



## CUSTOMER PERCEPTION AND SATISFACTION OF SERVICE QUALITY OFFERED BY MOBILE NETWORK SERVICE PROVIDERS IN ERODE

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### **Abstract**

*The Indian telecom sector is the world's fastest growing telecom industry. It is also the second largest telecommunication network in the world in terms of number of wireless connection after China. It become pertinent to understand the quality of service provided to the customers by the telecommunication industry, for this purpose, even-though there are number of service providers in this sector, the researcher had selected two providers who are evenly poised with their strengths in the provision of services which are BSNL : Public sector company and all other networks viz, Airtel, Jio, Idea and Vodafone are the Private Sector company is taken for comparison for analysis based on the measurement of Service Quality and Satisfaction towards their services. For service providers, the pursuit of service quality is essential for competitiveness and gaining momentum. Over the last few years, considerable research has been carried out on different aspects of service quality, leading to a sound conceptual base for both practitioners and researchers. it becomes necessary to assess the service quality provided by Jio, Airtel and BSNL with regard to five service quality dimensions like Tangibility, Reliability, Responsiveness, Assurance, Empathy compared with satisfaction on Technical Quality. The objective framed is to study the Customer Perception and Satisfaction of Service Quality offered by Mobile Network Service Providers in Erode. Non-Probability sampling considering the convenience, accessibility and availability of individuals. One hundred and fifty (150) respondents are selected as samples for the study. Statistical tools such as Percentage Method, Correlation and Regression analysis are used for the study. Strong Correlation observed between Service Quality constructs such as Reliability, Responsiveness and Empathy and Satisfaction towards Technical Quality offered by the Service Providers, whereas, weak correlation between Assurance and Technical Quality and no correlation between Tangibility and Technical Quality is observed. Further the regression result proved contribution is observed only from the three predictors which confirms significant relationship between Service Quality and Technical Quality which are Reliability based Service Quality, Responsiveness based Service Quality and finally, Empathy based Service Quality. In conclusion, Technical Quality was found to be at par and satisfactory levels among customers using private network services, whereas, few did not find satisfaction with respect to speed, network connectivity and call quality which are all the areas can be improved by BSNL and also the private players like JIO, Airtel, Idea and Vodafone shall keep up their good work to retain their customer base to achieve greater heights.*

**Key Words: Perception, Satisfaction, Service Provider, Service Quality, Technical Quality.**

### **1. Introduction**

The Indian telecom sector is the world's fastest growing telecom industry. It is also the second largest telecommunication network in the world in terms of number of wireless connection after China. It become pertinent to understand the quality of service provided to the customers by the telecommunication industry, for this purpose, even-though there are number of service providers in this sector, the researcher had selected two providers who are evenly poised with their strengths in the

provision of services which are BSNL : Public sector company and all other networks viz, Airtel, Jio, Idea and Vodafone are the Private Sector company is taken for comparison for analysis based on the measurement of Service Quality and Satisfaction towards their services.

## 2. Perception Towards Service Quality

Services are deeds, processes and performances (Zeithaml et.al., 2008). Broadly speaking, services include all economic activities whose output is not a physical product or whose construction is generally consumed at the time it is produced and which provides added value in forms (convenience, amusement, timeliness, comfort or health) that are essentially intangible for its first purchaser. For service providers, the pursuit of service quality is essential for competitiveness and gaining momentum. Over the last few years, considerable research has been carried out on different aspects of service quality, leading to a sound conceptual base for both practitioners and researchers.

Moeed Ahmad Sandhu, (2013), emphatically argues that service quality is crucial factor for customer satisfaction. His research was undertaken on the telecommunication sector Pakistan, by collecting data from about 300 respondents. Using simple descriptive statistics such as simple percentages and means, data were presented in a tabular form. Following which, complex statistical tools like Regression analysis, Pearson correlation coefficient and ANOVA are utilized to run and to test the proposed hypotheses. The study established that the factors of service quality impacted the customer satisfaction, and the author further suggests that the service providers should improve their technical quality in order to remain competitive in the market.

Zaman, R, (2014) defines two different types of satisfaction 1) Transaction-specific satisfaction which is restricted to the customer's assessment based on the service encounter he has and the resultant reaction or the assessment the customer comes to, based on this encounter. The second one is the 2) cumulative satisfaction, which consists of the customer's assessment of the overall service experience to the date. Both these play a vital role in the overall assessment the customer has towards the service quality.

Maria-Friday, (2017), analysed the Nigerian Telecom market, with a focus on finding out the role played by the service quality dimensions and customer loyalty, towards mediation of customer satisfaction plays a mediating role, by proposing suitable hypothesis and creating a conceptual model. Data was collected from 183 experienced telecom customers using SERVPERF measuring scale for adaptability. For the analysis of data, various correlation techniques were employed. On analysis it was found that, the dimension empathy had a strong and positive relationship, towards customer satisfaction among the various other dimensions analyzed. The author implicates that, since customers have a strong need for individual attention, any service provider who matches that is likely to get more loyal customers.

## 3. Statement of The Problem

Rapidly changing technology and customer needs are increasing consistently. The level of awareness of customers had become imperative to review the Quality of Service parameters for different types of services such as voice and data services in the form of Mobile, Landline, Broadband and Wi-Fi services provided by the two market giants viz. Jio and AirTel competing with BSNL and other service providers in the Telecommunication sector. The forces of liberalization and globalization on telecommunication market had pressurized the companies to face stiff competition that also paved way to maintain their credibility to retain their market share by providing good quality service to their customer base. Therefore, it becomes necessary to assess the service quality provided by Jio, Airtel and BSNL with

regard to five service quality dimensions like Tangibility, Reliability, Responsiveness, Assurance, Empathy compared with satisfaction on Technical Quality.

#### 4. Objective of The Study

To study the Customer Perception and Satisfaction of Service Quality offered by Mobile Network Service Providers in Erode

#### 5. Methodology

Research In Common Parlance refers to the search of knowledge. Research design is descriptive in nature. This piece of research depends entirely on the primary data collected for studying the above mentioned objectives among various individuals in Erode city limits. However, the secondary sources collected to further strengthen and support the research work. The sampling technique used for the research is Non-Probability sampling considering the convenience, accessibility and availability of individuals. One hundred and fifty (150) respondents are selected as samples for the study. Statistical tools such as Percentage Method, Correlation and Regression analysis are used for the study.

#### 6. Analysis and Results

Cronbach's alpha achieved prescribed threshold (0.7 by Nunnally, 1978) for all service quality dimensions (independent) and Technical Quality (Dependent) variables. Further, the descriptive statistics reveals the mean and standard deviation among all five IVs measuring the dependent variable (Technical Quality). Inferences of hypotheses tested for correlation and regression analysis are as follows:

##### 6.1. Correlation

Mean and standard deviation of satisfaction on Technical Quality shows M=3.62, SD=0.851.

Mean and SD of Reliability based Service Quality shows M=3.41, SD=0.760. Correlation between Reliability (IV) and Technical Quality (DV) is found related ( $r=0.547$ , Sig.0.000) and statistical proved significant, thus, rejecting null hypothesis.

**Table: Descriptive and Correlation analysis (Service Quality and Technical Quality)**

| Variables         | Mean | Std. Deviation | Technical Quality              |
|-------------------|------|----------------|--------------------------------|
| Technical Quality | 3.62 | 0.851          | 1.000                          |
| Reliability       | 3.41 | 0.760          | 0.547 <sup>**</sup><br>(0.000) |
| Assurance         | 3.65 | 0.779          | 0.154 <sup>*</sup><br>(0.030)  |
| Responsiveness    | 3.37 | 0.862          | 0.534 <sup>**</sup><br>(0.000) |
| Empathy           | 3.36 | 0.970          | 0.592 <sup>**</sup><br>(0.000) |
| Tangibility       | 3.39 | 0.816          | 0.023<br>(0.388)               |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

- Mean and SD of Assurance based Service Quality shows M=3.65, SD=0.779. Correlation between Assurance (IV) and Technical Quality (DV) is found related ( $r=0.154$ , Sig.0.030) at 5% level and statistical proved significant, thus, rejecting null hypothesis.
- Mean and SD of Responsiveness based Service Quality shows M=3.37, SD=0.862. Correlation between Responsiveness (IV) and Technical Quality (DV) is found related ( $r=0.534$ , Sig.0.000) and statistical proved significant, thus, rejecting null hypothesis.
- Mean and SD of Empathy based Service Quality shows M=3.36, SD=0.970. Correlation between Empathy (IV) and Technical Quality (DV) is found related ( $r=0.592$ , Sig.0.000) and statistical proved significant, thus, rejecting null hypothesis.
- Mean and SD of Tangibility based Service Quality shows M=3.39, SD=0.816. Correlation between Tangibility (IV) and Technical Quality (DV) is not found related ( $r=0.023$ , Sig.0.388) and statistical not proved significant, thus, accepting null hypothesis.

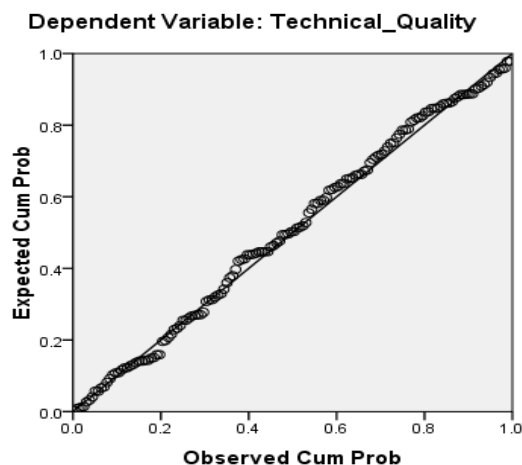
## 6.2. Regression Analysis

In continuation to Correlation analysis, Multiple Regression analysis is conducted using enter method to determine the power of service quality constructs on satisfaction towards Technical Quality. Initially, collinearity diagnostics measured to understand whether there is collinearity between service quality factors (Reliability, Assurance, Responsiveness, Empathy and Tangibility) which reveals that the tolerance and variance inflation factor (VIF) did not found to have violated and recorded within the specified threshold, thus, helping to compare the model measuring perception on Service Quality and Satisfaction of customers towards Technical Quality of the mobile network service providers. Further, the P-P plot in Figure 1 confirms the distribution normality.

**Table 1 : Collinearity Diagnostics**

|                | <b>Tolerance</b> | <b>VIF</b> |
|----------------|------------------|------------|
| Reliability    | .675             | 1.482      |
| Assurance      | .966             | 1.036      |
| Responsiveness | .633             | 1.581      |
| Empathy        | .535             | 1.871      |
| Tangibility    | .934             | 1.071      |

**Normal P-P Plot of Regression Standardized Residual**



The equation is

$$= 0.854 (Y) + 0.305 (X_1:\text{Reliability}) + 0.100 (X_2:\text{Assurance}) + 0.252 (X_3:\text{Responsiveness}) + 0.275 (X_4:\text{Empathy}) - 0.120 (X_5:\text{Tangibility})$$

Relationship between five Service Quality Perception constructs (IV) which are the predictors compared with Satisfaction of Customer towards Technical Quality is the dependent variable shows  $r=0.694$  which found to have strong level of correlation between IV and DV, further, the  $R^2$  explains the variance between Service Quality Perception and Satisfaction on Technical Quality recorded 0.482 and the adjusted  $R^2=0.464$  which is approximately 46%, meaning that the explanation of predictors on dependent variable is reasonably good. ANOVA shows the Fitness of the model  $F(5,144)=26.804$ ,  $\text{Sig}.0.000$  is statistically proved significant thus, achieving the fitness at 1% level. Further, the beta coefficient and 't' values shows the relationship existing between Service quality dimensions and Satisfaction of customers towards Technical Quality, therefore, the hypotheses are

**Table 2 : Relationship between Perception on Service Quality and Satisfaction towards Technical Quality**

| Dependent Variable | Service Quality (IV) | B (Unstd. Coeff.) | S.E. | t-value (Sig.) | R, R <sup>2</sup> & Adj. R <sup>2</sup>                       | F-Value (df) Sig.    |
|--------------------|----------------------|-------------------|------|----------------|---|----------------------|
| Technical Quality  | Reliability          | .305              | .082 | 3.725 (0.000)  | R=0.694<br>R <sup>2</sup> =0.482<br>Adj.R <sup>2</sup> =0.464 | 26.804 (5,144) 0.000 |
|                    | Assurance            | .100              | .067 | 1.500 (0.136)  |   |                      |
|                    | Responsiveness       | .252              | .075 | 3.387 (0.001)  |   |                      |
|                    | Empathy              | .275              | .072 | 3.822 (0.000)  |   |                      |
|                    | Tangibility          | -.120             | .065 | -1.851 (0.066) |   |                      |

### 6.3. Framed Hypotheses

Positive relationship expected between

- H<sub>1</sub>: Reliability and Technical Quality
- H<sub>2</sub>: Assurance and Technical Quality
- H<sub>3</sub>: Responsiveness and Technical Quality
- H<sub>4</sub>: Empathy and Technical Quality
- H<sub>5</sub>: Tangibility and Technical Quality

It is evident that out of five service quality dimensions three are found to be strong contributors in predicting Satisfaction towards Technical Quality and the results shows,

Positive significant relationship exists  $\beta=0.305$ ;  $SE=0.082$ ;  $t=3.725$ , (0.000) between Reliability based Service Quality and Satisfaction towards Technical Quality.

Positive significant relationship exists  $\beta=0.252$ ;  $SE=0.075$ ;  $t=3.387$ , (0.000) between Responsiveness based Service Quality and Satisfaction towards Technical Quality.

Positive significant relationship exists  $\beta=0.275$ ;  $SE=0.072$ ;  $t=3.822$ , (0.000) between Empathy based Service Quality and Satisfaction towards Technical Quality.

Thus, the result partially satisfies the declared hypotheses. Whereas no significant relationship observed between

Assurance based Service Quality and Satisfaction towards Technical Quality  $\beta=0.100$ ;  $SE=0.067$ ;  $t=1.500$ , (0.136) as well as Tangibility based Service Quality and Satisfaction towards Technical Quality  $\beta=-0.120$ ;  $SE=0.065$ ;  $t=-1.851$ , (0.066) thus, accepting null hypothesis.

## 7. Summary of Results

### 7.1. Findings

- Strong Correlation observed between Reliability and Technical Quality offered by the Service Providers
- Weak Correlation exists between Assurance and Technical Quality offered by the Service Providers
- Strong Correlation exists between Assurance and Technical Quality offered by the Service Providers
- Strong Correlation exists between Empathy and Technical Quality offered by the Service Providers
- No Correlation exists between Tangibility and Technical Quality offered by the Service Providers
- Contribution of three predictors which confirms significant relationship between Service Quality and Technical Quality reveals that One unit increase in Reliability based Service Quality increases Satisfaction towards Technical Quality by 0.305 units. Likewise, increase in Responsiveness based Service Quality increases Satisfaction towards Technical Quality by 0.252 units and finally, increase in Empathy based Service Quality increases Satisfaction towards Technical Quality by 0.275 units.

### 7.2. Suggestions

Confidence can be instilled when assurance play major role by customer handling efficiencies, in this regard, more number of respondents in the present circumstances are becoming first customer to the service providers, where, performance on service quality through assurance is much expected to prove their trustworthiness, therefore, it is suggested that the service providers shall support the customers feel easy and assured when using their services. In this regard, tangibility, assurance and technical quality play significant role where there is a need to improve on assurance and tangibility.

Some customers felt attention is not particularly convincing them, therefore, recommendation is that staff shall be imparted with necessary training programmes to display professionalism. Many private sector company customers have low dissatisfaction levels, whereas, BSNL customers have more complaints which needs immediate attention by policy makers.

### 7.3. Conclusion

In conclusion, Technical Quality was found to be at par and satisfactory levels among customers using private network services, whereas, few did not find satisfaction with respect to speed, network connectivity and call quality which are all the areas can be improved by BSNL and also the private players like JIO, Airtel, Idea and Vodofone shall keep up their good work to retain their customer base to achieve greater heights.

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**Appendix**  
**Dependent Variable: Turnover Intentions**

| Model Summary <sup>b</sup>  |                   |          |                   |                            |
|---|-------------------|----------|-------------------|----------------------------|
| Model   | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1   | .694 <sup>a</sup> | .482     | .464              | .62353                     |
| a. Predictors: (Constant), Tangibility, Assurance, Reliability, Responsiveness, Empathy |                   |          |                   |                            |
| b. Dependent Variable: Technical_Quality  |                   |          |                   |                            |

| ANOVA <sup>b</sup>  |            |                |     |             |        |                   |
|---|------------|----------------|-----|-------------|--------|-------------------|
| Model   |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
| 1   | Regression | 52.106         | 5   | 10.421      | 26.804 | .000 <sup>a</sup> |
|   | Residual   | 55.986         | 144 | .389        |        |                   |
|   | Total      | 108.092        | 149 |             |        |                   |
| a. Predictors: (Constant), Tangibility, Assurance, Reliability, Responsiveness, Empathy |            |                |     |             |        |                   |
| b. Dependent Variable: Technical_Quality  |            |                |     |             |        |                   |

| Model                                    |                | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|--|----------------|-----------------------------|------------|---------------------------|--------|------|
|  |                | B                           | Std. Error | Beta                      |        |      |
| 1  | (Constant)     | .854                        | .393       |                           | 2.173  | .031 |
|  | Reliability    | .305                        | .082       | .272                      | 3.725  | .000 |
|  | Assurance      | .100                        | .067       | .092                      | 1.500  | .136 |
|  | Responsiveness | .252                        | .075       | .255                      | 3.387  | .001 |
|  | Empathy        | .275                        | .072       | .313                      | 3.822  | .000 |
|  | Tangibility    | -.120                       | .065       | -.115                     | -1.851 | .066 |
| a. Dependent Variable: Technical_Quality |                |                             |            |                           |        |      |