

EMPIRICAL STUDY ON APPLICATION OF SERVQUAL MODEL WITH SPECIAL REFERENCE TO RELIANCE JIO, MAHARASHTRA

Dr. Arjita Jain, Professor & HoD (MMS Program),
NCRD's Sterling Institute of Management Studies, Navi Mumbai,
arjitajain@yahoo.com

Dr. Sandeep Ponde, Associate Professor,
NCRD's Sterling Institute of Management Studies, Navi Mumbai,
sandeepponde@yahoo.com

Dr. Prashant Gundawar, Director,
NCRD's Sterling Institute of Management Studies, Navi Mumbai,
gundawar@gmail.com

ABSTRACT

Business philosophy plays a key role in managing a business in the market that is highly competitive and unpredictable. Sustainability of any business depends upon customer satisfaction through quality delivery of product and services. It is the information era where customers are getting more knowledgeable and sophisticated. Customer's expectations are dynamic and keep on changing with the time that makes companies' jobs more challenging. Under such a turbulent business environment managing and measuring services efficiently and effectively is more puzzling in the service sector as compared to other sectors like manufacturing, mining etc. Telecommunication is one such sector; in India this sector has experienced phenomenal growth after the launch of Reliance Jio. This paper presents the application of the SERVQUAL model with special reference to Reliance Jio, Maharashtra. In order to measure the service quality SERVQUAL model is used extensively. Across Maharashtra randomly 100 customers of Reliance Jio were selected and participated in this research study through survey. On five parameters of the SERVQUAL model namely reliability, responsiveness, assurance, empathy and tangibles, the expectations and perception of Reliance Jio customers were measured. There were 22 questions in the questionnaire where the 5-point Likert scale was used. Primary data was collected using the Google form. With regard to expectation and perception standard deviation and mean was calculated for all 22 items. Paired t test was used to compare the expected score and perceived score for each parameter. There is no statistically significant difference in the expected and perceived score for services provided by Reliance Jio. Majority of the respondents were satisfied.

Keywords: Service Quality, Customer Expectation, Customer Perception, Customer Satisfaction and SERVQUAL

Introduction

Any business entity can retain its customers by providing quality services at a reduced cost. This also results in customer loyalty and retention. A comparison of perceived expectations of a service with perceived performance is known as service quality. Any business whose service quality is high means they are exceeding their customer expectations. Through this they are having an edge over their competitors. Delivering superior value to their customers is a key concern of all the managers in the service industry. It is essential for every business entity to determine the lacuna between what is the service quality expected by the customers and how is the customer perception regarding service quality. For service quality measurement the SERVQUAL model is used most commonly. This model was developed by Zeithaml, Parasuraman and Berry. Parasuraman et al in their research (1985; 1991; 1994). Facilities, reliability, responsibility, communication, credit, security, qualification, politeness, understanding of the client, and availability were the 10 dimensions for the identification of service quality. Later these were converted into five dimensions as reliability, assurance, tangibles, empathy and responsiveness. In other words, these five dimensions mean consistent and genuine services, customer reliance, physiognomy of employees, sensitivity towards customers and immediate and quick customer service.

Though this model deficiencies between what customer expects and what he receives are identified, once the deficiencies are identified they are rectified to improve the customer service. Quality plays a key role in satisfying the customer.

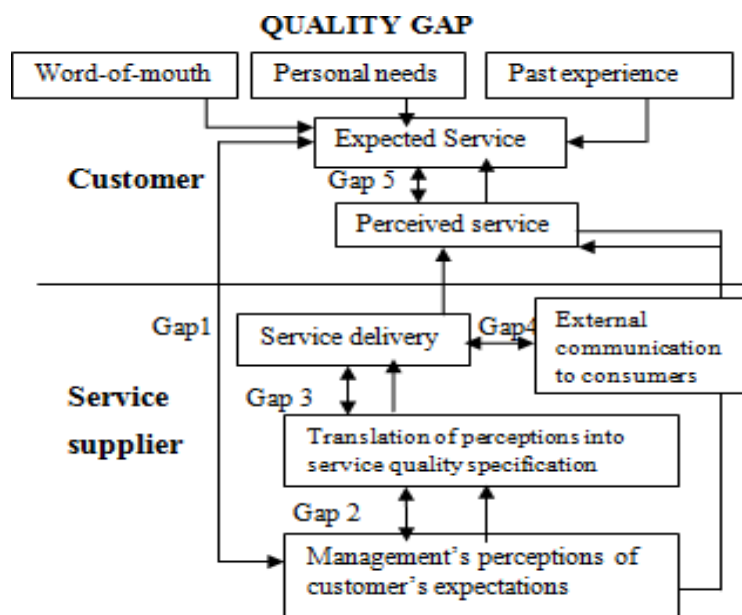


Figure 1: Model of Service Quality Gaps (Source: Parasuraman et al)

Through this study researchers aim to identify the quality of services rendered by Reliance Jio in Maharashtra using the SERVQUAL model. As customer preferences keep changing frequently; this research paper takes an opportunity to contribute to growing literature on this topic.

Literature Review

Ahuja, Mahlawat & Masood (2011) tested the application of the SERVQUAL model in Govt. Eye care hospitals in Haryana. Customer satisfaction and quality of service impacts the perception of customers' and their outlook regarding services provided. Superior quality of services results in greater satisfaction levels among customers. There is a relation amid quality of management and service performance. Deficiencies in patient perceptions and expectations were measured.

Akhlaghi, Amini & Akhlaghi (2012) tested the application of SERVQUAL model in educational institutes. Through this five-dimensional SERVQUAL model the service level of institutions is gauged. The service gaps revealed were measured. The service modifications and improvements in educational establishments were suggested. Major inefficiencies of service quality observed were in responsiveness that was creating dissatisfaction among the students.

Randhir (2018) conducted a study in the telecommunication industry. Quality of a service provided by a company determines its customer satisfaction. In the telecommunication industry there are service quality gaps. Service quality impacts the customer satisfaction. SERVQUAL model is important in understanding the customers' problems. What services customers expect and what they receive determines the level of satisfaction among customers. Complaints must be handled timely. Service level governs the happiness among customers.

Badlani & Singhal (2019) presents the importance of the SERVQUAL model with respect to the measurement of quality of service and gap recognition. Gap analysis performed through the SERVQUAL model offers various improvement areas. These areas further give a new dimension to the organization to implement change and provide the direction to improve the quality of service and customer experience.

Alberto et al (2019) tested the service quality of transportation in a Mexican company using the model of SERVQUAL. The customer expectations and their observations were measured using this model. The five variables of this model were measured on a five-point scale and gauged the service quality of the transport system being used by the general public.

Ko & Chou (2020) performed an investigative study where the condition of a nursing home was compared before and after the implementation of SERVQUAL method. How patients rate the performance of nursing home, what difficulties they are facing were brought out to the surface. The well-maintained infrastructure and supported by skilled medical staff dedicated to serve the patients are prime factors which contribute to higher customer satisfaction.

Shetty & Peruleetal (2022) assesses the application of modified SERVQUAL model in Indian public sector banks. In the banking industry, retention of customers is primarily influenced by its services. Quality inservice is impacted by many factors like Tangible, Responsiveness, Empathy and Assurance With the inclusion of creativity and innovation in these parameters public sector banks can improve their customer service and bonding with customers. This will also help banks to gain competitive advantage and higher customer retention.

Jonkisz, Karniej & Krasowska (2021) studies the application of the SERVQUAL method in medical services. This method is extensively used across various sectors. This method helps in investigating gaps in quality and appropriate changes can be incorporated in the services. Respondents' perceptual differences may impact the gap analysis. On the other hand application of this method results into improved performance of medical staff and higher customer satisfaction,

Salameh & Hassan (2015) in their study found that quality of service, quality of a system and quality of information determines the worth of service in m-commerce. Study created awareness and understanding regarding the practices of m-commerce and deeper understanding of behavioural intentions of customers and vendors.

Yarimoglu (2014) presents the review of various service quality models. To improve the quality of services a company must understand the expectations of their customers. A transparent and open communication with its customers leads to increased satisfaction. Physical environments should be designed as per the needs of the customers. Processes need to be refined with respect to changing needs of the customers and these should be in sync with the environmental changes.

Limitations Of The Study

This research is only applicable to Reliance Jio customers residing in Maharashtra. Therefore; its findings cannot be generalized. Due to time limitation data has been collected and analysed based upon feedback given by 100 customers of Reliance Jio, across Maharashtra. Quality dimensions for service industries are considered here; study does not comprise industry specific service attributes.

Objectives of the Study

1. Investigate the factors that influence customer satisfaction
2. Using the SERVQUAL model, to assess customer satisfaction with Reliance Jio's services.
3. Conduct a gap analysis amid customer expectations along with perceptions of Reliance Jio's services.

Hypothesis

H0: There is no statistically significant difference between perceived and expected score.

H1: There is a statistically significant difference between perceived and expected score.

Research Methodology

To assess the quality of service rendered by Reliance Jio an observational study design has been used. A sample of 100 Reliance Jio customers was chosen for this study. Deductive quantitative research was used and primary data was collected through Google form. Adults over 18 from Maharashtra; who were using the services of Reliance Jio were the respondents. Non-probability convenience sampling method was adopted on the basis of accessibility. Questionnaire (Parasuraman et al 1988) as a means to evaluate the quality of service offered by Reliance Jio worked as an instrument to assess the opinion of customers. Questionnaire was comprised of three parts. The first section part included respondent's name, e-mail id, age, current service providers, and place of residence in Maharashtra. The second part was comprised of various questions which aimed at assessing the quality expectations of customers/respondents towards the services provided by Reliance Jio. Likert scale extending from 1 (strongly disagree) to 5 (strongly agree) was used for data collection. The third part consisted of questions which aimed at gauging how customers perceive the quality of service rendered by Reliance Jio. 5 point Likert Scale was used as discussed above. Various questions in this part were based on the key dimension of SERVQUAL model as reliability, tangibility, responsiveness, assurance and empathy. On all these dimensions/aspects respondents shared their observations. What is the gap between expected and perceived service rendered by Reliance Jio was assessed. Average score of perceived service quality and expected quality service was calculated. Service gap was calculated. Paired t-test was used to compare the expected score and perceived score for each dimension of SERVQUAL model.

Data Analysis and Interpretation

Respondents' profile is based on Gender, Age and Place of Residence in Maharashtra.

Sr. No.	Particulars	Frequency	Percentage
	Gender		
1	Male	47	47%
	Female	53	53%
	Age in Years		
2	18 – 25	64	64%
	25 – 35	28	28%
	35 – 45	5	5%
	45 and Above	3	3%
	Place of Residence		
3	Maharashtra	100	100%

Table 1: Distribution of Respondents based on Gender, Age and Place of

Residence

Gender of a respondent may impact their preferences towards a product/service. In this survey female respondents participated more than male respondents. Female and male respondents' ratio was 53% and 47% respectively. Respondents' age may impact their satisfaction with regards to a product/service. 64% of the respondents were mainly in the age group of 18 to 25. The responses were analysed using Five-point Likert scale where 1 represented strongly disagree to 5 represented strongly agree. Standard Deviation and arithmetic mean was calculated for each dimension of SERVQUAL model to gain insights on level of satisfaction.

The mean and standard deviation of each of the five dimensions are displayed in Table 2 to Table 6 as follows: -

Statements	N	Expectation		Perception	
		Mean	Std. Deviation	Mean	Std. Deviation
Tangibles 1	100	4.15	0.93	4.15	1.10
Tangibles 2	100	4.09	0.94	4.15	1.03
Tangibles 3	100	3.83	0.91	3.94	0.93
Tangibles 4	100	3.93	1.00	4.01	0.94

Table 2: Mean and Standard Deviation of Tangibles Dimension

Statements	N	Expectation		Perception	
		Mean	Std. Deviation	Mean	Std. Deviation
Reliability 1	100	4.13	1.10	4.05	0.91
Reliability 2	100	3.97	1.09	3.94	0.89
Reliability 3	100	3.68	1.09	3.76	0.93
Reliability 4	100	4.14	0.98	3.83	0.99
Reliability 5	100	4.18	0.85	3.92	1.01

Table 3: Mean and Standard Deviation of Reliability Dimension

Statements	N	Expectation		Perception	
		Mean	Std. Deviation	Mean	Std. Deviation
Responsiveness 1	100	3.15	1.42	3.08	1.33
Responsiveness 2	100	3.19	1.12	3.18	1.18
Responsiveness3	100	2.70	1.29	3.03	1.23
Responsiveness 4	100	3.02	1.22	3.26	1.12

Table 4: Mean and Standard Deviation of Responsiveness Dimension

Statements	N	Expectation		Perception	
		Mean	Std. Deviation	Mean	Std. Deviation
Assurance 1	100	4.01	1.08	3.93	1.03
Assurance 2	100	4.15	0.94	3.93	0.96
Assurance 3	100	4.28	0.90	4	0.96
Assurance 4	100	4.08	0.85	3.87	0.90

Table 5: Mean and Standard Deviation of Assurance Dimension

Statements	N	Expectation		Perception	
		Mean	Std. Deviation	Mean	Std. Deviation
Empathy 1	100	3.25	1.34	3.23	1.21
Empathy 2	100	3.15	1.33	3.15	1.24
Empathy 3	100	3.11	1.38	3.09	1.31
Empathy 4	100	3.23	1.21	3.3	1.28
Empathy 5	100	3.16	1.29	3.25	1.28

Table 6: Mean and Standard Deviation of Empathy Dimension

The above self-explanatory table shows that the means of the expectations for various dimensions are greater than the perception. It can be inferred that there is a slight gap between expected and perceived service quality offered by Reliance Jio.

Dimensions & Items	Expectation (E)		Perception (P)		Mean Gap Score = P-E	Std. Deviation Gap Score = P-E
	Mean	Std. Deviation	Mean	Std. Deviation		
Tangibles 1	4.15	0.93	4.15	1.10	0	0.17
Tangibles 2	4.09	0.94	4.15	1.03	0.06	0.09
Tangibles 3	3.83	0.91	3.94	0.93	0.11	0.02
Tangibles 4	3.93	1.00	4.01	0.94	0.08	-0.06
Reliability 1	4.13	1.10	4.05	0.91	-0.08	-0.19
Reliability 2	3.97	1.09	3.94	0.89	-0.03	-0.2
Reliability 3	3.68	1.09	3.76	0.93	0.08	-0.16
Reliability 4	4.14	0.98	3.83	0.99	-0.31	0.01

Reliability 5	4.18	0.85	3.92	1.01	-0.26	0.16
Responsiveness 1	3.15	1.42	3.08	1.33	-0.07	-0.09
Responsiveness 2	3.19	1.12	3.18	1.18	-0.01	0.06
Responsiveness 3	2.70	1.29	3.03	1.23	0.33	-0.06
Responsiveness 4	3.02	1.22	3.26	1.12	0.24	-0.2
Assurance 1	4.01	1.08	3.93	1.03	-0.08	-0.05
Assurance 2	4.15	0.94	3.93	0.96	-0.22	0.02
Assurance 3	4.28	0.90	4	0.96	-0.28	0.06
Assurance 4	4.08	0.85	3.87	0.90	-0.21	0.05
Empathy 1	3.25	1.34	3.23	1.21	-0.02	-0.13
Empathy 2	3.15	1.33	3.15	1.24	0	-0.09
Empathy 3	3.11	1.38	3.09	1.31	-0.02	-0.07
Empathy 4	3.23	1.21	3.3	1.28	0.07	0.07
Empathy 5	3.16	1.29	3.25	1.28	0.09	-0.01

Table 7: Calculation of Gap Score

Dimensions	Mean Gap Score	Mean Standard Deviation
Tangibles	0.06	0.06
Reliability	-0.12	-0.08
Responsiveness	0.12	-0.11
Assurance	-0.79	0.02
Empathy	0.03	-0.23

Table 8: Overall Analysis

	Mean 1	Mean 2	SD 1	SD 2	n	T _{cal}	T _{tab}	Decision
Tangibles	4	4.0625	0.945	1	100	$0.0625/0.137= 0.456$	1.96	T _{cal} < t _{tab} Accept H ₀
Reliability	4.02	3.9	1.022	0.946	100	$0.12/0.1389= 0.8639$	1.96	T _{cal} < t _{tab} Accept H ₀
Responsiveness	3.015	3.1375	1.2625	1.215	100	$0.1225/0.175=0.7$	1.96	T _{cal} < t _{tab} Accept H ₀
Assurance	4.13	3.9325	0.9425	0.9625	100	$0.1975/0.134= 1.47$	1.96	T _{cal} < t _{tab} Accept H ₀
Empathy	3.18	3.204	1.31	1.264	100	$0.024/0.18= 0.133$	1.96	T _{cal} < t _{tab} Accept H ₀

Table 9: Paired t-Test

Overall Research Findings

Tangibles

The tangibles dimension has a mean gap score as 0.06. The mean standard deviation gap score for tangibles dimension is 0.06. Positive value of mean gap score shows the satisfaction among customers with regard to service quality of services depicted by Tangibles dimension. Positive value of mean standard deviation gap score indicates that the spread of gaps is away from the mean.

Reliability

The Reliability dimension has a mean gap score as -0.12 and standard deviation gap score is -0.08. The negative value of mean gap score shows that the customers are not satisfied with the service quality of services depicted by Reliability dimension. The negative value of mean standard deviation gap score indicates that the spread of gaps is not far away from the mean.

Responsiveness

The Responsiveness dimension has a mean gap score as 0.13. The mean standard deviation gap score for responsiveness dimension is -0.11. The positive value of mean gap score shows the satisfaction among customers with regards to the service quality of services depicted by Responsiveness dimension. Negative value of mean standard deviation gap score indicates that the spread of gaps is not far away from the mean.

Assurance

The Assurance dimension has a mean gap score as -0.79 and means standard deviation gap score is 0.02. The negative value of mean gap score shows that the customers are not satisfied with the service quality of services depicted by this parameter. Positive value of mean standard deviation gap score indicates that the spread of gaps is away from the mean.

Empathy

The Empathy dimension has a mean gap score as 0.03 and means standard deviation gap score is -0.25. Positive value of mean gap score shows that the customers are satisfied with the service quality of services depicted through Empathy dimension. Negative value of mean standard deviation gap score indicates that the spread of gaps are not very far away from the mean.

Table 1 to Table 7 shows that the means of the expectations for a few dimensions are greater than the perception. Data analysis reveals a slight gap exists amid expected and perceived service quality offered by Reliance Jio, wherein Table 9 specifies that in each case, when paired t test was performed calculated t value is higher than tabulated t value. Hence Null Hypothesis H₀ is accepted. Researchers are of the opinion that most of the Reliance Jio customers are satisfied with the service rendered by the company.

Conclusion

This research study's goal was to demonstrate the SERVQUAL model's use with particular reference to Reliance Jio, Maharashtra. An evaluation of the discrepancy between consumer expectations and perceptions of quality was made.

This study offers new insights on the subject of service quality, and it is thought that there are a number of things that can be done to broaden the usage of SERVQUAL in the design and enhancement of high-quality services. Analysis of the data revealed that most respondents were happy with the services offered by Reliance Jio. Most of the respondents expressed their satisfaction with the services in the aspects of Tangibles, Responsiveness, and Empathy as being extremely high. According to the analysis, Reliance Jio's customer care services, which fall under the reliability and assurance dimensions, did not receive a high level of consumer satisfaction. Paired t-test was also applied to find out the gap between expected and perceived services. The results of the T-test reveal that there is no difference between the perceived and expected services offered by Reliance Jio and what customers expect. So, this can be concluded that most users are happy with the services offered by Reliance Jio. Researchers are of the opinion that Reliance Jio needs to focus more on the customer care services and they need to respond to the customer's issues on an immediate basis.

Scope for Further Research

As customer expectation and perception is dynamic it is important for every service provider to have a regular check on service gaps and take appropriate actions. The SERVQUAL model can be applied to assess the quality of internal processes which ultimately influences the satisfaction of a customer.

References

- Ahuja, M., Mahlawat, S., & Masood, R. Z. (2011), Study of Service Quality Management With SERVQUAL Model: An Empirical Study of Govt/NGOs Eye Hospitals In Haryana, *Indian Journal of Commerce & Management Studies*, 2(2), 310-318
- Akhlaghi, E., Amini, S., & Akhlaghi, H. (2012), Evaluating Educational Service Quality in Technical and Vocational Colleges using SERVQUAL Model, *Procedia-Social and Behavioral Sciences*, 46, 5285-5289

- Chao H. K. & Chin M.C. (2020), Apply the SERVQUAL Instrument to Measure Service Quality for the Adaptation of ICT Technologies: A Case Study of Nursing Homes in Taiwan, *Journal Healthcare*, Vol 8, 108; doi:10.3390/healthcare8020108
- Jonkisz A., Karniej P. & Krasowska D. (2021), SERVQUAL Method as an “Old New” Tool for Improving the Quality of Medical Services: A Literature Review, *Int J Environ Res Public Health*. 2021 Oct, 18(20): 10758. Published online 2021 Oct 13. doi: 10.3390/ijerph182010758
- Manish B. & Davendra K. (2019), Analysis of Service Quality Gap Using SERVQUAL Model: An Indian Petro Retailing Scenario, *International Journal of Business and Management Invention*, ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X, Volume 6 Issue 7, pp 68-71
- Randhir R. (2018), Assessing the Level of Service Quality and Customer Satisfaction at EMTEL Ltd., *Academy of Marketing Studies Journal*, Volume 22 Issue 2, (Print ISSN: 1095-6298; Online ISSN: 1528-2678)
- Salameh A. & Hassan S. (2015), Measuring Service Quality in M-commerce Context: A Conceptual Model, *International Journal of Scientific and Research Publications*, Volume 5, Issue 3, March 2015, ISSN 2250-3153
- Shetty, Perule, Potti, Jain, Malarout, Devesh, Vaz, Singla & Naik (2022), A study of service quality in Indian public sector banks using modified SERVQUAL model, *Cogent Business & Management*, Vol 9, 2022, Issue-1, <https://doi.org/10.1080/23311975.2022.2152539>
- Valenzo A., Marco J., Lázaro A., Daniel I., Martínez A. Jaime A. (2019), Application of the SERVQUAL model to evaluate the quality in the transportation service in Morelia, Mexico, *Revista DYNA*, 86(211), pp. 64-74, October - December, 2019, ISSN 0012-7353. doi: <http://doi.org/10.15446/dyna.v86n211.78368>
- Yarimoglu K.E. (2014), A Review on Dimensions of Service Quality Models, *Journal of Marketing Management* June 2014, Vol. 2, No. 2, pp. 79-93 ISSN: 2333-6080 (Print), 2333-6099 (Online)