



The Critical Evaluation Of Railway Station Service Quality In India

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ABSTRACT

The impression that passengers have of the entire train ride can frequently be gauged by the quality of service they receive on the station. We recommend taking public transit wherever possible, but understand that it is not always convenient. The success of public transportation depends on attracting more passengers, so satisfying those passengers is essential. The present research was based on the Indian Railways system in order to evaluate the current condition of railway platforms in India. This research was carried out at Dehradun Junction Railway Station, one of the most important in the Northern Railway Zone of the Indian Railways and a major transit hub for visitors heading to other parts of Uttarakhand and Himachal Pradesh. This research examines the quality of the services and amenities offered to travelers at Dehradun Junction.

Keywords: quality of service, public transportation, Indian Railways, Dehradun Junction and Northern Railway Zone.

1. INTRODUCTION

The Indian Railways is the lifeblood of the country's transportation network, and as such, they are crucial to the growth of the Indian economy. Platforms are essential components of the railway system, as passengers spend a significant amount of time there while taking advantage of services such as ATMs, restrooms, snack stands, waiting rooms, and so on. Therefore, it is crucial that websites generate a relaxing atmosphere for visitors. The impression that passengers have of the entire train ride can frequently be gauged by the quality of service they receive on the station. This research was conducted on Indian Railways in order to evaluate the current state of railway platforms in India and determine what improvements are necessary to bring them up to "World Class Station" standards. Dehradun Junction Railway Station, one of the most important Junction stations in the Northern Railway Zone of the Indian Railways, is the site of the research. In addition to being

the second-busiest railhead in Uttarakhand (after Haridwar), this city is often seen as the starting point for excursions to other parts of the state and even neighboring Himachal Pradesh. This research examines the amenities and services offered to travelers at Dehradun Junction Railway Station from the perspective of the passengers who use those services. The study is timely because the State Government and the Ministry of Railways have been working for a long time to relocate the Dehradun Junction Railway Station from the city's central market to the neighboring district of Harrawala. This relocation is set to begin in November 2019. The passengers are anticipating a rise in the quality of the amenities and services offered as a result of this renovation. This factor inspires this study, which seeks to assess the current state of amenities on railway platforms and the passengers' level of satisfaction with them.

2. LITERATURE REVIEW

Many studies have been done in various industries to measure customer happiness and service quality. According to TCRP Report 100 (TCRP Report 100, Part 3, Chapter 1), the degree of service shows how passengers perceive the effectiveness of the transportation system. A model called SERVQUAL, developed by Parasuraman et al. (1988), has been widely used for evaluating service quality in numerous research (Gupta and Datta, 2012). Some other models that scholars have used are QUALBUS by Perez et al. (2007) (as reported by Kian, Latiff & Fong (2012)) and E-S-QUAL (Parasuraman et al., 2005). It is important to note, however, that clients have varying needs and expectations when it comes to service (Hirmukhe, 2012; Gupta & Datta, 2012; Agyapong, 2011). Like Customer satisfaction has been linked to service quality by Kian, Latiff, and Fong (2012), who looked at the relationship between these characteristics and customer satisfaction. Satisfaction is linked to tangible, reliable, responsive and empathic attributes but not significantly to certainty (Kian, Latiff & Fong, 2012).

The dimensions of service quality were technical, functional, and reputational excellence (Gronoos, 1884). A study by Givoni & Rietveld (2007) examines how passengers feel about a train trip's start and end points, as well as how they feel about the train ride itself. It was found that customers were most satisfied with the ease of purchasing tickets, the information on train schedules and platforms and your personal security in the station, while they were least satisfied with the availability of parking facilities and the calibre of facilities and services (Survey on Passenger Satisfaction with Rail Services, 2011).

A wide range of factors were considered by Gupta & Datta (2012), including accessibility, wait times and information accessibility for passengers, as well as passenger comforts and security. Customer dissatisfaction was greatest in the areas of wait time, security, and travel-related facilities, according to the report. According to Geetika & Nandan (2010), the most important elements in customer contentment are the quality of the refreshments and the

demeanor of the employees. Parasuraman et al. (2005) developed a model to measure the quality of electronic services using a 22-item E-S-QUAL scale that has four dimensions: efficiency; fulfilment; delivery; and privacy. The 11-item E RecS-QUAL measure was developed for clients who are not routine. Response, recompense, and contact are all aspects of it.

Further, to find out what causes people to be satisfied or dissatisfied, a number of research have been carried out recently. These studies have been dubbed satisfiers and dissatisfiers and the earliest one dates back to the work of Swan and Combs (1976) in the field of consumer behavior (as cited by Johnston, 1995). There are two types of determinants: expressive (the product's psychological performance) and instrumental (the product's utility) (performance of physical product). The consumer must be satisfied if both of these conditions are met. Customers' long-term service experiences have been shown to have an impact on aspects of service quality, such as expectations for service assurance, perceptions of reliability and responsiveness, and the quality gap in service assurance (Urban, 2010).

Additional research has been done on platform facilities at Allahabad Junction railway station by Geetika et al. (2016). They concluded that passengers were most dissatisfied with the cleanliness, hygiene, and security of the station. Passengers' satisfaction at the Kanpur Central Railway Station in India was studied by Ghosh et al. (2017), who built a model to measure customer satisfaction based on service quality parameters. At the Allahabad Junction Railway Station of Indian Railways, Ojha (2020) conducted a study on platform-based facilities to assess passengers' awareness, usage and satisfaction levels with amenities given on Indian Railway platforms. Various service providers at Allahabad Junction Railway Station have been grouped into five primary categories: food and beverages, hygiene & sanitation, information system, waiting arrangements & accessibility, and additional facilities. Overall, the study found that the Indian Railways' largest challenge is to provide a hygienic environment, since hygiene and sanitation earned the least positive response.

There are several aspects that are vital to consider while establishing a model platform and making passengers happy, according to the literature review. Table 1 summarizes these elements. It has been grouped according to the elements that have been identified relevant by different authors for different countries in the literature review.

Table 1: Summary of Factors for Model Platform

Factors	Country Context	Author(s)/Report
Services at Stations	Philippines Japan	Doi et al.(2003), Kido (2005), Geetika and Nandan (2010), Faiz, Maleki and Zargar

	Indian Railway Iran Railway EU	(2010), The Gallup Organization (March, 2011), Gupta and Datta (2012), Dash, Dash and Pradhan (2012), Vishnuvarthani and Selvaraj (2012; 2013); Geetika et al. (2016); Ghosh et al. (2017), Ojha (2020)
Safety & Security	USA Philippines Japan Indian Railway EU	TCRP Report 100 (2003), Doi et al.(2003), Kido (2005), Geetika and Nandan (2010), The Gallup Organization (March, 2011), Gupta and Datta (2012), Dash, Dash and Pradhan (2012), Vishnuvarthani and Selvaraj (2012; 2013); Geetika et al. (2016); Ghosh et al. (2017), Ojha (2020)
Accessibility	Philippines EU Indian Railway USA	Doi et al.(2003), The Gallup Organization (March, 2011), Gupta and Datta (2012), Hanna and Kaufmann (2014); Geetika et al. (2016); Ghosh et al. (2017), Ojha (2020)
Information System	Japan Indian Railway EU	Kido (2005), Geetika and Nandan (2010), The Gallup Organization (March, 2011), Gupta and Datta (2012), Dash, Dash and Pradhan (2012), Vishnuvarthani and Selvaraj (2012; 2013); Geetika et al. (2016); Ghosh et al. (2017), Ojha (2020)
Maintenance & Construction	USA Japan EU	TCRP Report 100 (2003), Kido (2005), The Gallup Organization (March, 2011)
Behavior of Staff	Indian Railway Iran Railway	Geetika and Nandan (2010), Faiz, Maleki and Zargar (2010), Dash, Dash and Pradhan (2012), Ojha (2020)
Complain Handling Mechanism	EU Indian Railway	The Gallup Organization (March, 2011), Vishnuvarthani and Selvaraj (2012) (2013)
Transit Services	USA Philippines	TCRP Report 100 (2003), Doi et al.(2003)
Travel Time	USA Philippines	TCRP Report 100 (2003), Doi et al.(2003)

The research makes it clear that the availability and calibre of various amenities at platforms have a significant role in determining passenger pleasure. The goal of the current study is to

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gauge how satisfied passengers are with the various amenities offered at railroad platforms. The goal of the article is to evaluate passenger knowledge, utilisation, and happiness in order to determine the critical amenities that ought to be offered at train platforms.

3. METHODS

The study's goal is to determine how satisfied passengers are with the facilities found on railway platforms. The study combines survey method and observation method (Singh and Kumar, 2014) for fulfillment of objective. All four platforms of Dehradun Junction were inspected during the current study to see how the various facilities were doing. Primary data were gathered using the questionnaire method (Goel, Ghosh, Ojha and Shukla, 2017; Ghosh, Goel and Ojha, 2018).

4. DISCUSSION

For each of the five study categories, the average passenger satisfaction level (depending on service provider) is calculated, and composite mean values are also calculated for each of the five study categories. The standard deviation (SD) is calculated to determine how consistent the utilities are in providing passengers with a positive experience. The investigation has been broken down into three phases. The first step was to assess customer satisfaction with various aspects of service quality throughout the utilities sector. The respondent's gender was taken into account in the second stage of the analysis, and the respondent's age was taken into consideration in the third stage of the analysis of utility category-wise satisfaction.

4.2 Satisfaction Level for Individual Service Quality Aspect

Overall the satisfaction level from all the service quality aspects have been shown in the Table 2 and it can be conclude that overall, passengers' are somewhat dissatisfied with the services of Dehradun Junction Railway station as overall, there mean satisfaction score is just 2.87 out of 5 in 5 point rating scale, which clearly indicate that satisfaction level is on a lower side. Further, overall standard deviation is also on a higher side (0.88) elucidating the fact that there are high variation in level of service delivery at platforms of Dehradun Junction.

In case of food and beverage services, the provision of free and potable drinking water provides the highest level of satisfaction to passengers, according to a study that analyzed quality features on the basis of utility category. The availability of food and beverages and the quality of the food provided are also important factors of service quality, with mean satisfaction scores of 3.87 and 3.45, respectively. With a mean satisfaction score of just 2.54, hygiene at and around food stalls is the service quality aspect with the lowest satisfaction rating. Affordability of eatables and the accessibility of food stalls, two other service quality aspects within this category, have both recorded mean satisfaction scores less than 3. (on a 5 point scale, 3 being considered as average). There are numerous reasons for the poor

accessibility of food and beverage vendors, but one of the most important is that they tend to be clustered in one area rather than being distributed uniformly around a platform, as is required for a railroad. There aren't many food booths on platform no. 4 at Dehradun Junction Railway Station, which may be due to the fact that no trains stop there on their route to other destinations; as a result, there aren't any trains that just stop at Dehradun. As a result, authorities may conclude that the last platform's food kiosk is unnecessary because no passengers will be there for an extended period of time. The railway authorities should take heed of passengers' concerns about the affordability of food, as it reveals that merchants charge clients unclear pricing.

When it comes to service quality in the food and beverage area, the provision of free and potable drinking water has once again scored well with a standard deviation of just 0.62, indicating a consistent level of service delivery. With a standard deviation of 0.99 and 0.91, the availability of food and beverage stalls and hygiene in and around food stalls are the worst. Therefore, it can be stated that water points and the placement of potable drinking water provide maximum passenger satisfaction while maintaining a consistently high quality of service.

As a general rule, the variety of books and periodicals available at book stalls regularly provides passengers with a high level of satisfaction (mean satisfaction score of 3.89). As a measure of overall service quality, it has the lowest standard deviation (-0.68) in the industry. Since passengers are so pleased with this service, it may be concluded that it falls under the book stall category. We may deduce from the worst performer in this category that passengers are dissatisfied with the ease of access to book stalls because the mean satisfaction score was only 2.61 while the standard deviation was significantly large (0.86). Even book stalls tend to congregate in one location, which makes it difficult to distribute them uniformly around the platform. Dehradun Junction Railway Station platform number 4 has no book stalls, and the reason is the same as platform number 3 and 4: the railway authority doesn't believe that book shops on the fourth platform are worthwhile. While price and availability of a bookstall received average ratings of 3.41 and 3.24 respectively, these two criteria fared better than expected. Because most bookstalls are located outside of railway station grounds, travellers may have difficulty accessing them. This could explain the large standard deviation around the mean for the availability of book stalls (0.95) in the study.

There is a 3.64 average satisfaction rating for the service quality of washrooms when it comes to personal hygiene in the category. It also goes without saying that public restrooms and other hygienic facilities are essential in any community worth its salt. As a result, passengers have expressed discontent with all aspects in this category, and this is the main problem here. Cleaning and hygiene supply in the bathroom (such as the placement of soap, handwashing, sanitizer, a trashcan and mugs) received the weakest mean score of all service quality categories. Shows the dismal state of the washrooms at Dehradun Junction's platform. The

overall standard deviation for this category is on the high side, showing the category's variable performance. This raises serious concerns about the lack of upkeep and the quality of service provided by railroads and its vendors for one of humanity's most fundamental needs.

The reservation display board has the greatest mean satisfaction level (3.69) in the category of basic platform amenities, followed by the platform display board (3.45). Reservation counters have the highest deviation (1.43) and the lowest degree of customer satisfaction (1.54). One possible explanation for this is that the reservation counters are located in separate buildings outside of the station. Waiting rooms (seating chairs) have also scored below average in terms of customer satisfaction, with mean scores of 2.45, 2.81, and 2.85, respectively. Escalators' poor performance could be due to their location at the entrance to the railway station, which is frequently under maintenance. The concourse (meeting point) at Dehradun Junction is disorganized, which contributes to the poor performance of the waiting room (seating chairs). Platform displays with high mean satisfaction scores and low standard deviations are clearly the most popular in this category, as can be deduced from the data.

Study concludes that passengers are satisfied with the performance of all service quality aspects except the accessibility of STD/PCO booths and ATMs (mean score of 1.27) because these are located in the outer premises of the railway station and further in the immediate vicinity of the station there are only a few ATMs. With a mean score of 3.57, passengers are pleased with the performance of their phone and banking services.

Table 2: Satisfaction Level for Individual Service Quality Aspects

S. No.	Utility Category	Service Quality Aspect	Mean	Standard Deviation
1	Food and Beverages	Availability	3.87	0.99
		Affordability	2.69	0.85
		Quality	3.45	0.71
		Accessibility	2.83	0.91
		Cleanliness	2.54	0.81
		Provision of Free and Potable Drinking Water	4.22	0.62
2	Book Stalls	Availability of Books and Magazines	3.24	0.95
		Affordability	3.41	0.79
		Accessibility	2.61	0.86
		Variety	3.89	0.68

3	Personal Hygiene	Availability of washrooms	3.64	1.01
		Cleanliness inside and around washrooms	1.45	0.98
		Hygiene provisions in washrooms	1.62	0.84
		Accessibility of washrooms	2.64	1.09
4	Basic Platform Amenities	Waiting Hall (Seating Chairs)	2.62	0.89
		May I Help You	2.85	0.65
		Platform Display	3.45	0.79
		Reservation Counter	1.54	1.43
		Reservation Display Board	3.69	0.92
		Escalator	2.45	0.99
		Cloak room	2.81	0.96
5	Communication & Banking	Availability PCO/STD/ISD/Internet	2.97	0.81
		Availability ATMs	2.55	0.77
		Accessibility STD Booths and ATMs	1.27	1.06
		Functioning of STD Booths and ATMs	3.57	0.68
Overall Satisfaction Level			2.87	0.88

4.3 Satisfaction Level on the Basis of Gender

Table 3 shows that overall satisfaction is higher in males (3.25) than in females (2.25) when it comes to gender categorization (3.07). As a group, men outperform women across the board when it comes to overall levels of contentment. When it comes to food and drink, males are more satisfied than females, and this could be because they are less concerned about quality and hygiene, which is normally a major issue for women. Besides this, there may be another reason why women aren't able to go out to eat since they have to take care of their things and children at the same time. As a result, moving all of the goods is a difficult task for them.

Males are more satisfied with the utility of book booths than females (3.60) in this area (2.96). Males are likely to be happier since they are more likely to purchase newspapers and magazines from the stall, and as a result, they use the service more frequently than females. Both males and females have expressed dissatisfaction with personal hygiene as a utility category, however males are slightly less dissatisfied than females. As a rule, women are more conscientious about personal hygiene and cleanliness than men are, and this is one of the main reasons why women avoid using public restrooms. Female relics are unable to use restrooms because of the unsanitary conditions and lack of basic amenities like hand sanitizer, hand wash, dustbins, and the like.

Men are more satisfied (2.97) than women are (2.57) with the basic amenities on the railway platform. There are many different types of facilities in this category, such as reservation

counters, reservation displays on the platform, escalators, and so on. With family travel, males tend to be given the role of checking reservation status, train status, platform status, etc. using their mobile phones. They aren't really worried about these amenities. This utility's primary source of criticism came from passengers' concerns regarding escalators. Males have a higher level of satisfaction with communication and banking usefulness than females (2.85) (2.33). Customers don't like that the facility is outside of station grounds and hence difficult for travelers to access.

Table 3: Satisfaction Level: Utility Category and Gender Wise

Utility Category		Male	Female
Food & Beverage	Mean	3.48	3.06
Book Stall	Mean	3.60	2.98
Personal Hygiene	Mean	2.62	2.06
Basic Facilities on Platform	Mean	2.97	2.57
Communication & Banking	Mean	2.85	2.33
Overall Satisfaction level	Mean	3.25	3.07

4.4 Satisfaction Level on the Basis of Age

Results from an age group analysis show that passengers under the age of 25 are comparatively more satisfied with the services provided at the station, followed by those between the ages of 40 and 55 (2.88). Passengers in all age groups are on average satisfied with the service quality features of food and beverages, according to the utility category's satisfaction rating. Age groups 40-55 (3.38) and 25-40 (3.24) have the highest levels of satisfaction in this area, although there is no significant difference in levels of satisfaction between them. Those in the 25-40-year-old age range are the most satisfied with book stalls, followed by those in the under-25-year-old age range (3.62), according to the results of this survey (3.41). This may be due to the fact that these individuals like to read when on the road. Furthermore, because book stores are clustered in one location, it is difficult for the elderly to move around in search of books, as evidenced by the fact that those over the age of 55 have the lowest levels of satisfaction of any age group (3.01). These booths need to be evenly distributed among the platforms, taking into account the age of the audience. It can be concluded that passengers of all ages are dissatisfied with the personal hygiene facilities supplied over there, as the mean satisfaction level for all age groups is less than 3. Passengers over the age of 55 have the lowest levels of satisfaction with the onboard amenities, with a mean satisfaction score of 2.11 out of 5. Maybe that's why the mean satisfaction score has dropped from 2.82 to 2.11 as people get older and more concerned about their health and cleanliness.

Passengers over the age of 55 are the least satisfied with basic platform facilities (waiting hall/seating chairs, escalators, platform display, and so on) since they use these facilities more frequently than passengers in other age groups. Elderly individuals prefer to use elevators rather than stairs since they have health difficulties, yet elevators often malfunction and only work on one side at a time. In addition, they are the ones who frequently use services like the railway display board, May I Help You (inquiry counters), and so on because they aren't particularly fond of mobile applications. The modern banking and reservation mobile apps like Phone Pe, Google Pay, Paytm, and others are not particularly user pleasant, therefore customers over the age of 55 rarely utilize the railway station's banking capabilities. As a result, the position of ATMs outside of the railway station grounds has no effect on them because they typically carry cash and aren't very interested in using mobile apps. However, travelers under the age of 55 prefer e-wallets over cash, so when they need money, they prefer to use an ATM rather than a bank, which makes the ATM's position outside the station difficult for them.

Table 4: Satisfaction Level: Utility Category and Age Wise

Utility Category		<25	25-40	40-55	>55
Food & Beverage	Mean	3.27	3.24	3.38	3.19
Book Stall	Mean	3.41	3.62	3.12	3.01
Personal Hygiene	Mean	2.82	2.12	2.31	2.11
Basic Facilities at Platform	Mean	3.11	2.84	2.96	2.17
Communication & Banking	Mean	2.16	2.48	2.62	3.10
Overall Satisfaction level	Mean	2.954	2.86	2.878	2.716

5. Conclusions And Recommendations

As an outcome of present study, it turns out that practically every passenger desires a clean and hygienic environment on the train platforms. A recent survey questioned passengers for their ideas on how to make the platforms better. Passengers have rated cleanliness and hygiene as the service quality characteristics with the lowest satisfaction scores, which supports this claim. Since this is a fundamental human need, it is imperative that the railway authorities focus their efforts on this aim. Customers have expressed their high degree of happiness with the availability of washrooms, but if the washrooms themselves are not clean and sanitary, this will all be in vain. When it comes to supplying passengers with adequate restroom and washroom facilities, however, the railway authority and management have failed horribly when it comes to the sanitation and hygiene components of these facilities. In order to help ensure that toilets and washrooms are properly maintained, the railway administration can play a role by selecting the suitable and trustworthy vendor for these contracts. Consequently, it is advised that the railway administration make those vendors

accountable for their performance, and regular checks and inspections should be made to get a sense of the service quality supplied to passengers.

Customers have expressed displeasure with the accessibility of several businesses, including food stands, bookstores and ATMs. Consequently, it is imperative that the railways look into the situation and endeavor to distribute these amenities more evenly throughout the railway station premises. The correct upkeep of the infrastructure is also a crucial concern for travelers. There is only one escalator at the Dehradun Junction railway station, and it is frequently out of service or in need of repair. As a result, travelers, particularly the elderly, suffer greatly as a result of the difficulties they experience in and outside the station. Passengers over the age of 55, i.e. senior adults, have been found to be less satisfied than other demographics with basic platform amenities like escalators, according to research.

Passengers are overwhelmingly in favor of improving and maintaining railway infrastructure. Platforms, footbridges, food stands, restrooms, and other amenities should be kept in good working order. A small percentage of those polled claimed they don't want any alterations to the station's platforms and were happy with as they are now.

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