

# Impact of Reliance Jio 4G Network on Competition

**Dr. Makarand S. Wazal**

Principal

Sinhgad College of Commerce, Savitribai Phule Pune University, Pune (M.S.), India

**Abstract-** Reliance Jio Infocomm Limited (Jio) is an LTE mobile network operator in India. It is a wholly owned subsidiary of Reliance Industries headquartered in Maharashtra that provides wireless 4G LTE service network (without 2G/3G based services) and is the only 'VoLTE-only' (Voice over LTE) operator in the country which lacks legacy network support of 2G and 3G, with coverage across all 22 telecom circles in India. The services were first beta-launched to Jio's partners and employees on 27 December 2015 and later services were commercially launched on 5 September 2016. Reliance Jio has come into market with a bang and still giving many recipes to the telecom sector giving the free services to the user like free calling, free hi-speed internet, etc..This paper will throw some light on the effect of Reliance Jio on other 4G operators in the market.

**Keywords-** Network, Service, hi-speed, subscriber, telecommunication

## I. INTRODUCTION

In terms of number of telephone users, the India's telecommunication network is second largest in the world. By the end of 31 August 2016, it has 1.053 billion subscribers (both fixed and mobile phone). There were 342.65 million internet users in the country as on 31 March 2016. Due to the cut throat competition among mega telecom operators, it has lowest call tariffs in the world. The telecom industry of India mainly comprises of the sector like telephone, internet and television broadcast Industry in the country which is in an ongoing process of transforming into next generation network. It employs an extensive system of modern network elements such as digital telephone exchanges, media gateways and signaling gateways at the core, interconnected by a wide variety of transmission systems using fiber-optics or Microwave radio relay networks, mobile switching centers. The modern example is DTH, a relatively new broadcasting technology which has attained significant popularity in the Television segment and FM which has given a fillip to the radio broadcasting in India.

Since 1990s, the Indian telecom industry underwent a high pace of market liberalization and growth and because of which it has become the world's most competitive and one of the fastest growing telecom markets. There were 37 million

users in the year 2001 and which has gone upto 846 million users by the end of 2011, so it has grown very rapidly over the decade. India has the world's second-largest Internet user-base with over 300 million as of June 2015 and 929.37 million users as of 2012. Telecommunication has helped the government to increase the transparency of governance with the introduction of e-governance in India and has also supported in the socio-economic development of India by narrowing down the rural-urban digital divide to some extent mass education program for rural area development.

## II. OBJECTIVES OF STUDY

The main objectives of the present study are as follows:

1. To know the present situation of JIO Telecom Services
2. To study the market share of Jio
3. To study the competition of Jio with other
4. To know the strategies of Jio and their revenue generation model.

## III. INDIAN TELECOM INDUSTRY: A REVIEW

Wireless segment of India dominates the market. India's telephone user base reached 1,058.86 million in March 2016. The urban regions accounted for 57.6 per cent share in the overall telecom users in the country, while rural areas holds for the remaining share. The wireless segment which includes 97.62 per cent of total telephone users dominated the market, with the wire line segment accounting for an overall share of 2.4 per cent. The story of Jio arrival is very interesting. In the year 2002, when Dhirubhai Ambani died, there rose some major ownership issues between his two sons. After some public argue between both the brothers for the control of Reliance Empire, then their mother involved and split Reliance into two parts in 2005. Anil Ambani got telecom, entertainment, power and financial services business while Mukesh Ambani received IPCL and Reliance Industries. It was Mukesh Ambani who started the Reliance Communication .It was his idea which revolutionized the Indian mobile industry by reducing the call rates in the early 2000s, which made mobile phones affordable to Indian market but due to separation it went to Anil Ambani. When Anil Ambani received the Reliance Communication, he prevented

Mukesh Ambani from making another telecom company with the help of non-compete clause in the agreement. After 5 years in 2010, when the non-compete agreement became scrapped, Mukesh Ambani bought 96% share in Infotel Broadband and by which he won 4G spectrum in all sectors in India. Later they renamed it to Jio and then started building optic fiber cable (OFC) network around the country. It's not about the rivalry among the brother but the experience of Mukesh Ambani who knows that existing network providers are not good enough and that he can easily compete with them and win.

#### IV. RELIANCE INDUSTRIES: FACT

RIL(Reliance Industries Limited), incorporated in 1966, is one of the largest Indian firm headquartered in Mumbai managed by Mr. Mukesh Amabani with revenue of more than Rs.2960 billion (2016). It holds its business across India which consists of petrochemicals, natural resources, textiles, energy, retail and telecommunication. It is the 2<sup>nd</sup> largest public traded company of the country by its market capitalization, 2<sup>nd</sup> largest in terms of revenue after Indian Oil and 3<sup>rd</sup> most profitable company in India. Fortune has ranked the company 215<sup>th</sup> on the Global 500 list of world's biggest organizations as of 2016. By RIL is ranked among top 250 Global Energy Companies and it contributes 20% of the total exports of India.

JIO (Reliance JIO Infocomm Ltd) is a LTE (Long Term Evolution) mobile network operator, is an entrepreneurial venture and 100 percent subsidiary of Reliance Industries headquartered in NaviMumbai. It is the only company which provides 4G LTE network service unlike 2G or 3G services. It covers across all 22 telecom circles and is 100% VoLTE(Voice over LTE) operator in the country. The Jio services were launched first for partners and employees of Jio on Late Dhirubhai Ambani 83<sup>rd</sup> birth anniversary on December 27, 2015. Commercial launch was done on September 5, 2016.

#### Reliance Jio's Vision:

The vision of Jio for India is that the broadband digital services will no longer be a luxury item rather converts it into a basic necessity that can be consumed in abundance by consumers and small businesses. The initiative is truly aligned with the Government of India's Digital India vision for our nation.

#### V. LITERATURE REVIEW

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**Customer Loyalty** – It is an important aspect for any industry and with the telecom industry. It is affected due to network coverage, transmission quality, customer service and pricing policies. In France, the telecom service provider was investigated through moderating effects of switching cost on customer trust and customer loyalty relationship and so with the case with many countries. The above mention qualities are important aspect to maintain the customer loyalty of any service provider.

**Customer Trust** - Trust plays a significant role to increase customer loyalty. When a customer feels good about a particular brand then she will develop a positive attitude towards the purchase of that brand in case the brand is trustworthy for the customer.

**Customer Satisfaction** - It originates when the customer compares the actual performance of a product with expected performance. Customer satisfaction can generate customer retention and ultimately, it leads to increase market share with enhancement of sustainable competitive advantage. Previous studies have reported that call quality, value added services, and customer support provided by cellular service firm results in customer satisfaction that increases customer loyalty. Customer satisfaction describes how customers rate a specific brand based on the past experiences of customers with a particular brand.

**Switching Cost** – When a customer switches from one supplier to another then in the process the cost which has incurred is the switching cost. It includes time, money and psychological cost.

Assaari and Karia(2000) in their paper titled, “Churn Management towards Customer Satisfaction; A Case of Cellular operations in Malaysia” have viewed that customer satisfaction and customer service have been critical factors of the cellular industry. Cellular service providers need to ensure about the technology that provides customer service best in the industry. It is stated that investment in people and in technology helps in providing best customer service for today and for the future. One common ground that most carriers and customers agree on is that good customer service can have a key impact on how a customer views firm's services and company.

Bepko (2000) in his article entitled, “Service Intangibility and Its Impact on Consumer Expectations of Service Quality” has pointed out that among the areas which

need to be addressed in service quality research is the nature of consumer expectations across the range of intangibility.

K.E. Lommeruda and L. Sorgard(2003) in their study on “Entry in Telecommunication: Customer Loyalty, Price Sensitivity and Access Prices” have stated that telecommunication services are like undifferentiated products. Therefore, customers are not price sensitive all the times and sometimes brand loyalty takes a dominant part in brand preferences. This is because some consumers are retained with old monopolists. They have pointed out that substantive role of price fairness and quality service with customer satisfaction existing in the communication sector.

J. Pakola, M. Pietila and R.Svento (2003) in their article titled, “An Investigation of Customer Behavior in Mobile Phone Markets in Finland” have indicated that price and properties are the major influential factors affecting the purchase of a new mobile phone, whereas audibility, price and friends are regarded as the most important in choice of the mobile phone operators. Customers have certain amount of self-knowledge about telephone features, connection fee, access cost, mobile-to-mobile phone rates, call rates and free calls which are related to mobile phone purchasing respondents. He has stated that customers with prior experience about a product can be able predict their choices relatively well but tend to overestimate the importance of a monthly access fee, mobile-to-mobile rates and connection fees.

K. Maran, C. Madhavi and K.Thilagavathi15 (2004) in their article titled, “Customer's Perception on Telephone: A Study with Special Reference to Chennai City” have indicated that the consumer perceptions about fixed telephone lines in Chennai. The objectives of the study is to find the most influencing factor in selection of service provider, and to measure customer perception and satisfaction as regards the service provided. The study on a sample of 550 telephone users indicate that some problems exist that deserve the attention of the company. The company needs to bridge the gap between the services promised and services offered. And to conclude, “Delivering service without measuring the impact on the customer is like driving a car without a windshield”. Whatever literature review has been done, maximum has the same background of the study which are customer satisfaction, customer loyalty, network coverage, service quality, switching cost, call rates, trust, etc. If the company is giving good network coverage and services to its customers then the customer will be satisfied and will be happy to use the services of an operator. But if the customer is not satisfied then the customer will not hesitate in switching to other operator for a better service experiences. So it has become a competitive

point for all the operators to provide better and better service to their customers so that their customers remain satisfied with the services they are receiving and do not switch to other operator. As the technology has evolved over the past years from 1G to 4G till now, the market is getting more and more competitive. With the entry of Jio in the market it has become more competitive for other operators to retain their customers and they are fighting hard for this and due to their competition the customers are getting benefited as customers can easily compare the services of different operators and choose the best services fit to them.

## VI. MARKET ANALYSIS

Let's discuss about different operators now, how they are changing the current market scenario of telecom.

### Reliance Jio:

Due to its optical fiber network, Jio made a huge difference between other telecom operators. It (Optical Fiber) is a wire which converts the data signal into light and transfers them at the speed of light which is the fastest thing in the universe. Jio has the longest fibre optic network in the country, ranging over 2.5 lakh kilometers of fibre and laying down that kind of fibre optics network is not a joke as it requires a lot of money.

**Investment of Jio:** Jio has invested 1,50,000 crores (\$ 22 billion ) into the fibre optic network which is more than two times combined investment of Airtel, Idea and Vodafone. So the question arises that how exactly they will get back to such a huge investment?

**The Master Plan of Jio:** A very calculated risk they are taking. The approach is –

- Step I : Undercut the market price by giving attractive discounts
- Step II : Let everyone switch to Jio for internet use at cheap rates
- Step III : Unleash the power of fibre optic network to give super fast internet
- Step IV : Grow your subscriber base
- Step V : Recover your investment using the large number of users

The cost of operating the optic network is not very huge once the fiber optic has laid down. It can be operated at minimal cost. That's what they are doing by giving free services and increase their internet users. If you look at the tariff plan, you will notice that it conforms to the above ideology. They are not charging for the voice calls because

they don't care about voice. In fact, not charging for voice will attract more people towards Jio. After that, they can showcase their data capability. Their network is capable enough to handle amazing internet speeds. It therefore encourages the users to use internet instead.

**Number of subscriber they need to recover the investment:**

Jio is charging Rs. 70 per GB of data. Let's assume that profit before fixed cost is Rs. 50 per GB of data and this amount is also on the lower side as per GB cost is going to be lesser. If we calculate, we will be able to realize that if 30% of people in India use 2 GB internet per month, then the initial investment can be recovered in 3 years. Actually, Mukesh Ambani thinks he can capture 90% of the country by next year.

**Jio Business Model:** Everything Jio have done till now is intended at making money. Their tariff plans may look awesome but they will make more money by giving free voice calls than what the other companies make by charging you for it. In India, the monthly average revenue per user (ARPU) the current network providers get is around Rs. 150 per month. That is the money they get on average from each user. If you spend over Rs250 per month, you are considered a high value customer.

They do have some smaller plans at Rs 19, 199 and 299, but these plans do not really offer any more value than their main plans as they have even less validity. Also, it offers less data per rupee. For example the 299 plan only offers 21 day validity and 2GB data. This may be adequate for many people, but if you ever exceed the 2GB limit, then you will have to purchase 'add-on packs' and these add-on pack will have the validity of the main pack. So, if you recharge on day 20 of this plan, then you will get only one day validity for the add-on. For practical purposes, you will be spending more for lesser value through these packs. Rs. 19 pack is useful for those who want to use some Internet and voice calling once in a while. For high intensive user there is 999 plan.

**Effect on Competition:**

During the 45 minute inaugural launch speech by Mr. Mukesh Ambani for Jio, the market capitalization of Airtel was evaporated by approximately Rs. 9800 crore whereas in case of Idea cellular it was approximately Rs. 2,450 crore. This has left the entire telecom industry shaking and gasping. As Jio is improving it's market position All other players are skirting to protect their market share by reducing prices on their schemes by 65 to 80 percent with host of other attractive schemes. Market share of major players was lost to the tune of 10 percent (Idea). Bharti Airtel has closed buyout of Telenor.

Idea and Vodafone have also announced their consolidation plan. The major initiatives undertaken by Airtel, Idea and Vodafone are discussed below.

Airtel announced two plans with 80 percent lower data tariffs. - an annual plan for Rs 1,498 and a semiannual plan for Rs 748. To avail this benefit, Airtel customers will have to recharge with Rs 1,498 against which they will get 1GB of 4G or 3G mobile internet usage valid for 28 days. Post exhaustion of 1GB data limit, the customers can get 1GB 4G or 3G recharges for just Rs 51 over a period of 12 months and there is no limit on the number of recharges during the period. The tariffs of Rs 1,498 or 748 is nothing but a subscription fee of sorts. The two packs will come with 1GB of data each, but the data costs after it is exhausted will be significantly cheaper. For example, the Rs 1,498 plan will offer 1GB of 4G/3G data for Rs 51, 2GB of data for Rs 99 and 5GB of data for Rs 259. Since there are no caps on the number of recharges you can do in the annual cycle, you can have as much data as you want, provided you keep recharging your account. Airtel has announced a special 4G offer under which it will be offering free data (worth Rs 9,000) for 12 months to customers who switch to Airtel 4G. The 12 months offer is available to any customer with a 4G mobile handset, and who is currently not on the Airtel network. Any customer, including existing Airtel customers, upgrading to a new 4G handset can also avail this offer. The offer will be available to customers across India starting January 4 and will close on February 28, 2017. Under this offer, selected customers with prepaid and postpaid connections will get free 3GB data every month till December 31, 2017, with the benefits over and above the pack/plan benefits. Airtel has been known for its premium data-voice plans. It was no different with 4G, but Jio 4G could possibly bring about a change in the way they operate. This is just a start, and more of it due in course of times.

Following the footsteps of Airtel, Idea Cellular entered the fiercely contested mobile calling and data plans pricing arena with its new 3G/4G data plans and unlimited calling. The company, which has over 185 million subscribers, added that the prepaid customers recharging the pack 348 on a new 4G handset will get an additional 3GB data. However, the benefit is valid for 28 days and can be availed for a maximum of 13 recharges in a year. For Postpaid users, Idea has launched two plans — Rs 499 and Rs 999 rental. In Rs 499 plan customers will get unlimited local, national and incoming roaming calls with 3GB free Data on a 4G handset, the Rs 999 plan gives unlimited local, national & roaming calls with 8 GB of free Data on 4G Handsets and 5GB Data on other handsets. Additionally, Idea will also provide free subscription to its music and movies pack on these plans. In a statement, Idea said all new and existing customers upgrading to 4G

handsets, the company will provide additional 3GB data on these rental plans, till 31st December 2017. The extra 3GB free Data for New 4G Handset customers will make it 6GB and 11GB free data each month, on Rs 499 and Rs 999 Ultimate Plans. Idea has a lot of work to do to extend its 4G support across the country. Unlike Airtel, they are yet to go PAN-India, because of their limited spectrum ownership for 4G connectivity. But to compete with Jio and other 4G operators, they are trying hard to match them.

Reliance Jio has already turned the market of telecom sector by giving the different schemes like unlimited data and free voice calls for lifetime. Other 4G operators are trying to match the offers. And so is the Vodafone. It has announced it will make incoming calls free for its users while roaming nationally. To compete with Jio and other 4G operators, Vodafone has given different offers to their users like SuperNet data plan, under which users get 10GB of 4G data for the price of 1GB. The catch is additional data is only applicable in night from 12AM to 6AM and one needs to buy a data pack that offers at least 1GB of data (pack of Rs 250 and above). Vodafone has also started offering double data for the same price to subscribers of its RED plans, then the offer for superhour concept to use unlimited 4G for one hour. Vodafone also revised its 3GB 3G/4G monthly recharge pack. Earlier a Rs 650 plan came bundled with 3GB data, but now you get 5GB for the same price. It has increased its data quota for 4G prepaid plans by up to 67 percent, without lowering down the cost of data packs. Similarly, the Rs 449 3G/4G pack now offers 50 percent more data by increasing the data benefit to 3 GB from 2 GB. The Rs 999 3G/4G pack will now offer 10 GB data, offering 54 percent more benefits and plan of Rs. 301 in which local/std calls with roaming is free along with 5GB of 3G/4G data and many more. In comparison to Airtel and Idea, Vodafone's 4G plans are appealing, owing to the fact that now you get more data (in GB) for the same cost. But again, when it comes to Jio 4G, Vodafone will have to go dip itself further down to stand a chance of making money from data but let's see how it goes on.

## VII. THE CURRENT MARKET SCENARIO FOR TELECOM SECTOR

After all sorts of discussions in market, different offers given by operators and marketing strategies, we can see the current market trend. "Investigating the last six months of usage, we can see that Jio has grown aggressively at the end of 2016 summer. Jio racked up millions of customers in their first few months and picked up the pace of acquisition towards the end of the year." The growth is owing to the Jio welcome offer of providing unlimited data to its subscribers till March 31, 2016.

According to mobile communication app Truecaller's Q4 Report, Jio has grown aggressively in the latter half of 2016, racking up over 16.2 million subscribers in November and taking its total subscriber base to 51.87 million within three months of launching the service. As per the latest data from TRAI, India's telecom subscriber base grew to over 1.12 billion at end-November 2016 and the large numbers of additions were credited to Reliance Jio Infocomm Ltd.

According to TRAI data, in the month of November 2016 alone, Jio was leading in mobile broadband segment followed by Idea with net addition of 2.52 million new customers. Bharti Airtel and Vodafone added 1.08 million and 890,794 subscribers, respectively. Mobile internet usage is expected to grow to over 500 million customers by the end of 2017 with a large portion of those picking Jio. As a result, there are already consolidation discussions among operators in India due to the increased competitive pressures.

Reliance Jio has become the primary data connection on most of the mobile devices in India, with 42 per cent users having activated Jio in their 4G-enabled slot, followed by Airtel at 17.54 per cent, Vodafone at 12.26 per cent and Idea at 11.50 per cent. Jio is also leading in data consumption, with a Jio-user logging 6.54GB on average compared to 1.28GB on Airtel, 1.29GB on Vodafone and 1.32GB on Idea.

Reliance Jio with 23.93 percent dominates the current market 4G operators followed by Bharti airtel (20.13 percent), Vodafone (15.98 percent), Idea (13.01 percent), BSNL (9.4 percent) and others (17.61 percent). In case of speed of internet, again Reliance Jio with 9.9 Mbs wins the race quiet comfortably well ahead of Airtel at 8.1 Mbps.

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