



An Empirical Study on Internet to Home Through Optical Fibre in Indian Internet Service Provider Market with Special Reference to Customer Switching Pattern with the Introduction of Reliance Jio “GigaFiber” and other Players like BSNL, Airtel, Tata Sky Broadband etc.

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Abstract: In India, there is a long history of evolution in terms of Internet Services right from Dial-up slow connection to the fast Optical fibre based connection.

Keywords: Reliance, Reliance Giga – Fibre, Airtel , Airtel V-Fibre, BSNL, BSNL- FTTH, Internet Service Provider, customer switching pattern.

As and when telecoms services by various telecom operators such as broadband and mobile telephony were newly-introduced and service adoption was rising fast by customers, most retail competition involved attracting new customers and switchers. As these services have matured by the time and usage, attracting wholly new customers has become relatively less important until and unless they find some added extra benefits either in product or services. In this new environment, the willingness and ability of consumers to compare suppliers' offers and to switch if sufficiently good deals are available drive the incentives suppliers have to compete for existing service users.

This has been proved recently when reliance introduced “JIO” in mobile telephony with 4G network and high speed internet on mobile phones, many new customers adopted this service and there are many switchers from other network providers by using number portability over network operators.

In this research paper, the author is going to explore the Internet service provider market in terms of fixed line specially optical fibre network the product, price and competition like BSNL and Airtel for the newly introduced Reliance “GigaFiber” and the customer switching perception for the new services through the set of questionnaires to be floated through various social media and other means to get the idea if Reliance can repeat the previous success.

I. INTRODUCTION

The most awaited and ambitious project by reliance is introduced in this year Reliance – GigaFiber it is still in the initial stage in the market if compared to BSNL and other providers of Internet services through Optical fibre technology. Competition may show itself through substantial inter-operator switching by consumers or through attractive offers from suppliers to retain their customers (and probably some of both) due to mobile number portability facility. However, if many consumers are never willing to consider switching their supplier, the effectiveness of competition in a mature market will be reduced. Even if competition for active customers is effective, inactive consumers may be left paying higher prices or, as telecoms services are increasingly used by multiple household members in different ways, the inability of households to switch to the offerings best suited to their needs may result in lost consumer surplus. Competition has increased and major share in the wireless mobile market has been taken over by Reliance Jio, some companies have merge to take over this competition like Vodafone and idea in the Indian market. Now Reliance is targeting over the wired Internet market with high speed data plans combined with irresistible combo benefits to the customer. This research paper is focusing on understanding the customer switching pattern by asking various questions in questionnaire and understanding the market condition by **analysing** the market offerings by Reliance and its competitor. The scenario has been changed after Reliance JIO wireless services in Indian Telecom sector, earlier there were many players in the market now there are some major players like BSNL, Airtel and Vodafone are existing in the market other than Reliance.



Access Service Provider-wise Market Shares in term of Wireless Subscribers as on 31st July, 2019

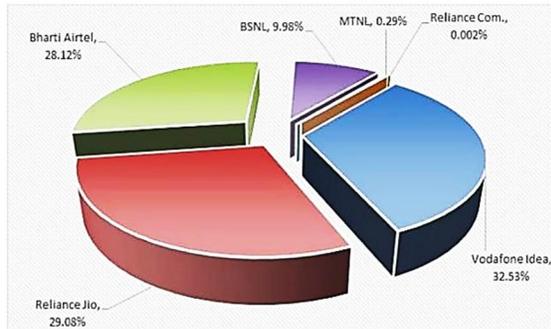


Fig. 1. Showing Top-mobile-operators-India-July-2019

Source: <https://www.telecomlead.com/wp-content/uploads/2019/09/Top-mobile-operators-India-July-2019.jpg>

The above fig 1. Showing the market share in the wireless telephone category in India till July 2019. Reliance Jio has captures a good share in the market if we look at the age of the companies and compared to Airtel and Vodafone in Indian Market.

After having stability in the wireless market Reliance JIO is aiming on wired Internet connection, in the next section the author is going to analyse the offer made by reliance and other competitors in the Indian wired Internet connection market. [1]

II. AIRTEL – V- Fiber

Airtel is one of the oldest and prominent player in the Telecom and providing Internet services in wired and wireless category with quite a good speed.

Bharti Airtel Limited is a leading global telecommunications company with operations in 18 countries across Asia and Africa. Headquartered in New Delhi, India, the company ranks amongst the top 3 mobile service providers globally in terms of subscribers. In India, the company's product offerings include 2G, 3G and 4G wireless services, mobile commerce, fixed line services, high speed DSL broadband, DTH, enterprise services including national & international long distance services to carriers. In the rest of the geographies, it offers 2G, 3G and 4G wireless services and mobile commerce. [2]

Airtel has issued a statement saying that it will be offering 'V-Fiber' technology based broadband services to 87 cities across India. Speeds will top 100Mbps.

The service will first be offered in Chennai and will be rolled out to other cities in the coming weeks. Airtel will also offer a 3-month free, unlimited trial to new customers. The company adds that modem charges will be fully refunded within the first month if users are not happy with the connection.

Airtel states that this technology will not require any additional digging up of roads for the laying of cables. Instead, the company will use 'vectorization' to provide "last-mile connectivity" over existing copper lines.

What is vectorization?

Normally, the data for your wired internet connection comes over, a wire. This wire is made up of a number of copper strands

that are multiplexed (multiple signals are transferred over the wire). You can increase the number of wires or the amount of multiplexing, but that would increase interference, this will degrade the signal quality and limit data transfer capabilities. With vectorization, dedicated hardware is used to measure and cancel this interference.

As a result Minimal interference and higher bandwidth on tap. Airtel is essentially upgrading all its exchanges to support V-fibre and the "last-mile copper" uses vectorization to ensure that Airtel can provide the full bandwidth you're paying for, at minimal cost.

WHAT IS V-FIBER

Based on Vectorization technology, which is the top standard for fixed broadband across Europe Fiber brought into colonies & neighbourhoods and exchanges upgraded Turbo charges the last mile copper with advanced noise elimination technology (just like in audio systems) to deliver super-fast data speeds.

Green Tech – does not need any digging in the streets, building or homes – reduces carbon footprint by 20% and also makes upgrade hassle free

All Airtel broadband subscribers will now also get free, unlimited voice calling to any network in the country. The company is also caching data at its data centres to improve performance for its users. Airtel states that vectorization and V-fibre are part of Project Leap, Airtel's network transformation program. [3]

III. YOU BROADBAND PLANS



You Broadband, Set up in 2001 by British Gas as Iqara Broadband, YOU Broadband India Limited (formerly known as YOU Broadband India Pvt. Ltd.) is now a subsidiary of Vodafone Idea Limited.

You Broadband also provides high-speed internet plans in India, but they start from Rs. 1,239 (including taxes) per month. The base plan offers 350GB data, and 100Mbps speed. After the cap is reached, the speed goes down to 5Mbps. The Rs. 1,357 (including taxes) monthly plan offers 400GB data cap at



150Mbps speed, and the Rs. 1,597 (including taxes) monthly plan offers 500GB data cap at 200Mbps speeds. These are the plan prices in Mumbai, and the prices differ from circle to circle. Apart from the monthly plans, You Broadband also offers 3-month, 6-month, and annual plans that come with extra FUP.

You Broadband operates in the cities like Ahmedabad, Aurangabad, Bengaluru, Chennai, Gurugram, Hyderabad, Kakinada, Mumbai, Nagpur, Nashik, Navi Mumbai, Navsari, Powai, Pune, Rajkot, Surat, Thane, Vadodara, Valsad, Vapi, Vijayawada, and Vishakapatnam. To see all the plans, head to the company website and change the city to your preferred one.

YOU Broadband is a category 'A' ISP and India's first ISO accredited broadband service provider. The company also has IP-1 Registration No.39/2001 dated 1st May, 2001 from DOT Govt. of India in the name of YOU Broadband India Limited.

Being a leading independent ISPs in India, YOU Broadband offers high speed Internet and voice services through various state-of-the-art delivery platforms to residential, SME and corporate customers in 18 cities. As a part of its growth plans, YOU Broadband is rapidly expanding its presence in other cities across the country.

IV. ACT FIBERNET PLANS



ACT fibernet
Atria Convergence Technologies Ltd.

ACT (Atria Convergence Technologies Ltd.) was born out of a vision to become the most admired in-the-home entertainment, education and interactive services company that creates radical social transformation, and delights and empowers customers with products like -

- Fibernet (Internet over Fiber Optics)
- Digital TV
- HDTV

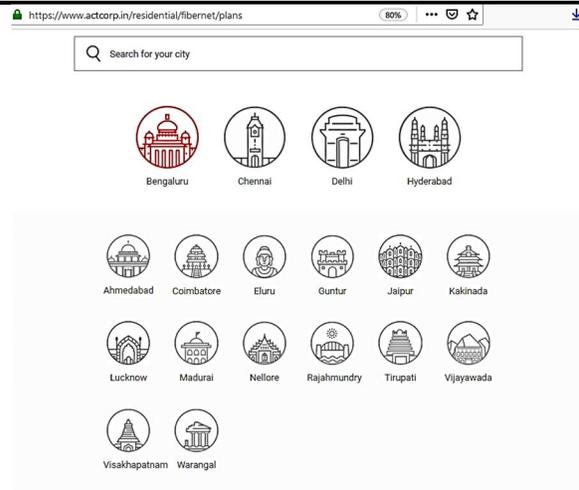


Fig. 2. Showing various cities to select the ACT Internet plan <https://www.actcorp.in/residential/fibernet/plans>

ACT Fibernet operates in several cities and offers data speeds up to 1Gbps just like Jio Fiber. The 1Gbps ACT Giga plan is currently only active in select cities like Bengaluru and Chennai and it offers 2500GB data cap at Rs. 5,999. Additionally, there are several non-Giga plans as well that start from Rs. 1,159 and go up to Rs. 4,999 and offer 100Mbps and more Internet speed, and data cap from 400GB up to 1,500GB. The speed reduces to 1Mbps after the data cap is used. ACT plans differ from city to city and the ISP also offers annual plans that offer free extra service and more FUP. [4]

Plan Name	Internet Speed	Monthly Data (Download + Upload)	*Extra GB	Post FUP Speed	Monthly Rental
ACT Swift	40 Mbps	200 GB	-	512 Kbps	₹ 685
ACT Rapid Plus	75 Mbps	350 GB	1500 GB	512 Kbps	₹ 959
ACT Blaze	100 Mbps	450 GB	1500 GB	1 Mbps	₹ 1059
ACT Storm	150 Mbps	650 GB	1500 GB	1 Mbps	₹ 1159
ACT Lightning	200 Mbps	800 GB	1500 GB	1 Mbps	₹ 1399
ACT Incredible	250 Mbps	1000 GB	1500 GB	2 Mbps	₹ 1999
ACT Essential	250 Mbps	1500 GB	1500 GB	2 Mbps	₹ 2999
ACT Advance	250 Mbps	2000 GB	1500 GB	2 Mbps	₹ 3999
ACT Progress	250 Mbps	2500 GB	1500 GB	2 Mbps	₹ 4999
ACT GIGA	1 Gbps	3500 GB	-	5 Mbps	₹ 5999

Fig. 3. Showing various ACT Internet plan to select <https://www.actcorp.in/residential/fibernet/plans>

ACT operates in cities like Ahmedabad, Bengaluru, Chennai, Coimbatore, Delhi, Eluru, Guntur, Hyderabad, Jaipur, Kakinada, Lucknow, Madurai, Nellore, Rajahmundry, and Tirupati.



V. BSNL BHARAT FIBER



भारत संचार निगम लिमिटेड
BHARAT SANCHAR NIGAM LIMITED

BSNL's high-speed broadband plans start from Rs. 777 per month, and it offers 50Mbps internet speed and 500GB data cap. After the data limit is reached, the Internet speed is reduced to 2Mbps. The Rs. 849 plan offers 50Mbps speeds and 600GB data cap. There's a Rs. 1,277 plan that offers 100Mbps speed and up to 750GB data cap, and the Rs. 2,499 monthly plan offers 100Mbps speeds and data cap of 40GB per day. The Rs. 4,499 and Rs. 5,999 plan also offer 100Mbps Internet speed, and data cap of 55GB per day and 80GB per day, respectively. There's a Rs. 9,999 plan that offers 120GB per day at 100Mbps internet speed, and after the data cap is reached the speed is reduced to 8Mbps.

Lastly, there is a Rs. 16,999 plan that offers 100Mbps speeds, 170GB per day data cap, and 10Mbps speed after the data limit is reached. [5]

Bharat Fiber (FTTH) Overview

Bharat Fiber (FTTH) is a unique technology being deployed by BSNL for the first time in India. The fiber connectivity having unlimited bandwidth and state of the art technology provides fix access platform to deliver the high speed broadband from 256 Kbps to 100 Mbps, IPTV having different type of contents like HDTV and future coming 3D TV and range of voice telephony services. It provides a comprehensive solution for the IP leased line, internet, Closed User Group (CUG), MPLS-VPN, VoIP, video conferencing, video calls etc whatever the services available on the internet platform, bandwidth on demand can be delivered by this connectivity to the without changing the access fiber and home device. Customer will get a CPE called Home Optical Network Termination (HONT) consist of 4X100 Mbps Ethernet ports and 2 normal telephone ports. Each 100 Mbps ports will provide broadband, IPTVs, IP Video call and leased line etc as required by the customers. Customer will get power back unit having full load backup of four hours and normal backup of three days. This power backup will be AC input and connecting to the HONT on 12V DC.

Connectivity via Bharat Fiber (FTTH)

BSNL will extend fiber from its nearest Central Office (CO) location directly or through franchisee and install HONT and battery backup at the customers identified locations. The services such as Voice, Broadband, IPTV etc. will be enabled as per the customer's request plans for the same.

The services over Bharat Fiber (FTTH)

Basic internet Access Service controlled and uncontrolled from 256Kbps to 1000Mbps.

- TV over IP Service (MPEG2).
- Video on Demand (VoD)(MPEG4) play like VCR
- Audio on Demand Service

- Bandwidth on Demand (User and or service configurable)
- Remote Education
- Point to Point and Point to Multi Point Video Conferencing, virtual classroom
- Voice and Video Telephony over IP: Connection under control of centrally located soft switches
- Interactive Gaming
- VPN on broadband
- Dial up VPN Service
- Virtual Private LAN Service (VPLS)

BSNL, has its widespread presence all over the India in basic telephony services. The Bharat Fiber (FTTH) presence is also widespread but a bit limited to the almost all major cities of India distributed through various circles.

In the following list of circles and their corresponding cities which has Bharat Fiber (FTTH) availability. In near future the list will grow to beat the competition as BSNL is the oldest, biggest and backed up by government of India.

Table 1: Showing BSNL Circles and their city where Bharat Fiber FTTH is available

Circle	City (in selected areas)
Andhra Pradesh	Anantpur
	Guntur
	Hyderabad Local
	Kakinada
	Nazvidu
	Nellore
	Rajahmundry
	Sangareddy
	Tirupathi
	Vijayawada
Bihar	Patna
Chhattisgarh	Ambikapur
	Raigarh
	Raipur
Gujarat	Ahmedabad Local
	Anand
	Bardoli
	Kalol
	Mehsana
	Patan
	Surat
	Vadodara
Haryana	Faridabad
	Gurgaon
	Jagadhari
	Palwal



Karnataka	Bangalore
	Belgaum
	Belthangady
	Dharwad(Hubli)
	Karkala
	Mangalore
	Mysore
	Raichur
	Shimoga
	Udupi
Kerala	Calicut
	Ernakulam
	Irinjalakuda
	Kannur(Cannanore)
	Kunnamkulam
	Trichur
Madhya Pradesh	Dewas
	Bhopal
	Gwalior
	Jabalpur
	Mandsaur
Circle	City (in selected areas)
	Ujjain
Maharashtra	Amravati
	Butibori
	Dhulia
	Hingua
	Kolhapur
	Mumbai
	Nagpur
	Nanded
	Nasik
	Pune
	Sangli
Orissa	Bhubneshwar
Pondicherry	Pondicherry
Punjab	Chandigarh
	Jalandhar
	Nawanshahar
	Patiala
	Phagwara
Rajasthan	Ajmer
	Behror
	Bhilwara
	Jaipur
	Jodhpur
	Kota(Ladpura)
	Sawaimadhopur
	Sriganganagar
	Tijara (N)
	Udaipur

Tamilnadu	Chennai
	Coimbatore
	Madurai
	Pollachi
	Trichy
	Vellore
Uttar Pradesh	Agra
	Ghaziabad
	Kanpur
	Meerut
	Moradabad
	Muzaffarnagar
	Noida
	Saharanpur
	Varanasi
Uttaranchal	Haridwar
	Roorkee
West Bengal	Kolkata

https://www.bsnl.co.in/opencms/bsnl/BSNL/services/broadband/pdf/TTH_Cities.pdf [6]

VI. OPTICAL FIBRE TECHNOLOGY

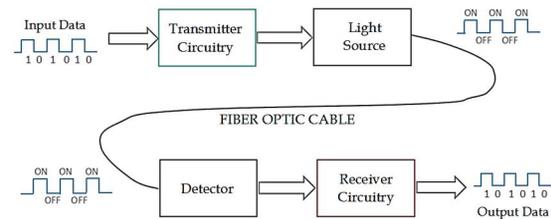


Fig. 4. Showing Fiber optic Technology

Source: https://img-en.fs.com/images/ckfinder/ftp_images/tutorial/optical-transmission.png

Fiber optic communication system consists of three main components:

- **Optical transmitter,**
- **Fibre optic cable**
- **An optical receiver.**

The optical transmitter converts electrical signal to optical signal; the fiber optic cable carries the optical signal from the optical transmitter to the optical receiver; and the optical receiver reconverts the optical signal to electrical signal. The most commonly used optical transmitter is semiconductor devices like LEDs (light-emitting diodes) and laser diodes. Photodetector is the key part of an optical receiver. It converts light into electricity using photodetector effect.



VII. ADVANTAGES AND DISADVANTAGES OF INTERNET ON OPTICAL FIBRE



Driven by the rising demand for higher bandwidth and faster speed connections for a variety of industrial and residential purposes, fiber optic transmission is becoming more and more common in modern society.

Advantages of Fiber Optic Transmission

Extremely High Bandwidth: No other cable-based data transmission medium offers the bandwidth that fiber does. The volume of data that fiber optic cables transmit per unit time is far greater than copper cables.

Longer Distance: in fiber optic transmission, optical cables are capable of providing low power loss, which enables signals can be transmitted to a longer distance than copper cables.

Resistance to Electromagnetic Interference: in practical cable deployment, it's inevitable to meet environments like power substations, heating, ventilating and other industrial sources of interference. However, fiber has a very low rate of bit error (10 EXP-13), as a result of fiber being so resistant to electromagnetic interference. Fiber optic transmission is virtually noise free.

Low Security Risk: the growth of the fiber optic communication market is mainly driven by increasing awareness about data security concerns and use of the alternative raw material. Data or signals are transmitted via light in fiber optic transmission. Therefore there is no way to detect the data being transmitted by "listening in" to the electromagnetic energy "leaking" through the cable, which ensures the absolute security of information.

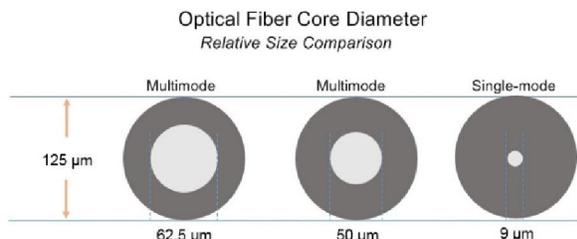


Fig. 5. Showing Core diameter of fiber optic cable

Small Size: fiber optic cable has a very small diameter. For instance, the cable diameter of a single OM3 multimode fiber is about 2mm, which is smaller than that of coaxial copper cable. Small size saves more space in fiber optic transmission.

Light Weight: fiber optic cables are made of glass or plastic, and they are thinner than copper cables. These make them lighter and easy to install. **Easy to Accommodate Increasing Bandwidth:** with the use of fiber optic cable, new equipment can be added to existing cable infrastructure. Because optical cable can provide vastly expanded capacity over the originally laid cable. And WDM (wavelength division multiplexing) technology, including CWDM and DWDM, enables fiber cables the ability to accommodate more bandwidth. [7]

Other **advantages** could be apart from listed above like:

- Reliable and Consistent
- Faster Data Transfer
- Symmetrical Internet Connectivity
- Cost-effective
- Eliminate Latency Issues- that helps in
 - Better voice quality for VoIP users
 - Support for HD Video - Streaming high definition video (example... training video)
 - Ability to move more apps to the cloud
 - Downloads and uploads of huge files without disruption
 - Improved collaboration between employees - Web Conferencing
- File sharing
- Cloud Access
- Signal Strength

Disadvantages of Fiber Optic Transmission

Though fiber optic transmission brings lots of convenience, its disadvantages also cannot be ignored.

Fragility: usually optical fiber cables are made of glass, which lends to they are more fragile than electrical wires. In addition, glass can be affected by various chemicals including hydrogen gas (a problem in underwater cables), making them need more cares when deployed underground.

Difficult to install: it's not easy to splice fiber optic cable. And if you bend them too much, they will break. And fiber cable is highly susceptible to becoming cut or damaged during installation or construction activities. All these make it difficult to install.

Attenuation & Dispersion: as transmission distance getting longer, light will be attenuated and dispersed, which requires extra optical components like EDFA to be added.

Cost Is Higher Than Copper Cable: despite the fact that fiber optic installation costs are dropping by as much as 60% a year, installing fiber optic cabling is still relatively higher than copper cables. Because copper cable installation does not need extra care like fiber cables. However, optical fiber is still moving into



the local loop, and through technologies such as FTTx (fiber to the home, premises, etc.) and PONs (passive optical networks), enabling subscriber and end user broadband access.

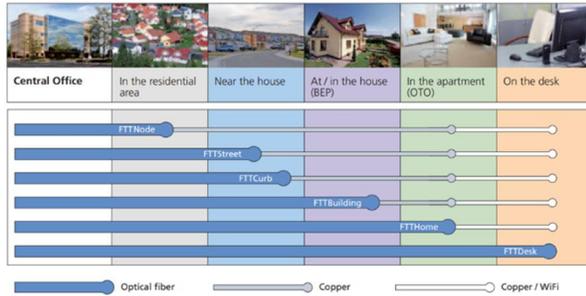
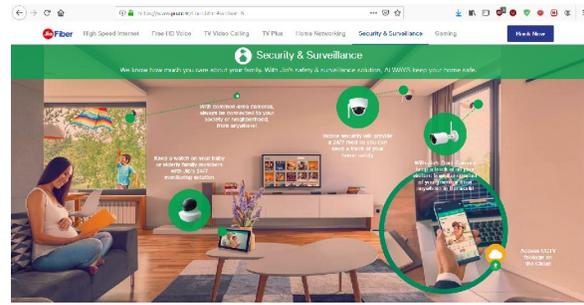
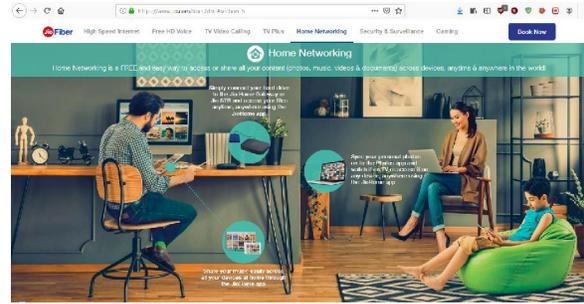
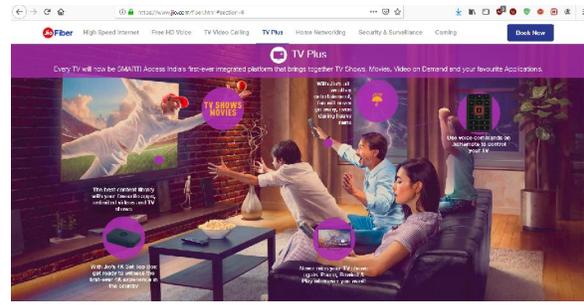
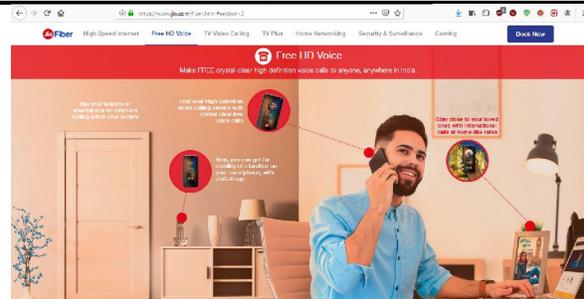
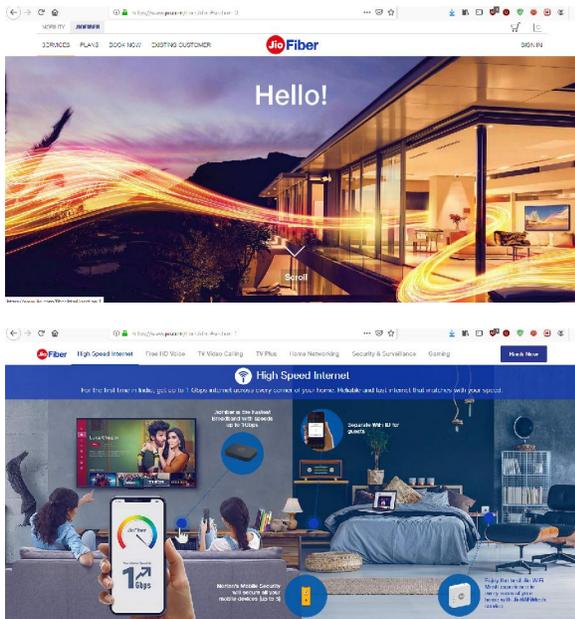


Fig. 6. Showing Optical fiber and copper cable in FTTx

Special Equipment Is Often Required: to ensure the quality of fiber optic transmission, some special equipment is needed. For example, equipment such as OTDR (optical time-domain reflectometry) is required and expensive, specialized optical test equipment such as optical probes and power meter are needed at most fiber endpoints to properly provide testing of optical fiber.

VIII. RELIANCE JIO “GigaFiber”: AN IMPRESSION TO INTERNET REVOLUTION ON OPTICAL FIBER



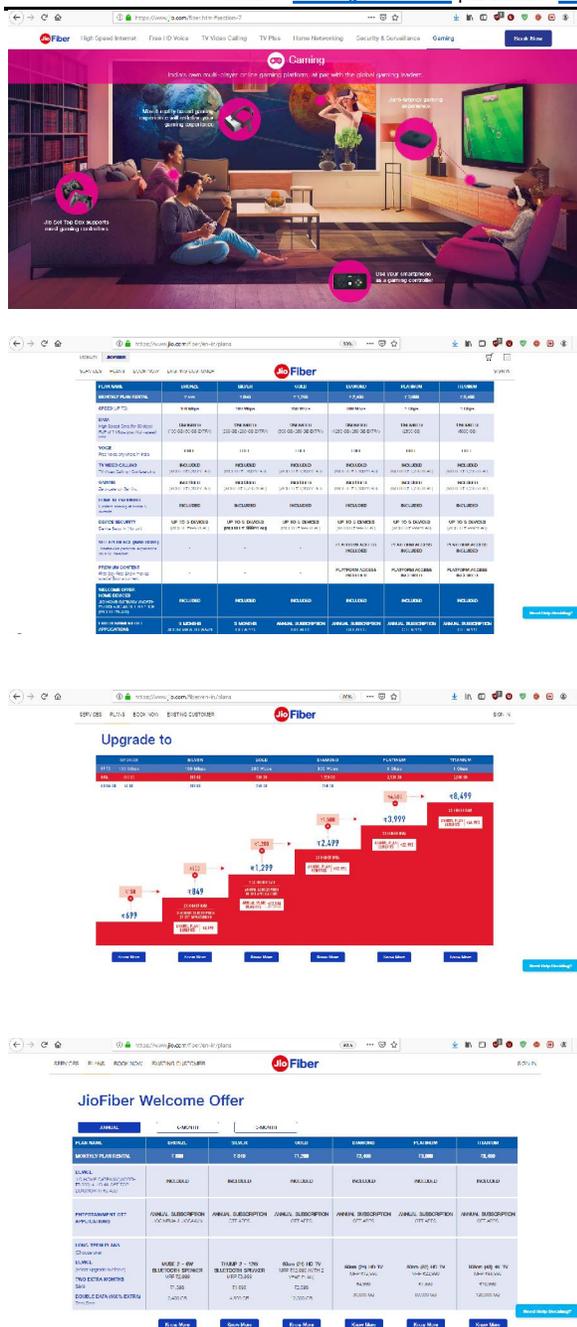


Fig. 7. Showing various plans and features of Reliance Jio “GigaFiber”

Source: www.jio.com/fiber

Reliance Jio has started “Giga” internet services commercially from last month, 5th Sept 2019 in the cities with foremost demand for connection. The current research is going on in the month of October 2019, since it is not the right time to predict more but to understand the market and the customer switching pattern and preferences what is likely to be the future of Reliance GigaFiber in Indian market. Will Reliance going to repeat the success story as Reliance has done in recent past in

wireless telecom services (Voice and Data both) and change the market scenario.

Looking at the Reliance official “GigaFiber” website offering to the features of “GigaFiber” shown in above images like:

- High speed Internet
- Free HD Voice
- TV Video Calling
- TV Plus
- Home Networking
- Security and Surveillance
- Gaming
- Plans
- Options to upgrade in Plans [8]

Some of the features are also provided by Reliance competitors earlier than the presence of Reliance “GigaFiber” in the market it’s the time to see the market and customer reaction to the newly introduced “GigaFiber” services.

The most eye catching feature is “Welcome Offer”, other features and plans are going to stay later on but this welcome offer is going to vanish soon.

People would like to take benefit of “Welcome Offer” to the maximum, looking at the pre- registration in millions it gives a positive inclination towards the welcome offer.

The services has started commercially from 5th September at rates which are one-tenth compared to global rates. Registrations for Jio “GigaFiber” had opened in August last year.

Jio “GigaFiber” has received **over 15 million** registrations from **1,600 cities** and the company has drawn up a plan to reach 20 million homes and 15 million business enterprises.

The fibre offering will support mixed reality (augmented reality and virtual reality combined) which would enable immersive shopping experiences, high definition entertainment apart from high quality video calling anywhere in India.

Within less than three years of its launch, Jio has become the number one operator in terms of revenue and the second largest in terms of subscriber base.

Reliance is also planning to buy majority stakes in Den Networks Ltd and Hathway Cable and Datacom Ltd for 5,230 crore—a move that would boost the reach of Jio GigaFiber in many parts of India. [9]

IX. “DATA WAR” BETWEEN RELIANCE JIO “GigaFiber” AND ITS RIVALS BSNL, AIRTEL, TATA SKY BROADBAND AND ACT ETC.

There is a scenario of “Data War” in between the Reliance Jio and other internet service provider in fixed line internet services. The tug of war is in terms of data providing and the speed at which the data is provided most likely in download



stream then the uploading speed of data. People are using data for uploading the videos on YouTube and other sites but mostly people are using Internet data for downloading the video streams for entertainment and other purposes. The next issue is the consistency of data providing like maintaining the speed of data in both uploading and downloading stream.

Other than reliance Jio there are other players who are present already in the market and providing services to their customers many of the customers are going to switch their ISPs after introducing the services by Reliance Jio in near future as looking at the huge pre demand booking of the Reliance Jio fiber, JioGigaFiber has received over 15 million registrations from 1,600 cities. In the above mention figure it is quite a good figure to understand the demand for Reliance jio GigaFiber in the market.

Let's look at the offerings given by the rivals of Reliance Jio "GigaFiber" in the market, many service provider has changed the plans according to the competition rising ahead in the market.

Airtel V-Fiber Broadband: Airtel charges Rs 799 for 40Mbps speed and its 100 Mbps plan called 'Entertainment' starts from Rs 1,099 per month with a data limit of 300GB (1000GB bonus data) in Delhi circle. The plan also offers subscription services like Amazon Prime, Netflix, Zee5 Premium and Airtel TV Premium.

Tata Sky Broadband: Tata Sky Broadband plan starts from Rs 999 per month for a 25 Mbps connection which is slower than what is promised by Reliance JioFiber. However, the plan has no data limits and comes with a free router. The 100Mbps plan of Tata Sky starts from Rs 1599. None of the Tata Sky Broadband plans offers free installation, a huge pain point in 2019!

ACT Fibernet Broadband: Basic Act Fibernet Broadband plan called the ACT Silver Promo starts from Rs 749 for 100 Mbps speed and a data limit of 500GB. The ACT Platinum Promo plan of ACT Fibernet offers 150 Mbps speed and a 1000GB data limit. The company also allows its users to activate Netflix by subscribing to any ACT Entertainment plan.

Reliance JioFiber: The Reliance JioFiber plans start from Rs 700 and offer a minimum speed of 100 Mbps. The plan prices go up to Rs 10,000 with speeds of 1Gbps. Reliance Jio has a 'Welcome offer' under which it will give an HD or 4K LED TV as well as 4K set-top box for free with their JioFiber connection to those who opt for the annual plans or the 'Jio Forever plans.' [10]

Looking at the data war in between reliance and other rivals that upcoming scenario will change many things in terms of market leadership, customer satisfaction and other things like minimising the competition in the market making the huge gap in between first position and second position in the market share.

This can be achieved only with the support of customer and customer will only support when they are satisfied with the services. They are moving from the less or only option with high priced internet services by established players towards

high speed internet at affordable or competitive prices. It can be said it's a customer driven market now but in future it could be something else.

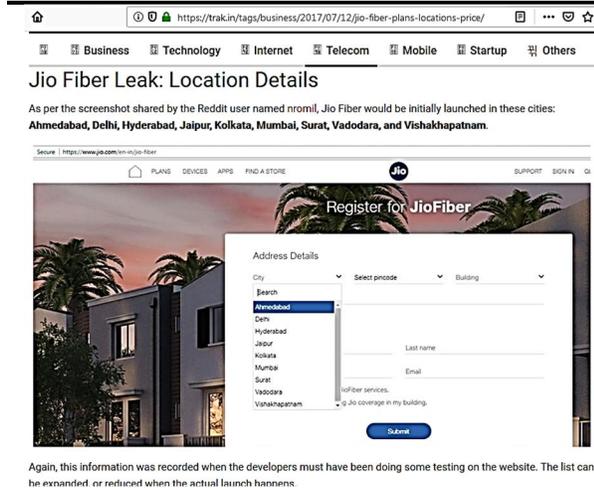
Looking at the incredible pre demand of 15 million registrations from 1,600 cities from all over India, it becomes important according to the point of research that people wants to shift from their earlier service providers what could be the best possible reasons for that or these are the new customers who wants to join the Reliance "GigaFiber" bandwagon of Internet data.

Reliance Jio has added over over 82.6 lakh subscribers in the month of June, Vodafone Idea shed 41.45 lakh subscribers, and Bharti Airtel 29,883 customers, according to data released by the Telecom Regulatory Authority of India (Trai). The number of telephone subscribers in India increased from 1,183.15 million at the end of May'19 to 1,186.63 million at the end of June'19, thereby showing a monthly growth rate of 0.29%, Trai data showed.

As on 30 June 2019, Vodafone Idea had a subscriber market share of **32.9%**, **Reliance Jio** (28.42%), and Bharti Airtel (27.49%). [11]

The emphasis of users and service providers are shifted from voice to data, earlier than "Jio" the situation was different telecom companies are attracting the users by providing the benefits regarding the voice and less focused on data. Data was the premium services for the users and the speed and other things are also associated to it, after the 4th Generation of Telecom services the focus was shifted towards data war and this focus is now on the wired services after wireless services. In near future the 5th generation of telecom services is going to hit and situation would be different from the present scenario, but that is a bit out of scope for the current research studies.

One of the biggest curiosity among people was will I get the Jio connection is it available at my location as the Jio did not disclosed the location from where it will start its services first. The following image is showing some locations as website was constantly upgrading and this was the hint of location was disclosed but not fixed, the connections were going to process as per the higher demand first and so on. But looking at the tentative list all the major cities are going to get Reliance Jio's "GigaFiber". Now as the services have started from 5th September 2019, there is no hide and seek of location.



X.UNDERSTANDING THE OUTLOOK OF CUSTOMER

In contemporary scenario of telecom and internet data services the market is customer centric and service providers are aggressive to get the maximum market share the emphasis has been shifted towards “data” rather than “voice”. Reliance Jio has already shaken the market and marked its presence in the market share with maximum percentage of users to its network and other players are struggling to get these magical number of users.

Since, its customer driven market and customer will move towards the player who gave them maximum benefits for both data and voice services, this has been proved in terms of wireless data on 4G network and existence of Reliance Jio network and its market share I the live example for the same. This situation could be repeated in near future too if the customer base shifted towards reliance fixed line Internet services and other services providers like BSNL, Airtel and others will lose the customer base.

Customers could be of following types:

Loyal Customers- These types of customers are less in numbers but promote more sales and profit as compared to other customers as these are the ones which are completely satisfied. These customers revisit the organization over times hence it is crucial to interact and keep in touch with them on a regular basis and invest much time and effort with them. Loyal customers want individual attention and that demands polite and respectful responses from supplier.

Discount Customers- Discount customers are also frequent visitors but they are only a part of business when offered with discounts on regular products and brands or they buy only low cost products. More is the discount the more they tend towards buying. These customers are mostly related to small industries or the industries that focus on low or marginal investments on products. Focus on these types of customers is also important as they also promote distinguished part of profit into business.

Impulsive Customers- These customers are difficult to convince as they want to do the business in urge or caprice. They don't have any specific item into their product list but urge to buy what they find good and productive at that point of time. Handling these customers is a challenge as they are not particularly looking for a product and want the supplier to display all the useful products they have in their tally in front of them so that they can buy what they like from that display. If impulsive customers are treated accordingly then there is high probability that these customers could be a responsible for high percentage of selling.

Need Based Customers- These customers are product specific and only tend to buy items only to which they are habitual or have a specific need for them. These are frequent customers but do not become a part of buying most of the times so it is difficult to satisfy them. These customers should be handled positively by showing them ways and reasons to switch to other similar products and brands and initiating them to buy these. These customers could possibly be lost if not tackled efficiently with positive interaction.

Wandering Customers- These are the least profitable customers as sometimes they themselves are not sure what to buy. These customers are normally new in industry and most of the times visit suppliers only for confirming their needs on products. They investigate features of most prominent products in the market but do not buy any of those or show least interest in buying. To grab such customers they should be properly informed about the various positive features of the products so that they develop a sense of interest. [12]

The customers can be further segregated, as per the situation like before opting the product or services, on-board/ involved/ ongoing and after purchase of good and services.

Before purchase

- Lookers
- Bargain Hunters
- Buyers
- Researchers
- Impulse buyers
- Discount hunters

Onboard/ involved

- New
- Repeat
- Active
- Dissatisfied

After purchase

- Loyal
- Referring
- Advocate [13]

The current situation for the offering of Reliance Jio “GigaFiber” services the pre-booking status for the same involves “Before purchase” types of customers then after they were involved and soon become after purchase customer types.



To understand it in a better way the author has designed a set of questionnaire that will help in understanding the customer preference of choice to depict the future of fixed line services from Reliance Jio.

Reliance has made its move with a very strategic move as it knows that there are established players in the market and it will be difficult to crack the customer base for its new offering of fixed line data service, the players are like BSNL etc. who have maximum outreach of customer base at interior part of the India. To cope up the situation it launches the portal to get the pre booking for the fixed line internet services and stated to get the reliance fixed line services get the maximum bookings from your area, reliance will start its operation from maximum customer base of pre-bookings, by doing this reliance will get a picture where to hit first on the map of India, where are the potential customers who are waiting whether they are new customers or already using some Internet services form competitors.

Broadband – Defined

Broadband is defined as "an always-on Internet connection with download speed of 512 kbit/s or above."

The number of internet users are 665.31 million, out of which 70.72 million are narrow band subscribers and 594.38 million are broadband subscribers.

The following table shows the top 10 ISPs in India by total subscriber base as of 30 June 2019. [14]

Table 2: Shows the top 10 ISPs in India by total subscriber base as of 30 June 2019

Rank	ISP	Narrowband	Broadband	Total
1	Jio	0	331,255,614	331,255,614
2	Airtel	28,960,669	121,488,786	150,449,455
3	Vodafone	32,781,067	110,522,654	143,303,721
4	BSNL	7,873,402	21,928,047	29,801,449
5	Tata Teleservices	796,090	1,759,618	2,555,708
6	ACT Fibernet	0	1,449,044	1,449,044
7	MTNL	251,982	956,778	1,208,760
8	Hathway	0	835,987	835,987
9	You broadband	14,816	743,593	758,409
10	GTPL Broadband Pvt. Ltd.	0	290,968	290,968

https://en.wikipedia.org/wiki/List_of_internet_service_providers_in_India

XI. QUESTIONNAIRE

To understand the customer response about Reliance Jio “Gigafiber” features and its responses and customer switching reasons for any Internet Service Providers the author has designed a set of questionnaire, that has been virtually divided into three sections like in the first section it has the details about the Reliance Jio “Gigafiber” offering to the customers as “Welcome Offer” and other features, in second section assuming that the respondent has already using Internet connection “optical fiber” by any of the ISP and its user experience on the various parameters, in the third section, the details of the respondents like age group, gender, income group, marital status etc.

Following are the images of the questionnaire that has been floated over the website and the link was distributed through e-mail and various social media applications like Whatsapp, Facebook, twitter to get the responses from the respondents.

Reliance Jio “GigaFiber” and other Players in wireline Internet Services Market

*Indicates a response is required

1.

PLAN NAME	BRONZE	SILVER	GOLD	DIAMOND	PLATINUM	TITANIUM
MONTHLY PLAN RENTAL	₹ 600	₹ 640	₹ 1,200	₹ 1,400	₹ 1,800	₹ 6,400
SPEED (UP TO)	100 Mbps	100 Mbps	200 Mbps	500 Mbps	1 Gbps	1 Gbps
DATA	UNLIMITED High Speed Data for 30 days FUP of 1 Mbps post high-speed end.	UNLIMITED (100 GB+50 GB EXTRA)	UNLIMITED (200 GB+200 GB EXTRA)	UNLIMITED (500 GB+250 GB EXTRA)	UNLIMITED (1200 GB+250 GB EXTRA)	UNLIMITED (5000 GB)

Kindly choose the Reliance Jio’s “GigaFiber” Wireline Internet Plans and Rental that best suits your need.

Bronze - 699 Silver - 849 Gold - 1299 Diamond - 2499
 Platinum - 3999 Titanium - 8499

2. Reliance Jio - TV Calling and Conferencing solution - Make FREE international video calls straight from your TV, video and conference calls to anyone, anywhere in the world. With following offer in various plans from Reliance Jio.

| TV VIDEO CALLING | INCLUDED (WORTH ₹1,200/YEAR) |
|---------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| TV Video Calling / Conferencing | INCLUDED (WORTH ₹1,200/YEAR) |

According to you it's a new and unique feature from Reliance Jio “GigaFiber” and it will help users to connect more effortlessly with their friends and relatives all around the world.

Yes No

3. Gaming - Zero Latency Gaming, Reliance Jio “GigaFiber” offers India’s own multi-player online gaming platform, Blood reality based gaming experience with Jio Set Top Box supports most gaming controllers you can use your smartphone as a gaming controller. This is included in the all offered plans worth approx 1200.

| GAMING | INCLUDED (WORTH ₹1,200/YEAR) |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Zero-Latency Gaming | INCLUDED (WORTH ₹1,200/YEAR) |

According to you, did this feature attract you and could be one of the supporting reason to opt Jio GigaFiber in near future.

Yes No

4. Home Networking is a FREE and easy way to access or share all your content (photos, music, videos & documents) across devices, anytime & anywhere in the world. Sync your personal photos on to the Photos app and watch it on TV or access it on any device, simply connect your hard drive to the Jio Home Gateway or Jio STB and access your files anytime, anywhere using the JioHome app.

HOME NETWORKING	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
Content sharing at home & outside	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED

According to you, through Reliance Jio Home Networking feature, access your data from anywhere attracts you as included part of the plans as offered.

Yes No

5. Device Security (Share) - up to 5 devices worth approx 999/- per year is included in all offered GigaFiber Plans.

| DEVICE SECURITY | UP TO 5 DEVICES (WORTH ₹999/YEAR) |
|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Device Security (Share) | UP TO 5 DEVICES (WORTH ₹999/YEAR) |

Do you find this offering an essential and necessary feature of the plan?

Yes No

6. VR Experience (IMMERSIVE) - Theatre like personal experience on a VR headset available only in Diamond, Platinum and Titanium plans of Reliance Jio GigaFiber.

VR EXPERIENCE (IMMERSIVE)				PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED
Theatre like personal experience on a VR headset				PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED

According to you, this VR Platform feature attracts you to opt premium category plans.

Yes No

7. Premium Content - First Day First Show movies, special Sports content. Available only in Diamond, Platinum and Titanium plans of Reliance Jio GigaFiber.

PREMIUM CONTENT				PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED
First Day First Show movies, special Sports content				PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED	PLATFORM ACCESS INCLUDED

Do you think that this feature attracts you to opt premium category plans from Reliance Jio “GigaFiber”.

Yes No



6. Welcome Offer - Home Devices JIO HOME GATEWAY (WORTH ₹5000) + JIO 4K SET TOP BOX (WORTH ₹4000) and Entertainment OTT applications are loaded with welcome offer like JioCinema and JioSana etc.

Table with 7 columns: WELCOME OFFER HOME DEVICES, INCLUDED, INCLUDED, INCLUDED, INCLUDED, INCLUDED, INCLUDED. Rows include JIO HOME GATEWAY and ENTERTAINMENT OTT APPLICATIONS.

Do you think it's really a welcome offer for the new users? Yes No

5. With long term plans, Reliance is offering Bluetooth Speakers in two variety, range of HD TV with 24, 32 and 43 inches with extra months and doubling the data in annual plans. There is some extra in all the plans of Reliance Jio long term "GigaFiber".

Table with 7 columns: DEVICE, MUSE 2.0 - 4W, THAMP 2.0 - 12W, 60cm (24") HD TV, 60cm (24") HD TV, 80cm (32") HD TV, 100cm (43") HD TV. Rows include TWO EXTRA MONTHS, DOUBLE DATA (100% EXTRA), and Total Data.

Long term plans are attractive with offering like Bluetooth, HD TV and extra data, according to you, would you like to go with long term plans? Yes No

10. TV Plus - Every TV Plus. Every TV will now be SMART! Access India's first-ever integrated platform that brings together TV Shows, Movies, Video on Demand and your favourite Applications. The best content library with your favourite apps, unlimited HD TV shows with Jio's 4K Set Top Box get ready to witness the first-ever 4K experience in the country. The voice commands on JioRemote to control your TV, never miss your TV shows again. Pause, Rewind & Play whenever you want. With Jio's all-weather entertainment, fun will never go away, even during heavy rain.



Will TV Plus, never before offering all TV will be SMART! Would you like to opt Reliance Jio "GigaFiber" to experience TV shows, Videos and Movie on Demand. Yes No

Table comparing internet plans: JioFiber, Airtel V Fibre, BSNL Bharat Fiber, Spectra Broadband, Tata Sky Broadband etc. Columns include Speed (Mbps), ISP Offer, Speed Test (Mbps), and Cost.

Kindly select your preferred internet service provider by looking at the offerings. Data accessed from: Source - https://www.fritzpost.com/news-analysis/60-cm-4k-set-top-box-bharat-fiber-and-more-the-best-internet-broadband-plans-comparison-7284721.html

12. Assuming that you are already using fixed line internet services from any available ISP, kindly select the per month spending on the fixed line internet service - NR 500-1000 NR 1000-1500 NR 1500-2000 NR 2000 above

13. Assuming that you are already using fixed line internet services from any available ISP, kindly rate the ISP's response time for your new connection installation - Very promptly Quite promptly Promptly Not promptly

14. Assuming that you are already using fixed line internet services from any available ISP, kindly rate the uploading and downloading speed of the ISP, as per your selected plan - Very satisfied Quite satisfied Satisfied Not satisfied

15. Assuming that you are already using fixed line internet services from any available ISP, kindly rate the internet tariff plan - Best in the market Better than many Average plan Plan needs improvement

16. Assuming that you are already using fixed line internet services from any available ISP, kindly rate the current ISP overall performance - Very satisfied Quite satisfied Satisfied Not satisfied

17. Assuming that you are already using fixed line internet services from any available ISP, kindly rate the current ISP's after sales and customer support experience - Very satisfied Quite satisfied Satisfied Not satisfied

18. Assuming that you are already using fixed line internet services from any available ISP based on the overall user experience would you like to recommend your current ISP to your friends and relatives? Yes May be I would support but final decision will be of my friend or relative No

19. Assuming that you are already using fixed line internet services from any available ISP, would you like to change your current ISP? Yes May be yes, if I got better alternative Neither yes nor no No

20. Assuming that you are already using fixed line internet services from any available ISP, what could be the possible reasons or factor that influence you to switch over to the other alternative ISP for fixed line internet services - Price Data Issues with after sale and customer support To seek benefit of welcome offer Trying new alternative - Hope to get better service this time Already the user of wireless connection from same ISP and would like to go with fixed wire line services too Plans Speed - very slow after data limit Non-availability of desired plans Extra purchases for Wi-Fi connectivity Source of information for alternative ISP- Advertisement, social media, print media, etc. I will not switch, if I got upgrade in my internet plans. Billing Performance for the Internet Services. (Billing on time, Error Free, Transparent, Accurate etc.) Speed - uploading and downloading Reroute plans are costlier than others Other ISP are providing better speed and data at similar or almost similar cost Influenced by the decision of friends/relative Fied-up from current ISP and eager to change to alternative Billing Performance for the Internet Services. (Billing on time, Error Free, Transparent, Accurate etc.)

21. Kindly select - Gender Male Female

22. Kindly Select - Age group 21-30 Years 31-45 Years 46-60 Years 60+ Years

23. Kindly select - Current occupation Student Homemaker Self-employed/business Salaried - govt. Salaried - pvt. Retired person

24. Kindly select - Marital status - Married Single

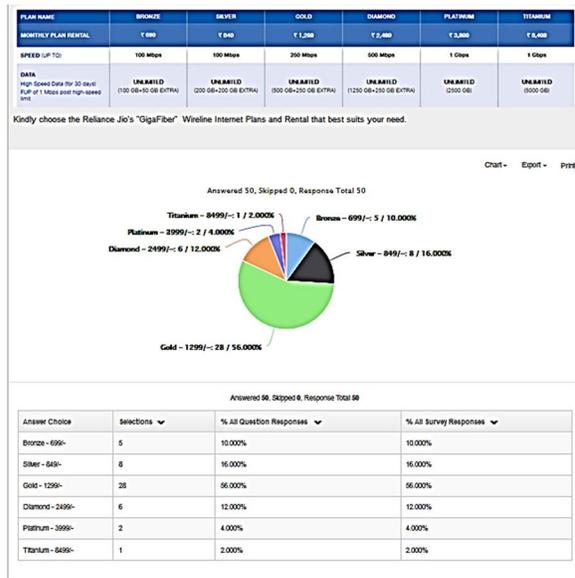
25. Kindly select - approx. Monthly income - Up to 15K 16K - 25K 26K - 50K 51K - 75K

different age groups and genders what they think about the Reliance Jio "GigaFiber" offerings in the highly competitive fixed line Internet market. Looking on the previous success in wireless telephony and internet [data] services in the Indian market the future of Reliance Jio's "GigaFiber" is yet to be decided the deciding force are customers who are either struggling with data or speed and waiting for the another best alternative. Let's see that Reliance could be the next anticipated alternative for the Fixed line internet users,

This questionnaire and survey results are not the last line of decision, there are constant up gradation in the policies of Reliance competitors in the market, other players are constantly trying to hold their customers by upgrading their plans or offering new plans for the new customers and customer could change their decision accordingly. This leads author to the future scope for further research to analyse the situation after six-month or year of usage "GigaFiber" Internet to test the decision was correct by the users.

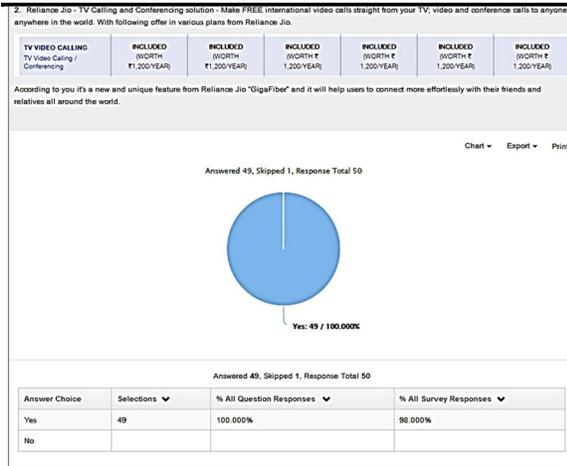
XII. ANALYSIS AND INTERPRETATION

This questionnaire and survey results are just an indication of attitude about the users of any available ISP who is providing fixed line internet connection, due to entry of Reliance in the fixed line internet market customer are having an alternative to opt against the already available connection and to choose to upgrade or move towards new provider.



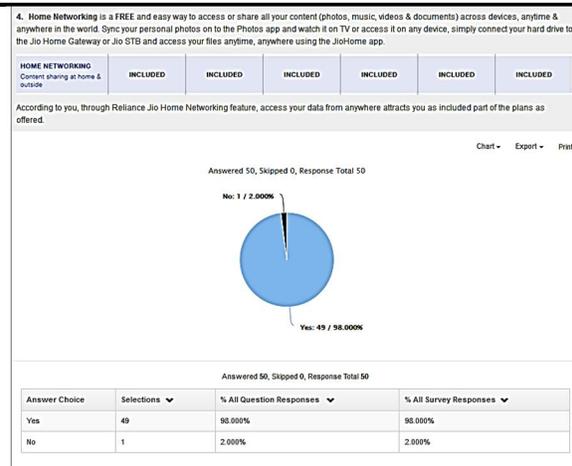
The first question in the survey was about the plans offered by Reliance Jio "GigaFiber", respondents choose Bronze - 699/- 10.000%, Silver - 849/- 16.000%, Gold - 1299/- 56.000%, Diamond - 2499/- 12.000%, Platinum - 3999/- 4.000%, Titanium - 8499/- 2.000%. People choose maximum the gold plan as preferred plan.

In next section, the author is going to analyse the respondent's responses to understand the attitude of the respondents of

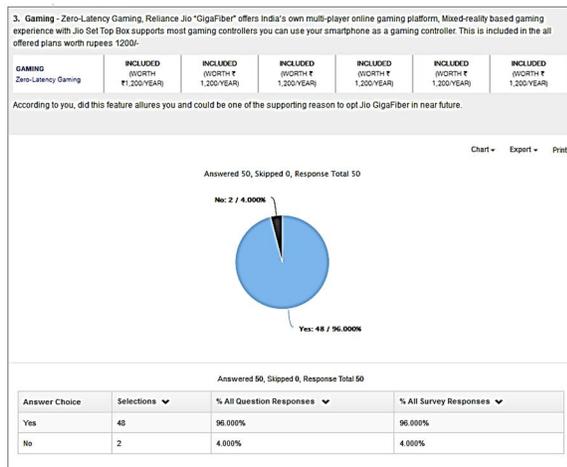


As per the next question about the features of Reliance Jio "GigaFiber" - Reliance Jio - TV Calling and Conferencing solution – it allows to make FREE international video calls straight from your TV; video and conference calls to anyone, anywhere in the world.

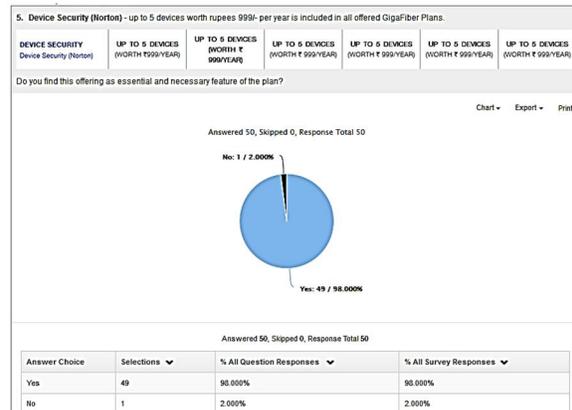
This feature is included in all plans from Reliance Jio. The question was is it helpful or not, all the respondents agrees with 100% support.



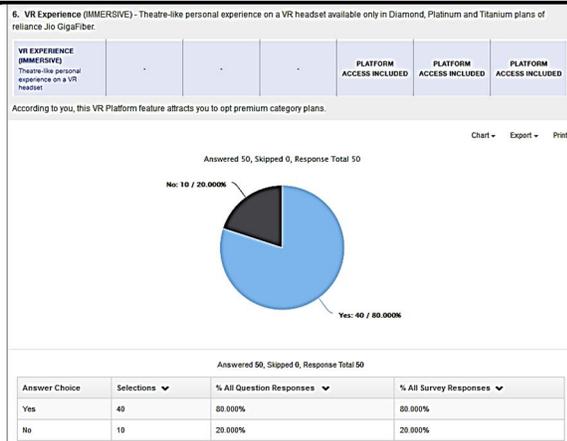
The next question is about the "Home Networking" feature it is a FREE and easy way to access or share all your content across devices, anytime anywhere in the world. 98% of the population of respondents are in support of this feature and 2% respondents are not supporting it. People are using Google drive and other companies to share and store their data online, a Jio can share its data through home networking feature.



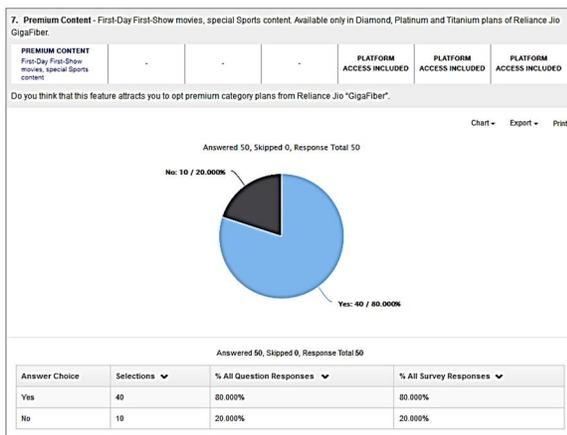
The third question was about the "gaming" experience with zero latency. Jio Set Top Box supports most gaming controllers you can use your smartphone as a gaming controller. This is an attractive features for all the game lovers who play the online games with multiplayer like PUBG etc. the respondents agrees with 98% yes and 2% says no about it. Looking at the popularity of online gaming this feature is certainly useful to the users.



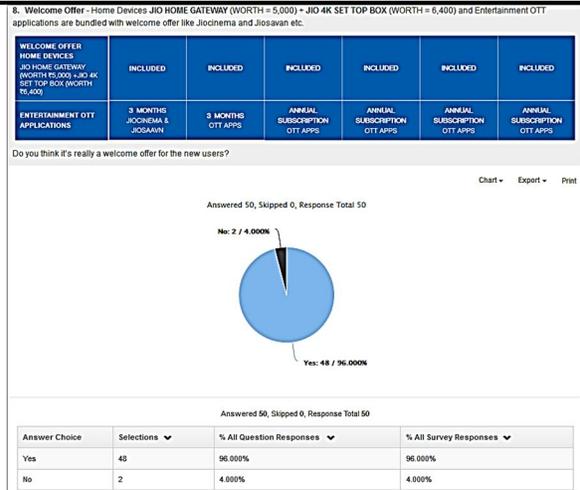
The next question is about the feature of Device Security (Norton), it gives support to 5 devices to secure them worth rupees 999/- per year is included in all offered GigaFiber Plans. 98% of the respondents' population is in the support, that it is an essential and necessary feature. 2% of the respondents' population are not thinking like that, they says No to this feature.



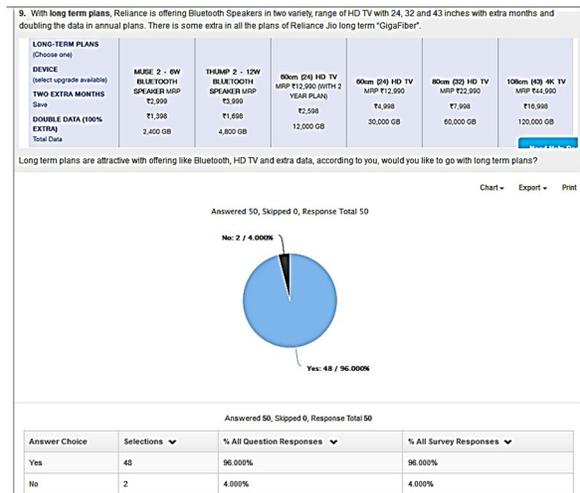
The sixth question of the survey about the features is about - **VR Experience (IMMERSIVE)** - Theatre-like personal experience on a VR headset available only in Diamond, Platinum and Titanium plans of reliance Jio GigaFiber. The respondents reaction towards this question is like, 80% of the population is ready to experience Virtual Reality on Jio network and 20% of the respondents population are not in the support, the reason could be the availability of this feature is only in the premium plans and many regular user do not opt these plans, as it is very clear from the first question about the preference of the plans, people opted gold plan in spite of these premium plans the most. But the percentage is still high, like 80% and there are chances that people will upgrade their plans in near future to experience the premium content.



This question has similar response like the previous one, it was about the feature of **Premium Content - First-Day First-Show** movies, special Sports content. Available only in Diamond, Platinum and Titanium plans of Reliance Jio GigaFiber. This is also with the high priced premium plans, 80% of the population is ready to experience of **First-Day First-Show** movies, 20% are not ready to opt this feature, may be these peoples are not crazy for the **First-Day First-Show** movies. This is a good feature for the people who like movies, they will have the HD quality movies at their home.



Question 8 is about the "welcome offer" it is bundled with Home Devices JIO HOME GATEWAY (WORTH = 5,000) + JIO 4K SET TOP BOX (WORTH = 6,400) and Entertainment OTT applications are bundled with welcome offer like JioCinema and Jiosavan etc. the question was is it a really "welcome offer" to customers, 96% of the respondents are in favour to this offer only 4% were saying No to this offer. 96% acceptance is a huge percentage that indicates the success of the offer, that it is able to attract the attention of the respondents. Looking at the pre -booking numbers **over 15 million** registrations from **1,600 cities, reason - welcome offer.**



This question is about the feature, long term plans with free goodies like blue tooth speakers and HD Television. 96% population are ready to go with long term plans, these are good plans with heavy data and speed along with free goods that makes them attractive to the customers. High percentage shows the same, but 4% of the respondents' population are not ready for the long term plans may be they have limited usage of data.



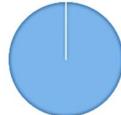
10. TV Plus - Every TV will now be SMART! Access India's first-ever integrated platform that brings together TV Shows, Movies, Video on Demand and your favourite Applications.

The best content library with your favourite apps, unlimited videos and TV shows with Jio's 4K Set Top Box get ready to witness the first-ever 4K experience in the country. Use voice commands on JioRemote to control your TV, never miss your TV shows again. Pause, Rewind & Play whenever you want. With Jio's all-weather entertainment, fun will never go away, even during heavy rain.



With TV Plus, never before offering all TV will be SMART! Would you like to opt Reliance Jio "Gigafiber" to experience TV shows, Videos and Movie on Demand.

Answered 50, Skipped 0, Response Total 50

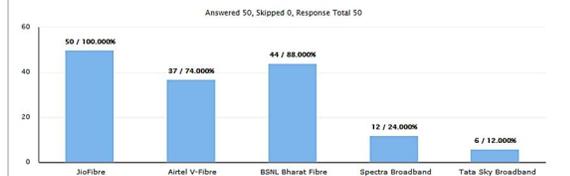


This is about the feature, **TV Plus** - Every TV will now be SMART! Access India's first-ever integrated platform that brings together TV Shows, Movies, Video on Demand and your favourite Applications. 100% of the respondents are in favour of this feature.

11. Internet Plans comparison between JioFibre, Airtel V-Fibre, BSNL Bharat Fibre, Spectra Broadband, Tata Sky Broadband etc.

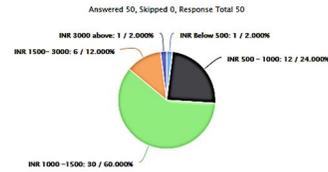
	JioFibre	Airtel V-Fibre	BSNL Bharat Fibre	Spectra Broadband	Tata Sky Broadband
Speed (Mbps)	100, 250, 500, 1000	40, 100, 300	50, 100	250, 500, 1000	25, 75, 100
FUP (GB)	100, 200, 500, 1250, 2500, 5000	100, 300, Unlimited	500, 750, Unlimited	500	200, Unlimited
Speed post FUP (Mbps)	1	2	2, 10 (for 1 Gbps)	NA	1
Cost	Rs 599 - 100 Mbps (100 GB); Rs 849 - 100 Mbps (200 GB); Rs 1,299 - 250 Mbps; Rs 2,499 - 500 Mbps; Rs 3,999 - 1 Gbps (2500 GB); Rs 8,999 - 1 Gbps (5000 GB)	Rs 799 - 40 Mbps; Rs 1,099 - 100 Mbps; Rs 1,399 - 300 Mbps; Rs 1,999 - Unlimited @ 100 Mbps	Rs 777 - 50 Mbps; Rs 1,277 - 100 Mbps; Rs 2,499 - Unlimited @ 100 Mbps 40 GB/day; Rs 9,999 @ 100 Mbps 120 GB/day; Rs 15,999 - Unlimited @ 100 Mbps 170 GB/day	Rs 885 - 1 Gbps; Rs 833 - 500 Mbps; Rs 799 - 250 Mbps	Rs 999 @ 50 Mbps; Rs 999 - Unlimited @ 25 Mbps; Rs 1,249 - Unlimited @ 50 Mbps; Rs 1,599 - Unlimited @ 100 Mbps

Kindly select your preferred internet service provider by looking at the offerings.



In this question, there is a comparison of the various plans of the Internet by various companies, the question was to select the preferred internet service provider according to the offerings, the respondents selection- JioFibre - 100.000%, BSNL Bharat Fibre - 88.000% , Airtel V-Fibre - 74.000%, Spectra Broadband - 24.000% followed by Tata Sky Broadband - 12.000%. This clearly indicates the choice and preference of the customers, BSNL is still the second best choice due to its widespread presence in India.

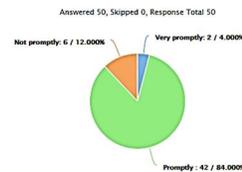
12. Assuming that you are already using fixed wire line internet services from any available ISP. Kindly select the per month spending on the fixed wire line internet service -



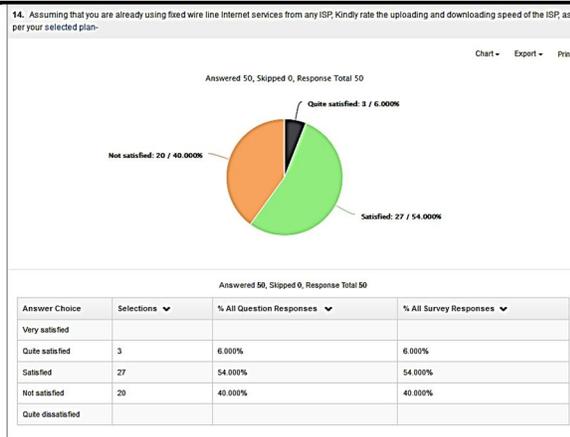
This question is the beginning of the new set of questions that gives the reflections about the user attitude when the customer is already a user of any mentioned ISP.

The question was about the monthly expenditure over the Internet plan, the respondents selected the INR value as - INR **1000 - 1500** - 60.000%, **INR 500 - 1000** - 24.000%, INR 1500-3000- 12.000% ,INR Below 500 - 2.000% , INR 3000 above - 2.000%. This indicates that people are spending INR 500 to 1500 for various plans and mostly in the range of 1000 – 1500 rupees. This also relates to the first question about choosing the Reliance Jio plans people choose Gold and Silver that also cost almost in the selected range.

13. Assuming that you are already using fixed wire line internet services from any available ISP. Kindly rate the ISPs response time for your new connection installation -

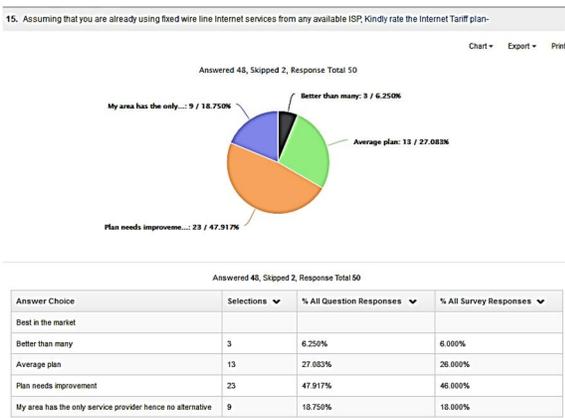


This questions is about, rating the ISPs response time for your new connection installation. The respondents choose **Promptly** as 84.000% followed by **Not promptly** as 12.000% and **Very promptly** by 4.000%. This gives an indication for the Reliance that people are seeking their most awaited Jio Installation very eagerly and they have their previous installation very promptly by their earlier ISP if they wish to switch they assume the same response from Reliance Jio too.



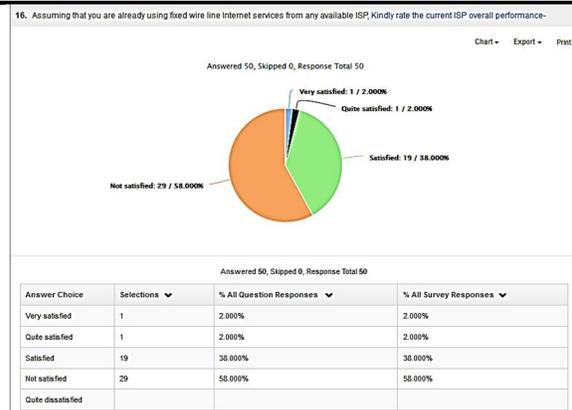
This question is about, giving score to the Uploading and Downloading speed of the ISP, as per your selected plan by the user. The respondents are Satisfied - 54.000%, Not satisfied - 40.000%, Quite satisfied - 6.000%. The higher percentage like 54% are of satisfied customers but 40% customers are not satisfied with the speed issue. This is a area of concern, people opt the new technology with optical fibre for the faster speed and quite a large customers are not satisfied with that.

This gives the clear indication for the promising customer who can switch from their current ISP to the Reliance Jio network for seeking speed.



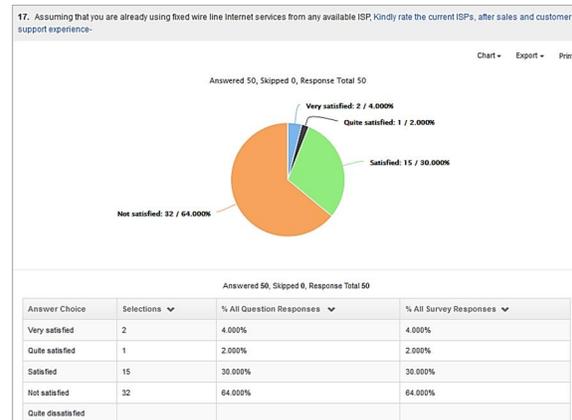
This question is asking about the Internet Tariff plan, the respondents selected the responses from the given options as, Plan needs improvement - 47.917%, Average plan -27.083%, My area has the only service provider hence no alternative-18.750%, Better than many - 6.250%.

This is again an indication that people are using different plans from various ISP but the large section of the population thinks that it needs improvement followed by average plan and they have no alternative. All these situation gives ample opportunity to new ISP like Reliance Jio to design the plans that suits the need of the customer at large. This question also indicates that if they have improved plan they can move to the new ISP or there are chances that they could stick to their current ISP.



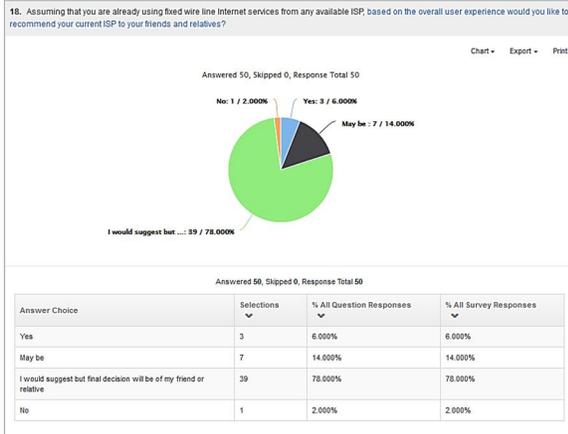
This question is about, rate the current ISP overall performance, The respondents are Not satisfied - 58.000%, Satisfied - 38.000%, Quite satisfied - 2.000%, Very satisfied - 2.000%. Looking at the responses, majority of the respondents are not satisfied with the overall performances that may include various issues.

This gives the hope of light to the new ISP that people are seeking satisfaction in services from ISP and there are good chances to get the business done with these customers.



This question is about, current ISPs, after sales and customer support experience. The respondents are Not satisfied - 64.000%, Satisfied - 30.000%, Very satisfied- 4.000%, Quite satisfied -2.000%. A large number of customers are not satisfied with the after sales and customer support, in general companies are very prompt in new customer but later on the after sales services are not that prompt. People are paying the rental for all the services not only the internet connection. These kind of dissatisfaction cloud be dangerous for the current ISP and could be the opportunity for the other ISP.

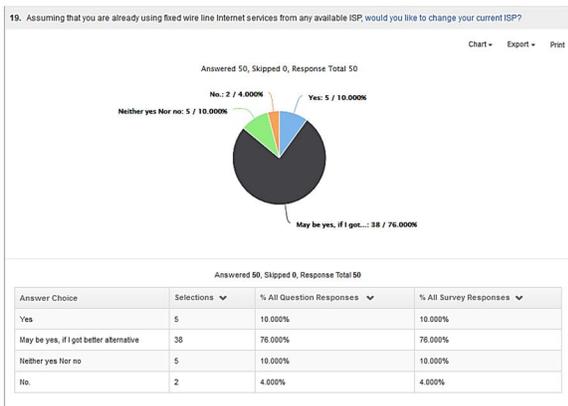
It is very easy to convert a dissatisfied customer rather than a satisfied customer, a satisfied customer is loyal to the company and works as advocate for the products and services to others.



This question is about, recommending your current ISP to your friends and relatives. The respondents choose the options like - I would suggest but final decision will be of my friend or relative - **78.000%**, May be - **14.000%**, Yes - **6.000%**, No - **2.000%**. a higher percentage of respondents choose they will only suggest and take no responsibility for the consequences followed by may be kind of suggestion and yes by 6% of respondents 2% are not recommending.

In this question, the positive environment for current ISP is very low, most of the people are in between kind of thing, they do not want to blame themselves for the later results.

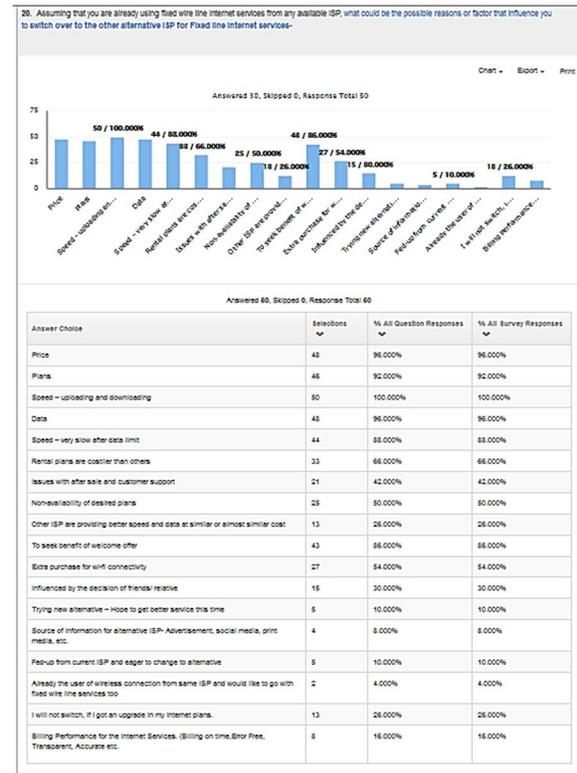
That makes a negative environment for the current ISP and opportunity for the new ISP and other competitors to take the benefit of the situation. Less advocacy means less loyal customers.



This question is about, like to change your current ISP. The respondents are with the responses like, May be yes, if I got better alternative - **76.000%**, Neither yes Nor no - **10.000%**, Yes - **10.000%**, No. - **4.000%**. A huge section of respondents are looking for better alternative due to many reasons like speed, price etc. followed by them they are in between situation, like seeking bargain with the profitable situation they will move, 10% are confident they will move to the new option and 4% are the loyal customers they are not ready to move to new ISP.

The percentage of the loyal customers are very low, this means the current ISP has to effort very hard to keep the existing customers, many customers are looking for change if they have the opportunity a better one than current.

The scenario, in the market is full of opportunity, ISPs has to rethink and redesign the plans and prices for Internet services, a new entrant like Reliance Jio has maximum opportunity to cash the dissatisfaction level of the customers. They are clearly indicating in this question that they are ready to move if they have a better solution for the current situation.

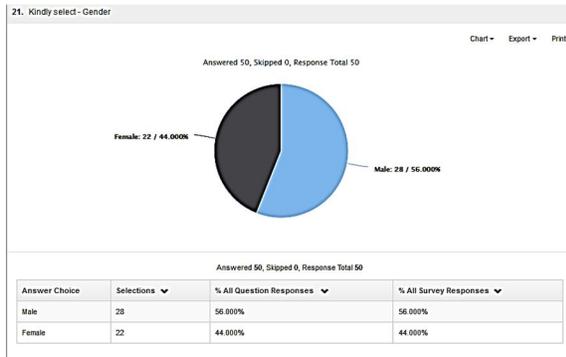


This question deals about, the possible reasons or factor that influence you to switch over to the other alternative ISP. The reasons opted by the respondents are like- **Speed** - uploading and downloading - **100.000%**, **Price** - **96.000%**, **Data** - **96.000%**, **Plans** - **92.000%**, **Speed** - very slow after data limit - **88.000%**, To seek benefit of **welcome offer** - **86.000%**, Rental plans are costlier than others - **66.000%**, Extra purchase for wi-fi connectivity - **54.000%**, Non-availability of desired plans - **50.000%**, Issues with after sale and customer support - **42.000%**, Influenced by the decision of friends/relative - **30.000%**, Other ISP are providing better speed and data at similar or almost similar cost - **26.000%**, Trying new alternative - Hope to get better service this time - **10.000%**, Source of information for alternative ISP- Advertisement, social media, print media, etc.- **8.000%**, Fed-up from current ISP and eager to change to alternative- **10.000%**.

The above choices by the respondents clearly shows the best possible reasons to switch over from one ISP to another, the higher percentage is uploading and downloading speed followed by Plans and data and the speed after the limit is gone. People choose the option of welcome offer that clearly indicates the pre - booking of Reliance Jio's Welcome offer in millions. People are expecting something more than the current ISP. This can be an alarming situation for the current ISP to think and rethink about the price and plans with sufficient data to hold the

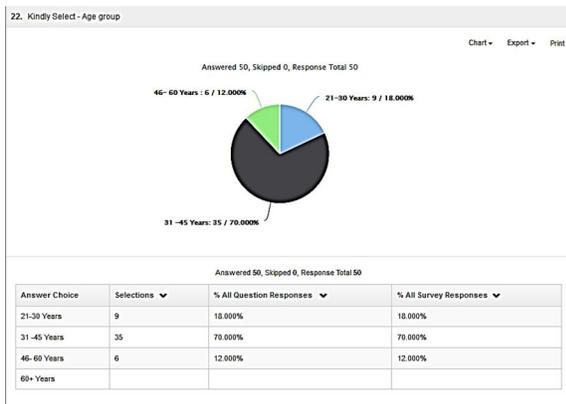


customers, the market is customer centric with there are so many issues to deal with and they are leading towards customer dissatisfaction and customer has many option to choose with along the threat of new entrant.

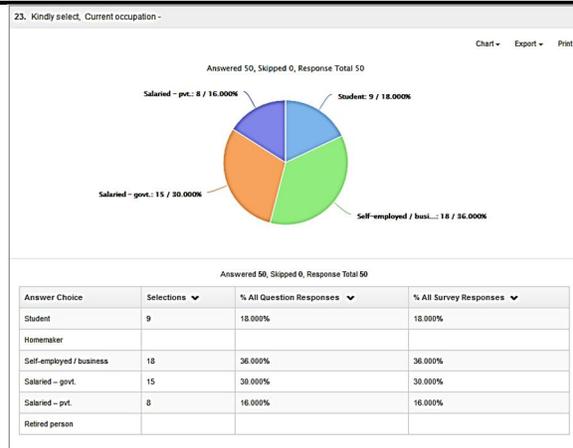


This question is a part of third section in which the general details of the customer is taken for the research purpose.

This question deals with the gender of the respondents, Male - 56.000%, and Female 44.000%. The gender is almost ideally divided into male and female population. This is a good indication for the research purpose that the responses are from almost equal population so there is a less chance of biasness.



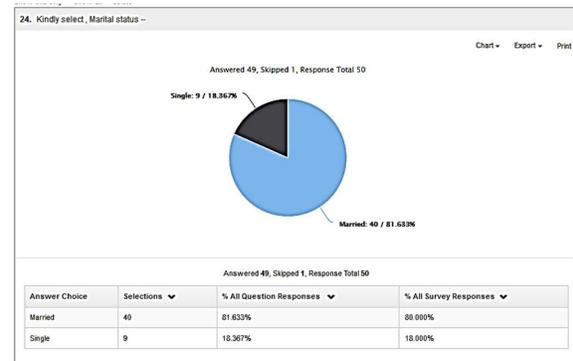
This questions is related to the age group of the respondents, the respondents are majorly from the age group of 31 -45 Years - 70.000% followed by 21-30 Years - 18.000% and 46- 60 Years - 12.000%. Its overall a good mix of age group major age group are of 21 – 45 years of age that includes young and mature people.



This question deals with, occupation of the respondents, the respondents are from various occupations but majorly from Self-employed / business - 36.000%, Salaried – govt. - 30.000%, Student- 18.000%, Salaried – Pvt. - 16.000%.

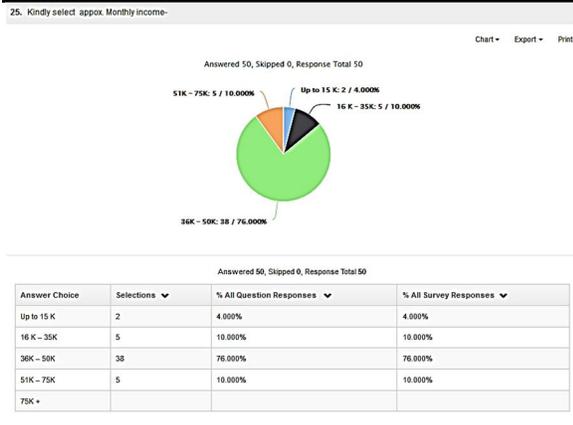
Fast internet services are required by the business purpose and at home too. People are opting fast Internet services for various purposes like entertainment, education, gaming etc., now a days the television sets are well equipped with the Internet option and with technology like android which was only available in mobile devices.

This question has a perfect distribution of population of respondents according the occupation and the ongoing need.



This question is about, Marital status. The maximum respondents are Married - 81.633% followed by Single - 18.367% status.

This data gives the indication that the majority of Internet connection is needed at home purpose, entertainment, gaming etc.



The last question of the survey is about, Monthly income of the respondents, 36K – 50K - 76.000% followed by 16 K – 35K - 10.000% and 51K – 75K -10.000% and Up to 15 K - 4.000%. This is a good indication of paying capacity of the respondents that they could be in an easy position to pay the rental for the plans they have selected. This can be relate to the first question of the survey questionnaire about the preferred plan from the Reliance Jio most of them have selected Gold and Silver, again to the question 12 where they are paying the current ISP.

XIII. CONCLUSION

To conclude this research paper brings a new aspect of the future research. Customer switching is a never ending process, the current situation is where there are prominent players as well as the new entrant Reliance Jio with its welcome offer. Looking at the pre – booking for reliance offer, suppose that people have shifted to the new provider, this brings the scope of the further study the customer satisfaction level after opting reliance Jio as an ISP after one year of usage.

According to the current survey questionnaire responses form respondents for various questions it gives that picture that the people are struggling with the speed, price and plans issue and overall performance of current ISP which they are using. People are ready to move to new option for better results in the services. The response to the optical fiber technology and welcome offer by reliance Jio gives a new hope to the customers for a better services, on the other hand the competitors of reliance Jio already working on the retaining their customer base looking at the success of Jio in the wireless market these players are seriously taking the counter measures like increasing data limit and speed and free calling etc. customer centric market will benefit the customers in price and other features and make the environment more competitive to the players in the market to provide the better service. The major competitor of Reliance Jio is BSNL due to its nationwide presence followed by the other players who have their own market territory locked.

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