

INSTITUTO UNIVERSITÁRIO DE LISBOA



Pratiksha Jain

Master of Business Administration

Supervisor:

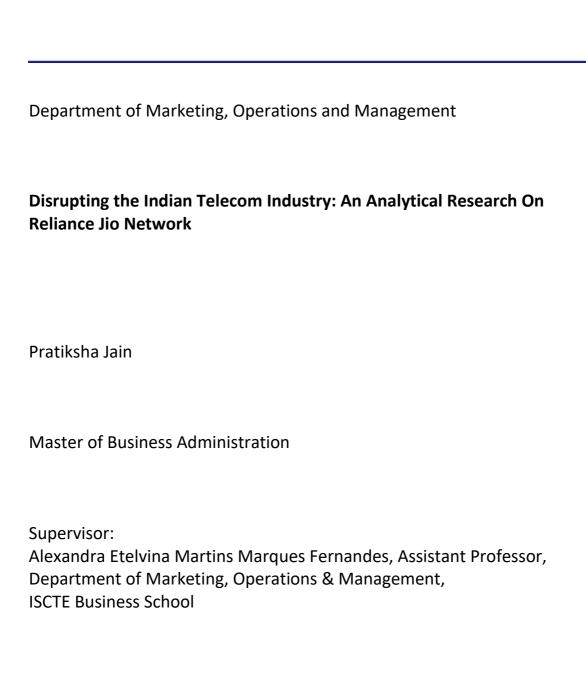
Alexandra Etelvina Martins Marques Fernandes, Assistant Professor, Department of Marketing, Operations & Management, ISCTE Business School

December, 2020



SCHOOL

December, 2020





Disrupting the Indian Telecom Industry: An Analytical Research On Reliance Jio Network

Pratiksha Jain

Acknowledgments

First of all, I offer my gratitude to my parents for everything. Research is definitely a challenging undertaking and no research work can be finished without invoking the blessings and support of parents They blessed me, and I am in a position to work and look forward to more opportunities coming my way.

Every mission needs a spirit of determination and hard work, but more than anything else, it needs the proper guidance, working environment, and most importantly support from others. It is my proud privilege and earnest responsibility to express my deep sense of gratitude to my supervisor Professor Alexandra Marques Fernandes whose expert guidance and valuable suggestions throughout my research work have enabled me to provide the final shape to this thesis. I have a deep sense of gratitude and an eternal feeling of indebtedness towards ISCTE Business School and I express my sincere gratitude for giving me a chance to study here. Living abroad in Portugal has challenged me on multiple fronts, however, at the same time, this experience has given me a few beautiful memories, an identity, and a career that I have always wanted. I would really like to take this opportunity to thank all Professors, Colleagues, and Friends I have had the privilege to meet at University. I genuinely acknowledge their kindness, understanding, and camaraderie we have shared.

This acknowledgment would not be fully complete without mentioning the name of my father Mr. Sanjay Jain and my mother Mrs. Vidya Jain, who stood as pillars of my fortitude and resolution all through my life. I express my deep regards for their love, affection, patience, faith, silent sacrifices, and deep impulsion. This thesis could not have been accomplished without the help of my brother who always gave me warm encouragement and love in every situation. Last but not least, I also express my sincerest thanks to the respondents of the study who spared their precious time to provide the required information.

Sumário

Atualmente, a Índia é o segundo maior mercado de telecomunicações, com a segunda maior base de consumidores do mundo. O setor de telecomunicações da Índia tem assistido a uma transformação revolucionária desde 2016, quando a Reliance Jio lançou os seus próprios serviços de Internet 4G que, ofereciam chamadas gratuitas e dados ilimitados de Internet a um custo muito baixo. Reliance Jio perturbou nao só, o mercado de telecomunicações da Índia, como também desencadeou uma concorrência de preços catastrófica que impulsionou a rápida evolução do setor. O presente estudo tem como objetivo analisar o impacto do Reliance Jio nos clientes, bem como os concorrentes. Adicionalmente, o estudo salienta as dificuldades sentidas pelos utilizadores da Reliance Jio ao analisar o nível de satisfação dos clientes e analisa a tendência dos consumidores sobre a utilização de dados e seu impacto no mercado OTT. Para atingir os objetivos descritos acima, o questionário é concebido e distribuído aos utilizadores de smartphones da área urbana de Pune. O software utilizado foi o SPSS para analisar os dados, sendo que foram utilizadas técnicas univariadas e multivariadas. O estudo evidência a natureza de sucesso do Reliance Jio e como se tornou um nome conhecido na Índia, mostrando que a maioria dos clientes ficaram satisfeitos.

Palavras-chave: Indústria indiana de telecomunicações, Reliance Jio, OTT, internet 4G, serviço VoLTE, nível de satisfação

Abstract

India is currently the second largest market for telecommunications, with the world's second highest consumer base. India's telecom sector has seen a revolutionary transformation since 2016 when Reliance Jio launched its own 4G internet services which offered free calling and unlimited internet data at a very low cost. Not only it disrupted India's telecom market but triggered a catastrophe price war and induced the rapid evolution of the industry. The objective of this contemporary study is to analyze the impact of Reliance Jio on the customers as well as competitors. It also emphasizes on the issues faced by Jio users by analyzing the satisfaction level of customers. This study also plans to analyze the consumer trend on data usage and its impact on OTT market. To accomplish above objectives, the questionnaire is designed and circulated to smartphone users of Pune Urban area. SPSS software is used to analyze data using univariate and multivariate techniques. The study exposes the successful nature of Reliance Jio to become a household name in India and illustrates most customers were satisfied.

Keywords: Indian Telecom Industry, Reliance Jio, OTT, 4G internet, VoLTE service, Satisfaction Level

Contents

	Acknowledgements Sumário	i iii
	Abstract	v
1	Introduction	1
1.1	Company Profile	2
1.2	Competitors	2
1.3	OTT Industry	3
1.4	Key Factors driving Jio's Disruption	3
	Research Motivation	5
1.6	Structure of the Study	6
2	Literature Review	9
2.1	Conceptual Literature	9
2.2	Research Literature	11
3	Research Gap and Problem Statement	15
3.1	Objectives	15
3.2	Hypotheses	15
3.3	Research Methodology	16
4	Data Analysis and Interpretation	19
4.1	Findings of the Study	34
5	Final Considerations	37
5.1	Suggestions/Recommendation	37
5.2	Conclusions	37
5.3	Limitations	38
6	References	41
7	Annexes	47
	Annex A- Online Survey	47
	Annex B- Data Analysis Outputs	47
	1. Network Usage	47
	2. Network Usage 2	49
	3. Satisfaction	51
	4. Reliance Jio Usage	53
	5. Jio Usage	57
	6. Reliability Test	59
	7. Gender and Age	61

List of Tables

Table Number	Description	
1.1	Company Profile	2
·	1 1	
4.1	Demographic data of the respondents	19
4.2	Network usage among the respondents	20
4.3	Primary and secondary networks	20
4.4	The duration of usage of network per service provider	21
4.5	Type of services used per Jio users and competitors' usage	22
4.6	Importance of the factors when choosing any network	23
4.7	Mobile data consumption per month before 2016 & currently	26
4.8	Average monthly expenditure on mobile sim card	27
4.9	Assessment of Jio users' satisfaction with different service components	29
4.10	Service provision components per users' status	30
4.11	JIO primarily usage per gender	32
4.12	JIO primarily usage per age	32
4.13	Cross Tabulation Analysis of gender and age factors with Study variables.	33

List of Figures

Figure Number	Description	
2.1	Service Quality Model	11
4.1	Duration of network usage per Jio users and competitors' usage	22
4.2	Satisfaction with service provider per Jio users and competitors' users	24
4.3	Satisfaction with the services per providers	25
4.4	Which service the respondents preferred after portability?	27
4.5	The preferable Jio services	28
4.6	To be improved in Reliance JIO services	28
4.7	Usage of Jio Internet	30
4.8	Usage of OTT platform	30
4.9	Time Jio users spend watching OTT platforms everyday	31

List of Acronyms

Acronym	Explication	Definition
OTT	Over-the-Top	Streaming media service offered
		directly to viewers via the Internet.
SVoD	Subscription Video on Demand	OTT platform which use a
		subscription business model.
LTE	Long-Term Evolution	Standard used for wireless broadband
		communication for mobile devices.
VoLTE	Voice over Long-Term Evolution	Standard used for high-speed wireless
		communication for mobile phones
MHz	Megahertz (10 ⁶ Hz)	Unit of frequency
GB	Gigabyte (Unit of Data)	Multiple of the unit byte for digital
		information
TRAI	The Telecom Regulatory Authority	Statutory body set up by the
	of India (Government body)	Government of India regulate
		telecommunications sector in India
Mbps	Megabits per second	Standard used for data-transfer rate
QoS	Quality of Service	Measurement of the overall
		performance of a service in telecom
		sector.

Chapter 1

Introduction

India's Telecom sector has seen a revolutionary transformation since Reliance Jio Infocomm launched its own 4G VoLTE services in September 2016. Not only it disrupted India's telecom market but triggered a catastrophe price war and induced the rapid evolution of the industry. Its low-cost plans and smartphones have caused havoc leading to a major consolidation in India's telecoms market. India only had 1.6 Million subscribers in 2015, while South Korea, Japan, and China had 42 Million, 82 Million, and 415 Million LTE subscribers respectively. But after a year that number had shot up to 72 Million subscribers in India reflecting Jio's launch.

Jio network provided LTE spectrum of 800MHz, 1800MHz and 2300MHz bands and released its first budget smartphone LYF with VOLTE services in March 2016. It was studied that Jio's market entry strategy was disrupting as it focused on establishing the strongest broadband network, delivery of cheap devices, offering enticing content, superior customer service and a reasonable structure of tariffs.

1.1 Company Profile

Reliance Jio Infocomm Limited is an Indian telecom company headquartered in Mumbai, the capital city of Maharashtra State in India. It is commonly known as Jio and is a subsidiary of Jio Platforms. It operates a national LTE network covering all 22 telecommunication circles. It does not provide 2G or 3G coverage and uses only voice over LTE to provide voice services on its 4G network instead.

Jio soft released a beta for partners and staff on December 27, 2015, and the 4G networks were launched internally and became publicly available on September 5, 2016. On December 27, 2017, the company launched the 4G services commercially, providing free data and voice services until March 3, 2018.

Jio reported within the first month that it had acquired 1.6 crores (16 million) subscribers. Within 83 days since its commencement, Jio crossed the five crores (50 million) subscriber mark, eventually reaching 100 million subscribers on February 22, 2017. It had around 13 crores (130 million) subscribers by October 2017. As of December 31, 2019, with over 40.56 crores (405.6million) subscribers, it is India's biggest mobile network operator and the seventh-largest mobile network operator in the world.

Table 1.1 Company Profile

Reliance Jio Infocomm Limited		
Туре	A subsidiary of Reliance Industries	
Industry	Telecommunications	
Founded	15 February 2007	
First Commercial Launch	5 September 2016	
Founder	Mukesh Ambani	
Headquarters	Mumbai, Maharashtra, India	
Products	Fixed-line telephone	
	Mobile telephony	
	Wireless broadband	
	Internet services	
	OTT Services	
Revenue	₹21,708 crore (US\$3.0 billion)	
Parent	Jio Platforms	
Subsidiaries	LYF	
Website	https://jio.com/	

1.2 Competitors

The main competitors of Reliance Jio in the telecom market are Vodafone Idea, Airtel, and BSNL:

Vodafone Idea: Affected by Reliance Jio, Vodafone India merged with Idea Cellular to form a new entity named Vodafone Idea Limited. This third-largest telecom company in India is a pan-India integrated GSM operator offering 2G, 3G, 4G, 4G+, and VoLTE.

Airtel: It is the second-largest provider of mobile telephony after Jio and they offer services of fixed telephony, broadband, and subscription television services. They also have services like GSM, 3G, 4G LTE, 4G+ mobile services, fixed-line broadband, voice services and had also rolled out its VoLTE technology across all Indian telecom circles.

BSNL: It is an Indian state-owned telecommunications organization. It is the biggest wireline telecommunications network organization in India, with more than 60% marketplace share and the fourth biggest wireless telecommunications operator.

1.3 OTT Industry

An over-the-top (OTT) media service is media streaming delivered directly to viewers via the internet. India had only two OTT platforms in 2012, and now there are more than 40 platforms. Most popular are Netflix, Amazon Prime, and Disney + Hotstar.

1.4 Key Factors driving Jio's Disruption

Here are some aspects in which the telecom industry in India disrupted upon Jio's transformative entry:

- (i) **Reduction in Data Cost:** Before the arrival of Jio, the internet was very costly, and for 1 gigabyte of data, users in India paid approximately 225 rupees (\$3). Initially, when Jio launched, it provided free data for customers at high speed. And then, after attracting the initial massive number of users, it began charging contracts. Still, the rate was very modest, which forced its competitors to lower the cost of data en masse. In 2019, the global average for 1 gigabyte of data was \$5.09, and in India, the price is 18.5 rupees (26 cents).
- (ii) Unlimited Voice Calls at No Cost: For mobile operators, voice calls were a significant revenue source before Jio, but they were made available free of cost by Jio when it introduced its services. According to the Reliance annual general meeting (AGM) 2017, chairman Mr. Mukesh Ambani disclosed that Jio subscribers had made more than 250 crores (2.5 billion) minutes of voice and video calls every day.
- (iii) **Highest User Acquisition:** Jio reported that its telecommunications network had accumulated 100 million users in less than six months of its launch. This growth was assumed higher than what Facebook and WhatsApp had reported. Reliance Jio has crossed the 400 Million customers mark in India with a net addition of over 3.5 Million subscribers in July 2020 hence becoming the first telecom company to acquire the highest number of customers in India, according to data released by telecom regulator TRAI.
- (iv) Increased Consumption of Online Content: Since the release of free data, India saw unprecedented growth in the usage of online content. Before the launch of Reliance Jio, India ranked 155th in terms of data consumption in the world. According to a KPMG report, India now has the second-highest per capita consumption of online video in the world. Mobile data consumption in India shot up to 3.7 Billion GB/Month from 0.2 Billion GB/Month.

In India, over-the-top (OTT) platforms have taken the media and entertainment sector to new heights because of the booming digital wave. There has been a 56-fold boom in India's total mobile data consumption since 2016 due to the large-scale rollout of 4G networks and low-value unlimited data plans.

According to KPMG, the Indian OTT market will grow 45% to reach \$18 billion by the end of fiscal 2023. The number of OTT users in the country will cross 500 million by 2020, according to a study by Ernst & Young, making India the second-largest market after the US.

The Indian OTT market ecosystem incorporates players operating in diverse industry segments like tv distributors, telecom agencies, companies with content presence, broadcasters (Disney+Hotstar), independent companies, and platforms (Amazon Prime, Netflix).

- (v) **Mobile High-Speed Data:** After introducing Jio, India's average internet speed had doubled, clocking 5.6 megabits per second (Mbps) in Q4 2016. In India, the 99% growth in the average internet speed in just one year is also the fastest growing India has ever seen. According to the telecom regulator TRAI, Reliance Jio continues to be the fastest mobile network, with an average download speed of 19.3 megabits per second (Mbps) as of 2020.
- (vi) Improved Broadband Internet Availability: In 2016, TRAI defined 512 kbps as the broadband speed and had issued that in any circumstance, internet service providers would have to ensure that the rate of fixed broadband connections does not dip below 512 kbps. As people got access to free high-speed 4G services, Jio became the country's most extensive broadband Internet network. India's average broadband download speed rose 16.5 percent in October 2019. In September 2019, it topped out at 34.07 Mbps. Also, Jio is providing free Wi-Fi hotspot services called Jionet Wi-Fi in several cities across India.
- (vii) **The popularity of 4G Smartphones:** The 4G technology in India was relatively new in late 2015. Few people had smartphones capable of 4G. But 4G VoLTE-capable smartphones began to hit the market for as low as \$ 48 when Jio started providing free access to 4G data. 95% of smartphones sold in India were 4G-capable in the first quarter of this year.
- (viii) **Impact on Competitors:** Bigger competitors like Airtel had to reduce their 3G and 4G plans by almost 80%, while smaller counterparts such as Aircel, Telenor, and Tata Teleservices were already on the verge of shutting down. In contrast, significant players like Vodafone and Idea merged as a single entity from April 2018. This combined entity became the largest operator in India, with over 400 million subscribers and about 41% revenue share in the telecom business. Since 2016, all major telecom providers launched 4G services and changed their capital structure through Mergers and Acquisitions.

Bharat Sanchar Nigam Ltd (BSNL) and Mahanagar Telecommunications Nigam Limited (MTNL) are state-owned telecommunication corporations. For both companies, the market share was 10.61%. BSNL is currently facing a fiscal crisis. The four private corporations have occupied 89.88% market share of total wireless subscribers of February 2019. These service providers are Vodafone Idea (28.04%), Bharti Airtel (28.35%), Reliance Jio (32.99%) as per TRAI May Report 2020.

(ix) **Introduction of Jio Apps:** In May 2016, Jio launched a range of multimedia applications to compliment the introduced 4G services. If users have a Jio SIM card, they can access Jio Apps to avail themselves of the services. Some of their best applications are:

MyJio - manages Jio user accounts with their Jio SIM and other Jio services:

JioSaavn is an online music streaming application with around 45 million songs;

JioBrowser is a fast and secure web browsing application;

JioTV app gives access to 600+ TV channels and 100+ HD channels;

JioCinema is an online video library consisting of movies, TV shows, originals, music videos, and latest trailers;

JioNews is an online news streaming platform;

JioChat is an instant messaging voice & video calling application;

JioCloud is a cloud storage app to store files of any type and size;

JioSecurity is a mobile antivirus application;

JioHealthHub is a health services app.

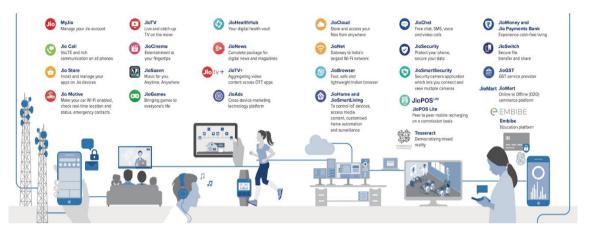


Image source: www.jio.com

1.5 Research Motivation

Various reasons have inspired and empowered the author to carry out the present study to analyze the overall effect of Jio on India's telecom industry. The transformation of Reliance Jio within a short time is another factor that has inspired the author to pursue the proposed study. Conventional industry stakeholders like Airtel, Idea, Vodafone, and BSNL have reigned the Indian market for a long time. However, the entry of Jio into the telecommunications sector has had a significant effect on these players' sales and profitability. Moreover, only a few research and academic papers on India's telecommunications industry, especially on Jio's impact, were studied. All these factors motivated the researcher to pursue this study.

1.6 Structure of the Study

The study is designed in the following manner to emphasize the primary purposes for formal research:

Chapter 1 Introduction: This will be the first and primary chapter of this dissertation, and it will give readers an overview of the whole thesis. The readers will be able to gain the discernment into the research conducted by the authoress.

Chapter 2 Literature review: It will be the second chapter of the dissertation, and it is consequential as it will element the perspectives and critiques of different researchers on the subject selected for examination. A literature review's significance is that it allows the researcher to obtain perspective and develop knowledge on the subject.

Chapter 3 Research Gap and Methodology: With the aid of literature, this chapter will find a research gap. It also specifies tools and techniques chosen by the researcher, such as collecting, analyzing, and interpreting data obtained from multiple sources.

Chapter 4 Data Analysis and Interpretation: This is the scientific chapter and will carry out the analysis and interpretation of the primary data to test presumed hypotheses.

Chapter 5 Final Summary: The researcher will conclude the study's findings and recommend suggestions for future growth and development.

Chapter 2

Literature Review

This chapter is the theoretical foundation for complete analytical research. The literature review focuses on the impact of Reliance Jio on Indian telecommunication market. The intent is to acquire a general overview of this company with a focus on multiple factors and strategies responsible for popularity of this brand. More than 24 papers were considered to gain knowledge about consumer perception, customer behavior, customer satisfaction, quality of service in mobile network service providers.

2.1 Conceptual Literature

Rani and Radhakrishnan (2012) conclude that **consumer perception** is a personal feeling of either pleasure or disappointment springing up from the evaluation of service supplied through an organization to an individual concerning expectation. According to Kothari (2004) and Levin & Rubin (2004), consumer perception is exceedingly critical and inevitable for a company's easy functioning having public dealing and responsibilities. It relies upon tangibility, reliability, assurance, advanced service quality, empathy, and the like. **Customer satisfaction** is the primary intention of every company. The satisfaction level is a characteristic of the difference between perceived performance and expectations. If the performances of the products exceed expectations, the consumer is incredibly satisfied or delighted. If the overall performance matches the consumer's expectation, and if the product's overall performance falls shorts of expectation, the consumer is dissatisfied. It relies upon numerous elements like tangibility, reliability, assurance, advanced service quality.

PL. Senthil and S. Mohammed Safi (2014) conclude that **customer behavior** is the act of individuals directly involved in acquiring and using economic goods and services. It requires the decision strategies that precede and determine this act. The efficient and effective usage of mobile phones primarily depends on cell phone consumers' attitudes, and cell phone service providers rely on the development of this communication market. Factors such as purchasing a cell phone, selecting an activation card, tower issue, range of schemes, recharge vouchers, roaming, and efficient usage of cell phone facilities are essential to evaluate mobile phones' consumer behavior.

Parasuraman et al.(1988) define the **quality of services** as "The discrepancy between consumers' perceptions of services offered by a particular firm and their expectations about firms offering such services".

According to Parasuraman, Zeithaml, and Berry (1985), the instrument for service of quality is usually used to assess the quality of services. They are multidimensional and initially had a set of ninety-seven items which are further divided into 10 dimensions. The determinants of service quality can be categorized into Access, Communication, Skills, Courtesy, Credibility, Reliability, Responsiveness, Security, Tangibility, and Understanding or Customer Knowledge. The dimensions discussed are divided into two parts, the first group of items is assessed customer expectations regarding the delivery of services and the second part have the items that assessed customer perception about the delivery of the services.

Parasuraman et al. (1988) suggest using the Likert scale (seven points) to evaluate the services. It ranges from "Strongly Disagree" (1) and "Totally Agree" (7), and here the points two to six do not hold any description. Due to statistical changes in the Quality of Service (QoS) instrument, 97 items were shortlisted to 22 and on the other side, the ten dimensions discussed above were regrouped and finalized into five dimensions. The two new dimensions were formed, Reliability and Empathy, which had the elements representing the 7 original dimensions which are Communication, Credibility, Security, Competence, Courtesy, Understanding or Knowing, Customers and Access.

Parasuraman et al. (1985) concluded after his analysis, "A set of key discrepancies or gaps exists regarding executive perceptions of service quality and the tasks associated with service delivery to consumers. These gaps can be major hurdles in attempting to deliver a service which consumers would perceive as being of high quality". And hence the gaps found were the following:

Consumer expectation – management perception gap (GAP 1): In many situations, the management team of an organization may not be able to identify the features which might be of high quality to consumers. It briefly means which characteristics should a service have in order to satisfy consumer needs.

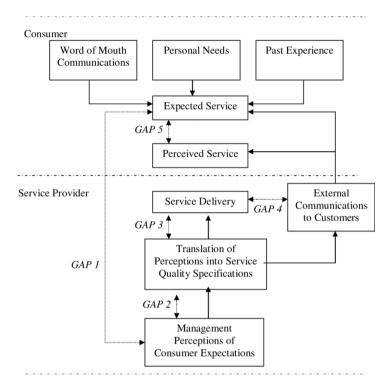
Management perception – service quality specification gap (GAP 2): There are various factors such as constraints on resources, market conditions, and/or undifferentiated management that could trigger a difference between the perception of management on the expectations of consumers and the specifications of quality of service defined by the company.

Service quality specifications – service delivery gap (GAP 3): Even with guidelines to perform a service, high-quality performance might not be achieved as the performance capacity will depend substantially on the workers' performance, which are necessarily not standardized.

Service delivery –external communications gap (GAP 4): The communication made by an organization about its services, for instance, advertisements, can affect not only customer expectations concerning the service provided by the company but also the perception of the customer regarding the service. Because, if the organization creates high expectations in consumers, the service will have to meet them, otherwise customers will not be satisfied.

Expected service – perceived service gap (GAP 5): The high- and low-quality judgments made by consumers are dependent on their perception of the service that's rendered in accordance with their expectations

Figure 2.1 Service Quality Model



Source: (Parasuraman, Zeithaml, & Berry, 1985)

The perception of service quality by customers depends both on the size and direction of GAP 5, according to Parasuraman et al. (1985), which in turn depends on the existence of the differences associated with the design, marketing, and services. GAP 5 thereby results from the remaining gaps, winding up positively, and negatively impacting GAP 5 on the quality of service perceived by customers. In addition, it can be seen from Figure 2.1 that, given the quality of service, consumer expectations are based on experiences encountered by themselves or others through word of mouth), but also on personal needs at the time of service provision.

2.2 Research Literature

M. Nandhini and D. Sivasakthi (2014) argue that many businesses confidently expected it to capture the bulk of market share, and with good reason since broadband was first launched as a means of connecting to the internet. Broadband appears to be quicker, more reliable, and less complicated than other dial-up connectivity methods. As people's purchasing power rises, demands shift towards comfort; however, the expectations are quality, quantity, and less price that contribute to consumer satisfaction. Domestic and global market players face problems in investing cash to satisfy the customer. Market research is crucial on a timely basis since, from time to time, there can be a shift in attitude from person to person.

Panda & Shastri (2016) states that India is the fourth-largest utility economy in the world. There might be significant reasons due to which the telecom industry of India is proliferating. The first and most important factor or reason is the increasing demand of customers in the country. The Indian market customers are now looking forward to a telecom service company that can provide services such as fast internet connectivity and an efficient cellular network at prices that can be less expensive and convenient.

According to Curwen & Whalley (2018), Reliance Jio entered the Indian telecom industry in 2016 and led to severe competition and a substantial challenge to the business model of existing corporations in the marketplace. Reliance Jio was revolutionary, which further attracted people and existing customers of the already famous brands such as Idea, Vodafone, BSNL, Airtel, and other telecom companies. Reliance Jio's business model emphasized offering high speed and 4G data at low prices, and the strategy has supported the company in carrying out considerable penetration withinside the Indian market. The tariff plans introduced by Reliance Jio were revolutionary, and during their preliminary stage, they seemed to be unrealistic. The entry of Reliance Jio was a shockwave to the whole telecom industry because the brand commenced providing services such as free voice calls. The general business strategy of Reliance Jio was so compelling that it had become complex for existing market players to retain their subscribers. On the alternative aspect of this, Airtel (2016) had critically argued that the business model of Reliance Jio appears implausible as a company can't make sustainable profits by offering such services at no cost and at such low prices.

Kumar, Balaji, Krishna & Yadav (2018) concluded that Reliance Jio had compelled the other network operators to reduce their prices. The businesses were not left with any other alternatives to reduce their rate to sustain in the market. The approach employed by Reliance Jio is enormously capitalist, and this has further resulted in carrying out a substantial impact on the whole telecom industry of the country.

Daga, Chandra, and Malik (2018) in their research, found many respondents from 20-40 age groups preferred Jio service and believed Reliance Jio played a significant contribution in digitization. Respondent's data consumption increased drastically. Jio had a revolutionizing market strategy of cheapest data cost globally, and according to their survey, the Jio users are more than 60% and are still growing positively. This study makes a critical remark that Jio is promoting digitization and connecting the people and enhancing their lifestyle.

Kalra, Padacheril, and Chandak (2018) show the change in the expenditure on the customers' sim usage. It was found in their research that the expenditure shifted from the majority of people spending between 600 rupees and 200 rupees to 400 rupees. They also concluded the launch of Jio had cut down the customer expenditure by 50% on sim services.

Kulshrestha and Gupta (2020) concluded that customers in India are price sensitive and prefer to switch to other service providers if they do not find value for their money.

Kalita (2019) suggested that companies must have a better-quality network, upgraded by technological up-gradation and better-quality infrastructure, and fast, responsive customer service.

Sornapriya and Sathiya (2017) in their study reveals that with 26 percent using Jio as a primary SIM and 21 percent as a secondary SIM, Jio's free plan gains fair momentum. Jio's speed is higher for 55 percent of the consumers surveyed than for other telcos. Meanwhile, 32 percent of users said they use Jio because it is easy, and 28 percent said it is inexpensive. Many individuals have the trouble with the voice calling feature.

Gupta, Raghav, and Dhakad (2019) concluded that the most satisfying factor amongst the Jio users was Network and Mobile data. They additionally recommended that Jio should take cognizance of improving customer care services. This paper discovered 85% of the sample believes Jio has affected the telecom industry in a way that has ultimately reduced the Internet Plan prices, and by launching its LYF Phones, it has notably increased access to the internet with the free internet plan. They also make an introductory remark of increased access to the internet led to India's data consumption has also increased significantly.

Gopal (2020) argues that Jio needs to solve the network problem and calling congestion and suggests installing the towers at locations where there may be the unavailability of the network and the far-flung areas. This paper additionally observed that 55 % of the respondents were satisfied with Jio.

Patlolla and Doodipala (2018) show that most respondents used Airtel as a primary network provider and Jio as a secondary network provider. Jio was used frequently for data speed. They additionally suggest installing the towers in the area of unavailability of network and the remote regions will help Jio to resolve network connectivity and issues of congestion calling.

Deloitte (2017) described OTT (Over The Top) as the term which is used globally for the video streaming content services accessed through the high-speed internet on smart gadgets. OTT also has bypassed the conventional distribution like cable, DTH, and Cinema. OTT or "Over-the-top" refers to video content streamed through the internet and not through broadcast or cable television. It incorporates subscription-based services, free, ad-supported services, and pay-to-watch streams offered by services inclusive of iTunes and Video on demand.

Mathur (2018) mentions in its initial study that due to the launch of Reliance Jio in 2016, the top three mobile applications out of 10 downloaded were of video streaming, which offers a capacious assortment of content upon movies, TV shows, and web series. The streaming applications have seen the potential, and these OTT platforms will dominate many users. This paper concluded that Netflix was very popular and tried to acquire more users by enticing video content.

Singh (2019) concluded that Hotstar, Netflix, and Jio are major players of the Indian OTT market. Amazon is also one of the primary players in the market, however, it is not very popular. It also determined that Indian customers stream content free of cost, and most of the viewers watch content through these applications for around 2 hours daily.

Patel, Khadia, and Awasya (2020) concluded that OTT's growth would only increase in India. Their study found 63.5 percent of viewers spend 0-2 hours watching the OTT applications and 24.7 percent of viewer's spends 2 to 4 hours, and 9 percent of respondents spend more than 4 hours to watch OTT applications in a day, and it correlates that this 9 percent of viewers will affect the other traditional mediums as this can change their watching habits.

Sundaravel E. and Elangovan N (2020) concluded Hotstar leads the Indian OTT market. Hotstar has the highest penetration of non-paying OTT users. They also observed that the Smartphone is the most common device for OTT media consumption, and Jio is the most desired networking service amongst OTT users, followed by Airtel and Vodafone-Idea.

Chapter 3

Research Gap and Problem Statement

Indian Telecom Market is too competitive, and every company tries to acquire users by introducing exciting offers to make profits. Reliance Jio offers a range of services either free of cost or at a very jaw-dropping price, but a study shows that it fails to achieve 100% customer satisfaction level due to lack of network coverage, lack of infrastructure, and not so good customer service. Before the launch of Reliance Jio, data was costly, and consumers used data in a minimal quantity as per need in phones.

The launch of Reliance Jio leads to a decrease in the price of data, and hence consumers now use the vast amount of data daily. Demand for OTT platforms and channels like Netflix and Hotstar have increased significantly because of increased data consumption. Hence the study is undertaken to analyze the subscriber's opinion towards the Jio network, the impact of Jio Network on subscribers by analyzing the consumption of data by them, and subscriber behavior towards the OTT platform, which needs a lot of internet data.

3.1 Objectives

The objective of the present study is to analyze customer's opinion towards the Jio network and to analyze factors which impact Jio consumers. The following objectives are considered for this research:

- i) To analyze the impact of Reliance Jio on Customers.
- ii) Identify the satisfaction level of Jio Subscribers.
- iii) To analyze the consumer trend on data usage.
- iv) To analyze the growth of the OTT market due to cost reduction in mobile tariffs.

3.2 Hypotheses

Following hypotheses have been considered in order to test the significant impact of variables in the study:

- **H1:** The level of satisfaction with the service provider is significantly different among the Reliance Jio customers compared to the competitors.
- **H2:** Average monthly expenditure on a mobile sim card is lower among Jio users compared to the competitors' users.
- **H3**: More than 50% of the users believe that a growth increase in OTT platform usage is mainly due to low data cost for high-speed internet.
- **H4**: Jio primarily usage preference is dependent on customers' gender and age.

3.3 Research Methodology

Descriptive analysis is preferred to study the customer's opinion towards Jio Mobile Network. The primary data is collected through a questionnaire from a sample of 350 respondents from the Pune Urban Area. The data is analyzed using SPSS software. Moreover, to analyze data, descriptive statistics and multivariate data methods are used, like the Chi-Square test, parametric and non-parametric mean comparison tests. Reliability tests are done for the variables which have a similar scale of measurement. Sample frequencies used for data cleaning and data were adjusted where there were inconsistencies, like wrong skips, mismatch of responses.

The link to the online questionnaire to collect opinions of mobile network users is given in the Annex A. The survey had 29 questions concerning their demographic background, their preference for mobile networks, their internet use patterns, and their views towards Reliance Jio

Chapter 4

Data Analysis and Interpretation

Demographics

The results are interpreted based on the analysis of the total sample and its demographic segments based on gender and age. The sample consists of 383 respondents, of which 350 respondents are from the Pune (PMC) Area. As this study is limited to only Pune Urban area, a sample of 350 respondents is considered. All the respondents were smartphone users. As Table 4.1 demonstrates, out of 350 respondents, 48.3% of the respondents were female, and 51.7% were male. Among the respondents, the vast majority were up to 35 years old (overall 66.9%). 12.0% of the respondents were from the 35-44 age group, and the rest were 45 years old and older (Table 4.1).

Table 4.1 Demographic data of the respondents

Demographic groups	Absolute numbers	%
Gender		
Female	166	48.3%
Male	178	51.7%
Age		
16-24	105	30.0%
25-34	129	36.9%
35-44	42	12.0%
45-64	63	18.0%
65 and above	11	3.1%

Source: Primary data

Network usage:

Overall, 85.4% of the respondents have been using the internet on their phone before the launch of Reliance Jio in 2016, 1.1% were not sure, and 13.4% mentioned that they had not been using the phone internet before 2016. To the question "Which network are you currently using?" 44.6% of the respondents mentioned "Reliance Jio"; however, 50.3% of the respondents are using more than one network, as it turns out. Based on the aggregated results, 52.3% of the respondents use Reliance Jio either as a primary or secondary.

This indicator is followed by Vodafone Idea (41.4% of the respondents) and Airtel (30.6% of the respondents) (Table 4.2). Overall, 40.9% of the respondents are using Jio as a primary network, 16.0% as a secondary network and 43.1% are non-Jio users¹.

¹ The indicator has been calculated through a direction question to the respondents whether they are using Reliance Jio as a primary network or a secondary

Table 4.2 Network usage among the respondents

Service provider	Number of total mentions	% of total users	% of total networks
Reliance Jio	183	52.3%	34.8%
Vodafone Idea	145	41.4%	27.6%
Airtel	107	30.6%	20.3%
BSNL	61	17.4%	11.6%
Others	30	8.6%	5.7%
Total	526	150.3%*	100.0%

Source: Primary data, * multiple response enabled

Table 4.3 demonstrates what combination of two networks as a primary and a secondary network the respondents prefer to use. As can be seen, Reliance Jio as a primary network is used most frequently with Vodafone Idea (38 respondents) and Airtel (33 respondents).

Table 4.3 Primary and secondary networks

Which network are you currently using? *		Primary mentioned					
		Reliance Jio	Airtel	BSNL	Vodafone Idea	Others	
	Reliance Jio	-	10	3	14	0	
	Airtel	33	-	5	4	0	
Secondary mentioned	BSNL	15	5	-	7	0	
	Vodafone Idea	38	8	7	-	2	
	Others	3	4	2	14	2	

Source: Primary data, * number of respondents

Overall, almost 60% of the respondents are using their current network for more than 3 years. Approximately 20% are using for 2-3 years and the rest 20% for less than 2 years. Table 4.4 demonstrates the duration of usage of the network per service provider. As can be seen, more than 70% of the respondents who use competitors' networks as a primary network are used to use them for more than 3 years, while this indicator is low among the Reliance Jio users.

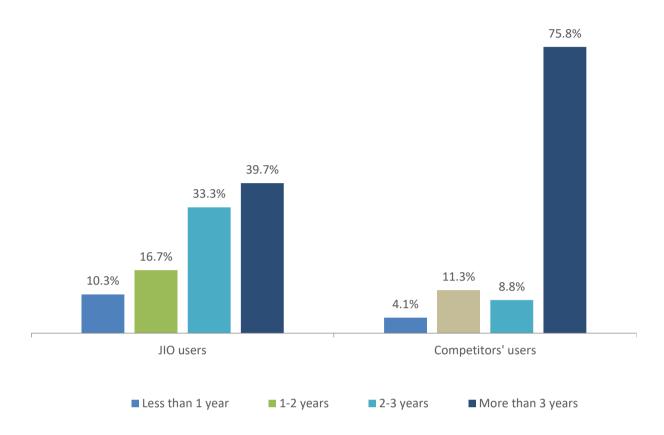
Table 4.4 The duration of usage of network per service provider

Service Provider	Less than 1 year		2-3 years	More than 3 years		
D I' I'	Count	16	26	52	62	
Reliance Jio	% of total Reliance Jio users	10.3%	16.7%	33.3%	39.7%	
	Count	3	6	3	53	
Airtel	% of total Airtel users	4.6%	9.2%	4.6%	81.5%	
	Count	1	7	2	24	
BSNL	% of total BSNL users	2.9%	20.6%	5.9%	70.6%	
Vodafone Idea	Count	4	6	12	68	
	% of total Vodafone Idea users	4.4%	6.7%	13.3%	75.6%	

Source: Primary data

To reveal statistically significant differences in terms of duration of network usage per Jio users (primary) and competitors' users, Chi-Square Test has been applied. The test revealed that there is a statistically significant difference between the duration of provider service consumption and Jio users/nonusers (p < .00, df = 3, Chi-Square = 51.8). As data visualization shows, 75.8% of competitors' users are using the services for more than 3 years, while this indicator of Jio users comprises only 39.7%. 33.3% of Jio users are using the network for 2-3 years, and the rest for less than 2 years (Figure 4.1).





Chi-square test revealed statistically significant differences for Jio primary users per type of services they use with statistically significant Chi-square test value = 23.15, p < .00, df = 2. As Table 4.5 demonstrates, Jio users prefer prepaid services (83.2% of Jio primary users), while this indicator comprises 60.4% among the competitors. Overall, 26.1% of the competitors' users prefer post-paid services, and 13.5% prefer both prepaid and post-paid services.

Table 4.5 Type of services used per Jio users and competitors' usage

	Primary Ji					
Type of services	Yes		No	No		Asymp. Sig. (2-
	Number	% of total	Number	% of total		sided)
Prepaid	119	83.2%	125	60.4%		
Post-paid	11	7.7%	54	26.1%	$\frac{1}{2}$.000*
Both	13	9.1%	28	13.5%	2	.000*
Total	143	100.0%	207	100.0%		

Source Primary Data: *values significant at 0.05 levels

The respondents have been asked to mention the factors they consider important to them when choosing any network. The majority of the respondents (77.7%) mentioned that all the factors are important to them, while several of the highlighted data speed and price. The least important factors were considered the quality of the call and customer service (Table 4.6). A more detailed analysis of the importance of the factors per priority network showed no statistically significant dependencies on the factors highlighted by the respondents and the priority network provider they use.

Table 4.6 Importance of the factors when choosing any network

	Number	Percent	Percent of Cases*
All of the above	272	65.2%	77.7%
Data Speed	61	14.6%	17.4%
Price	51	12.2%	14.6%
Quality of the Call	28	6.7%	8.0%
Customer Service	5	1.2%	1.4%
Total	417	100.0%	119.1%

Source: Primary data, * multiple response enabled

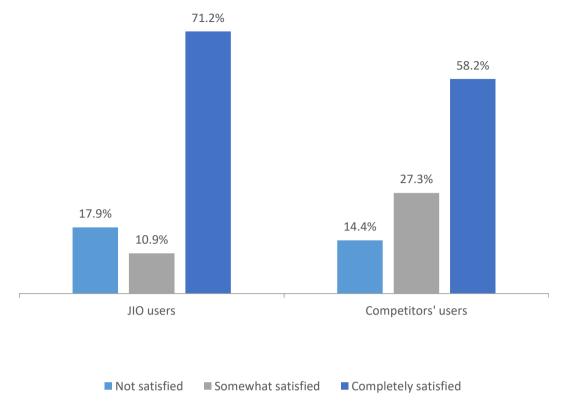
Satisfaction with the services: To find out whether there is a statistically significant difference in the satisfaction level for services among Jio users and competitors' users, the following hypothesis has been established and tested:

H0: The level of satisfaction with the service provider is the same among the Reliance Jio customers compared to the competitors

H1: The level of satisfaction with the service provider is significantly different among the Reliance Jio customers compared to the competitors

The respondents' satisfaction with the current service provider has been measured through a 3-level scale where 0 stands for not satisfied, 1 - somewhat satisfied, and 2 for completely satisfied. The variable was tested against normality criteria through a One-Sample Kolmogorov-Smirnov test, which revealed that the variable does not follow a normal distribution (p < .00), accordingly non-parametric Mann-Whitney U test has been applied to reveal significant differences between the groups. Though data visualization suggests that there are differences between the satisfaction level of Jio users and competitors' users in favor of Jio users, the Mann-Whitney U test showed that these differences between the groups are not statistically significant (p=.071) (Figure 4.2). Accordingly, H0 is not rejected and hence, H1 is not validated as a hypothesis.





As Figure 4.3 shows, the respondents' share satisfied with the service provider is the highest among Reliance Jio customers (71.2% completely satisfied) and is the lowest among the BSNL customers (only 26.5% completely satisfied). Vodafone and Airtel demonstrated almost similar results. Meanwhile, the respondents who are not satisfied with the services among Reliance Jio customers and Vodafone Idea customers and almost the same, 17.9% and 16.7% respectively, and is the lowest among Airtel users (4.6% of Airtel users).

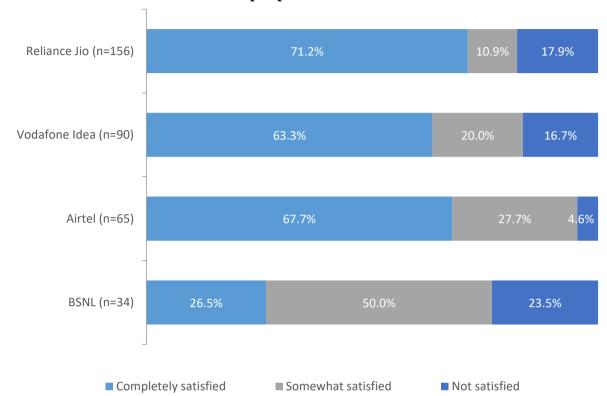


Figure 4.3 Satisfaction with the services per providers

Reliance Jio Usage:

Almost all of the respondents (94.3% of total respondents) are aware of Reliance Jio as a service provider. As mentioned above, 52.3% of the respondents use Reliance Jio either as a primary network or as a secondary network. 68.8% of them use the services primary for calling and data speed, 21.6% for data speed, and 9.6% primary for calling.

Before 2016 only among 36.0% of the respondents, the approximate mobile data consumption was above 1000 Mb while currently 94.6% of the respondents are using more than 1000 Mb data per month; 29.7% are using more than 30 Gb per month (Table 4.7). This indicates a significant increase in the volume of mobile data usage among the respondents.

Table 4.7. Mobile data consumption per month before 2016 and currently

Approximate mob		ta consumption per ch in 2016	Current mobile data consumption per month?		
Data volume	%			%	Data volume
Up to 100 Mb	10.3				
100 - 500 Mb	22.7	Up to 1 Gb 64%	Up to 1 Gb 5.4%	5.4	Up to 1 Gb
500 - 1000 Mb	31				
				22.6	1 - 10 Gb
A1 1000 MI	26	Above 1 Gb	Above 1 Gb	22	11 - 20 Gb
Above 1000 Mb	36	36.0%	94.6%	20.3	21 - 30 Gb
				29.7	Above 30 Gb

Source: Primary Data

To check whether users of the Jio network enable customers to reduce their **average monthly expenditure** on a mobile sim card, the following hypothesis is established and tested:

H0: Average monthly expenditure on a mobile sim card does not differ between Jio users and competitors' users

H2: Average monthly expenditure on a mobile sim card is lower among Jio users compared to the competitors' users

Overall, 34.0% of the Jio-user respondents spend from 100 to 200 rupees monthly, another 34.6% from 200 to 300 rupees, and the rest more than 300 rupees per month. Interestingly only 10.9% of the Jio users spend more than 500 rupees per month on mobile services, while this indicator is twice high among the competitors comprising 20.1% of total competitor users (Table 4.8). As the Chi-square test suggests, the average monthly expenditure on a mobile sim card does not significantly differ among Jio users and competitors' users, p = .101, df = 3. Accordingly, the null hypothesis is not rejected. Hence, H2 is not validated as a hypothesis.

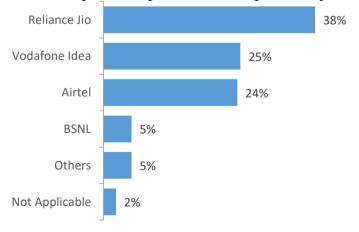
Table 4.8. Average monthly expenditure on mobile sim card

	Primary Jio User					
Average monthly expenditure	Yes		No		df	Asymp. Sig. (2-sided)
	Number	% of total	Number	% of total		
100-200 rupees	53	34.0%	52	26.8%		
200-300 rupees	54	34.6%	67	34.5%		
300-400 rupees	32	20.5%	36	18.6%	3	.101
500 rupees and above	17	10.9%	39	20.1%		
Total	156	100.0%	194	100.0%		

Source: Primary Data

According to data, 50.6% of the respondents changed their service provider by mobile number portability. Out of the 38% (68 respondents) preferred Reliance Jio (Figure 4.4). As for the reasons why the respondents preferred Reliance Jio, many of them (82.4%) mentioned a combination of all services, 7.4% mentioned price (free sim), 5.9% - unlimited data services, and 4.4% mentioned unlimited calling services.

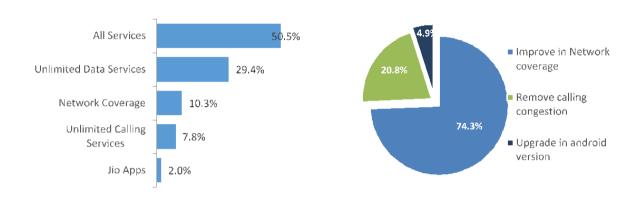
Figure 4.4. Which service the respondents preferred after portability



Jio customers mention the services they like most while using the Reliance JIO services. Almost half of the Jio users mentioned all services, 29.4% highlighted unlimited data services, 10.3% - network coverage. Unlimited calling services have been mentioned by 7.8% of the Jiousers, while only 2.0% of the users mentioned Jio apps (Figure 4.5). Among the services to be improved, Jiousers most frequently talked about the improvement of network coverage (74.3% of total responses), 20.8% mentioned removal of calling congestion, and 4.9% highlighted the importance of upgrade of Android version (Figure 4.6).

Figure 4.5 The preferable Jio services

Figure 4.6 To be improved in Reliance JIO services



To find out whether the increase in **OTT platform** usage increased due to low data cost for high-speed internet, the following hypothesis has been established and tested:

H0: Less than 50% of the users believe that increase in OTT platform usage is mainly due to low data cost for high-speed internet.

H3: More than 50% of the users believe that a growth increase in OTT platform usage is mainly due to low data cost for high-speed internet.

Overall, 65.0% of the respondents mentioned that they think their data consumption went up because of unlimited cheap Jio Data, and 35.0% do not think so. One sample t-test revealed that 65.0% is significantly high compared to hypothesized 50.0% with t = 33.2, df = 348, p< .05. Accordingly, the null hypothesis is rejected. Hence, H3 is validated as a hypothesis.

In total, 77.8% of the Reliance Jio users mentioned that they are satisfied with the services, and the rest, 22.2%, are not. The respondents have been asked to rate their **satisfaction** with Reliance JIO services per the following criteria: Network Coverage, Internet Data Services, Calling Services, Customer Care, Jio Apps, and New Schemes & Offers. A 5-point Likert scale has been used to assess the satisfaction level, where 1 stands for "poor performance." and 5 for "performance". The reliability of the scale has been tested through Cronbach alpha test which revealed high level reliability of the scale with $\alpha = .912$ Cronbach alpha coefficient.

 $^{^2}$ The scale used is as followed: 1 – Poor, 2- Average, 3 – Good, 4- Very good, 5 – Excellent (recoded) 28

As shown in Table 4.9, respondents are most satisfied with the internet data services and the new schemes & offers. The rest of the service components are assessed similarly equivalent to the "good" level of the scale. As the non-parametric Mann-Whitney U test shows, the assessment is not dependent on the respondents' gender (p > .05).

Meanwhile, assessment of several components, among them Internet Data Services, Calling Services, Jio Apps, New Schemes & Offers, differs per age group based on Kruskal-Wallis H test results (p < .05) (Table 4.9).

Table 4.9 Assessment of Jio users' satisfaction with different service components

Service provision	N^3	Mean	Median	SD	Gender (Mann- Whitney U test)	Age (d (Krusk H test)	al-Wallis
components					Asymp.	Chi-	Asymp.
					Sig. (2-	Squa	Sig. (2-
					tailed)	re	tailed)
Network Coverage	223	3.21	Good	1.17	0.71	6.0	0.20
Internet Data	224	3.50	Very good	1.22	0.99	13.1	0.01*
Services							
Calling Services	223	3.36	Good	1.27	0.77	13.6	0.01*
Customer Care	223	3.25	Good	1.15	0.90	5.7	0.22
Jio Apps	226	3.33	Good	1.18	0.97	8.5	0.08*
New Schemes & Offers	224	3.42	Good - Very good	1.18	0.74	14.5	0.01*

Source Primary Data: *Values significant at 0.05 levels

The assessment of different components of Jio services differ per users' status. As can be seen the satisfaction of non Jio-users is lower per all the components compared to those who use Jio as primary network or secondary network. Jio non-users are least satisfied with network coverage, internet data services and calling services (Table 4.10).

_

³ Includes Jio primary and not primary users as well as not-Jio users

Table 4.10. Service provision components per users' status

Service provision components	User status		
•	Primary Network (n=141)	Secondary Network (n=50)	Non user (n=33)
Network Coverage	3.34	3.06	2.85
Internet Data Services	3.62	3.60	2.88
Calling Services	3.44	3.42	2.91
Customer Care	3.23	3.34	3.18
Jio Apps	3.48	2.96	3.23
New Schemes & Offers	3.56	3.28	3.00

To the question "What do you mostly use the Jio Internet for?" most frequently the Jio user respondents mentioned social media (36.7% of total mentions) which is followed by OTT Platforms (Netflix, Saavn, etc.) (30.7% of total mentions) and e-services (15.6% of total mentions). The internet is used for work and study less frequently (Figure 4.7). Most frequently, respondents use their Jio network for Netflix (31.6% of total mentions) and Amazon Prime (26.3% of total mentions). Hotstar and Jio TV and Cinema are used less frequently (Figure 4.8).

Figure 4.7 Usage of Jio Internet for...

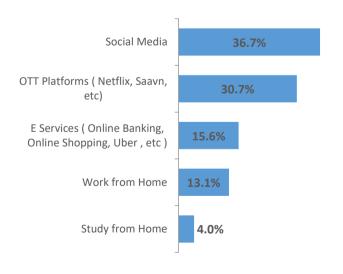
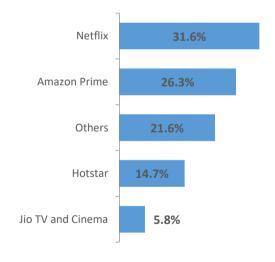


Figure 4. 8 Usage of OTT platform for...



Those who use OTT platforms everyday (188 respondents) have been asked to mention approximate time they spend to watch OTT platforms. Almost half of the respondents (46.3%) are watching OTT platforms 2 hours every day, 36.2% less than 1 hour and the rest more than 3 hours (Figure 4.9)

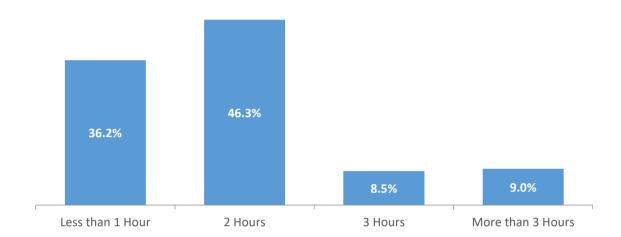


Figure 4.9 Time Jio users spend watching OTT platforms everyday

Overall, 59.7% of the respondents mentioned that they are happy with their current dependency on mobile data for their daily activities and they would not prefer the early times of less mobile usage and more time for other things, 30.3 % were not sure about this question, and 10.0 % mentioned that they are not happy with their current dependency on mobile data.

Gender and Age Dimension:

To find out whether there are significant relationships between gender and age and primary use of Jio, the following hypothesis has been established and tested:

H0: Jio primarily usage preference is not dependent on customers' gender and age

H4: Jio primarily usage preference is dependent on customers' gender and age

In Table 4.11, the personal factor of Gender is compared with the primary use of JIO. Chisquare test has been applied, which did not reveal any statistically significant dependency on customers' gender and Jio primary usage preference (p = 0.449, df = 1).

Table 4.11 JIO primarily usage per gender

Candany/s HO mimarily years		Primary JIO User	Primary JIO User		Asymp. Sig. (2-
Gender v/s Ji	Gender v/s JIO primarily usage		No	df	sided)
Male	Count	71	95	1	
	% of total male	42.8%	57.2%		
	Count	69	109		0.449
Female	% of total	38.8%	61.2%		
	female				

Similarly, no statistically significant differences have been revealed JIO primarily usage preference per customers age, with Chi-square test results of p = 0.312, df = 4 (Table 4.12). Accordingly, H0 is not rejected. Hence, H4 is not validated as a hypothesis.

Table 4.12 JIO primarily usage per age

Age v/s JIO primarily usage		Primary J	Primary JIO User		Asymp. Sig.
Age V/S J1	O primarity usage	Yes	No		(2-sided)
16-24	Count	62	43		
10-24	% of total 16-2	24 59.0%	41.0%		
25.24	Count	74	55		
25-34	% of total 25-3	34 57.4%	42.6%		
35-44	Count	24	18		
33-44	% of total 35-4	57.1%	42.9%	4	0.312
45-64	Count	43	20		
43-04	% of total 45-6	68.3%	31.7%		
65 and	Count	4	7		
	% of total 6	5 and 36.4%	63.6%		
above	older				

As the cross-tabulation analysis of gender and age factors with Study, variables show that none of the variables are dependent on gender factor (Chi-square test results p > .05). In contrast, several variables differ per age group; among them is the usage of phone internet before 2016, type of services the respondents use, mobile data consumption per month, average monthly expenditure on the mobile sim card, satisfaction level with Jio services, and data consumption linked to unlimited cheap Jio Data (Chi-square test results p < .05) (Table 4.13).

Table 4.13 Cross Tabulation Analysis of gender and age factors with Study variables.

	Gender			Age		
Study variable	Chi- Square	df	Sig.	Chi- Square	df	Sig.
Did you use internet on your phone before the launch of Reliance Jio in 2016? (no, maybe, yes)	1.989	2	.370	52.939	8	.000*
How long have you been using your current network? (Less than 1 year, 1-2, 2-3, more than 3 years)	.269	3	.966	17.182	12	.143
What type of service do you use? (pre-paid, post-paid, both)	4.287	2	.117	43.398	8	.000*
What was your approximate mobile data consumption per month before the Jio launch in 2016?	2.301	3	.512	16.650	12	.163
What is your current mobile data consumption per month?	3.937	4	.415	49.088	16	.000*
What is your average monthly expenditure on mobile sim card?	1.163	3	.762	33.947	12	.001*
Did you ever change your service provider by Mobile Number Portability? (yes/no)	.576	1	.448	5.600	4	.231
Are you satisfied with Reliance JIO services? (yes/no)	2.291	2	.318	18.675	8	.017*
Do you think your data consumption went up because of unlimited cheap Jio Data?	.260	1	.610	11.056	4	.026*
How many hours do you spend watching above mentioned OTT platforms every day?	1.013	3	.798	10.069	12	.610
Are you happy with your current dependency on mobile data for your daily activities or you would prefer the early times of less mobile usage and more time for other things?	.650	2	.723	5.791	8	.671

Source Primary Data: *values significant at 0.05 levels

4.1 Findings of the Study

This survey and analysis reviewed the following findings and presented Reliance Jio with significant feedback through a questionnaire:

- 1. 85.4% of the respondents used internet on their phone before the launch of Reliance Jio in 2016, and 60% of the respondents are using their current network for more than 3 years.
- 2. Overall, 50.3% of the respondents are using more than one network.
- 3. 40.9% of the respondents use Jio as a primary network, 16.0% use it as a secondary network, and 43.1% are non-Jio users.
- 4. There is a statistically significant difference in duration of network usage per Jio users (primary) and competitors' users: 75.8% of competitors' users are using the services for more than 3 years, while this indicator of Jio users comprises only 39.7%.
- 5. Jio users prefer prepaid services (83.2% of Jio primary users), while this indicator comprises 60.4% among the competitors, and the difference is statistically significant.
- 6. The satisfaction with the service provider is the same among the Reliance Jio customers compared to the competitors.
- 7. Almost all the respondents (94.3% of total respondents) are aware of Reliance Jio as a service provider.
- 8. Before 2016, only among 36.0% of the respondents, the approximate mobile data consumption was above 1000 Mb, while currently, 94.6% of the respondents are using more than 1000 Mb data per month.
- 9. Average monthly expenditure on a mobile sim card does not differ between Jio users and competitors' users.
- 10. More than 50% of the users believe that a growth increase in OTT platform usage is mainly due to low data cost for high-speed internet.
- 11. Respondents are most satisfied with the internet data services of Jio as well as with the new schemes & offers.
- 12. The assessment of different Jio services components differs per users' status: the satisfaction of non-Jio-users is lower per all the components compared to those who use Jio as a primary network or secondary network.
- 13. Almost half of the respondents (46.3%) watch OTT platforms 2 hours every day, 36.2% less than 1 hour, and the rest for more than 3 hours.
- 14. Jio preference is not dependent on customers' gender and age. Gender factor is not essential for service usage while age factors perform importance in terms of impact on several study variables.

Chapter 5

Final considerations

5.1 Suggestions/Recommendations

- 1. Most of the Jio users suggest improving the network and remove calling congestions. This study recommends building capacity to install 4G base stations in urban areas through network integration of network and spectrum to improve capacity and coverage.
- 2. Jio Postpaid services are the least popular among all respondents; this study advises the company to introduce new postpaid plans with competitive tariffs and services.
- 3. Jio TV, Jio Cinema, and Jio App are also out of favor among Jio Users. The company should focus on introducing more attractive features, especially for the young generation.
- 4. The company should get regular consumer feedback to offer a quality of service (QoS) guarantee.
- 5. The enterprise should continue the deals offered in the preliminary stage of introduction.

5.2 Conclusions

- 1. The level of satisfaction with the service provider is not significantly different among the Reliance Jio customers compared to the competitors.
- 2. Average monthly expenditure on a mobile sim card is not lower among Jio users compared to the competitors' users.
- 3. More than 50% of the users believe that a growth increase in OTT platform usage is mainly due to low data cost for high-speed internet.
- 4. Jio primarily usage preference is not dependent on customers' gender and age.
- 5. This study reveals that several variables are not dependent on all demographic factors. Variables like phone internet usage before 2016, type of services the respondents use, mobile data consumption per month, average monthly expenditure on the mobile sim card, satisfaction level with Jio services, and data consumption linked to unlimited cheap Jio data does affect the age group.

- 6. The satisfaction with the service provider is the same among the Reliance Jio customers compared to the competitors.
- 7. The average monthly expenditure on a mobile sim card does not differ between Jio users and non-Jio users.
- 8. Most of the respondents believe OTT's growth is mainly due to low data costs for high-speed internet.
- 9. Reliance Jio as a primary network is used most frequently with Vodafone Idea.
- 10. Netflix is more prevalent among Jio internet users.
- 11. Jio users spend on average 2 hours to watch videos on the OTT platform.
- 12. The study exposed the drastic increase in data consumption of the internet since 2016.
- 13. Most of the Jio subscribers are satisfied with the services offered by the company.
- 14. From the comprehensive survey of customer satisfaction, it can be concluded that Reliance Jio subscribers are satisfied with their services. But simultaneously, the service station environment needs to be enhanced. Better customer service will assist the company to be more efficient, provide exceptional services, avoid problems, maintain the growth and attract consumers with new schemes, and so on.

5.3 Limitations

- 1. The study restricts to the Urban area of Pune (region under Pune Municipal Corporation PMC).
- 2. This study depends on the opinion given by mobile network consumers only.
- 3. Time constraint is a major drawback.

Chapter 6 References

Books:

C.R. Kothari, Research Methodology Methods and Techniques, 2nd Edition, *New Age International Publishers*, 2004

Richard I. Levin and David S. Rubin, Statistics for Management, 7th Edition, Prentice Hall, 2004

Journals:

- Curwen, P., & Whalley, J. (2018). High-speed data provision by mobile networks in the Asia-Pacific region. *Digital Policy, Regulation and Governance*, 20(3), 225–243. https://doi.org/10.1108/dprg-10-2017-0057
- Daga, T., Chandra, V., & Malik, A. (2018). Effect of Reliance Jio on Digital India. *International Journal of Advanced Research*, 6(6), 395–401. https://doi.org/10.21474/ijar01/7224
- Gopal, P. (2020). A study on customer satisfaction of Jio services in Tirupati City, A.P. *Mukt Shabd Journal*, 9(5), 4954–4961.

 http://shabdbooks.com/gallery/527-may-2020.pdf
- Gupta, A., Raghav, K., & Dhakad, P. (2019). The effect on the telecom industry and Consumers after the introduction of Reliance Jio. *International Journal of Engineering and Management Research*, 9(3), 118–137. https://doi.org/10.31033/ijemr.9.3.16
- K. V. Rani and M.K. Radhakrishnan (2012), A Study On Customer Satisfaction Towards 3G Data Services In Erode, Namex International Journal of Management Research, 2(2), 4552
- Kalita, B. (2019). A study on the dynamics that influence customer satisfaction and Loyalty towards various telecom service providers. *Journal of Management in Practice*, 4(1), 2456–1509.

Kalra, S., Padacheril, M., & Chandak, S. (2018). To study the Impact of Jio on the Indian Telecom Industry through their Marketing Strategies. *International Journal of Creative Research Thoughts (IJCRT)*, 6(1), 907–913.

http://www.ijcrt.org/papers/IJCRT1705136.pdf

Kulshrestha, K., & Gupta, D. (2020). An empirical study of determinants towards customer satisfaction in major Indian telecom companies. *Juni Khyat*, 10(6), 172-183.

http://www.junikhyat.com/no 12 jun 20/19.pdf

- Kumar, A., Balaji, M., Krishna, U., & Yadav, M. (2018). Jio-Bharti Airtel Data War and Strategy. *In Harnessing Human Capital Analytics for Competitive Advantage*, 171–179.
- M. Nandhini and D. Sivasakthi (2014), A Study on Customer Attitude Perception towards Branded Broad Band, *Intercontinental Journal of Marketing Research Review*, 2(4), 45-50
- Mathur, P. (2018). Netflix Streaming in Indian Digital World. *Trinity Journal of Management, IT & Media (TJMITM)*, 9, 34–37. https://tips.edu.in/download_pdf/239.pdf
- P.L. Senthil and Safi (2014), A Study on Consumer Behavior of Mobile Phone Users with Reference to Tiruchirappalli District in Tamil Nadu, *Intercontinental Journal of Marketing Research Review*, 2(7), 7-11
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring customer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implication for future research. *The Journal of Marketing*, 49(4), 41-50.
- Panda, R., & Shastri, D. (2016). Telecom Regulation and Its Impact on the Growth of the Economy: An Indian Perspective. *IUP Journal of Information Technology*, 12(4), 48.

https://ssrn.com/abstract=3089573

- Patel, K., Khadia, R., & Awasya, D. G. (2020). A Study: OTT viewership in "Lockdown" and viewer's dynamic watching experience. *International Journal on Transformations of Media, Journalism & Mass Communication*, 5(2), 10–22. https://doi.org/10.13140/RG.2.2.35708.56967
- Patlolla, R., & Doodipala, M. (2018). Distracting the Indian telecommunications sector:

 An Analytical study on Reliance JIO network. *American Journal of Marketing Research*, 4(2),34–43.

 http://www.aiscience.org/journal/paperInfo/ajmr?paperId=3905
- R. Sornapriya and M. Sathiya (2017), Customer Satisfaction towards Reliance Jio Network, *Asian Journal of Managerial Science*, 6(1), 21-27.
- Singh, P. (2019). New media as a change agent of Indian Television and Cinema: A study of over the top platforms. *Journal of Content, Community & Communication*, 9(5), 131–137. https://doi.org/10.31620/JCCC.06.19/18
- Sundaravel, E., & Elangovan, N. (2020). Emergence and future of Over-the-top (OTT) video services in India: An analytical research. *International Journal of Business Management and Social Research*, 8(2), 489–499. https://doi.org/10.18801/ijbmsr.080220.50

Other Resources:

- 1. Insight Research Reports, http://www.insight-corp.com/
- 2. Informa's World Cellular Revenue Forecasts 2018, http://www.telecoms.com/197721/ott-appuse-undermining-sms-revenue/
- 3. Subscription Reports, Telecom Regulatory Authority of India(TRAI), https://www.trai.gov.in/release-publication/reports/telecom-subscriptions-reports
- 4. Deloitte. (2017, October). *Digital Media: Rise of on-demand content.*, https://shorturl.at/mrwC3
- 5. Annual Reports, Telecom Regulatory Authority of India (TRAI), https://trai.gov.in/about-us/annual-reports
- 6. Assessment of the quality of mobile telecommunications services , ISCTE-IUL, https://repositorio.iscte-iul.pt/handle/10071/13548
- 7. https://www.thehindu.com/business/Industry/india-has-highest-data-usage-report/article28078254.ece
- 8. https://www.bloombergquint.com/business/jio-becomes-first-telco-to-cross-40-crore-subscribers-mark-trai-data
- 9. https://tele.net.in/streaming-surge-otts-emerge-as-mass-consumption-platforms/
- 10. https://lawschoolpolicyreview.com/2020/05/25/the-reliance-jio-facebook-deal-a-challenge-for-net-neutrality/
- 11. https://www.outlookindia.com/website/story/india-news-mukesh-ambanis-reliance-jio-set-to-take-on-internet-video-streaming-market/324169
- 12. http://www.marketreportsonindia.com/marketreports/ott-over-the-top-market-in-india-2020/2103101
- 13. https://dazeinfo.com/2017/03/09/average-internet-speed-india-doubled-apac/
- 14. https://www.livemint.com/industry/telecom/reliance-jio-fastest-mobile-network-with-19-3-mbps-download-speed-trai-11602587012559.html
- 15. https://www.indiatoday.in/technology/news/story/trai-redefines-broadband-as-512kbps-connection-officially-confirms-internet-in-india-is-a-joke-349537-2016-11-01
- 16. https://www.firstpost.com/tech/news-analysis/ookla-reveals-fixed-broadband-speeds-increased-in-india-but-stayed-flat-on-mobile-7544411.html
- 17. https://telecomdrive.com/the-aftermath-of-jios-launch-more-than-3-years-ago/
- 18. https://tejas.iimb.ac.in/articles/43.php
- 19. https://gadgets.ndtv.com/telecom/features/jio-10-ways-the-indian-telecom-industry-changed-after-jio-started-operations-1746342
- 20. https://www.lightreading.com/asia/india-needs-u-turn-to-prevent-jio-monopoly/a/d-id/758142

- 21. https://www.livemint.com/industry/telecom/thanks-to-reliance-jio-mobile-data-rates-are-cheapest-in-india-report-1551851856460.html
- 22. https://espace.curtin.edu.au/bitstream/handle/20.500.11937/76812/77055.pdf?sequence=2
- 23. http://www.pbr.co.in/2018/2018_month/Nov/10.pdf
- 24. https://en.wikipedia.org/wiki/LTE_(telecommunication)
- 25. https://www.thecitizen.co.tz/tanzania/oped/-how-reliance-jio-set-the-indian-telecoms-market-on-fire-2712728
- 26. https://www.studymode.com/essays/Jio-Reliance-Case-Study-85819515.html
- 27. http://web.archive.org/web/20200918125502/https://www.agnonet.com/category/analysis/
- 28. https://en.wikipedia.org/wiki/Bharat_Sanchar_Nigam_Limited
- 29. https://en.wikipedia.org/wiki/Bharti_Airtel
- 30. https://en.wikipedia.org/wiki/Vodafone_Idea
- 31. https://indianstartupnews.com/news/reliance-jios-yet-another-milestone-becomes-1st-telco-to-cross-40-crore-subscribers-mark/
- 32. https://www.marketresearch.com/Netscribes-India-Pvt-Ltd-v3676/OTT-India-13399887/
- 33. https://www.indiatvnews.com/technology/news-broadband-internet-speed-in-india-rises-by-16-percent-558517
- 34. https://theresearchershub.com/wp-content/uploads/2018/08/Dissertation-on-Telecom-Industry.pdf
- 35. https://docplayer.net/61585512-Customers-satisfaction-towards-reliance-jio-sim-with-special-reference-to-dharmapuri-district.html
- 36. https://telecom.economictimes.indiatimes.com/news/reliance-jio-adds-over-13-mn-users-while-airtel-voda-ideas-user-base-shrinks-in-september-report/66476999

Chapter 7 Annexes

Annex A- Online Survey

The online questionnaire to collect opinions of mobile network users can be found in Google Forms at https://forms.gle/iQ8rmAqXJ4mKasap6.

The survey had 29 questions concerning their demographic background, their preference for mobile networks, their internet use patterns, and their views towards Reliance Jio.

Annex B- Data Analysis Outputs

1 Network Usage

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	166	47.4	48.3	48.3
	Female	178	50.9	51.7	100.0
	Total	344	98.3	100.0	
Missing	System	6	1.7		
Total		350	100.0		

Age Group

		age Group			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-24	105	30.0	30.0	30.0
	25-34	129	36.9	36.9	66.9
	35-44	42	12.0	12.0	78.9
	45-64	63	18.0	18.0	96.9
	65 and above	11	3.1	3.1	100.0
	Total	350	100.0	100.0	

Are you aware about Reliance Jio?

	riic you awa	i e about i	emanee or	•	
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	11	3.1	3.1	3.1
	Maybe	9	2.6	2.6	5.7
	Yes	330	94.3	94.3	100.0
	Total	350	100.0	100.0	

Did you use internet on your phone before the launch of Reliance Jio in 2016?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	47	13.4	13.4	13.4
	Maybe	4	1.1	1.1	14.6
	Yes	299	85.4	85.4	100.0
	Total	350	100.0	100.0	

Which network are you currently using?

	vi men network are you carrently asing.					
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Airtel	65	18.6	18.6	18.6	
	BSNL	34	9.7	9.7	28.3	
	Others	5	1.4	1.4	29.7	
	Reliance Jio	156	44.6	44.6	74.3	
	Vodafone Idea	90	25.7	25.7	100.0	
	Total	350	100.0	100.0		

If more than one, mention the networks you are currently using

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		174	49.7	49.7	49.7
	Airtel	42	12.0	12.0	61.7
	BSNL	27	7.7	7.7	69.4
	Others	25	7.1	7.1	76.6
	Reliance Jio	27	7.7	7.7	84.3
	Vodafone Idea	55	15.7	15.7	100.0
	Total	350	100.0	100.0	

Which network are you currently using? * If more than one, mention the networks you are currently using Crosstabulation

Count

Count		If me	If more than one, mention the networks you are currently using						
			Airtel	BSNL	Others	Reliance Jio	Vodafone Idea	Total	
Which	Airtel	38	0	5	4	10	8	65	
network are you currently	BSNL	17	5	0	2	3	7	34	
using?	Others	1	0	0	2	0	2	5	
	Reliance Jio	67	33	15	3	0	38	156	
	Vodafone Idea	51	4	7	14	14	0	90	
Total		174	42	27	25	27	55	350	

How long have you been using your current network?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	24	6.9	6.9	6.9
	1-2 years	48	13.7	13.7	20.6
	2-3 years	69	19.7	19.7	40.3
	More than 3 years	209	59.7	59.7	100.0
	Total	350	100.0	100.0	

What type of service do you use?

	<u> </u>				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pre-paid	244	69.7	69.7	69.7
	Post-paid	65	18.6	18.6	88.3
	Both	41	11.7	11.7	100.0
	Total	350	100.0	100.0	

What factors do you consider when choosing any network?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Data Speed	61	17.4	17.4	17.4
	Price	12	3.4	3.4	20.9
	Quality of the Call	2	.6	.6	21.4
	Customer Service	3	.9	.9	22.3
	All of the above	272	77.7	77.7	100.0
	Total	350	100.0	100.0	

2 Network Usage 2

Which network are you currently using? * How long have you been using your current network? Crosstabulation

Count

		How long	How long have you been using your current network?				
		Less than 1 year	1-2 years	2-3 years	More than 3 years	Total	
Which network are you currently using?	Airtel	3	6	3	53	65	
	BSNL	1	7	2	24	34	
	Others	0	3	0	2	5	
	Reliance Jio	16	26	52	62	156	
	Vodafone Idea	4	6	12	68	90	
Total		24	48	69	209	350	

Chi-Square Tests

	Value	df	Asymp. Sig. (2- sided)			
Pearson Chi- Square	29.582ª	8	.000			
Likelihood Ratio	30.004	8	.000			
N of Valid Cases	350					

a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is .59.

JIO User * What type of service do you use? Crosstabulation

or of the or per vice do you does crossed during						
		What type				
		Pre-paid	Post- paid	Both	Total	
JIO User	No	125	54	28	207	
	Yes	119	11	13	143	
Total		244	65	41	350	

Chi-Square Tests

	Value	df	Asymp. Sig. (2- sided)
Pearson Chi- Square	23.153ª	2	.000
Likelihood Ratio	24.999	2	.000
Linear-by-Linear Association	13.119	1	.000
N of Valid Cases	350		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.75.

What factors do you consider when choosing any network?

	•	Resp	Responses		
		N	Percent	Percent of Cases	
\$Q9 ^a	Data Speed	61	14.6%	17.4%	
	Price	51	12.2%	14.6%	
	Quality of the Call	28	6.7%	8.0%	
	Customer Service	5	1.2%	1.4%	
	All of the above	272	65.2%	77.7%	
Total		417	100.0%	119.1%	

a. Group

3 Satisfaction

One-Sample Kolmogorov-Smirnov Test

One sample iximogorov siminov rest				
		Are you satisfied with your current service provider?		
N		350		
Normal Parameters ^{a,b}	Mean	1.48		
	Std. Deviation	.756		
Most Extreme	Absolute	.394		
Differences	Positive	.246		
	Negative	394		
Test Statistic		.394		
Asymp. Sig. (2-tailed)		.000°		

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Ranks

VAR00002		N	Mean Rank	Sum of Ranks
Are you satisfied with	Jio users	156	184.79	28827.00
your current service provider?	Non Jio users	194	168.03	32598.00
	Total	350		

Test Statistics^a

	Are you satisfied with your current service provider?
Mann-Whitney U	13683.000
Wilcoxon W	32598.000
Z	-1.808
Asymp. Sig. (2-tailed)	.071

a. Grouping Variable: VAR00002

VAR00002* Are you satisfied with your current service provider? Crosstabulation

Count

Count		Are you satisfied with your curr	-		
		No	Maybe	Yes	Total
VAR00002	Jio users	28	17	111	156
	Non Jio users	28	53	113	194
Total	otal 56 70 224				

Chi-Square Tests

Chi Square Tests						
	Value	df	Asymp. Sig. (2- sided)			
Pearson Chi-Square	14.578ª	2	.001			
Likelihood Ratio	15.315	2	.000			
Linear-by-Linear Association	1.335	1	.248			
N of Valid Cases	350					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 24.96.

Which network are you currently using? * Are you satisfied with your current service provider? Crosstabulation

Count

		Are you satisfied with your curr			
		No	Maybe	Yes	Total
Which network are you	Airtel	3	18	44	65
currently using?	BSNL	8	17	9	34
	Others	2	0	3	5
	Reliance Jio	28	17	111	156
	Vodafone Idea	15	18	57	90
Total		56	70	224	350

4. Reliance Jio Usage

Jio is used primarily for

	oro is used primarily for						
		Frequer	псу	Percent	Valid Percent	Cumulative Percent	
Valid	Non-Users		142	40.6	40.6	40.6	
	Calling		20	5.7	5.7	46.3	
	Data Speed		45	12.9	12.9	59.1	
	Both		143	40.9	40.9	100.0	
	Total		350	100.0	100.0		

What was your approximate mobile data consumption per month before the Jio launch in 2016?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Upto 100 Mb	35	10.0	10.3	10.3
	100 - 500 Mb	77	22.0	22.7	33.0
	500 - 1000 Mb	105	30.0	31.0	64.0
	Above 1000 Mb	122	34.9	36.0	100.0
	Total	339	96.9	100.0	
Missing	System	11	3.1		
Total		350	100.0		

What is your current mobile data consumption per month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Up to 1 Gb	19	5.4	5.4	5.4
	1 - 10 Gb	79	22.6	22.6	28.0
	11 - 20 Gb	77	22.0	22.0	50.0
	21 - 30 Gb	71	20.3	20.3	70.3
	Above 30 Gb	104	29.7	29.7	100.0
	Total	350	100.0	100.0	

What is your average monthly expenditure on mobile sim card? * Jio usage Crosstabulation

Count

Count					
		Jio user			
		Yes	No	Total	
What is your average monthly	100-200	53	52	105	
expenditure on mobile sim card?	200-300	54	67	121	
mobile sim card?	300-400	32	36	68	
	500 and above	17	39	56	
Total		156	194	350	

What is your average monthly expenditure on mobile sim card? Chi-Square Tests

	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	6.232a	3	.101
Likelihood Ratio	6.391	3	.094
Linear-by-Linear Association	4.422	1	.035
N of Valid Cases	350		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 24.96.

Did you ever change your service provider by Mobile Number Portability?

	<i>V</i>	Frequenc y	Percent	Valid Percent	Cumulativ e Percent
Valid	No	173	49.4	49.4	49.4
	yes	177	50.6	50.6	100.0
	Total	350	100.0	100.0	

If yes, then which service provider did you opt for? (After portability)

	1 / 1		<u> </u>	,
	Frequen y	c Percent	Valid Percent	Cumulativ e Percent
Valid	17	'3 49.4	49.4	49.4
Airtel	4	12.3	12.3	61.7
BSNL		9 2.6	2.6	64.3
Not Applicable		4 1.1	1.1	65.4
Others		9 2.6	2.6	68.0
Reliance Jio	6	8 19.4	19.4	87.4
Vodafone Idea	4	12.6	12.6	100.0
Total	35	100.0	100.0	

Which feature of Reliance JIO convinced you to use this?

		Frequenc y	Percent	Valid Percent	Cumulativ e Percent
Valid		282	80.6	80.6	80.6
	All services	56	16.0	16.0	96.6
	Price (Free sim)	5	1.4	1.4	98.0
	Unlimited Calling Services	3	.9	.9	98.9
	Unlimited Data Services	4	1.1	1.1	100.0
	Total	350	100.0	100.0	

Which service do you like most while using the Reliance JIO services?

		Frequenc y	Percent	Valid Percent	Cumulativ e Percent
Valid	All Services	103	29.4	29.4	29.4
	Jio Apps	4	1.1	1.1	30.6
	Network Coverage	21	6.0	6.0	36.6
	Non-User	146	41.7	41.7	78.3
	Unlimited Calling Services	16	4.6	4.6	82.9
	Unlimited Data Services	60	17.1	17.1	100.0
	Total	350	100.0	100.0	

Are you satisfied with Reliance JIO services?

		Frequenc y	Percent	Valid Percent	Cumulativ e Percent
Valid	No	44	12.6	12.6	12.6
	Non-User	152	43.4	43.4	56.0
	Yes	154	44.0	44.0	100.0
	Total	350	100.0	100.0	

What should be improved in Reliance JIO services?

That block be improved in Renamed 610 bet trees.						
		Frequenc y	Percent	Valid Percent	Cumulativ e Percent	
Valid		12	3.4	3.4	3.4	
	Improve in Network coverage	136	38.9	38.9	42.3	
	Non-User	155	44.3	44.3	86.6	
	Remove calling congestion	38	10.9	10.9	97.4	
	Upgrade in android version	9	2.6	2.6	100.0	
	Total	350	100.0	100.0		

5. Jio Usage

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Do you think your data consumption went up because of unlimited cheap Jio Data?	349	.65	.478	.026

One-Sample Test

		Test Value = 0.5								
					Maan		nce Interval of the ference			
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper				
Do you think your data consumption went up because of unlimited cheap Jio Data?	5.885	348	.000	.150	.10	.20				

What do you mostly use the Jio Internet for ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	E Services (Online Banking, Online Shopping, Uber , etc.)	31	8.9	8.9	8.9
	Non-User	151	43.1	43.1	52.0
	OTT Platforms (Netflix, Saavn, etc.)	61	17.4	17.4	69.4
	Social Media	73	20.9	20.9	90.3
	Study from Home	8	2.3	2.3	92.6
	Work from Home	26	7.4	7.4	100.0
	Total	350	100.0	100.0	

Do you think your data consumption went up because of unlimited cheap Jio Data?

	v				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	122	34.9	35.0	35.0
	Yes	227	64.9	65.0	100.0
	Total	349	99.7	100.0	
Missing	System	1	.3		
Total		350	100.0		

Which OTT platform do you mostly use with your Jio network?

	o F	<u>j</u>	sely ase with jour sio network .			
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Amazon Prime	50	14.3	14.3	14.3	
	Hotstar	28	8.0	8.0	22.3	
	Jio TV and Cinema	11	3.1	3.1	25.4	
	Netflix	60	17.1	17.1	42.6	
	Non-Users	160	45.7	45.7	88.3	
	Others	41	11.7	11.7	100.0	
	Total	350	100.0	100.0		

How many hours do you spend watching above mentioned OTT platforms everyday?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 Hour	68	19.4	36.2	36.2
	2 Hours	87	24.9	46.3	82.4
	3 Hours	16	4.6	8.5	91.0
	More than 3 Hours	17	4.9	9.0	100.0
	Total	188	53.7	100.0	
Missing	System	162	46.3		
Total		350	100.0		

Are you happy with your current dependency on mobile data for your daily activities or you would prefer the early times of less mobile usage and more time for other things?

		V11118			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	35	10.0	10.0	10.0
	Maybe	106	30.3	30.3	40.3
	Yes	209	59.7	59.7	100.0
	Total	350	100.0	100.0	

6. Reliability Test

Case Processing Summary

		N	%
Cases	Valid	221	63.1
	Excludeda	129	36.9
	Total	350	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.912	6

Statistics

		Network Coverage	Internet Data Services	Calling Services	Customer Care	Jio Apps	New Schemes & Offers
N	Valid	223	224	223	223	226	224
	Missing	127	126	127	127	124	126
Mean		3.2063	3.5045	3.3587	3.2466	3.3274	3.4152
Median		3.0000	4.0000	3.0000	3.0000	3.0000	3.5000
Std. Deviatio	n	1.17118	1.22382	1.27219	1.14969	1.18466	1.18357

Ranks

Gender		N	Mean Rank	Sum of Ranks
Network Coverage	Male	114	111.96	12764.00
	Female	106	108.92	11546.00
	Total	220		
Internet Data	Male	115	111.06	12772.00
Services	Female	106	110.93	11759.00
	Total	221		
Calling Services	Male	114	111.68	12731.00
	Female	106	109.24	11579.00
	Total	220		
Customer Care	Male	115	111.01	12766.00
	Female	105	109.94	11544.00
	Total	220		
Jio Apps	Male	116	111.63	12949.50
	Female	106	111.35	11803.50
	Total	222		
New Schemes & Offers	Male	115	109.65	12609.50
	Female	106	112.47	11921.50
	Total	221		

Test Statistics^a

	Network Coverage	Internet Data Services	Calling Services	Customer Care	Jio Apps	New Schemes & Offers
Mann-Whitney U	5875.000	6088.000	5908.000	5979.000	6132.500	5939.500
Wilcoxon W	11546.000	11759.000	11579.000	11544.000	11803.500	12609.500
Z	366	015	291	129	033	337
Asymp. Sig. (2-tailed)	.715	.988	.771	.898	.973	.736

a. Grouping Variable: Gender

Ranks

Age Group		N	Mean Rank
Network Coverage	16-24	70	106.49
	25-34	91	105.84
	35-44	26	125.83
	45-64	28	123.04
	65 and above	8	146.69
	Total	223	
Internet Data	16-24	70	101.95
Services	25-34	91	107.48
	35-44	27	139.39
	45-64	28	114.14
	65 and above	8	165.44
	Total	224	
Calling Services	16-24	70	103.69
	25-34	91	105.60
	35-44	27	145.37
	45-64	28	109.84
	65 and above	7	158.21
	Total	223	
Customer Care	16-24	69	108.91
	25-34	91	105.19
	35-44	27	115.17
	45-64	28	129.46
	65 and above	8	144.25
	Total	223	
Jio Apps	16-24	70	104.95
	25-34	92	108.94
	35-44	27	122.19
	45-64	29	126.83
	65 and above	8	163.13
	Total	226	
New Schemes &	16-24	70	98.97
Offers	25-34	91	110.17
	35-44	27	119.35
	45-64	28	128.14
	65 and above	8	179.50
	Total	224	

Test Statistics^{a,b}

	Network Coverage	Internet Data Services	Calling Services	Customer Care	Jio Apps	New Schemes & Offers
Chi-Square	6.033	13.142	13.580	5.679	8.455	14.476
df	4	4	4	4	4	4
Asymp. Sig.	.197	.011	.009	.224	.076	.006

a. Kruskal Wallis Test

b. Grouping Variable: Age Group

Statistics

			Stat	usucs				
JIO is used as your			Network Coverage	Internet Data Services	Calling Services	Customer Care	Jio Apps	New Schemes & Offers
Non user	N	Valid	33	33	33	33	35	33
		Missing	118	118	118	118	116	118
	Mean		2.8485	2.8788	2.9091	3.1818	3.2286	3.0000
	Median		3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
	Std. Deviat	tion	1.58353	1.53618	1.58831	1.46745	1.62853	1.60078
Primary Network	N	Valid	141	141	140	140	141	141
		Missing	2	2	3	3	2	2
	Mean		3.3404	3.6170	3.4429	3.2286	3.4823	3.5603
	Median		3.0000	4.0000	4.0000	3.0000	3.0000	4.0000
	Std. Deviat	tion	1.08779	1.15053	1.23073	1.09507	1.09285	1.14248
Secondary Network	N	Valid	49	50	50	50	50	50
		Missing	7	6	6	6	6	6
	Mean		3.0612	3.6000	3.4200	3.3400	2.9600	3.2800
	Median		3.0000	4.0000	3.0000	3.0000	3.0000	3.0000
	Std. Deviat	tion	1.02892	1.08797	1.10823	1.08063	.98892	.88156

7. Gender and Age

Crosstab

Count				
		JIO U:	JIO User	
		No	Yes	Total
Gender	Male	95	71	166
	Female	109	69	178
Total		204	140	344

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.571ª	1	.450		
Continuity Correction ^b	.417	1	.518		
Likelihood Ratio	.571	1	.450		
Fisher's Exact Test				.510	.259
Linear-by-Linear Association	.570	1	.450		
N of Valid Cases	344				

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 67.56.
- b. Computed only for a 2x2 table

Age Group * JIO User

Crosstab

Count

		JIO Us	er	
		No	Yes	Total
Age Group	16-24	62	43	105
	25-34	74	55	129
	35-44	24	18	42
	45-64	43	20	63
	65 and above	4	7	11
Total		207	143	350

	Cm Square 1	CDCD	
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.765ª	4	.312
Likelihood Ratio	4.780	4	.311
Linear-by-Linear Association	.091	1	.763
N of Valid Cases	350		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.49.

Gender \ast Did you use internet on your phone before the launch of Reliance Jio in 2016?

Crosstab

Count

		Did you use inter the launch of			
		No	Maybe	Yes	Total
Gender	Male	19	1	146	166
	Female	27	3	148	178
Total		46	4	294	344

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	1.989ª	2	.370			
Likelihood Ratio	2.040	2	.361			
Linear-by-Linear Association	1.329	1	.249			
N of Valid Cases	344					

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.93.

Gender * How long have you been using your current network?

Crosstab

Count						
		How long have y	How long have you been using your current network?			
		Less than 1	4.0	2-3	More than 3	T-4-1
		year	1-2 years	years	years	Total
Gender	Male	12	23	30	101	166
	Female	12	24	36	106	178
Total		24	47	66	207	344

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.269ª	3	.966
Likelihood Ratio	.270	3	.966
Linear-by-Linear Association	.000	1	.996
N of Valid Cases	344		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.58.

Gender * What type of service do you use?

Crosstab

Count

		What type of			
		Pre-paid	Post-paid	Both	Total
Gender	Male	124	27	15	166
	Female	115	38	25	178
Total		239	65	40	344

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.287 ^a	2	.117
Likelihood Ratio	4.318	2	.115
Linear-by-Linear Association	4.100	1	.043
N of Valid Cases	344		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.30.

Gender * What was your approximate mobile data consumption per month before the Jio launch in 2016?

Crosstab

			What was your approximate mobile data consumption per month before the Jio launch in 2016?			
		Upto 100 Mb	100 - 500 Mb	500 - 1000 Mb	Above 1000 Mb	Total
Gender	Male	16	32	51	62	161
	Female	19	45	51	57	172
Total		35	77	102	119	333

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.301ª	3	.512
Likelihood Ratio	2.310	3	.511
Linear-by-Linear Association	1.593	1	.207
N of Valid Cases	333		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.92.

Gender * What is your current mobile data consumption per month?

Crosstab

Count

		What is your	What is your current mobile data consumption per month?					
		Up to 1 Gb	1 - 10 Gb	11 - 20 Gb	21 - 30 Gb	Above 30 Gb	Total	
Gender	Male	7	41	34	30	54	166	
	Female	12	36	41	41	48	178	
	Total	19	77	75	71	102	344	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.937 ^a	4	.415
Likelihood Ratio	3.956	4	.412
Linear-by-Linear Association	.240	1	.624
N of Valid Cases	344		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.17.

Gender * What is your average monthly expenditure on mobile sim card?

Crosstab

Count						
		What is your ave	What is your average monthly expenditure on mobile sim card?			
		100-200	200-300	300-400	500 and above	Total
Gender	Male	55	56	30	25	166
	Female	50	64	37	27	178
Total		105	120	67	52	344

on square rests						
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	1.163ª	3	.762			
Likelihood Ratio	1.163	3	.762			
Linear-by-Linear Association	.510	1	.475			
N of Valid Cases	344					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 25.09.

Gender * Did you ever change your service provider by Mobile Number Portability?

Crosstab

Count

Count				
		Did you ever change your service provider by Mobile Number Portability?		
		No	yes	Total
Gender	Male	79	87	166
	Female	92	86	178
Total		171	173	344

Chi Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.576ª	1	.448		
Continuity Correction ^b	.424	1	.515		
Likelihood Ratio	.576	1	.448		
Fisher's Exact Test				.453	.258
Linear-by-Linear Association	.575	1	.448		
N of Valid Cases	344				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 82.52.

b. Computed only for a 2x2 table

Gender * Are you satisfied with your current service provider?

Crosstab

Count

			Are you satisfied with your current service provider?		
		No	Maybe	Yes	Total
Gender	Male	27	29	110	166
	Female	26	41	111	178
Total		53	70	221	344

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.664ª	2	.435
Likelihood Ratio	1.672	2	.433
Linear-by-Linear Association	.078	1	.781
N of Valid Cases	344		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 25.58.

$\label{lem:consumption} \textbf{Gender * Do you think your data consumption went up because of unlimited cheap Jio Data?}$

Crosstab

		Do you think consumption wer	nt up because	
		of unlimited che	Yes	Total
Condor	Mole	U		
Gender	Male	55	110	165
	Female	64	114	178
	Total	119	224	343

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.260ª	1	.610		
Continuity Correction ^b	.157	1	.692		
Likelihood Ratio	.260	1	.610		
Fisher's Exact Test				.650	.346
Linear-by-Linear Association	.259	1	.611		
N of Valid Cases	343				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 57.24.

Gender * How many hours do you spend watching above mentioned OTT platforms everyday?

Crosstab

Count

Count						
		How many hours do you spend watching above mentioned OTT platforms everyday?				
		Less than 1				Total
Gender	Male	35	40	8	9	92
	Female	33	46	6	7	92
Total		68	86	14	16	184

Cin-bquare resis					
	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	1.013ª	3	.798		
Likelihood Ratio	1.015	3	.798		
Linear-by-Linear Association	.111	1	.739		
N of Valid Cases	184				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.00.

b. Computed only for a 2x2 table

Gender * Are you happy with your current dependency on mobile data for your daily activities or you would prefer the early times of less mobile usage and more time for other things?

Crosstab

Count

Count					
		dependency on r activities or you times of less mob	Are you happy with your current dependency on mobile data for your daily activities or you would prefer the early times of less mobile usage and more time for other things?		
		No	Maybe	Yes	Total
Gender	Male	16	54	96	166
	Female	17	51	110	178
Total		33	105	206	344

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.650ª	2	.723
Likelihood Ratio	.650	2	.723
Linear-by-Linear Association	.319	1	.572
N of Valid Cases	344		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.92.

Age Group * Did you use internet on your phone before the launch of Reliance Jio in 2016?

Crosstab

Count

		Did you use internet on your phone before the launch of Reliance Jio in 2016?			
		No	Maybe	Yes	Total
Age Group	16-24	15	1	89	105
	25-34	9	1	119	129
	35-44	7	0	35	42
	45-64	10	0	53	63
	65 and above	6	2	3	11
Total		47	4	299	350

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.939ª	8	.000
Likelihood Ratio	29.853	8	.000
Linear-by-Linear Association	6.534	1	.011
N of Valid Cases	350		

a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is .13.

Age Group * How long have you been using your current network?

Crosstab

Count						
		How long have y	network?			
		Less than 1 year	1-2 years	2-3 years	More than 3 years	Total
Age Group	16-24	7	18	24	56	105
	25-34	8	17	28	76	129
	35-44	2	4	5	31	42
	45-64	4	7	9	43	63
	65 and above	3	2	3	3	11
Total		24	48	69	209	350

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.182ª	12	.143
Likelihood Ratio	14.969	12	.243
Linear-by-Linear Association	.190	1	.663
N of Valid Cases	350		

a. 5 cells (25.0%) have expected count less than 5. The minimum expected count is .75.

Age Group * What type of service do you use?

Crosstab

Count

		What type of	use?		
		Pre-paid	Post-paid	Both	Total
Age Group	16-24	90	8	7	105
	25-34	85	18	26	129
	35-44	27	12	3	42
	45-64	34	24	5	63
	65 and above	8	3	0	11
Total		244	65	41	350

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43.398ª	8	.000
Likelihood Ratio	42.541	8	.000
Linear-by-Linear Association	4.725	1	.030
N of Valid Cases	350		

a. 3 cells (20.0%) have expected count less than 5. The minimum expected count is 1.29.

Age Group * What was your approximate mobile data consumption per month before the Jio launch in 2016?

Crosstab

Count

		What was your a per month				
		Upto 100 Mb	100 - 500 Mb	500 - 1000 Mb	Above 1000 Mb	Total
Age Group	16-24	10	28	31	34	103
	25-34	9	26	39	55	129
	35-44	4	5	19	13	41
	45-64	11	16	15	19	61
	65 and above	1	2	1	1	5
Total		35	77	105	122	339

Chi-Square Tests

om square resus						
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	16.650ª	12	.163			
Likelihood Ratio	16.007	12	.191			
Linear-by-Linear Association	1.817	1	.178			
N of Valid Cases	339					

a. 5 cells (25.0%) have expected count less than 5. The minimum expected count is .52.

Age Group * What is your current mobile data consumption per month?

Crosstab

Obdite							
		What is your current mobile data consumption per month?					
		Up to 1 Gb	1 - 10 Gb	11 - 20 Gb	21 - 30 Gb	Above 30 Gb	Total
Age Group	16-24	2	21	26	25	31	105
	25-34	6	20	19	30	54	129
	35-44	3	9	15	9	6	42
	45-64	6	23	16	6	12	63
	65 and above	2	6	1	1	1	11
Total		19	79	77	71	104	350

em square resus						
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	49.088ª	16	.000			
Likelihood Ratio	48.415	16	.000			
Linear-by-Linear Association	22.543	1	.000			
N of Valid Cases	350					

a. 7 cells (28.0%) have expected count less than 5. The minimum expected count is .60.

Age Group * What is your average monthly expenditure on mobile sim card?

Crosstab

Count

		What is your ave				
		100-200	200-300	300-400	500 and above	Total
Age Group	16-24	37	41	15	12	105
	25-34	28	53	31	17	129
	35-44	11	15	5	11	42
	45-64	21	11	16	15	63
	65 and above	8	1	1	1	11
Total		105	121	68	56	350

Cin-Square rests					
	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	33.947ª	12	.001		
Likelihood Ratio	34.025	12	.001		
Linear-by-Linear Association	1.570	1	.210		
N of Valid Cases	350				

a. 4 cells (20.0%) have expected count less than 5. The minimum expected count is 1.76.

Age Group * Did you ever change your service provider by Mobile Number Portability?

Crosstab

Count

		Did you ever change your service provider by Mobile Number Portability?		
		No	yes	Total
Age Group	16-24	60	45	105
	25-34	57	72	129
	35-44	23	19	42
	45-64	27	36	63
	65 and above	6	5	11
Total		173	177	350

Chi-Square Tests

em square rests						
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	5.600 ^a	4	.231			
Likelihood Ratio	5.615	4	.230			
Linear-by-Linear Association	1.311	1	.252			
N of Valid Cases	350					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.44.

Age Group * Are you satisfied with your current service provider?

Crosstab

		Are you satisfied with your current service provider?			
		No	Maybe	Yes	Total
Age Group	16-24	20	21	64	105
	25-34	22	25	82	129
	35-44	3	11	28	42
	45-64	10	12	41	63
	65 and above	1	1	9	11
Total		56	70	224	350

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.360 ^a	8	.719
Likelihood Ratio	5.980	8	.649
Linear-by-Linear Association	1.624	1	.202
N of Valid Cases	350		

a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 1.76.

$\label{lem:constraint} \textbf{Age Group * Do you think your data consumption went up because of unlimited cheap Jio Data?}$

Crosstab

Count

		Do you think your data consumption went up because of unlimited cheap Jio Data?		
		0	Yes	Total
Age Group	16-24	29	76	105
	25-34	41	88	129
	35-44	17	24	41
	45-64	32	31	63
	65 and above	3	8	11
Total		122	227	349

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.056ª	4	.026
Likelihood Ratio	10.819	4	.029
Linear-by-Linear Association	7.189	1	.007
N of Valid Cases	349		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 3.85.

$\label{eq:continuous} \textbf{Age Group * How many hours do you spend watching above mentioned OTT platforms everyday?}$

Crosstab

Count

		How many hours do you spend watching above mentioned OTT platforms everyday?				
		Less than 1 Hour	2 Hours	3 Hours	More than 3 Hours	Total
Age Group	16-24	20	26	5	7	58
	25-34	24	37	6	10	77
	35-44	11	10	3	0	24
	45-64	9	11	1	0	21
	65 and above	4	3	1	0	8
Total		68	87	16	17	188

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.069 ^a	12	.610
Likelihood Ratio	14.562	12	.266
Linear-by-Linear Association	4.480	1	.034
N of Valid Cases	188		

a. 9 cells (45.0%) have expected count less than 5. The minimum expected count is .68.

Age Group * Are you happy with your current dependency on mobile data for your daily activities or you would prefer the early times of less mobile usage and more time for other things?

Crosstab

Count					
		Are you happy with your current dependency on mobile data for your daily activities or you would prefer the early times of less mobile usage and more time for other things?			
		No	Maybe	Yes	Total
Age Group	16-24	11	31	63	105
	25-34	16	43	70	129
	35-44	4	9	29	42
	45-64	4	19	40	63
	65 and above	0	4	7	11
Total		35	106	209	350

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.791 ^a	8	.671
Likelihood Ratio	7.055	8	.531
Linear-by-Linear Association	1.569	1	.210
N of Valid Cases	350		

a. 3 cells (20.0%) have expected count less than 5. The minimum expected count is 1.10.