

Customer perception measuring service quality provided by Airtel telecom services in Coimbatore

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Abstract

Services are deeds, processes and performances. 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. The telecom services have been recognized the world over as an important tool for socio-economic development for a nation. This study attempts to assess the service quality perceptions on the Airtel services which is one of the leading private players in telecom sector and providing services such as Telecommunication (Landline and Mobile) and Broadband Services (Fixedline and Wifi) that are considered as high priority services in telecommunication sector for the study. The objectives are to study the demographic variables of the customers using Telecom services of Airtel in Coimbatore, to measure a model based on the perception towards the services quality provided by Airtel telecom service providers and to contribute suggestions for policy implications. The survey was conducted among the various customers who are specifically using only Airtel telecom services in Coimbatore city limits. The sample size of the study is 175 Nos. The technique used for the research is Non-Probability sampling considering the accessibility and availability of Individuals only using Airtel Telecom services in Coimbatore, the sampling technique selected for the study is on a convenience basis. The study concludes that the service quality provided by Airtel Telecom was found to have highly influenced the customers in Coimbatore and their perception based on the service quality aspects such as Tangibility, Reliability, Responsiveness, Assurance, Empathy and Technical Quality were all found to have been significant contributors in achieving the expected quality. There is a need to specifically improve the empathy factor that was perceived low by the customers who felt that the understanding of the service provider needed more effective to achieve the service quality in the Telecom sector to achieve greater heights in the near future.

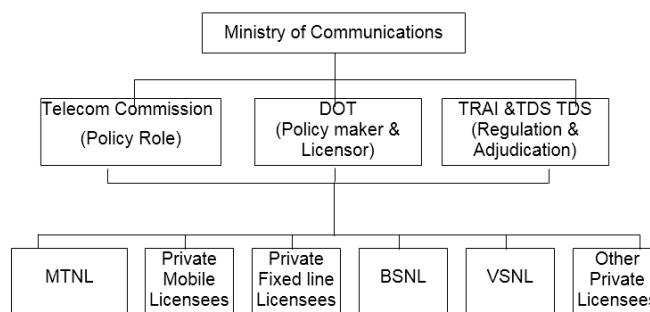
Keywords: airtel, service quality, telecom, broadband, wi-fi, etc.

1. Introduction

The telecom services have been recognized the world over as an important tool for socio-economic development for a nation. It is one of the prime support services needed for the rapid growth and modernization of various sectors of the economy. Economy becomes handicapped in the absence of a sound telecom network system. The postal and telecom sectors had a slow and uneasy start in India. In 1850s, the first experimental electric telegraph Line was started between Calcutta and Diamond Harbour. In 1951, it was opened for the British East India Company. The posts and telegraphs department occupied a small corner of the Public Works Department at that time. The Indian telecom industry 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. Broadband and Cellular services are also have a mention in the development of telecommunication sector. Hence, 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 only Airtel - Private Sector company is taken for comparison for analysis based on the measurement of Service Quality and the customers Preference and Satisfaction towards their services. India's leading Mobile Service operator, Vodafone has added a total of 3.68 million GSM subscribers which is the highest number of new mobile

subscribers and broadband users Among the GSM Mobile Service Operators, Bharti Airtel notched up 3.20 million new subscribers during the month, taking its total base to 162 million. India's national telecom backbone and Pan India 3G Mobile service operator Bharat Sanchar Nigam Ltd (BSNL) added up 1.3 million new users taking its total subscriber base to 86.4 million.

2. Telecommunication Sector



3. Service Quality Literature

Service quality is considered as a vehicle to increase value for the consumer and ensure customer satisfaction (Sivadas) ^[1]. It also helps positioning in a competitive environment (Mehta *et al*) ^[2]. Based on this view, perceived Service Quality is a component of customer satisfaction. Service quality is a forced

evaluation that reflects the customers' perception of elements of the service such as interaction quality, physical environment quality and overcome quality.

Ghobadian *et al.*, [3]. posit that most of the service quality definitions fall within the "customer led". Juran [4] elaborates the definition of customer led quality as "features of products which meet customers' needs and thereby provide customer satisfaction." As service quality relates to meeting customers' needs, focus is towards "perceived service quality" in order to understand consumers. Parasuraman *et al.* [5] looks at perceived quality of service as the difference between customers' expectation and their perceptions of the actual service received.

Service Quality is defined as a "Global judgement or attitude relating to the overall superiority of the service" (Parasuraman *et al.*) [6]. In service organisations, customer perceived service quality is considered as one of the key determinants of business performance

Mehta *et al.* [7] investigated the usefulness of service performance the perception component of SERVQUAL in measuring the service quality of electronic goods retailers, where service is an important component. Their findings further suggested that the retailer must understand the expectation and experience of the customers with regard to the quality of service.

Sureshchander *et al.* [8] conducted a study on the customer perceptions of service quality and concluded that the primary issue with developing an operational definition with the specific components of customer satisfaction is to clearly identify the nature of organization's business. This further extends into the effective collection, analysis and application of customer satisfaction information. The researcher found that services and products are the two major orientation of business. Products also referred to as goods, are the physical output of a business. These are tangible objects that exist in time and space. These are first created then inventories are sold.

Kim *et al.* [9] conducted an exploratory study designed to determine whether the service quality scale could be validated in a discount retail setting in the USA and Korea. Two convenience samples of US and Korean college students provided the data for the study. A multi sample analysis supported that the quality existed in both samples, but the measurement model was not equivalent. Confirmatory factor analysis suggested that consumer in both cultures did not make a distinction between the personal attention and the problem solving dimensions. In addition, the policy dimension was not observed in either sample. Examination of the means of the dimensions indicated difference between the U.S.A and Korean the way consumers perceived the service quality of discount stores.

4. Statement of the problem

With the rapidly changing technologies, customer needs are increasing like their level of awareness and it becomes imperative to review the Quality of Service parameters for different types of services such as Broadband, Landline, and Mobile communication services. Moreover, the forces of liberalization and globalization of telecommunication market have pressurized the companies to maintain their market share by focusing on retaining their current customer base. In the

context of the comparative efforts towards positioning of telecom companies in the market, this study attempts to assess the service quality perceptions on the Airtel services which is one of the leading private players in telecom sector and providing services such as Telecommunication (Landline and Mobile) and Broadband Services (Fixedline and Wifi) that are considered as high priority services in telecommunication sector for the study. To assess the service quality provided by Airtel, six dimensions are taken to measure the services such as Tangibility, Reliability, Responsiveness, Assurance, Empathy and Technical Quality. Therefore it becomes important to understand whether the perception of the customers have positive impact on all the dimensions leading to service quality of Airtel Telecom Services.

5. Objectives of the study

- To study the demographic variables of the customers using Telecom services of Airtel in Coimbatore.
- To measure a model based on the perception towards the services quality provided by Airtel telecom service providers
- To contribute suggestions for policy implications.

6. Methodology

Research in common parlance refers to the search of knowledge. In this context research may be defined as, "The objective and systematic method of finding solution to a problem i.e. systematic collection, recording, analyzing, interpretation and reporting of information about facts of a phenomenon under study". The sources of data included both primary as well as secondary data. Questionnaires were used for the primary data collection whereas secondary data collection was made based on the information provided by the company's officials. Questionnaire was adopted as research instrument. The survey was conducted among the various customers who are specifically using only Airtel telecom services in Coimbatore city limits. The sample size of the study is 175 Nos. The self-prepared questionnaire to find out the personal data of respondents to find out the perception on the service quality. The technique used for the research is Non-Probability sampling considering the accessibility and availability of Individuals only using Airtel Telecom services in Coimbatore, the sampling technique selected for the study is on a convenience basis. The researcher has circulated the instrument to the identified respondents for data collection. This piece of research depends entirely on the Primary Data collected for studying the above mentioned objectives among various individuals in Coimbatore city limites. However, the Secondary data were also collected from the information provided by the company. The objectives framed for the present study formed the basis of the identification of the relevant statistical techniques such as percentage method and SEM.

7. Results of Analysis

7.1 Demographic variables

The demographics of the respondents are classified based on their age, gender, educational qualification, occupation, monthly income, monthly telecom expenses and type of service opted from the Airtel Telecom service provider are presented in the Table below.

Table 1: Demographic variables

S. No.	Demographic Variables	Respondents (175 Nos.)	Percentage (100%)
1.	Age		
	Less than 20 years	30	17.1
	20 to 30 years	57	32.6
	30 to 40 years	46	26.3
	40 to 50 years	25	14.3
	Above 50 years	17	9.7
2.	Gender		
	Male	124	70.9
	Female	51	29.1
3.	Educational Qualification		
	Graduates	90	51.4
	Post Graduates	62	35.4
	Other (High School, Hr. Sec., etc.)	23	13.1
4.	Occupation		
	Government	26	14.9
	Private	70	40.0
	Business	61	34.9
	Others	18	10.3
5.	Monthly Income		
	Less than Rs.20000	29	16.6
	Rs.20000 to 30000	68	38.9
	Rs.30000 to 40000	19	10.9
	Rs.40000 to 50000	25	14.3
	More than Rs.50000	34	19.4

Source: Computed from Primary Data

The above table shows that maximum (32.6%) of the customers belong to the age between 20 and 30 years, while 26.3% of the customers belong the age between 30 and 40 years, 17.1% of the customers are in the age upto 20 years, 14.3% of the customers are in the age of 40 to 50 years and the remaining 9.7% of the customers are in the age above 50 years. It is understood that majority (70.9%) of the customers are male and 29.1% of the customers are female. It is clear that more than half (51.4%) of the customers are graduates, 35.4% of the customers are post graduates and the remaining 13.1% of the customers are having other qualifications such as Higher secondary, technical education, etc. It is evident that majority (40%) of the customers are working in private companies, 34.9% of the customers are conducting their own business (self-employed), 14.9% of the customers are working in Government sector and the remaining 10.3% of the respondents are occupied in other categories (house wife, student, unemployed, etc.). It is clear that maximum (38.9%) of the customers indicated that their monthly family income was between Rs.20000 and 30000, while 19.4% of the customers stated that their monthly family income is more than Rs.50000, 16.6% of the customers opined less than Rs.20000, 14.3% articulated Rs.40000 to 50000 and the remaining 10.9% of the customers confirmed between Rs.3000 and 40000.

7.2 Opinion on usage of Airtel Telecom Services

Followed by the demographic variables the customers opinion on the usage of telecom services for which the monthly expenses and the type of service opted from the Airtel Telecom service provider are presented in the Table-2.

Table 2: Opinion on usage of Airtel Telecom Services

S. No.	Demographic Variables	Respondents (175 Nos.)	Percentage (100%)
1.	Monthly Telecom Expenses		
	Less than Rs.1000	45	25.7
	Rs.1000 to 1500	51	29.1
	Rs.1500 to 2000	38	21.7
	Above Rs.2000	41	23.4
2.	Type of Service		
	Fixed Line with Broadband	115	65.7
	Mobile with Wifi/ Data services	60	34.3

Source: Computed from Primary Data

It is observed that maximum (29.1%) of the respondents spent between Rs.1000 to 1500 per month as their telecom expenses, 25.7% of the customers spent less than Rs.1000, 23.4% of the customers spent above Rs.2000 per month and the remaining 21.7% of the customers spent between Rs.1500 to 2000 per month.

It is evident from the table that majority (65.7%) of the customers are using fixed line with broadband services provided by Airtel and 34.3% of the customers are using mobile with wifi-data services.

7.3 Model measuring the Service Quality based on different dimensions

It is observed that the model fit summary of all six dimensions in which the fourth dimension i.e. Assurance which was found to be least loading variable was co-varied with the empathy to achieve the model fitness and the comparison of initial and final model results are presented in the table hereunder. The fitness of the model is valid only when the results are achieved in line with the Root Mean Square Error of Approximation (RMSEA): 0.08 or less is often considered acceptable (Browne & Cudeck, 1993. Comparative Fit Index: CFI value of 0.90 or greater (Hu & Bentler, 1999). Normed Fit Index (NFI) used to measure model fit above 0.90 are considered acceptable (Bentler & Bonett, 1980). The RMSEA, CFI, NFI and RMR are four good indices to verify that a model is adequate.

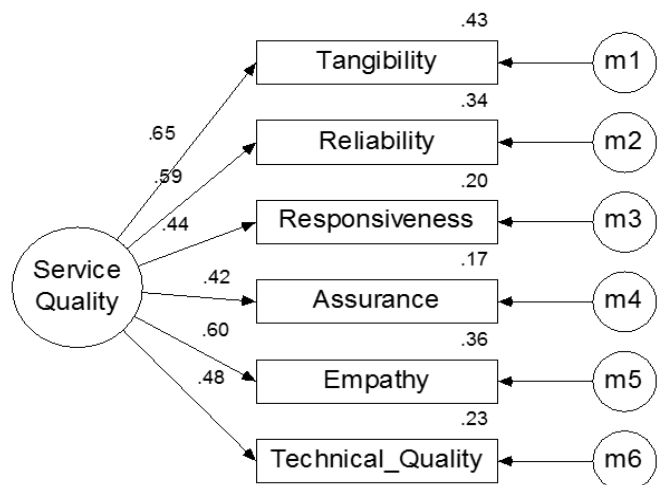


Fig 1: Initial Model (1st Order) measuring the Perception of Customers on Service Quality Provided by Airtel

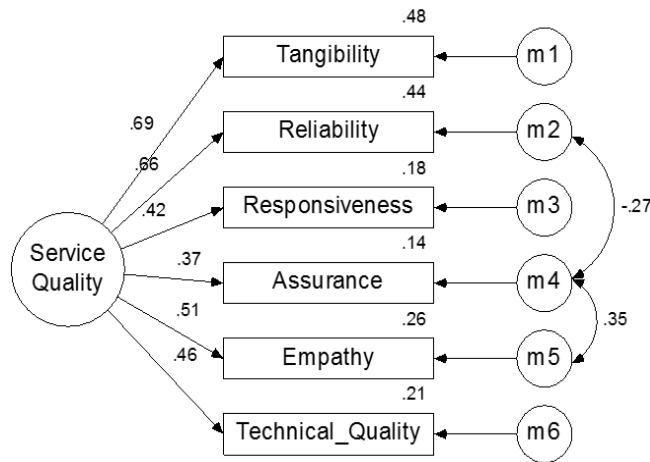


Fig 2: Final Model (2nd Order) measuring the Perception of Customers on Service Quality Provided by Airtel

Table 3: Model Summary

S. No	Model	Initial (Before Modification)	Final (After Modification)
1	CMIN	46.824	14.848
2	DF	9	7
3	CMIN/DF	5.203	2.121
4	RMR	0.521	0.323
5	GFI	0.922	0.974
6	AGFI	0.818	0.921
7	PGFI	0.395	0.325
8	NFI	0.751	0.921
9	RFI	0.585	0.831
10	CFI	0.782	0.955
11	RMSEA	0.155	0.080
12	LO 90	0.113	0.018
13	HI 90	0.201	0.137
14	P-Close	0.000	0.164

It is observed that the fit indices based on the level of perception of customers of Airtel Customers in Coimbatore towards service quality based on various dimensions such as Tangibility, Reliability, Responsiveness, Assurance, Empathy and Technical Quality are considered to be the major factors to achieve the service quality among the customers which has significant impact on the results that shows the fitness was proved through the SEM model shows all the six dimensions before modification and after conducting modification indices in which the initial model reveals that the CMIN = 46.824, CMIN/DF = 5.203, CFI = 0.782, NFI=0.751 and RMSEA

0.155 shows low fit and proves that the models needs improvement to prove the significance of the study which reveals positive perception of the customers based on the service quality provided by Airtel which reveals after modification indices shows improvements in the model CMIN = 14.848, CMIN/DF=2.121, CFI=0.955, NFI = 0.921 and the RMSEA = 0.080 shows acceptable fit and proves that the service quality rendered by the Airtel service provider is proved positive with the model fit acceptable to conclude the study.

Table 4: Regression Weights showing customer perception on Service Quality of Airtel Telecom

			Estimate	S.E.	C.R.	P	Result
Tangibility	<---	Service Quality	1.872	.223	8.408	***	Significant
Reliability	<---	Service Quality	1.856	.235	7.880	***	Significant
Responsiveness	<---	Service Quality	1.118	.225	4.965	***	Significant
Assurance	<---	Service Quality	.819	.210	3.897	***	Significant
Empathy	<---	Service Quality	1.486	.247	6.007	***	Significant
Technical Quality	<---	Service Quality	1.144	.209	5.472	***	Significant

H01: Direct significant positive effect of Service Quality based on Tangibility

The standardized direct (unmediated) effect of Service Quality on Tangibility is 1.872 is due to the direct effect of Service Quality on Tangibility, when Service Quality goes up by 1,

Tangibility goes up by 1.872. The probability of getting a critical ratio as large as 8.408 in absolute value is less than 0.001 and the regression weight for Service Quality in the prediction of Tangibility is significantly different from zero at the 0.001 level (two-tailed).

H02: Direct significant positive effect of Service Quality based on Reliability

The standardized direct (unmediated) effect of Service Quality on Reliability is 1.856 is due to the direct effect of Service Quality on Reliability, when Service Quality goes up by 1, Reliability goes up by 1.856. The probability of getting a critical ratio as large as 7.880 in absolute value is less than 0.001 and the regression weight for Service Quality in the prediction of Reliability is significantly different from zero at the 0.001 level (two-tailed).

H03: Direct significant positive effect of Service Quality based on Responsiveness

The standardized direct (unmediated) effect of Service Quality on Responsiveness is 1.118 is due to the direct effect of Service Quality on Responsiveness, when Service Quality goes up by 1, Responsiveness goes up by 1.118. The probability of getting a critical ratio as large as 4.965 in absolute value is less than 0.001 and the regression weight for Service Quality in the prediction of Responsiveness is significantly different from zero at the 0.001 level (two-tailed).

H04: Direct significant positive effect of Service Quality based on Assurance

The standardized direct (unmediated) effect of Service Quality on Assurance is 0.819 is due to the direct effect of Service Quality on Assurance, when Service Quality goes up by 1, Assurance goes up by 0.819. The probability of getting a critical ratio as large as 3.897 in absolute value is less than 0.001 and the regression weight for Service Quality in the prediction of Assurance is significantly different from zero at the 0.001 level (two-tailed).

H05: Direct significant positive effect of Service Quality based on Empathy

The standardized direct (unmediated) effect of Service Quality on Empathy is 1.486 is due to the direct effect of Service Quality on Empathy, when Service Quality goes up by 1, Empathy goes up by 1.486. The probability of getting a critical ratio as large as 6.007 in absolute value is less than 0.001 and the regression weight for Service Quality in the prediction of Empathy is significantly different from zero at the 0.001 level (two-tailed).

H06: Direct significant positive effect of Service Quality based on Technical Quality

The standardized direct (unmediated) effect of Service Quality on Technical Quality is 1.144 is due to the direct effect of Service Quality on Technical Quality, when Service Quality goes up by 1, Technical Quality goes up by 1.144. The probability of getting a critical ratio as large as 5.472 in absolute value is less than 0.001 and the regression weight for Service Quality in the prediction of Technical Quality is significantly different from zero at the 0.001 level (two-tailed).

8. Summary of Results**Demographic Variables**

- Maximum (32.6%) of the customers belong to the age between 20 and 30 years
- Majority (70.9%) of the customers are male

- More than half (51.4%) of the customers are graduates
- Majority (40%) of the customers are working in private companies,
- Maximum (38.9%) of the customers indicated that their monthly family income was between Rs.20000 and 30000

Opinion on usage

- It is observed that maximum (29.1%) of the respondents spent between Rs.1000 to 1500 per month as their telecom expenses
- It is evident from the table that majority (65.7%) of the customers are using fixed line with broadband services provided by Airtel

9. Model Summary

After modifying to prove the significance of the model fitness that shows reveals positive perception of the customers based on the service quality provided by Airtel. However, the researcher found some of the areas that needed to be improved. Even though, the study shows significant positive effect of all the six dimensions which was dominated by Tangibility, Reliability and Empathy which was found to have higher level of significant perception based on the service quality provided by Airtel. Whereas, even though there is significant positive effect measured with respect to Technical Quality, Responsiveness and Empathy there is a need to improve these dimensions to maximum satisfy the customers. The study concludes that the service quality provided by Airtel Telecom was found to have highly influenced the customers in Coimbatore and their perception based on the service quality aspects such as Tangibility, Reliability, Responsiveness, Assurance, Empathy and Technical Quality were all found to have been significant contributors in achieving the expected quality. There is a need to specifically improve the empathy factor that was perceived low by the customers who felt that the understanding of the service provider needed more effective to achieve the service quality in the Telecom sector to achieve greater heights in the near future.

10. References

1. Sivasdas Eugene, Jamie Baker-Prewitt. An examination of the relationship between service quality, customer satisfaction and store loyalty. International Journal and distribution management. 20002; 28(2):73-82.
2. Mehta C Subhash, Ashok Lalwani, Soon Li Han. Service quality in retailing: Relative efficiency of alternative measurement scales for different product service environments. International Journal and distribution management. Vol.28 (2), Pp.62-72.
3. Ghobadian A, Speller & Jones M. Service Quality: Concepts and Models. International Journal of Quality & Reliability Management. 1994; 11(9):43-66.
4. Juran JM. How to Think About Quality. In Juran J.M & Godfrey.A.b (Eds). Juran's Quality Handbook, Pp.2.1-2.3, 5th Edition, New York: McGraw-Hill.
5. Parasuraman A, Zeithaml VA, Berry LL. A Conceptual Model of Service Quality and its Implications for future research. Journal of marketing. Vol.49, Pp.41-50.
6. Parasuraman A, Zeithaml VA, Berry LL. SERVQUAL: A Multiple – Item Scale for Measuring Consumer Perceptions of Service Quality. Journal of Retailing. 1988; 64(1):12-40.

7. Mehta Subash C Lalwani, Ashok K. Measuring the Service Quality of retailers Distributing Technical products with High Service. *Journal of Professional service marketing*. 2000; 20(2):33-39.
8. Sureshchander, Rajendran, Kamalanaban. Customer Perceptions of Service Quality: A Critique Total Quality Management. *Journal of Professional Service Marketing*. 2001; 12(1):111-125.
9. Kim S, Jin B. Validating the Retail Service Quality Scale for US and Korean customers of discount stores: An Exploratory Study. *Journal of Service Marketing*. 2002; 16(3):223-238.
10. Sivadas, Eugene, Jamie Baker-Prewitt. An examination of the relationship between service quality, customer satisfaction and store loyalty. *International Journal and distribution management*. 2002; 28(2):73-82.
11. Mehta C, Subhash, Ashok Lalwani, Soon Li Han. Service quality in retailing: Relative efficiency of alternative measurement scales for different product service environments, *International Journal and distribution management*. 28(2):62-72.
12. Ghobadian, Speller, Jones M. Service Quality: Concepts and Models, *International Journal of Quality & Reliability Management*. 1994; 11(9):43-66.
13. JM Juran. How to Think About Quality. In Juran JM, Godfrey Ab (Eds). *Jurans Quality Handbook*. Edition, New York: McGraw-Hill. (5):2.1-2.3.
14. Parasuraman A, Zeithaml VA, Berry LL. A Conceptual Model of Service Quality and its Implications for future research, *Journal of marketing*. 49:41-50.
15. Parasuraman A, Zeithaml VA, Berry LL. Servqual: A Multiple – Item Scale for Measuring Consumer Perceptions of Service Quality, *Journal of Retailing*. 1988; 64(1):12-40.
16. Mehta Subash C Lalwani, Ashok K. Measuring the Service Quality of retailers Distributing Technical products with High Service, *Journal of Professional service marketing*. 2000; 20(2):33-39.
17. Sureshchander, Rajendran, Kamalanaban. Customer Perceptions of Service Quality: A Critique Total Quality Management, *Journal of Professional Service Marketing*. 2001; 12(1):111-125.
18. Kim S, Jin B. Validating the Retail Service Quality Scale for US and Korean customers of discount stores: An Exploratory Study, *Journal of Service Marketing*. 2002; 16(3):223-238.