Assessment Of Cleanliness Of Main Platform Areas At Railway Stations In Delhi NCR.

1Sahaj Monga, 2Ansh Mittal
1Student, 2Project Associate
1Amity School of Economics,
1Amity University, Noida Uttar Pradesh, India

Abstract: Railway tracks look similar to a dumping ground with unfinished food, disposable bottles and cardboard boxes being the major sightings stretched over the entire network. India has one of the largest railway system networks consisting of 119,629 km of track and carrying 8.108 billion passengers in a year. Its sanitation contributes to its efficiency, which directs the Public Utilities (PU) sector towards expansion and growth contributing to approximately 2.5% of India’s GDP. The largest section of the population dependent on this network is the lower class and the government specifically targets changing their mindset towards keep the railway station’s cleanliness in line with Swacch Bharat Abhiyan’s (SBA) standards when commuting daily. High intensity of footfall and people’s dependency on this network forced the Indian Railways to take up a much-needed fearless stride towards improving and maintaining the sanitation of railway stations. The Indian Railways launched its own “Swacch Rail, Swacch Bharat” campaign under “Swach Bharat Abhiyan”. Under this campaign, Ministry of Railways took measures to ensure sanitation is improved and maintained at all railway stations in India henceforth. It takes up special pursuit to ensure hygienic washrooms, maintenance of sanitation and periodic monitoring of stations under the campaign. Therefore, this paper seeks to explain the influence this campaign has had on the overall cleanliness of railway stations in Delhi NCR post implementation. This paper uses an empirical model to assess the contribution of cleaning processes in determining the cleanliness of main platform areas at major railway stations in Delhi NCR.

Keywords: Sustainable development, Indian Railways, Sanitation, Public Utilities

1. INTRODUCTION
Indian Railways is a network which is projected to contribute to roughly 2.5% of India’s GDP by the year 2019. This large network is a state owned enterprise and comes under the supervision of Indian Railways. The railway track spans across 1.15 Lac kilometres of length and caters to a number north of 7000 railway stations. This network carries more than a billion passengers a year. The footfall will obviously be enormous compared to the network. One such study found out that in Delhi alone (taking top 5 most visited stations) this number amounts to roughly 1,440,000 citizens visiting the railway stations daily. In the FY '15-16, the revenue of Indian Railways grossed Rs. 1,64,000 Crores, out of which Rs. 40,500 Crores was collected from the sale of passenger tickets alone. This large dependency of the people on this network tells us about how important this Public Utilities sector is and how in turn it contributes to the growth of the infrastructural canvas of the country. The Indian Railways saw the launch of ‘Swachh Bharat Mission’ as an opportunity to extend their contribution by adopting “Swacch Bharat - Swachh Rail” project. This project aimed at ensuring and maintaining the cleanliness on railway stations all over the country. One such study was conducted to measure the affect Swachh Bharat had, post implementation. This was done by ranking these stations on the basis of cleanliness. The stations with the highest score were the cleanest and the stations with the lowest score were the dirtiest. In this study, we aim to assess the citizen feedback that we collect in order to determine their perspective on cleanliness maintained and observed at railway stations in mainly Delhi NCR. There are Drinking Water Booths, Vendor Areas, Open Sitting Areas present at the railway stations whose dustbin availability, litter presence, and etc. was taken into consideration while drafting the questionnaire. Eventually the multiple regression model was run on it to determine the level of dependency of variable Y on X. It is crucial to determine and study what affect different factors had on the overall cleanliness of main platform areas. In the end, conclusions were drawn and recommendations put forward for the Government of India to take into consideration.

OBJECTIVES:

The primary objectives of the chosen project are to:

1. To quantitatively analyse the factors at Railway Stations in Delhi NCR by taking the citizen feedback regarding the cleanliness of Main Platform Areas:
2. To recognize the possible bottlenecks in maintaining the cleanliness of Main Platform areas
3. To suggest recommendations and measures to eradicate such bottlenecks
2. Review of Literature

- Standard Operating Procedures, Swachh Railway Stations, Ministry of Urban Development GOI, 2014

For standardization in sanitation rules, it is necessary to have a Standard Operating Procedure (SOP) to make sure all stations set a standard of sanitation in their own premises. This was aimed to improve the current cleanliness measures and overall improve the cleanliness standards for the populous. SOP looked for proper waste management and ensures that the grievances of the people are met timely and with full efficiency once the complaint or the problem is put forward. This paper listed out all the responsibilities of the various organizations such as the public, the Railway Ministry, etc. and what is their role in maintaining cleanliness. The assessment was carried out through the method of a questionnaire and means of scoring method. Scheduled inspection was carried out. Thus it gave a list of all the procedures all railway stations need to follow and as a result set a few standards that every station should adhere to—Standard Operating Procedures.

- Swachh Rail Swachh Bharat- Station Cleanliness Report, Indian Railways, 2017

Study carried out by a third party where all the railways stations in India were categorized into two main categories—A1 Category Stations and A Category stations. These categories were made depending on the average footfall. A questionnaire was devised to rank all the stations in India on the basis of their cleanliness by obtaining a total score for each station where the one with the highest score ranked better and the one with a low total score ranked worse. Hence the data provided the cleanliness score region wise, as well as station wise. Vishakapatnam ranked as No.1 in A1 category and Beas and No.1 in A category stations.

- Survey of Major Railway Stations for Cleanliness Ranking, Indian Railways, 2016

Survey conducted on the basis of a questionnaire where A1 and A category railway stations we categorized such that the questionnaire was devised on three parameters taking into account Process Audit, Customer Satisfaction and Citizen Feedback. Stations were color classified such that Dark Green represented ‘Very Clean’ category station and Red represented ‘Below Average’ scale. Cleanliness of various stations was observed at Divisional, Sub-Divisional level, etc. Regression was used to determine the dependence of variable between each other.

- Performance Analysis of Sub Urban Rail System in Delhi, Rahul Raoniara, Amudapuram Mohan Raob*, S. Velmuruganc, Ranjan Kumar.

The act of transit system can be catalogued on basis of two distinct tangents, i.e., Service and Service quality. Service can be defined as “the business deal that taken place between a donor (Service provider) and Receiver (Client) in order to fabricate a result that contents the client.” (Ramaswamy, 1996). On the other hand, Service quality is analysis the standard of service that is delivered to the client as per his/her conjecture. Parasuraman (1988) defines service quality as juxtaposition between what a customer expects and the recognition of service. Federal Administration of the U.S (1999) created a manageable and efficient measurement process of customer satisfaction for transit services termed as Impact Score Technique. This papers aims to identify the safety onboard and at the railway station. Also, cleanliness in train and at station should be appraised as first concern for enhancement of the suburban rail system. To keep the users connected with the system the quality of the parameters (fare, infrastructure facilities seating arrangement at station, lighting arrangement, Luggage facility) has to be maintained. Otherwise, the system will face the consequences i.e the migration of the users from the public sector to the private sector transportation system.

- Developing a Stakeholder Communication Strategy: Case Study of Indian Railways and Swachh Bharat Campaign, Vishakapatnam

The focus of this research is to get in touch with the effects of putting to application a stakeholder policy, taken from 5 persuasive communication theories. Ministry of Railways is focusing on 17 railway stations for a trail to attain the Swachh Mission Goal. The aim of this research is to enhance a structure for stakeholder communication policy in the environmental context. This requires stakeholders from different backgrounds and move at an allocated goal.

- Performance Audit on "Cleanliness and Sanitation in Indian Railways", Report No.11, 2013 (Railways)

On the foundation of the testimony made by the PAC, the MoR had started action to upgrade the level of hygiene and sanitation on stations and trains. However, these actions were not restated into actual improvement in the level of hygiene on both stations and trains. The earlier Audit Reports pointed out various deficiencies and concerned which are partially addressed. Frail checking of the nature of washed material provided to the travelers and moderate advance in setting up of robotized automated clothing had not just brought about extensive scale outsourcing of washing of cloth yet in addition contributed traveler disappointment. Absence of legitimate observing of the execution of the rules/guidelines had telling impact on the adequacy of the irritation and rat control convenient started by the IR. Further, IR's endeavors in executing New Catering Policy 2010 in giving sterile, great quality and moderate nourishment to travelers and enhancing gauges of tidiness at stations were generally incapable. Confirmation to PAC for isolation of biodegradable and non-biodegradable squanders was additionally not satisfied. Healing measures started by the IR to
guarantee satisfactory safe drinking water were deficient. IR additionally bombed in executing set down standards for making arrangement of water taps and keeping up the current offices. The high rate of unfit water tests was demonstrative of inadequacy in the therapeutic measures taken by the Railway Administration.

- The ‘Spittoon Syndrome’ How Effective Will Be the Anti-spitting Initiatives in India, Chitra Grace, Kesavan Rajasekharan Nayar, Lekha D Bhat, Anant Kumar, G Ratheesh Babu, Muhammed Shaffi,

This paper aims at analysing how the unsanitary and uncivilized act of spitting in public is rooted in the minds of our fellow citizen. Also, this paper helps the readers discuss how new strategies need to be designed to tackle this problem in order to make India a developed nation. In the created world, the training of spitting out in the open has declined to a great extent because of behavioural and social changes. In any case, in the less developed nations, individuals are known to spit aimlessly openly puts, especially where there is a corner. The training is not constrained to the betel leaf-biting populace which dishes room corners furthermore, stairs out in the open offices. One can likewise watch individuals spitting on the streets, workers dirty open transport, moviegoers spitting in silver screen lobbies. The demonstration of spitting has socio social and particularly sexual orientation measurements (Lindstrom 1980); spitting is generally polished by men and one once in a while finds ladies spitting in broad daylight places. Given the current hostile to spitting activities in India, it is imperative to talk about the efficacy of enactments in the mind boggling Indian situation what's more, propose a comprehensive procedure for controlling the training. The Pan Parag and skillet culture in Delhi, numerous North Indian states, and in Mumbai effectively empower a spitting populace and considerably render arrangement of spittoons or bulletins, as attempted in Britain, inefficient. The sociocultural underpinnings of the act of betel chewing are profound established and are most likely to annihilate with enactments. The paper suggests what is being endeavored for the sake of “Swachh Bharat Abhiyan” is a pitiful stylish and acculturating application insect which would fizzle out after at some point.

- EAST COAST RAILWAY EXPRESS – AN ODYSSEY, Ipseeta Satpathy, B. C. M. Patnaik and Sourav Mohanty

Indian railways are one of the longest and exceedingly elongated transportation systems in the world: which is about 200 years old and called as ‘Spine of the country’ (Raghuram and Rachna Gangwar, 2000). Considered to be carton and stepping-stone to success is the reason for presence in the socio-economic guide of India (Da.Coasta, 1987). Ticket reservation has been a danger as it has to be done in legitimate time and in the event that they forego any transient or lasting changes can lead to somewhat of progress in the working services. (John Gabriel and Suresh Babu, 2005). Customer satisfaction is vital and yields a profitable result with regards to serving and hospitality in extravagance premium trains. (Arvind Brame, 2007). Plenty of factors were considered out of a study conducted by a series of consultant that it is the aggressive observation, attitude and behavioral path in serving commuters in production process of railways. (Shone, 1999). Significance of railways integrated with change in transportation facilities and services provided by stations, trains was studied by an association named-Steer Davies Gleave of London (Gleave, S.D, 2000). With focused market, the world is changing fast in style and in dynamics, commuters have changed their preferences with the upgradation of innovation; the demand is more for ultra modern facilities in railways. (Kelley and Story, 2000). Diversity in 360 degrees had been defined completely topoint the passengers using train as a means of open transport. Enormous diversity of the nation leads to change in taste; change in preferences and sometimes these changes are not fulfilled leading to what is being called dissatisfaction of commuters. (Patil Pranay, 2012). This objective of this study is to contemplate on the problems faced by the commuters on boarding the train. Also, to understand the prevailing facilities and problems faced at small railway stations.

- CONTEMPORARY INSIGHT INTO PASSENGER PERCEPTION AND SERVICE QUALITY – A STUDY OF INDIAN RAILWAYS, Shahid Ali, Dr. Asif Iqbal Fazili

The present study is an endeavor in identifying various dimensions that are used to determine the passengers’ general perceived service quality and in determining the unmistakable dimensions in passengers’ general perceived service quality. The study highlights the existing level of passenger's discernment and service nature of Indian Railways. The finding of this study will help the concerned authorities to decide on the change of the passenger's recognition and service quality and for the general development of Indian Railways. It is hence earnestly hoped that the concerned authorities will consider the suggestions recommended herewith, so as to enhance the effectiveness of the knowledge and railroad services in India.

- Rural and Urban Sanitation in India, R.B. Bhagat,

This paper assists in understanding the needs to be identified that cleanliness is a close issue and any alternate issue wont be sufficient. The neighbour governments for urban and rustic areas need to be made accountable with right strengthening, resources and a sanitation strategy. The sanitation should be adequate. The areas where the minorities reside should not be left out. Thus these minorities should be made aware about the absence of sanitation facilities and focus on the objectives of Swachh Bharat.

3. Research Methodology
3.1 SURVEY METHODOLOGY

The method of collecting data was in the form of a Questionnaire which took into consideration all the parameters of the Swachh Bharat Mission like cleanliness of dustbins, cleanliness of toilets, presence of pests and rodents, etc. This pilot was carried out at 5 major railway stations in Delhi NCR.
Data source was from the following category:

- **Citizen Feedback** – This was the most deciding factor for our assessment as it collected feedback from the travellers who were travelling in the trains regarding the sanitation conditions. These passengers were questioned on the subject of cleanliness in the most commonly used areas of the station in terms of litter, dustbins, pests and rodents and cleanliness of toilets. At the end, the travellers were asked to rate their experience of the sanitation and cleanliness of the station overall. An average of 275 citizens were targeted at each station and a total of 2277 passengers were targeted.

### 3.2 Ranking Methodology

Ranking that was picked in the sample was derived from the Cleanliness Index according to the following weightages to each of the parameters using the following formula:

\[
\text{Cleanliness Index} = 0.3 \times \text{Process Audit} + 0.4 \times \text{Direct Observation} + 0.3 \times \text{Citizen Feedback} \tag{1}
\]

Ranking of the railway stations was derived using the above cleanliness index.

### 3.3 Scoring Methodology

For the study purposes, the aforementioned parts of the survey were given the below weightages in calculating the overall score for a station. For the purpose of the study, the three parts of the survey were given the following weightages in calculating the overall score for the station and ultimately ranking them:

\[
\text{Table 1: Part-wise Weightages}
\]

<table>
<thead>
<tr>
<th>Areas</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Audit</td>
<td>30%</td>
</tr>
<tr>
<td>Direct Observation</td>
<td>40%</td>
</tr>
<tr>
<td>Citizen Feedback</td>
<td>30%</td>
</tr>
</tbody>
</table>

Below table lists detailed area-wise categories and sub-categories under Citizen Feedback for the purpose of assessment:

<table>
<thead>
<tr>
<th>Main Category</th>
<th>Sub Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Experience</td>
<td>Platform Cleaning</td>
</tr>
<tr>
<td></td>
<td>Dustbin Availability</td>
</tr>
<tr>
<td></td>
<td>Toilet Cleaning</td>
</tr>
<tr>
<td></td>
<td>Water Booth Cleaning</td>
</tr>
<tr>
<td></td>
<td>Stagnant Water</td>
</tr>
<tr>
<td>Information, Education and Communication</td>
<td>Fine Awareness</td>
</tr>
<tr>
<td>Overall Experience</td>
<td>Pests in Sight</td>
</tr>
<tr>
<td></td>
<td>Bad Smell</td>
</tr>
<tr>
<td></td>
<td>Overall Experience</td>
</tr>
</tbody>
</table>

**Table 2: Assessment Parameters.**

The Citizen Feedback was used to obtain a total score for each Railway Station and then subsequently, this was taken to do a descriptive analysis of the data and run a regression analysis to see the dependency between the the dependent variable \( Y \) and the explanatory variables \( X_1, X_2, X_3, X_4, X_5, X_6, X_7 \) and \( X_8 \).

### 3.4 Research Design

**Regression Analysis**

A multiple regression analysis was used to assess the relationship of dependence between the relied variable \( Y \) and the illustrating variables \( X_1, X_2, X_3, X_4, X_5, X_6, X_7 \) and \( X_8 \).

Following the tabel which depicts the variables:
The dependent variable ‘Overall Cleanliness of Main Platform Area’ is calculated through the customer feedback in which they assess the overall cleanliness of the station on a scale of 1 to 5 such that they mean the following:

1. Poor
2. Fair
3. Good
4. Very Good
5. Excellent

The explanatory variables are determining the following:

- **$X_1$: Cleanliness of Main Platform Areas**
  - This measures how many times the area is dry swept, wet swept and mopped, etc.

- **$X_2$: Presence of Dustbins**
  - This takes into consideration that if there are dustbins present or not on the main platform area.

- **$X_3$: Cleanliness of Toilets**
  - This takes into consideration how clean the toilets are and gives highest score in regard to the cleanliness and sanitation maintained in the toilets.

- **$X_4$: Cleanliness of Drinking Water Booth**
  - This measures the overall cleanliness and sanitation that is maintained at the drinking water booth such as the instances of taps running or not, leaking or not, etc.

- **$X_5$: Presence of Stagnant Water**
  - This measure if there is presence of stagnant water on the railway tracks or on the main platform areas and assigns lower score if there is stagnant water and the highest of cleanliness is observed and no stagnant water is seen.

- **$X_6$: Citizen Information**
  - This assesses the citizen information regarding their knowledge of the fines and penalties they have to pay if they don’t maintain cleanliness and sanitation at railway stations under the ‘Swachh Bharat Abhiyan’

- **$X_7$: Presence of Pests or Rodents**
  - This assesses the presence of pests or rodents at the railway stations.

- **$X_8$: Foul Smell**
  - This assesses the presence of foul smell at the railway station.

Therefore, The Multiple Regression Equation becomes:

\[
\text{Overall Cleanliness of Main Platform (Y)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + U_i \tag{2}
\]
3.5 Sample Space
The sample space chosen for the research project is 5 Railway stations in Delhi NCR namely:

<table>
<thead>
<tr>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Delhi</td>
</tr>
<tr>
<td>Delhi Junction</td>
</tr>
<tr>
<td>Hazrat Nizamuddin</td>
</tr>
<tr>
<td>Adarsh Nagar Delhi</td>
</tr>
<tr>
<td>Anand Vihar Terminal</td>
</tr>
</tbody>
</table>

*Table 4: Stations in Sample Size*

3.6 SCOPE OF RESEARCH
The research is performed in New Delhi and National Capital Region (NCR) Only.

4. Data Analysis

Below is the total score obtained for each railway station. This is the base from which we start our descriptive analysis.

### 4.1 RANKING

<table>
<thead>
<tr>
<th>Stations</th>
<th>Total Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Delhi</td>
<td>737.7516985</td>
<td>3</td>
</tr>
<tr>
<td>Delhi Junction</td>
<td>734.4447578</td>
<td>4</td>
</tr>
<tr>
<td>Hazrat Nizamuddin</td>
<td>769.2166971</td>
<td>2</td>
</tr>
<tr>
<td>Adarsh Nagar Delhi</td>
<td>586.8251357</td>
<td>5</td>
</tr>
<tr>
<td>Anand Vihar Terminal</td>
<td>784.5867453</td>
<td>1</td>
</tr>
</tbody>
</table>

*Table 5: Ranks of Railway Stations*

4.2 REGRESSION ANALYSIS

Following is the table, which is obtained from running the regression analysis. Its interpretation is shown below and a descriptive analysis is done using the regression technique.

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.915837602</td>
<td>0.082495049</td>
<td>23.22366755*</td>
</tr>
<tr>
<td>Cleanliness OF Main Platform Areas</td>
<td>0.032361987</td>
<td>0.001374428</td>
<td>23.54578238*</td>
</tr>
<tr>
<td>Presence of Dustbins</td>
<td>0.002858838</td>
<td>0.001498406</td>
<td>1.90791947***</td>
</tr>
<tr>
<td>Cleanliness of Toilets</td>
<td>0.003929301</td>
<td>0.000476983</td>
<td>8.237815098*</td>
</tr>
</tbody>
</table>
Table 6: Regression Analysis table such that p<0.01=*, p<0.05=**, p<0.1=***, Source: Regression analysis run on MS Excel.

<table>
<thead>
<tr>
<th>Cleanliness of Drinking Water booth</th>
<th>0.000184357</th>
<th>0.000451089</th>
<th>0.408693511</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of Stagnant Water</td>
<td>-0.00433186</td>
<td>0.001778915</td>
<td>-2.435113814**</td>
</tr>
<tr>
<td>Citizen Information</td>
<td>-0.001765774</td>
<td>0.000936782</td>
<td>-1.884936577***</td>
</tr>
<tr>
<td>Presence of Pests</td>
<td>0.00794798</td>
<td>0.001900243</td>
<td>4.182612817*</td>
</tr>
<tr>
<td>Foul Smell</td>
<td>0.023794692</td>
<td>0.002006109</td>
<td>11.8611157*</td>
</tr>
<tr>
<td><strong>F Value</strong></td>
<td>5.0708</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R Square</strong></td>
<td>0.388782313</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This table shows the regression analysis between the dependent variable Y and all the explanatory variables X, X1, X2, X3, X4, X5, X6, X7 and X8. The overall R Square value is 0.388782313, which signifies that the explanatory variables are able to explain their effect on the dependent variables by 38.87% when taking the cleanliness of main platform area, presence of dustbins, cleanliness of toilets, cleanliness of drinking water booth, presence of stagnant water, citizen information, presence of pests and foul smell into consideration. The intercept, cleanliness of main platform area, cleanliness of toilets, presence of pests and foul smell are the most significant where the p value is less than 0.01 signifying the highest level of significance.

This value of R^2 implies that 38.87% of the variation in the dependent variable is explained by variation in independent variables. This means that there is a moderate Goodness of Fit.

5. Conclusion

It is inferred that the overall cleanliness of main platform area that is seen at the 5 Railway stations taken into our sample puts significance on the following variables:
The cleanliness of main platform is significant at 1% level of significance. The overall explanation by the X variables (X1,X2…,X8) stands at 38.87% explaining their effect on the overall cleanliness of main platform area.

5.1. Limitations

- Research was done in New Delhi only. These conclusions may not be the same in another area due to barriers.
- Sampling was based on the grouping-sampling techniques. This may not be able to provide the ideal situation.
- There may be other factors which may have higher level of significance determining and affecting the overall cleanliness of the main platform area.
- Due to biasness of the passenger, true picture may not be reflected.
5.2. Recommendations

1. With “Swachh Bharat Mission” going on at its full pace, the railway stations that have higher scores on cleanliness should maintain their standards.
2. Railway Stations securing lower score should take up cleanliness and sanitation as a necessity and take appropriate measures to improve on the cleanliness at these stations.
3. Continuous supervision and checks should be performed by the authoritative bodies put in place and standards should be set for cleanliness.

6. References


ANNEXURE A - Questionnaire

<table>
<thead>
<tr>
<th>Station Experience</th>
<th>Platform Cleaning</th>
<th>Toilet Cleaning</th>
<th>Water Booth Cleaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How clean did you find the platform area?</td>
<td>Extremely Clean</td>
<td>How clean did you find the toilets on railway platforms?</td>
</tr>
<tr>
<td></td>
<td>How clean did you find the platform area?</td>
<td>Slightly Clean</td>
<td>How clean did you find the toilets on railway platforms?</td>
</tr>
<tr>
<td></td>
<td>How clean did you find the platform area?</td>
<td>Not Clean</td>
<td>How clean did you find the toilets on railway platforms?</td>
</tr>
<tr>
<td></td>
<td>Are there dustbins in sight at the station?</td>
<td>Yes</td>
<td>How clean did you find the toilets on railway platforms?</td>
</tr>
<tr>
<td></td>
<td>Are there dustbins in sight at the station?</td>
<td>No</td>
<td>How clean did you find the toilets on railway platforms?</td>
</tr>
</tbody>
</table>

|                | How clean did you find the drinking water booth? | Functional taps with no litter/dirt | How clean did you find the drinking water booth? | Functional taps with some litter/dirt |
|                | How clean did you find the drinking water booth? | Functional taps with a lot of litter/dirt | How clean did you find the drinking water booth? | Not functional taps |
|                | How clean did you find the drinking water booth? | N/A did not use water booth | How clean did you find the drinking water booth? | |

Citizen Feedb ack
**Information, Education and Communication**

**Stagnant Water**

Have you seen stagnant water on the platforms in the railway stations?

- Yes
- No

**Fine Awareness**

Are you aware about the penalties on offences related to littering, spitting or urination in the railway stations?

- Yes
- No

**Pests in Sight**

Did you see any pests or rodents (Rats, cockroaches, flies, mosquitos) while at the station on platforms?

- Yes
- No

**Bad Smell**

Did you encounter any foul smell while at the station?

- Yes
- No

**Overall Experience**

Considering all the factors how would you rate your overall satisfaction with upkeep and cleaning of station?

- 5 - Excellent
- 4 - Very Good
- 3 - Good
- 2 - Fair
- 1 - Poor

---

**Figures and Tables**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Table Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Table 1: Part-wise Weightages</td>
</tr>
<tr>
<td>2</td>
<td>Table 2: Assessment Parameters.</td>
</tr>
<tr>
<td>3</td>
<td>Table 3: Variables For Regression</td>
</tr>
<tr>
<td>4</td>
<td>Table 4: Stations in Sample Size</td>
</tr>
<tr>
<td>5</td>
<td>Table 5: Ranks of Railway Stations</td>
</tr>
<tr>
<td>6</td>
<td>Table 6: Regression Analysis table such that p&lt;0.01=<em>, p&lt;0.05=<strong>, p&lt;0.1=</strong></em></td>
</tr>
</tbody>
</table>

*Source of tables and figures*: The source of the tables and figures presented above is on the basis of the questionnaire.