satisfaction, experiences, the loyalty of branding the Hotel industry. The research has used a descriptive research design. The sample respondents were 384 customers of Pars Hotels. The outcome of the study has shown that the customer expectancy has the most significant impact on satisfaction (path coefficient of 0.74) whereas, customer loyalty is one of the (path coefficient of 0.65,) significant factor. The study has represented that the positive drivers of customer loyalty are customer

satisfaction and customer expectations. Customer loyalty is considered one of the vital predictors of brand power in the hotel and tourism industry.

(Anbupriya & Subadra, 2017), stated that, an internet has become a vital travel service delivery channel. An online travel service delivery has grown up as a preferred direct distribution channel in travel industry. It will scale back the time passengers pay standing within the line, therefore creating their journey convenient and trouble free. IR Catering and Tourism Corporation, pioneered internet-based rail ticket booking through its website.

(Hellen Karyose, Widji Astuti & Achmad Ferdiansjah 2017), in their study “Customer Loyalty: The Effect of Service Quality, Corporate Image, Customer Relationship Marketing and Customer Satisfaction as Intervening Variable-An Empirical Analysis of Bank Customers in Malang City” has analysed the effect of corporate image, service quality and customer relationship marketing, on customer satisfaction and customer loyalty. The population comprised of one hundred eighty bank customers in Malang city. Structural Equation Model (SEM) has been used for data analysis. The results have shown that the entire underlying factor influences customer satisfaction and customer loyalty. Furthermore, it's been put forth that the customer satisfaction affects customer loyalty. Satisfaction of customers is attained with bank products that the customer uses. Customers want their bank officers to look attractive because it gives the impression for the customers. The bank's initiatives of building emotional closeness with customers like wishing birthday or anniversary connect the customers with the bank. These practices keep the customers attached to bank and satisfaction and loyalty is attained easily.

(Thomas & Tobe, 2013), in their research emphasized loyalty and said it is more profitable. In the study, they described that expenses to create a new customer are greater than retaining already present ones. Faithful customers would inspire other customers to buy from the place they recommend. The existing customers would always think before planning to buy at any different place. The loyalty to the customer for the service is not increased with chance rather it is built through obtaining and design decisions. The designs for the loyalty of the customer necessitate customer-centred approaches to understand the need, desire, taste, and want of service users. Building customer loyalty is not attained in a single day, rather it is a long time process.

(Vanniarajan & Stephen, 2012), in a study titled “Railqual and passengers Satisfaction: an empirical study in Southern Railway” has described the traits which the passengers have used for assessing the service quality of IR. The researcher tried to develop a comprehensive instrument, namely RAILQUAL and attempted to establish a relationship between Railqual and passenger satisfaction. The data have been gathered from the passengers of Southern Railways. The outcome of the study shows the important railqual aspects, namely reliability, assurance and empathy which have been provided by southern railways and are up to the expectations of the passengers. The study put forth significant and positive railqual factors that have a huge influence on the passengers' satisfaction.

Objectives and Research Methodology

1. To analyse the factors influencing the service quality of Indian Railways.
2. To measure the effect of service quality factor on customer satisfaction.
3. To examine the relationship between service quality and customer satisfaction.

The research design of this study was based on the primary and secondary data that was collected through the field survey with the help of the questionnaire. The information regarding services of railways and perception of passengers was collected from 401 passengers in tricity (Chandigarh, Panchkula and Mohali). The major reason for selecting these regions was that even buses are very commonly available on this route why passengers

are preferred railway. The study is based on the primary and secondary data collected from various Indian Railway publications, Indian railway budgets and the documents presented in parliament (Choudhary et al., 2018). This research was carried out to measure the service quality of Indian railway and strategy preference of Indian railway based on passengers and railway official's perception. Various methods like simple percentages, mean growth rates, proportions, regression and correlation have been worked out Table 1.

RESULTS & DISCUSSION

Table 1 DESCRIPTIVE STATISTICS OF RESPONDENTS		
Age	N	Percentage
<20	4	1.0
20 – 29	164	40.9
30 – 39	161	40.1
40 – 49	59	14.7
50 – 59	5	1.2
60 and above	8	2.0
Gender		
Male	257	64.1 %
Female	144	35.9 %
Category		
Student	80	20.0
Business	84	20.9
Salaried	186	46.4
Professional	40	10.0
Others	11	2.7
Travelling Routine		
Daily	15	3.7
Weekly	41	10.2
Occasionally	156	38.9
Rarely	126	31.4
Very rarely	63	15.7

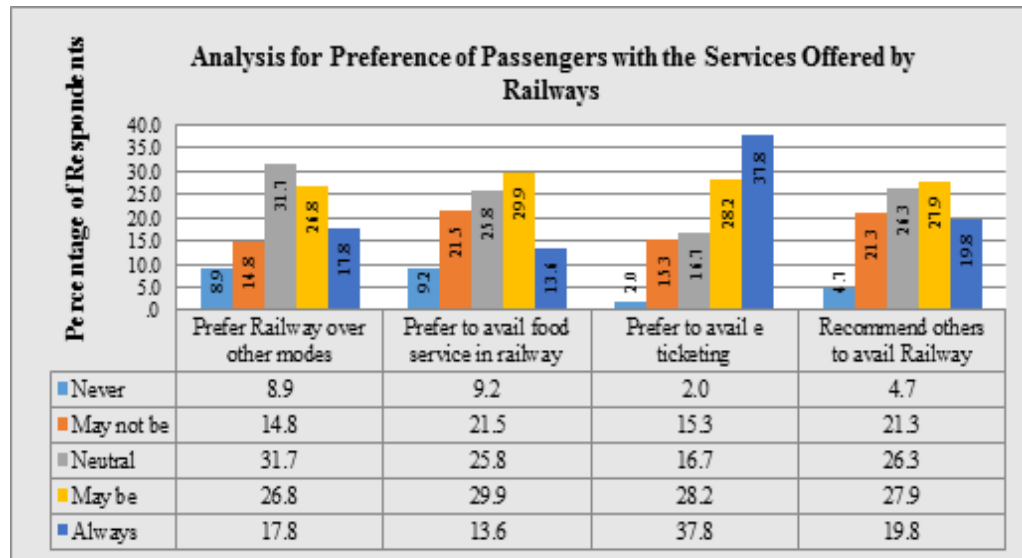


FIGURE 1
ANALYSIS FOR PREFERENCE OF PASSENGERS WITH THE SERVICES OFFERED BY RAILWAYS

The above bar figure 1 depicts the responses of respondents for preferring various services of railways.

The first cluster of bars indicates the statistics of preference of railway over other modes of transportation. 44.6 percent of the respondents show their positivity (Maybe and Always) for preferring railway over other modes of transportation. 31.7 percent of respondents stay neutral and don't take any extreme side for availing railway services. They have no clear views on whether to prefer or not railway over other modes of transportation. 22.7 percent submit their pessimistic opinion and show that they will prefer to other modes of transportation over the railway (Ganiyu, 2017).

The second cluster of bars represents the statistics of preferring availing food services on the railway. 43.5 percent of respondents give their positive node for availing food services provided by railway during their journey whereas 30.7 percent of respondents don't prefer to avail food services offered by railway. They may prefer to bring their own food with them. 25.8 percent of respondents may take either side. They may avail of food services or may not avail food services of railways (Kaur, Saluja & Bawa, 2025).

The third cluster of bars represents the preference of availing e-ticket services offered by railway to its passengers. The majority of respondents (60percent) prefer to avail e-ticketing as it is convenient and saves lots of time. 17.3percent of respondents seem not to be in favor of availing e-ticket services offered by railways. Less tech-savvy or lack of awareness of using this facility may be the reason behind not preferring this facility. 16.7percent of respondents don't have a clear stand about availing the e-ticket services.

The last cluster of bar figure indicates the percentage of respondents who prefer to give recommendations to their near ones for availing railway services. 47.7percent of respondents are positive and give their positive nod for recommending the railway as the transportation mode to others. 26percent give a negative opinion and in no mood to recommending to others for travel through railways. They seem to be quite dissatisfied with the services offered by the railway. The same scenario can be seen from the third category where 26.3percent of respondents are neutral and leave them in the predicament for recommending railway to others, for their traveling (GbolagadeAdewale & Oyewale, 2013).

Regression Analysis

	VIF
Constant	
Service delivery satisfaction level	4.101
Platform facilities satisfaction level	3.299
Platform services satisfaction level	1.725
Services in train satisfaction level	2.711
Punctuality	1.398
The behaviour of railway employees	1.301

The above statistics depict the level of collinearity among the predictor variables. As the Variance Inflation Factor (VIF) depicted in the above table 2.1 for the above understudy independent variables lies below 10 that signifies the non-existence of collinearity among independent variables. It indicates all the independent variables are reliable for regression analysis.

R	0.876
R – square	0.768
Adjusted R -Square	0.765
F	217.436
Sig. Value	0.000

The above table 2.2 depicts the regression statistics. R- square indicates the nature of the association of the dependent variable (overall satisfaction of customers) with independent variables. The difference between R- square and Adjusted R- square (level of shrinkage) is low ($0.768 - 0.765 = 0.003$) that confirms the acceptance level of the correlation between a dependent variable and independent variables under study. The fitness of the model is supported by the higher R – square value (0.768). The F-statistic value (217.436) confirms the validity as well as the stability of the regression model employed in the present study. The low significant value ($0.000 < 0.05$) indicates the significant impact of understudy predictor variables on the overall satisfaction of customers.

	Co-efficient	Standard. Error	Beta	t	Sig.
Constant	-0.173	0.131		-1.320	0.188
Service delivery satisfaction level	0.254	0.056	0.223	4.538	0.000*
Platform facilities satisfaction level	0.361	0.050	0.315	7.157	0.000*
Platform services satisfaction level	0.177	0.037	0.152	4.762	0.000*
Services in trains satisfaction level	0.150	0.031	0.193	4.842	0.000*

Punctuality	0.064	0.034	0.054	1.889	0.060
Behaviour of railway employees	0.260	0.034	0.213	7.680	0.000*

Dependent Variable – Overall satisfaction

*indicates the two tail significance at 5 % level of significance

The regression statistics depicted in the above table 2.3 indicate the factor significant for the overall satisfaction of passengers for railways. The values indicated in the above table show that the factor service delivery, platform facilities, platform services, services in train and behavior of railway employees are significantly important for the overall satisfaction of passengers as their p-value is lower than 0.05. As the p-value of Punctuality is 0.060 which is higher than the significant level of 0.05 that confirms it as a non- significant factor for the overall satisfaction of passengers FIGURE 1.2.

Regression Equation

$$\text{Overall Satisfaction} = -0.173 + 0.254 *(\text{Service Delivery}) + 0.361*(\text{Platform Facilities}) - 0.177*(\text{Platform Services}) + 0.150*(\text{Train services}) + 0.064*(\text{Punctuality}) + 0.260*(\text{Behaviour of Railway employees}).$$

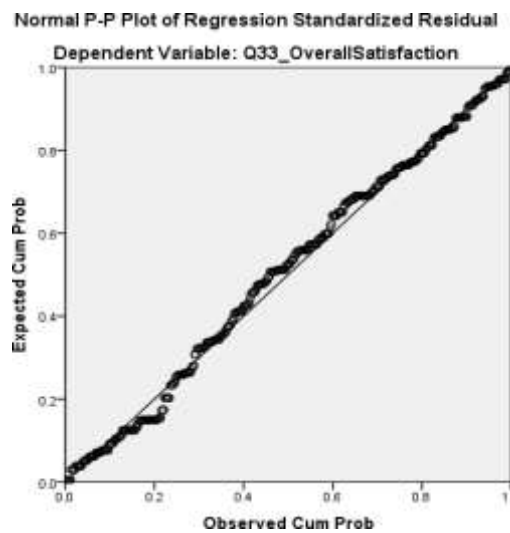


FIGURE 1.2
NORMAL P-P PLOT OF REGRESSION STANDARDIZED RESIDUAL

The P-P plot depicts a straight line that indicates the normality among the residuals

R	0.887
R ²	0.787
Adjusted R ²	0.780
F	119.374
Sig. Value	0.000

The above table 3.1 depicts the regression statistics. R- square indicates the nature of the association of the dependent variable (overall satisfaction of customers) with independent

variables. The difference between R- square and Adjusted R- square (level of shrinkage) is low ($0.787 - 0.780 = 0.007$) that confirms the acceptance level of the correlation between the dependent variable and independent variables under study. The fitness of the model is supported by the higher R – square value (0.787). The F-statistic value (119.374) confirms the validity as well as the stability of the regression model employed in the present study. The low significant value ($0.000 < 0.05$) indicates the effect of experimental variables on the understudy dependent variable, i.e. Overall satisfaction of customers.

Table 3.2
REGRESSION COEFFICIENTS FOR CUSTOMER SATISFACTION

	Co-efficient	Standard. Error	Beta	t	Sig.
Constant	-0.126	0.133		-0.951	0.342
Service delivery satisfaction level	0.424	0.165	0.372	2.575	0.010*
Platform facilities satisfaction level	0.583	0.146	0.510	3.983	0.000*
Platform services' satisfaction level	-0.062	0.101	-.053	-0.616	0.538
Services in trains satisfaction level	-0.146	0.082	-.189	-1.792	0.074
Punctuality	0.073	0.072	0.062	1.013	0.312
Behaviour of railway employees	0.321	0.083	0.262	3.863	0.000*
Income * Service delivery	-0.062	0.049	-.418	-1.278	0.202
Income * Platform facilities	-0.063	0.041	-.477	-1.543	0.124
Income * Platform services	0.079	0.030	0.594	2.674	0.008*
Income * Service in trains	0.089	0.022	0.636	4.075	0.000*
Income * Punctuality	-0.002	0.018	-.013	-0.092	0.927
Income*Behaviour of railway employees	-0.027	0.024	-.169	-1.095	0.274

Dependent Variable – Overall satisfaction

*indicates the two tail significance at 5 % level of significance

The statistics in the above table 3.2 indicate that the satisfaction level from service delivery, platform facilities, and behavior of railway employees are significant as their p-values are lower than the significance level i.e. 0.05. It indicates that these services provided by the railways are important to the passengers.

Regression Equation

Overall Satisfaction = $-0.126 + 0.424 *(\text{service Delivery}) + 0.583*(\text{Platform Facilities}) - 0.062*(\text{Platform Services}) - 0.146 *(\text{Train services}) + 0.073*(\text{Punctuality} + 0.321*(\text{Behavior of Railway employees}) - 0.062 *(Income * Service delivery) - 0.063 *(Income * Platform facilities) + 0.079 * (Income * Platform services) + 0.089 * (Income * Service in trains) - 0.002 *(Income*Punctuality) - 0.027 * (Income*Behavior of railway employees)$

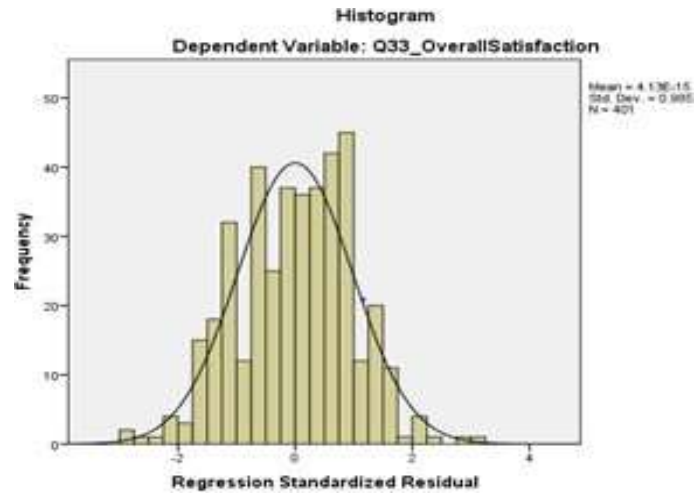


FIGURE 1.3
HISTOGRAM FOR NORMALITY OF THE RESIDUALS

The above histogram indicates the normality of the residuals. The histogram depicts a normal distribution curve that indicates the normality of the residuals FIGURE 1.3.

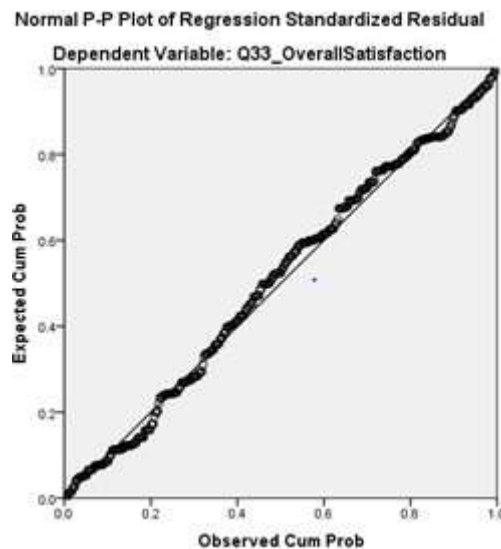


FIGURE 1.4
P-P PLOT FOR RESIDUAL NORMALITY

The above P-P plot indicates a straight line that further confirms the normality of the residuals in the analysis FIGURE 1.4.

FINDINGS AND CONCLUSION

The Indian Railways has a leading role in the development of India. IR is the second biggest network under a single administration. IR helps in transporting 22 million passengers and over 1.10 billion tons of load annually. IR is the fourth leading railway setup in the world by size, with 41,861 miles route. Although the Indian railway is growing, yet there are many problems in the path of growth. In this study more than a dozen, problems have been analyzed, it is concluded that IR needs a lot to improve its overall services, including

passenger safety, drinking water, and sanitation facility, ticket booking, the behavior of the railway employees, punctuality of the trains. If the indicative measurement has been considering by IR, it may be helpful for the Indian railway.

The response in contradiction of all the factors was used in the study to measure the quality of service in trains mentioned shows that most of the respondents revealed disappointment about cleanliness, maintenance of coaches, water services, coaches available for the female and facility for physically challenged people. It also indicates dissatisfaction with passengers among the services of vending machines, ticket agents, however, passengers were found satisfied with the parameter of electricity arrangements, the orderliness of seats in the trains and facility of e-ticketing. Passengers were found dissatisfied with the behavior of the railway employees at the platform, at the station and in the trains. Most of the passengers were found satisfied with the security issue, but maximum respondents were dissatisfied with the installation of cameras at stations, availability of bomb detection systems and security systems on the platform. Passengers also found dissatisfied with the services of the information facility provided by the Indian railways

The development of resources in the modern era has increased human needs. Meeting these growing needs is becoming a big challenge for any company or government. Indian Railways is also facing this challenge due to the increasing population in the country. Due to increasing awareness among the citizens, demand for facilities in the trains and at railway stations is also increasing continuously like sanitation facilities, drinking water, waiting room, facilities for differently-abled, etc. Apart from this, the process of ticket booking to the seat reservation has also become a big challenge for passengers and railways.

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