

# Retention of Andhra Telecom Circle GSM Mobile Subscribers



Dasari Siloyam, Rajesh C. Jampala

**Abstract:** Telecommunication has always been part of societal development in the last half century and continues to march toward innovative technologies and better living. The wireless subscriber base is growing at a rapid pace. All operations and communication across the world are being enabled by GSM mobile communication. Web services too involve the need to use GSM mobile communication for authentication and processing. The Andhra Telecom circle (which includes Telangana as well) is significant because of major industries and services sector, the best example being Information Technology services. This paper endeavours to assess the level of retention by telecom service providers. Structural Equation Modelling reveals the causal relations based on primary data collected from 1159 telecom subscribers.

**Keywords:** Telecom, Service Quality, Value, Pricing, Trust, Satisfaction

## I. INTRODUCTION

Telecommunication has always been part of societal development in the last half century and continues to march toward innovative technologies and better living. The wireless subscriber base is growing at a rapid pace. All operations and communications across the world are being enabled by GSM mobile communications. Web services too involve the need to use GSM mobile communications for authentication and processing.

The Andhra Telecom circle (which includes Telangana as well) is significant because of major industries and services sector, the best example being Information Technology services. The subscriber statistics for the first half-year of 2019 (web 1) is presented in Table 1.

Bharti Airtel has been consistently in the top position (Table 1) based on subscriber base while Reliance Jio comes second (good performance for a relatively new entrant). Vodafone Idea is placed third subsequent to the merger between Idea and Vodafone. Reliance Communication has not made much headway while the Government-owned Bharat Sanchar Nigam Limited (BSNL) is struggling to survive.

**Table 1: Andhra Telecom Circle Subscribers**

2019	January	March	June
Bharti Airtel	29807948	28220681	28220681

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	2304	1923	1923
Reliance Com.	2304	1923	1923
Vodafone Idea	22929051	22283084	22283084
Tata Tele.	1648423	1484357	1484357
BSNL	10176735	10171597	10171597
Reliance Jio	23301106	24568739	24568739
Total	87865567	86730381	86730381

## II. NEED FOR THE RESEARCH

Cut-throat competition and introduction of portability (of the mobile number) combined with other factors are putting the mobile service operators in a fix. Adding more subscribers every month is but natural but what is competitive is retaining existing subscribers. This is an herculean tasks as subscribers are very sensitive and price-conscious and even a small trigger leading to dissatisfaction may propel them to search for alternatives. i.e. other service providers.

## III. REVIEW OF LITERATURE

**Pricing:** Salomi and Selvan (2017) aimed to analyse the entry of Jio in competitive environment of telecommunication sector. It was found that the Jio attained tremendous growth in a short span. Jio adopted 4G technology and offered free services during its launch period, which was the main reason behind its success in the market. Jio relied on consumer behaviour in relation to its pricing. Its pricing system was in the form of Jio prime membership and ‘Dhan Dhan Dhan’ offer at moderate tariffs. Moreover, Jio offered post-paid services along with pre-paid connections with various level of prices as per customer needs. Therefore, the new strategy implemented by the Reliance Jio effectively dealt with the competitive environment of telecom sector. To sum up, it was found that Jio entry has changed the telecom sector and customers are being provided more services at low cost.

**Service Quality:** Jere and Mukupa (2018) measured the customer satisfaction and loyalty drivers in mobile telecom industry in Zambia. Results showed that network coverage was the stronger determinant; it indicates higher network coverage and contributes more to customer satisfaction. Customer service was the second most important aspect while service was the third largest predictor of customer satisfaction.

Kungumapriya and Malarmathi (2018) examined the impact of service quality, perceived value, and customer satisfaction in calculative commitment and customer loyalty in Indian telephone sector. Findings showed that perceived value, calculative commitment, customer satisfaction, and service quality had positive and significant effect on loyalty intentions of customers. Moreover, loyalty intentions had positive effect on attitudinal and behavioural loyalty of customers.

Sharma and Jhamb (2017) endeavoured to measure service quality in the telecom industry in India. It was found that gap in service quality may indicate several problems such as lack of trained employees, poor capacity of the firm, poor technical and infrastructure to offer services. In order to remove these problems, customer service employees should make effective efforts to offer service as per customer expectation.

**Satisfaction:** Kavumkal (2018) investigated the customer satisfaction of BSNL landline users in Coimbatore city. Results revealed that changes in communication technology and emergence of mobile phones ruined the use of landline phones. Moreover, frequent disruptions, poor complaint handling, line disturbances, voice clarity, billing system, call rates, and functioning of instruments were the major challenges of landline connections.

Mamo (2018) aimed to assess factors that affect customer satisfaction on service quality. Service delivery, price fairness, reliability, complaint handling, network status, and time to get services render a major role in garnering customer satisfaction. Furthermore, all service quality aspects were not uniformly considerably allied to customer satisfaction. It was found that assurance and responsiveness were the main predictors of customer satisfaction in telecom services.

Srikumar and Devaprasanna (2017) studied the customer satisfaction towards Airtel and Vodafone telecom services. Results showed that there was no significant difference in Coimbatore and Nilgiris customers apropos customer care support, availability of recharge options, voice quality and network coverage. Significant difference exists on data plan, voice tariff, and value-added services provided by the telecom operators. In conclusion, it was found that telecom service in terms of price fixation and speed should be matched with customers' expectation.

**Perceived Value:** Bala et al. (2018) aimed to measure the customer satisfaction of different mobile operators in Bangladesh. This study divulged that employee responsibility, customer care, internet cost, network quality, call tariff, and coverage were the antecedents of perceived value of customers in telecom service. This study stressed that mobile telecom services facilitate for information sharing, information searching, social media connectivity, and communication purposes. It was found that mobile service providers were planning to increase customer experience and perceived value on their brand by providing effective services. Results of the study revealed that customers perceived value on different services provided by the network operators has significant impact on customer satisfaction. Antecedents if found positive, will increase customer satisfaction. Findings suggested that mobile network operators should increase customer satisfaction through relevant measures.

Belwal and Amireh (2018) analysed the service quality and attitudinal loyalty of consumers of telecom companies in Oman. Findings showed that assurance and reliability has positive influence on attitudinal loyalty of customers. It was found that empathy, responsiveness and tangibles have no effect on attitudinal loyalty of customers.

Verma and Singh (2017) endeavoured to measure marketing mix, customer satisfaction and loyalty in telecom sector. Positive perception leads to achieve customer loyalty concerning a mobile service provider. Moreover, customer loyalty and satisfaction contributed to increased perceived

value of the service provider. Marketing mix helps to attract new customer and retain existing customers.

**Trust:** Sisili et al. (2018) aimed to assess customer satisfaction towards Reliance Jio network. Therefore, fulfilment of customer expectation paved the way for developing trust on the company. Results revealed that customers were satisfied with speed of internet, high network coverage, and voice clarity of calls. Findings showed that offer, free roaming, low connection charge, availability of online recharge facility, and other value-added services aid satisfaction of customers.

Teng et al. (2018) intended to understand the customer intention to use mobile payment services in China. It was found that perceived utility, perceived risk, trust, attitude, and subjective standard were the forerunners of customer intention to use the mobile payment services. Findings also showed that customers were interested to use this service due to the trust they have with the mobile service provider.

Malik et al. (2017) analysed the consequences of relationship marketing on customer loyalty. Results found that relationship building builds habitually buying behaviour and useful word of mouth. Results also revealed that relationship-based marketing commitment has sturdy influence on customer loyalty. Findings also showed that commitment helps customers overcome uncertainty and maintain the relationship with telecom companies. In summary, it was found that relationship marketing had direct association with customer loyalty.

#### IV. RESEARCH GAPS

Emphasis has been on customer satisfaction and loyalty in telecommunication services. That was probably an era when mobile number portability was not available in India and there were just a few telecom players. But the scenario has dramatically been changing, first with liberalisation, then with globalisation succeeded by evolving technologies and now freedom to choose the telecom operator without sacrificing the existing mobile number. Telecom customers were initially floored with promotions even to the extent of giving free connections (for a limited period). Well, the customers are now getting smarter with all operators now offering similar services. *Hence, there is a need, that too a pressing one, to analyse what influences retention.* Also, researching on individual telecom service providers may not be as significant as studying the entire market as subscribers have the freedom to switch operators as and when necessity arises.

Preliminary enquiries (face-to-face interactions) and pilot study enabled choosing the most mentioned parameters by subscribers, namely, quality of services, value perceived by them (beyond price), trust in the service provider, satisfaction as well as the affordability (pricing).

#### V. METHODOLOGY

Sampling was purposive with emphasis on GSM mobile telecom subscribers who possessed subscription for minimum six months. 1159 Samples were collected from Vijayawada (Andhra Pradesh) as well as Hyderabad (Telangana).

The scale items of the constructs used in the current research were inspired from Vimalnath and Balaji (2018), Yaqub and Halim (2018), Rendon et al. (2017) and Keerthi et al. (2017). The sample comprised: 18-28 years (58.8%), 29-39 years (24.7%), 40 years and above (16.5%). No income (28.7%), Up to INR 50,000 per month (45.7%), Above INR 50,000 per month (25.5%). Not working and Others (34.9%), Own business (23.7%), Employed (41.4%), Graduates (46.8%), Post-Graduates (36%), Other education (17.3%), Female (41.2%) and Male (58.8%).

**V. RESULTS AND DISCUSSION**

Structural Equation Modelling revealed the paths and coefficients and these are summarised in Table 2 and depicted in Figure 1. The endogenous entities were Service Quality, Value, Trust, Satisfaction, Pricing, and Retention. The exogenous entities were error terms (e1 to e6).

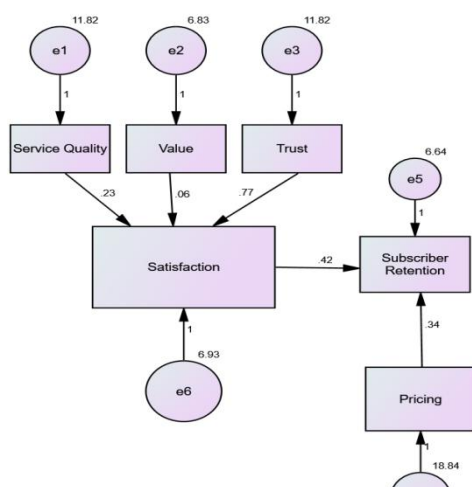
**Table 2: Structural Model Analysis**

Null Hypothesis	#	p	Outcome
Service Quality has no impact on Satisfaction	.231	***	Rejected at 0.1%
Value has no impact on Satisfaction	.059	.046	Rejected at 5%
Trust has no impact on Satisfaction	.768	***	Rejected at 0.1%
Pricing has no impact on Retention	.337	***	Rejected at 0.1%
Satisfaction has no impact on Retention	.420	***	Rejected at 0.1%

# Unstandardised Coefficients; \*\*\* p<0.001

▪ All variables had a positive impact on the other in each of the paths. Amongst the study variables impacting Satisfaction, Trust has the most impact while Value has the least impact. Service quality is also significant but to a lesser extent than Trust. Satisfaction has an edge over pricing as far as retention of the subscriber is concerned. These outcomes have been established in literature albeit with different conceptual models (Vimalnath and Balaji, 2018; Miah, 2018; Yaqub and Halim, 2018; Hossain et al., 2017; Boora, 2017; Rendon et al., 2017; Keerthi et al., 2017). These models involved other variables like channels of delivery, image of the brand / operator and promotion.

**Figure 1: Path and Coefficients**



**VI. CONCLUSION**

Ensuring satisfaction is the basic necessity of telecom service operators as this would go a long way in ensuring

continued loyalty and retention. Operators need to enjoy the trust of its subscribers in as many ways as possible. It takes time to establish relationships especially in an environment that comprises fickle-minded citizens who get influenced when something new appears in the horizon. Market is witnessing new entrants every quarter coupled with revolutionary technologies and value-addition. Therefore, telecom service providers need to be on their toes so as to innovate, delight and surprise their customers.

The current study variables had more emphasis on external customers. However, internal customers (employees) and other factors could also have an effect (Talwar and Balaji (2016, 2012). Future models can integrate both internal and external stakeholders and assess the respective impacts on telecom services.

**REFERENCES**

- Bala, T., Hossain, I. and Mondal, AKM. (2018). Measurement of customer satisfaction of different mobile operators in Bangladesh; a study on Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh. *IOSR Journal of Business and Management*, 20(3), 38-47.
- Belwal, R. and Amireh, M. (2018). Service quality and attitudinal loyalty: consumers' perception of two major telecommunication companies in Oman. *Arab Economic and Business Journal*, 13, 197-208.
- Boora, Krisnann K. (2017). Perceived Service Quality and Consumer Retention in Telecommunication Services: A Structural Equation Modelling Approach. *Amity Journal of Marketing*, 2(1), 1-13.
- Hossain, Md. Alamgir, Chowdhury, M.R. and Jahan, N. (2017). Customer Retention and Telecommunication Services in Bangladesh. *International Journal of Asian Social Science*, 7(11), 921-930.
- Jere, M.G. and Mukupa, A. (2018). Customer satisfaction and loyalty drivers in the Zambian mobile telecommunications industry. *Journal of Business and Retail Management Research*, 13(2), 120-128.
- Kavumkal, S.S. (2018). A study on customer satisfaction of BSNL landline with special reference to Coimbatore city. *International Journal of Research and Analytical Reviews*, 5(3), 772-776.
- Keerthi, K, Swaminathan, J., Renukadeci, R. and Bharathipriya, K. (2017). Service quality in Indian Telecom sector – a regression model study. MPRA. Retrieved from <https://mpra.ub.uni-muenchen.de/79912/> [August 21, 2019].
- Kungumapriya, A. and Malarmathi, K. (2018). The impact of service quality, perceived value, customer satisfaction in calculative commitment and customer loyalty chain in Indian mobile telephone sector. *IOSR Journal of Business and Management*, 20(5), 72-82.
- Malik, M.S., Ali, H. and Ibraheem, T. (2017). Consequences of relationship marketing on customer loyalty. *International Journal of Research – Granthaalayah*, 5(2), 180-190.
- Mamo, G.S. (2018). Assessment of the factors that affect customer satisfaction on service quality: a case study in Ethio Telecom Dawro Zone. *Arabian Journal of Business and Management Review*, 8(1), 1-5.
- Miah, Md. Iftexhar (2018). Factors Influencing the Customer Satisfaction on Local and Foreign Telecommunication Companies in Malaysia. *International Journal of Scientific and Engineering Research*, 9(4), 1374-1413.
- Rendon, Claudio M.C. and Vasquez, A. and Benjumea-Arias, M. and Valencia-Arias, A. (2017). Proposed Model for Measuring Customer Satisfaction with Telecommunication Services. *Mediterranean Journal of Social Sciences*, 8(2), 15-26.
- Salomi, S. and Selvan, K.G. (2017). Entry of Jio in Telecommunication sector in a competitive environment. *International Journal of Research in Management and Business Studies*, 4(3), 27-30.
- Sharma, P. and Jhamb, D. (2017). Measuring service quality in the telecom industry in India. *International Journal of Management Studies*, 4, 123-132.
- Sisili, T., Gokulkumar, S., Sivakumar, S. and Manikandan, G. (2018). A study on customer satisfaction towards Reliance Jio network. *International Journal of Innovative Research in Technology*, 4(2), 834-847.

16. Srikumar, H. and Devaprasanna, A.A. (2017). A comparative study on customer satisfaction towards Airtel and Vodafone with reference to Coimbatore and Nilgiris district. *Intercontinental Journal of Marketing Research Review*, 5(10), 37-44.
17. Talwar, Sunali and Balaji, B. (2012). Perceptions of Service Climate, Internal Service Quality and Employee Commitment. *South Asian Journal of Socio Political Studies*, XII(2), 98-102.
18. Talwar, Sunali and Balaji, B. (2016). Service Climate and Internal Service Quality: The effect of Socio-demography in Indian Telecom Servicescape. *International Journal of Applied Business and Economic Research*, 14(8), 5595-5605.
19. Teng, P.K. and Ling, T.J. and Seng, K.W.K. (2018). Understanding customer intention to use mobile payment services in Nanjing, China. *International Journal of Community Development and Management Studies*, 2, 49-60.
20. Verma, Y. and Singh, M.R.P. (2017). Marketing mix, customer satisfaction and loyalty: an empirical study of telecom sector in Bhutan. *Indian Journal of Commerce and Management Studies*, 8(2), 121-129.
21. Vimalnath, V. and Balaji, B. (2018). Pre-Paid Customer Satisfaction in Mobile Telecommunication Services. *Journal of Advance Management Research*, 6(2), 74-82.
22. Web 1 Retrieved from <https://main.trai.gov.in/> [July 10, 2019].  
Yaqub, Rana M.S., and Halim, Fairol (2018). Revisiting Customer Loyalty in Telecom Sector: Insights from Oliver Four-Stage Loyalty Model, EDM and Principles of Reciprocity. *Journal of Marketing Management and Consumer Behaviour*, 2(2), 16-30.