

# Understanding Customer Orientation of Delhi Metro's Service personnel and its impact on Customer Satisfaction: An Empirical Investigation

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## Abstract

Services are people centric, humanistic and subjective, and the outcome of the service experience mainly depends on the quality of inter-personal interactions between service contact personnel and customers. Customer orientation is one of the most important determinants of success of a service organization as customers form their perceptions about service quality based interactions with service personnel. Employee-driven services are one of the significant dimensions of services of Delhi Metro; it requires the human touch, adaptability and prompt action to make the service experience upbeat and enduring for the customers. Due to involvement of heterogeneity and a high degree of interactions involved in the service delivery, it has become imperative to analyze customer orientation and effects of employee-driven services on

commuter satisfaction. This paper investigates behavioural responses of employees of Delhi Metro and assesses the impact of employee-driven services over customer satisfaction. In the present study, 1,015 samples were taken from all the 160 metro stations and statistical tools such as correlation and multivariate regression analysis were administered to analyze the result. The study reveals that reliability has the most significant impact over customer satisfaction and customers value empathy shown by the employees while addressing their problems.

**Key words:** *Customer orientation, Behavioural dimension, Employee-driven services, Customer satisfaction, Touch points*

## **Introduction**

Sea changes are taking place in the public transport industry and competition is emerging in a different form and character. Consumer switching behaviour is visible in public transportation; commuters are valuing psychic cost, time cost and journey comfort for travelling from one place to another. Earlier, the public transport industry focused on productivity and performance, and very little importance was paid to service quality. Deregulation, availability of alternative modes of transportation, growing expectation of customers and privatization across the world changed this scenario, and as a result, public transport organizations started to focus on service quality and customer satisfaction. Majority of the studies focused on SERVQUAL using five dimensions of service quality to analyze the behaviour of service employees. Bitner et al. (1990) pointed out that behaviour of service employees influence the perception of customers about service quality.

Public transport organizations across the globe are changing their orientation and trying hard to offer better service experience to commuters. In the Indian context, Delhi Metro is a significant breakthrough in public transportation specifically for metropolitan cities. It not only transports 2.8 million customers every day, but also offers environment-friendly, comfortable, congestion-free and convenient services to customers. Keeping in mind the growing pressure on Delhi and the national capital region (NCR) due to speedy migration of people from different parts of the country, the central government seriously started to develop an alternative mode of public transport system to address congestion, pollution and parking problems. The traffic and travel characteristics study, which was carried out in 1969, suggested the concept of mass transit for Delhi. In order to rectify the traffic congestion problem in Delhi and NCR, Delhi Metro Rail Corporation was set up jointly by Government of Delhi and Central Government on 05-03-1995. E-

Sreedharan was appointed as the first managing director of Delhi Metro Rail Corporation.

Delhi Metro Rail Corporation shows concern for their customers and the grievance redressal cell is a part of its customer centric practices. For each line and station, a mobile number as well as land line number is provided to commuters to resolve their grievances, if any. Employee-driven services include consistency in delivery of services, prompt services, and capabilities of employees to develop trust and confidence in the mind of customers for providing defect-free services.

## **Review of Literature**

Service requires the human touch and manual intervention. In order to make the service experience pleasurable and memorable for the customers, all the important touch points must be managed efficiently and effectively. Due to variability of the services, it is extremely difficult for the service organization to provide uniform service quality to all the customers. Moreover, the intangible attributes of services necessitates the need to develop trust and confidence in the mind of customers about service quality. This makes the services more humanistic rather than mechanical. Customers have the tendency to rely more on behaviour of employees while judging the quality of services due to intangibility and high degree of interaction involved in service delivery.

A previous study suggests that employee-driven services have a prominent impact on customer satisfaction. Reeti Agarwal (2000) identified the factors which have a maximum impact on satisfaction levels of customers of Indian Railways. She found that out of various factors, employee behaviour has the maximum effect on satisfaction levels of customers. Employee-driven services can be judged on the basis of dimension of the service quality.

Several researchers such as Parasuraman et al. (1988), Dabholkar et al. (2000) analyzed the role of service employees and considered service employees as a dimension of service quality. A few studies were found on customer orientation of employees conducted by Kelley (1992), Brown et al. (2002) and Donavan et al. (2004). Thorsten Henning Thurau (2004) analyzed four dimensional conceptualization of customer orientation of service personnel. 989 samples were collected for the study and the model was empirically tested in two different service contexts. Mary Jo Bitner et al. (1997), in their study, analyzed the role of customer participation in creating a good service experience. The authors used two frameworks for conducting their study. In the first framework, the participation of customers in a different service context was examined while in the second framework, a major role played by the customers in service delivery was discussed. The outcomes of this specific study draw attention regarding role of customer participation and its impact on customer satisfaction. The level of participation of customers required in the service industry significantly varies.

Lance A. Bettencourt and Kevin Gwinner (1996), in their study, discussed the role of frontline employees in service delivery and explored various issues such as how frontline employees classify customers and execute behavioural strategy for frontline customization. This study reveals important insights about managerial implications for frontline customization.

Barbara R. Lewis and Thomas W. Entwistle (1990) discussed encounters between service contact personnel and the organization. They pointed out that perception of customers about the quality of the service organization is significantly influenced by quality of encounters between the firm and customers.

M.C. Vijayakanth Urs, A.N.Harirao et al. (2014), in their study, analyzed the perception of commuters and tried to find out how public services are delivered by frontline employees. This study specifically analyses how well frontline executives understand the expectations of customers and how internal processes support delivering good quality services to commuters.

Doddy Hendra Wijaya (2009) analyzed customer complaint handling of users of Trans Jakarta Busway. The author identified 20 types of complaints of passengers; these complaints were classified into five dimensions of service quality. The author concluded that all the complaints could not be handled due to a large number of complaints raised by the passengers. Efforts needed to be made to reduce the number of complaints; this could be done by giving customers a website or customer care cell to convey the complaints. Complaint handling is an organized way to address problems of the customers; it helps resolve problems and develops an assurance and confidence in the mind of customers about the service provider. Complaint handling is an activity covering delivery of the complaint, responding to the complaint, feedback and reporting about the complaint handling (Tronvoll 2008).

Markus Fellesson and Margareta Friman (2008) analyzed the perceived service satisfaction of commuters of eight European countries. 9,542 samples were collected from eight countries and respondents were asked to indicate their degree of agreement on 17 attributes. When factor analysis was applied, these 17 attributes emerged into staff, comfort, safety and system. This study highlights the important role of staff behaviour for traveller satisfaction.

K. Douglas Hoffman et al. (1995) discussed service failure and recovery efforts of employees in a

restaurant setting. Service recovery is an effective customer retention strategy which offers additional benefits to customers against failed services in proportion to the magnitude of the service failure. The authors identified the service failure and assessed the perception of customers regarding effectiveness of service recovery strategy. Research studies on service recovery suggest that when customers are given a chance to express their views against service failure, their quality of service experience is enhanced. Kelley et al. (1993) developed a typology for failure and recovery for the retail industry.

Nowadays companies are devising service recovery strategies based on customer demands. Service recovery is an important aspect of customer retention; it is the process of satisfying customers against service failure. Gronroos (1988) stated that service recovery refers to the actions an organization takes in response to a service failure.

Berry and Parsuraman (1991) pointed out that "service failures and failed recoveries are a leading cause of customer switching behaviour in service organizations". According to Formelland Wemerfelt (1987), "Well-executed service recoveries are important for enhancing customer satisfaction, building customer relationships, and preventing customer defections."

Robert Johnston et al. (2008) discussed the impact of service recovery procedure on three outcomes of service recovery, namely, employee recovery, process recovery and customer recovery. The authors argued that employee recovery develops a positive attitude among the employees and increases productivity.

In order to analyze the impact of emotional intelligence over customer satisfaction, an interesting study was conducted by Kernbach and Sally (2005), in which the authors examined whether emotional

intelligence displayed by the service provider leads to customer satisfaction.

Narnasivayam and Karthik (2005) presented a conceptual model on the relationship between misbehaviour of employees and customer dissatisfaction, and examined the factors accountable for customer satisfaction or dissatisfaction.

John Disney (2000) explored the various issues associated with customer satisfaction and loyalty in the retailing and transportation industry. He pointed out that due to deregulation and privatization in the road, rail, sea and air sectors, transformation took place in the public transport industry of UK in the last 15 years. He also stated that customer expectation is rising and reliability is an important factor for both road and rail bus operators.

While analyzing the impact of self-service technology on customer satisfaction, authors Meuter, Matthew and Ostrom Amy (2000) presented 800 critical incidents. In another study, researchers considered 724 critical service encounters in airlines, hotels and restaurants and found that "customer's own misbehaviour is accountable for his dissatisfaction and customer satisfaction is influenced by quality of interpersonal interaction between customer and service contact personnel."

R. Sreedhar et al. (2012), in their research article "Service quality and Passenger satisfaction: An Empirical Study", tried to find the association between five dimensions of service quality associated with Mahesh Motors and assessed overall passenger satisfaction. Multivariate regression analysis was used for data analysis. They found that Mahesh Motors is good in the area of responsiveness, empathy and reliability.

Banwari Mittal (1996), in his study, found that

personalization significantly influences customer experience. He used 223 adult respondents for the survey and employed SERVQUAL as a research instrument.

Lance A. Bettencourt (1996) discussed different roles of customers and pointed out that customers work as co-producers, promoters and consultants. He developed a model of customer voluntary performance and tested the model empirically. Grocery customers were used for sampling purpose.

In an interesting study, Josevarela Gozalez and Terasa Garcia Garazo (2005) tried to understand how organization service orientation influences job satisfaction and organizational citizenship behaviour of customer-contact employees. The authors collected data from 149 hotels and employed SEM (Structural equation modelling) to analyze the result. The specific outcome of this study reveals that OSO (Organization service orientation) positively influences job satisfaction and citizenship behaviour of customer-contact employees. The attitude and behaviour of customer-contact employees significantly influence customer satisfaction and service quality (Parsuraman 1987, Bitner et al. 1990, Gronroos 1990).

Fred Luthans (1998), in his interesting study, analysed the impact of recognition on employees' performance. He stated that recognition positively reinforces performance of employees. Korkaew Jankingthong et al. (2010), in their study, identified the factors affecting job performance of employees. They critically reviewed the existing literature on the topic. Borman and Motowidlo (1993) brought a different insight about performance of employees and divided it into task and contextual performance. Task performance was defined as the effectiveness with which job incumbents perform activities that contribute to the organization's technical core.

## **Objectives of the Study**

This study primarily aims to investigate customer orientation of employees of Delhi Metro. The objective of the study is derived from review of existing literature and gaps in the study. The current section of the study intends to analyze the behavioural dimension of services of Delhi Metro and its impact on customer satisfaction. Based on the outcome of the analysis, this study proposes to arrange the factors which influence passenger satisfaction in a hierarchical order.

**Hypothesis of the Study:** In this study, non-directional hypotheses are used and tested at 5 percent level of significance. Two hypotheses are framed based on objectives of the study.

$H_{01}$ . There is an insignificant relationship between the variables causing passenger satisfaction for employee-driven services of Delhi Metro.

$H_{02}$ . There is an insignificant impact of customer service orientation of employees of Delhi Metro on customer satisfaction.

**Rationale of the Study:** Delhi Metro plays a catalytic role in socio economic development of the national capital region as it facilitates business transactions and offers cost effective services. As metro railway transports 2.8 million customers every day and a high degree of interaction is involved between customers and service employees, it is imperative to analyze customer orientation of the employees of Delhi Metro. The specific outcome of this study brings an important insight about employee-driven services and findings of the study can be used in other projects of the metro railway. This study explores a niche and relatively unexplored area; a very insignificant study was found on light rails/metro rails across the world. In the Indian context, no detailed study was found on metro railway to analyze behavioural aspects of service personnel. The variables used in the study can be applied to suburban railways and mono rails for measuring the

effectiveness of the services with little modification of the variables based on the objectives of the study.

## **Research Methodology**

In this section of the study, the procedure for collecting and analyzing the data is discussed and statistical tools used in the analysis are explained. A total of 9 independent variables and one dependent variable were identified for the study. SPSS.20 statistical software was used for analysis of the data.

**Sources of the Data:** Both primary and secondary data was used for the study. Primary data was collected from all the 160 metro stations; maximum responses were collected from the busiest metro stations such as Rajiv Chowk, Kasmiri gate, Patel Chowk, Vaishali, Laxmi Nagar and Botanical garden. Both male and female respondents were chosen to minimize gender bias and diversified data was used to represent views of every section of society.

**Profile of the respondents:** Respondents with different income levels, backgrounds and native places were selected for the study. Out of 1,015 respondents, 571 are male while 444 are female. When age-wise profile of the respondents are analyzed, it is found that 524 respondents are below 25 years, 265 respondents are between 25 years and 35 years, 179 respondents are between 35 years and 50 years, and the remaining 47 respondents are above 50 years of age. A higher percentage of respondents belong to the age group of below 25 years. This is due to a higher percentage of younger population in India. Respondents are also analyzed based on their profession and it is found that out of 1,015 respondents, 509 are salaried, 108 are self-employed, 70 are housewives and 328 are students.

**Sample Frame:** In order to collect the data, convenience sampling was used due to easy accessibility, affordability and time constraints.

Respondents were contacted at exit points and on the platform, and data was collected on normal working days (not during holidays). A total of 1,100 samples were collected from the respondents of which 1,015 samples were found suitable for the study. The remaining 85 samples were dropped from the study due to vague responses given by the respondents. This shows the response rate of 92.7% against original sample of 1,100.

**Choice description for opinion survey:** Initially a questionnaire was designed and pre testing of the questionnaire was administered on 20 carefully selected respondents. Based on the feedback of the respondents, a few technical questions were removed and a few statements were reworded. A pilot study was conducted on 50 respondents. Respondents were asked to indicate their degree of agreement or disagreement on the 1 to 5 point Likert scale and the questionnaire was filled in a self-administered manner.

**Questionnaire design and identification of variables:** To collect the data, a non-disguised structured questionnaire was designed. The questionnaire was revised several times to make it more understandable and relevant for the study. Statements were used in the questionnaire for speedy collection of the data and objectives of the study were explained to respondents. A total of 9 independent variables and one dependent variable were identified for the study. These variables were extracted from existing review of literature, in-depth interviews and focus group interviews. A few important variables were identified from the study conducted by Reeti Agarwal (2000), R. Sreedhar et al. (2012), and T.Vanniarajan and A. Alleswari (2010).

SN	Variables
1	Provision of alternative trains done by the employees
2	Prompt services
3	Customer care effectiveness
4	Employees' knowledge
5	Employees' politeness
6	Grievance redressal
7	Employees' trustworthiness
8	Employees' punctuality
9	Trust building
10	Employee-driven services satisfaction

These variables belong to the dimension of service quality. Prompt services, customer care effectiveness and grievance redressal belong to responsiveness while trust building and employees trustworthiness belong to assurance. Employees' punctuality and provision of alternative trains in the case of breakdown of engine or technical fault is associated with reliability. Employees' politeness is related to empathy.

**Empirical Model of the Study:** The estimated value of employee-driven services satisfaction is the result of the sum of intercept parameter plus product of coefficient parameters and independent variables plus sum of unobserved variables. The result can also be represented statistically as below

$$\hat{E}_s = \alpha + \sum_{i=1}^9 \hat{\beta}_i E_i + \hat{\mu} \quad \dots \quad (1)$$

Where  $\alpha$  is constant,  $E_1, E_2, E_3$ , up to  $E_9$  are independent variables associated with satisfaction of passengers with employee-driven services,  $\hat{\beta}_i$  is the standardized coefficient of respective independent variable,  $\hat{\mu}$  is the error term and  $\hat{}$  is the estimated value.

**Data Analysis:** In this section of the study, data is analysed using correlation and regression analysis. Reliability of the data was tested using Cronbach alpha test. Out of three reliability tests, Cronbach alpha test was chosen as it is more reliable. A higher value of Cronbach alpha indicates greater reliability.

**Table-1**

SN	No of items	Cronbach Alpha
1	10	.936

Table 1 shows that data is reliable by 93.6 percent which indicates that data is highly reliable. This also shows that there is a very low percentage of error variance in the data.

**Inter Correlation Matrix of Employee-Driven Services:** Inter correlation matrix is used to analyze strength and direction of the relationship between the variables which influence customer satisfaction.

**Table-2 (Inter correlation Matrix)**

	E1	E2	E3	E4	E5	E6	E7	E8	E9	Es
E1	1	.573 **	.569 **	.529 **	.474 **	.496 **	.406 **	.439 **	.384 **	.449 **
E2	.573 **	1	.750 **	.671 **	.480 **	.647 **	.624 **	.563 **	.589 **	.616 **
E3	.569 **	.750 **	1	.703 **	.569 **	.626 **	.608 **	.601 **	.576 **	.621 **
E4	.529 **	.671 **	.703 **	1	.623 **	.586 **	.601 **	.558 **	.572 **	.538 **
E5	.474 **	.480 **	.569 **	.623 **	1	.643 **	.588 **	.565 **	.594 **	.511 **
E6	.496 **	.647 **	.626 **	.586 **	.643 **	1	.688 **	.567 **	.605 **	.593 **
E7	.406 **	.624 **	.608 **	.601 **	.588 **	.688 **	1	.642 **	.672 **	.653 **
E8	.439 **	.563 **	.601 **	.558 **	.565 **	.567 **	.642 **	1	.764 **	.890 **
E9	.384 **	.589 **	.576 **	.572 **	.594 **	.605 **	.672 **	.764 **	1	.709 **
Es	.449 **	.616 **	.621 **	.538 **	.511 **	.593 **	.653 **	.890 **	.709 **	1

In Table 2, the diagonal element of correlation matrix is equal to one because variables correlate perfectly with each other. Here, E1, E2, E3 up to E9 are used to present independent variables while Es is used to denote the dependent variable 'Employee-driven services satisfaction of customers'. Table 2 shows that all the variables are significant.

Here E1= provision of alternative trains, E2=prompt services, E3=customer care effectiveness, E4=employees' knowledge, E5=employees' politeness, E6= Grievance redressal E7= employees' trustworthiness, E8=employees' punctuality, and E9=Trust Building. Table 2 shows that the most significant correlation exists between employee-driven services satisfaction and punctuality of employees. The next significant correlation exists between trust building and Es.

It is also evident from the above table that a significant correlation exists among all the variables associated with attitude and behavioural aspects of service employees. Hence, it is confirmed that first null hypothesis is rejected and alternate hypothesis is accepted. This shows that there is a significant correlation between the variables which influence satisfaction of passengers with employee-driven services.

**Regression Analysis of Employee-driven Services Satisfaction:** A regression model is derived in order to analyze the joint influence of independent variables over the dependent variable. Out of two regression models, the probabilistic regression model is used for the analysis.

#### Model Summary (Table-3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.906a	.820	.818	.442

Table 3 gives the value of R, R<sup>2</sup> and Adjusted R<sup>2</sup>.The value of R<sup>2</sup> is 82%; this shows that 82% variation independent variable is explained by independent variables. This confirms that independent variables jointly influence the dependent variable in the sample and the model is nicely fitted.

ANOVA (Table-4)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	895.444	9	99.494	508.471	.000b
	Residual	196.651	1005	.196		
	Total	1092.095	1014			

Table 4 shows that the value of F- statistic is significant at 5% level of significance. This shows that the model has predictive value and independent variables significantly and jointly influence dependent variable in the population.

Table -5 (Coefficient Table)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	.308	.058		5.290	.000
Provision of alternative trains	.012	.018	.012	.671	.502
Prompt services	.102	.021	.113	4.792	.000
Customer care effectiveness	.054	.022	.057	2.435	.015
Employees' knowledge	.143	.022	.183	6.639	.000
Employees' politeness	.382	.042	.492	9.151	.000
Grievance redressal	.064	.021	.065	3.011	.003
Employees' trustworthiness	.076	.021	.077	3.563	.000
Employees' punctuality	.770	.022	.774	34.614	.000
Trust building	.072	.024	.073	2.990	.003

*Dependent Variable: Employee-services satisfaction*

Table 5 shows that except for the provision of alternative trains in the case of breakdown of the engine or technical fault, all the variables are statistically significant at 5% level of significance and there is a significant, linear and positive relationship between dependent and independent variables. It is also evident from the table that punctuality of employees has the most significant impact over satisfaction of passengers with employee-driven services followed by employees' politeness and knowledge of employees. On the basis of results of regression analysis, factors influencing customer satisfaction for employee-driven services can be arranged in a hierarchical order.

#### Regression Equation of Employee-Driven Services:

The regression equation for employee-driven services can be written as a--

$$\hat{E}_S = \hat{\alpha} + \hat{\beta}_1 E_1 + \hat{\beta}_2 E_2 + \hat{\beta}_3 E_3 + \hat{\beta}_4 E_4 + \hat{\beta}_5 E_5 + \hat{\beta}_6 E_6 + \hat{\beta}_7 E_7 + \hat{\beta}_8 E_8 + \hat{\beta}_9 E_9 + \hat{\mu} \quad \dots (1)$$

Putting the value of intercept and coefficient of independent variables in the above equation--

$$\hat{E}S = .308 + E1 * 012 + E2 * .113 + E3 * .057 + E4 * .183 + E5 * .492 + E6 * .065 + E7 * .077 + E8 * .774 + E9 * .073 + \hat{\mu}$$

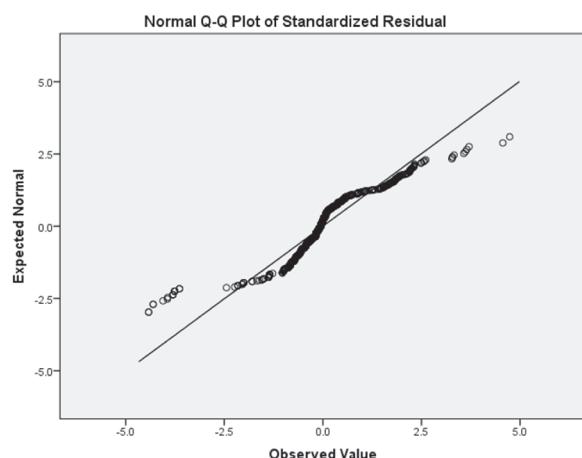
Where  $\alpha$  is constant,  $E_1, E_2, E_3$ , up to  $E_9$  are independent variables associated with satisfaction of passengers with

Employee-driven services and  $\hat{\beta}_1, \hat{\beta}_2$  up to  $\hat{\beta}_9$  are standardized coefficients (Beta values) of respective independent variables.

**Test of Normality-** To review the perfection of the regression model, the normality of residuals are tested by using a graphical approach.

**Graphical Approach for Normality Testing-** To test the normality of residuals, a graphical approach is used. Out of various residuals, standardized residual is used to test normality of residuals. Q-plot is used to ascertain that residuals are normally distributed.

**Chart No-1 (Q- Plot)**



The above chart shows the graphical presentation of Q plot and it is evident from the chart that most of the points are on the regression line. This indicates that standard error around the regression line is very low and the observed value is almost equal to the fitted value. This confirms that residuals are normally distributed, which is desirable for a good regression model.

#### **Testing of Hypothesis: (Employee-Driven Services) –**

The null hypothesis is tested at 5% level of significance. The first null hypothesis is tested by correlation while the second null hypothesis, which states that there is

an insignificant impact of customer orientation of service personnel on satisfaction of passengers, is tested by regression. It is clear from the model summary (Table 3) that the model explains 82% variability of response variable. It indicates that independent variables jointly influence the dependent variable 'employee-driven services satisfaction'. The coefficient table of employees' services also shows that except for one variable, all the variables are significant. Secondly, the ANOVA Table 4 suggests that F-statistic is significant at 5% significance level which shows that the dependent variable can predict the model using independent variables. Hence, this shows that null hypothesis is rejected and alternate hypothesis is accepted. This implies that there is a significant impact of customer orientation of service personnel on satisfaction of passengers with employee-driven services.

**Rationale of the Model and Test:** In this study, multivariate regression analysis was used to estimate the value of response variable and to analyze the impact of predictors over response variable 'Employee-driven services satisfaction'. The result of the regression analysis showed that the model is neither underestimated nor over-estimated and the observed value is almost equal to the fitted value as independent variables significantly explain variability in the dependent variable. Probabilistic regression model was used to examine the joint influence of independent variables over the dependent variable and for testing the hypothesis of the study. Out of the two regression models -the deterministic regression model and probabilistic regression model -the probabilistic regression model was chosen because

the deterministic regression model assumes that all the points are on the regression line. Precisely, correlation was used to analyze the strength and direction of the relationship between the variables while regression was administered to examine the rate of change. In this study, regression analysis was used because the objective of the study was to arrange the factors in a hierarchical order which influence satisfaction of passengers with employee-driven services.

**Limitations of the Study:** Although this study lays significant claim for contribution, it is not free from limitations. In this study, 1,015 samples were used which increases the possibility of sampling error as 2.8 million passengers travel through Delhi Metro every day. The finding of the study may not be representative of the population. Secondly, this study uses only quantitative research technique for the analysis of the result. Supremely multiple methodologies (both quantitative and qualitative) and procedures should be used for better evaluation of attitude and behaviour of service personnel from the perspective of passengers. This study suffers from the limitation of equal weight being given to all the identified variables to avoid complexity of analysis.

**Future Scope of Study:** This study explores and offers an important insight about customer-orientation of employees of Delhi Metro; a comprehensive model can be built by extending the existing study. As the Metro project is expanding in different parts of the country, variables used in this study can be applied for further study for Lucknow, Jaipur, Bengaluru and other expected metro projects. The finding of the study can be refined by complementing parametric research techniques with non-parametric research techniques and by assigning different weights to different variables keeping in mind the relative importance of each variable from passengers' perspectives.

**Managerial Implication:** This study suggests that customer-orientation, punctuality of employees, concern for the customers and knowledge of service employees creates a positive impact on the level of customer satisfaction. All the public transport organizations should focus more on reliability of the service delivery as travellers give highest priority to 'reliable' services. The findings of the study can be used to improve the quality of services of public transportation. Moreover, variables used in this study can be used further with little modifications for measuring the level of passengers' satisfaction with Mono rail, Suburban railway and Volvo buses.

## Conclusion

The quality of services delivered by service personnel has become a key result area for all service organizations irrespective of nature and type of business. Despite increasing dominance of the mechanical element of services, the human element of services plays a critical role in determining satisfaction of passengers. As service personnel are a very important interface between the organization and customers, this study analyses the behavioural dimension of services such as responsiveness, assurance, reliability and empathy, and its impact on customer satisfaction. The findings of the study reveal that customer orientation of service personnel of metro railway is very high and has a significant impact on satisfaction of passengers. The result of the study suggests that employees' reliability has the most significant impact on customer satisfaction and customers also value empathy shown by the service personnel. Based on the results of the study, factors accountable for satisfaction of customers can be arranged in a hierarchical order keeping in mind their relative importance from the perspectives of passengers. It is found that the most significant factor influencing customer satisfaction is punctuality of employees followed by empathy, knowledge of

employees, prompt services, etc. Provision of alternative trains made by the employees is the least important factor and got the last rank. This study is different and more significant than other existing studies as very few studies were found on Delhi metro for measuring the level of satisfaction of passengers for employee-driven services. Moreover, majority of the studies were found on airways, roadways and long distance trains. This study can be extended further as a

very significant study on customer orientation and behavioural dimensions of service personnel of a distinct mode of public transportation - 'Delhi Metro'.

Overall, based on the findings of the study, it can be concluded that the services involving the human touch and manual intervention have a prominent and lasting impact on passenger satisfaction.

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