Reliance Jio (A pack of services): Impact on Indian telecom market

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Abstract
Home to the world's second largest population of 1.3 billion, India is a young nation with 63% of its population under the age of 35 years. It has a fast growing digital audience with 800 million mobile connections and over 200 million internet users. The internet is like a blood in the vein of information driven economy, apart from impacting business and economy it has entered into the life of common man. Recently the major breakthrough in data carrier services comes with the launch of 4G (LTE) by different telecom companies. This paper is an attempt to analysis the impact of various JIO services i.e. jio money, 4G data services, Wifi hotspots etc. whereas other major player in Indian market like Airtel, Vodafone, Idea etc. are offering services in different areas comes under direct policy redirection and reformation due to Jio services.

Keywords: Jio, LTE, Telecom, Indian Economy, data and voice processing services

Introduction
India is currently the world's second-largest telecommunications market and has registered strong growth in the past decade and half. The Indian mobile economy is growing rapidly and will contribute substantially to India's Gross Domestic Product (GDP), according to report prepared by GSM Association (GSMA) in collaboration with the Boston Consulting Group (BCG).

The liberal and reformist policies of the Government of India have been instrumental along with strong consumer demand in the rapid growth in the Indian telecom sector. The government has enabled easy market access to telecom equipment and a fair and proactive regulatory framework that has ensured availability of telecom services to consumer at affordable prices. The deregulation of Foreign Direct Investment (FDI) norms has made the sector one of the fastest growing and a top five employment opportunity generator in the country.

The Indian telecom sector is expected to generate four million direct and indirect jobs over the next five years according to estimates by Randstad India. The employment opportunities are expected to be created due to combination of government's efforts to increase penetration in rural areas and the rapid increase in smartphone sales and rising internet usage.

International Data Corporation (IDC) predicts India to overtake US as the second-largest smartphone market globally by 2017 and to maintain high growth rate over the next few years as people switch to smartphones and gradually upgrade to 4G.

Market Size
Driven by strong adoption of data consumption on handheld devices, the total mobile services market revenue in India is expected to touch US$ 37 billion in 2017, registering a Compound Annual Growth Rate (CAGR) of 5.2 per cent between 2014 and 2017, according to research firm IDC.
India is expected to have over 180 million smartphones by 2019, contributing around 13.5 per cent to the global smartphone market, based on rising affordability and better availability of data services among other factors.

According to a report by leading research firm Market Research Store, the Indian telecommunication services market will likely grow by 10.3 per cent year-on-year to reach US$ 103.9 billion by 2020.

According to the Ericsson Mobility Report India, smartphone subscriptions in India is expected to increase four-fold to 810 million users by 2021, while the total smartphone traffic is expected to grow seventeen-fold to 4.2 Exabytes (EB) per month by 2021.

According to a study by GSMA, smartphones are expected to account for two out of every three mobile connections globally by 2020 making India the fourth largest smartphone market. Total number of Fourth-Generation (4G) enabled smartphone shipments in India stood at 13.9 million units in the quarter ending December 2015, which was more than 50 per cent of total shipments, thereby surpassing number of Third-Generation (3G) enabled smartphone shipments for the first time. Broadband services user-base in India is expected to grow to 250 million connections by 2017.

**Investment**

With daily increasing subscriber base, there have been a lot of investments and developments in the sector. The industry has attracted FDI worth US$ 18.38 billion during the period April 2000 to March 2016, according to the data released by Department of Industrial Policy and Promotion (DIPP).

Some of the major developments in the recent past are:

LeEco, a Chinese technology company, has entered into a partnership with Compal Technologies and invested US$ 7 million to set up manufacturing facility at Greater Noida in order to start manufacturing Le2 smartphones in India.

Chinese telecom gear maker Huawei has set up its largest global service centre (GSC) at Bengaluru in India, with an initial investment of Rs 136 crore (US$ 20.28 million), which will extend its support to Huawei's domestic and international telecom carrier customers in about 30 markets across Asia, Middle East and Africa.

Chinese smartphone maker Gionee, which currently assembles smartphones in partnerships with contract manufacturers Foxconn and Dixon, plans to invest Rs 500 crore (US$ 74.56 million) to set up a manufacturing facility in India.

Singapore Telecommunications Limited (Singtel), the major shareholder in BhartiAirtel, announced that it has signed an agreement with its majority owner Temasek Holdings Private Limited to purchase a 7.39 per cent stake in Bharti Telecom Limited, the parent company of BhartiAirtel Limited, in a deal worth US$ 659.51 million.

Axiata Digital, a subsidiary of Malaysia's largest telecom firm Axiata Group Berhad, has made its entry into Indian e-commerce market by investing Rs 100 crores (US$ 14.91 million) in Bengaluru-based StoreKing.

Chinese smartphone manufacturer OnePlus has partnered with Foxconn to start manufacturing its products in India as part of its plan to have 90 per cent of the devices sold in India to be locally manufactured.
manufactured by the end of 2017.
Government of India to make a windfall gain from sale of spectrum in 2016-17 and achieve its fiscal deficit target of 3.5 per cent of Gross Domestic Product (GDP) for the year.
Vodacom SA, a subsidiary of Vodafone Plc, has entered into an agreement with Tata Communications Ltd to buy the fixed-line assets of TataComm's South African telecom subsidiary Neotel Pty Ltd.
Reliance Communications Ltd, India's fourth largest mobile services provider, has agreed to acquire SistemaShyamTeleServices Ltd (SSTL), the local unit of Russian company Sistema JSFC, in a deal valued at Rs 4,500 crore (US$ 671.01 million), which includes payments to the government for spectrum allotted to Sistema.
American Tower Corporation, a New York Stock Exchange-listed mobile infrastructure firm, has acquired 51 per cent stake in telecom tower company Viom Networks in a deal worth Rs 7,635 crore (US$ 1.13 billion).
Swedish telecom equipment maker Ericsson has announced the introduction of a new radio system in the Indian market, which will provide the necessary infrastructure required by mobile companies in order to provide Fifth-Generation (5G) services in future.

**Government Initiatives**

* The government has fast-tracked reforms in the telecom sector and continues to be proactive in providing room for growth for telecom companies. Some of the other major initiatives taken by the government are as follows:

  * The Ministry of Communications & Information Technology has launched Twitter Sewa, an online communications platform for registration and resolution of user complaints in the telecommunications and postal sectors.

  * The Telecom Regulatory Authority of India (TRAI) has released a consultation paper which aims to offer consumers free Internet services within the net neutrality framework and has proposed three models for free data delivery to customers without violating the regulations.

  * The Government of India has liberalised the payment terms for spectrum auctions by allowing two options of payments to telecom companies for acquiring the right to use spectrum, which include upfront payment and payment in instalments.

  * The Department of Telecommunications (DoT) has amended the Unified Licence for telecom operations which will allow sharing of active telecom infrastructure like antenna, feeder cable and transmission systems between operators, thereby lowering the costs of operations and leading to faster rollout of networks.

  * The Telecom Regulatory Authority of India (TRAI) has recommended a Public-Private Partnership (PPP) model for BharatNet, the central government's ambitious project to set up a broadband network in rural India, and has also envisaged central and state governments to become the main clients in this project.

  * The Ministry of Skill Development and Entrepreneurship (MSDE) signed a Memorandum of Understanding (MoU) with Department of Telecommunication (DoT) to develop and implement National Action Plan for Skill Development in Telecom Sector, with an objective of fulfilling skilled manpower requirement and providing employment and entrepreneurship
opportunities in the sector.
* The Telecom Regulatory Authority of India (TRAI) has directed the telecom companies or mobile operators to compensate the consumers in the event of dropped calls with a view to reduce the increasing number of dropped calls.

Future Trends
India will emerge as a leading player in the virtual world by having 700 million internet users of the 4.7 billion global users by 2025, as per a Microsoft report. With the government's favourable regulation policies and 4G services hitting the market, the Indian telecommunication sector is expected to witness fast growth in the next few years.

The Telecom Market Segments
Mobile (wireless): Comprising establishments operating and maintaining switching and transmission facilities to provide direct communications via airwaves
Fixed-line (wireline): Consists of companies that operate and maintain switching and transmission facilities to provide direct communication through landlines, microwave or a combination of landlines and satellite link-up
Internet Services: Includes Internet Service Providers (ISPs) that offer broadband internet connections through consumer and corporate channels

Market Share In Terms Of Total Subscribers (Fy16)

<table>
<thead>
<tr>
<th>Wireless Company</th>
<th>% Share</th>
<th>Landline Company</th>
<th>% Share</th>
<th>Broadband Company</th>
<th>% Share</th>
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<tbody>
<tr>
<td>Bharti Airtel</td>
<td>24.31%</td>
<td>BSNL</td>
<td>58.52%</td>
<td>Bharti</td>
<td>25.69%</td>
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<tr>
<td>Vodafone</td>
<td>19.15%</td>
<td>MTNL</td>
<td>14.52%</td>
<td>Vodafone</td>
<td>18.54%</td>
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<td>Idea</td>
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<td>Bharti</td>
<td>13.89%</td>
<td>Idea</td>
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<tr>
<td>Reliance</td>
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<td>Tata</td>
<td>6.83%</td>
<td>BSNL</td>
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<td>Aircel</td>
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<td>4.64%</td>
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<tr>
<td>BSNL</td>
<td>8.35%</td>
<td>Quadrant</td>
<td>1.00%</td>
<td>Others</td>
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<td>5.81%</td>
<td>Vodafone</td>
<td>0.36%</td>
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<td>Telewings</td>
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<td>Sistema</td>
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<td>Sistema</td>
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<td>Videocon</td>
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About Reliance Jio
Reliance JioInfocomm Limited (RJIL) previously known as Infotel Broadband, is a broadband service provider which gained 4G licenses for operating across India. Sandip Das, former CEO of Maxis Malaysia, is the current group president of Reliance JioInfocomm.
It is doing business as Jio, is a LTE mobile network operator in India. It is a wholly owned
subsidiary of Reliance Industries headquartered in Mumbai, that provides wireless 4G LTE service network (without 2G/3G based services) and is the only 100% VoLTE (Voice over LTE) operator in the country, with coverage across all 22 telecom circles in India.

The company launched its 4G broadband services throughout India in the first quarter of 2016-2017 financial year. The Mukesh Ambani-led Reliance Industries Limited subsidiary recently announced the Jio Happy New Year Offer for all existing and new users that "extends free voice, data, video call, SMS and Jio apps till March 31, 2017." The Happy New Year Offer basically is an extension to Jio's Welcome Offer that ended on December 3, 2016.

The company has a network of more than 250,000 km of fiber optic cables in the country, over which it will be partnering with local cable operators to get broader connectivity for its broadband services. With its multi-service operator (MSO) licence, Jio will also serve as a TV channel distributor and will offer television-on-demand on its network.

**Services Bokeh by JIO**

**Affordable Devices:** Jio has worked with all the leading device manufacturers of the world to ensure availability of 4G LTE smartphones across all price points – from ultra-premium models on one hand, to entry level models on the other.

**Digital Communication:** The application Jio4GVoice brings the 4G communication suite to all smartphones. With its RCS (Rich Communication Services) features like Enriched calling, Chat, File share and Unified Messaging, it redefines the calling and messaging experience. It also enables Jio's cutting edge voice and video call service on non-VoLTE smartphones.

**Digital Currency:** Jio envisions a new India which will use digital currency instead of paper money for a more secure and convenient way to transact. Jio Money, Jio's digital currency and digital payments business, will play a crucial role in this by offering a platform for ubiquitous, affordable and secure digital payments.

**Jio Drive:** Micro and small businesses will soon have access to cutting-edge cloud storage technologies which were once affordable to big companies only, giving them a new edge to compete on a global landscape. Jio Drive is an application that brings powerful cloud capabilities to every smartphone. Using Jio Drive, anyone can store, sync and share any content between their own devices and also with their friends.

**Digital Education:** Teachers and students from far flung areas can connect with each other, crowd-source knowledge and adapt new age learning techniques and thus lift the level of education to a completely different plane.

**Digital Healthcare:** Expert medical advice would be available anytime, anywhere - with medical practitioners able to grow their practice without constraint, and provide quality of life to the crores that make up our country.

**Digital Entertainment and social connectivity:** Jio Chat is a powerful communication application that integrates chat, voice, video calling, conferencing, file sharing, photo sharing and much more. Jio Play enables users to watch HD TV anytime, anywhere on any device, from hundreds of channels, across categories and languages. Jio Beats is a premier digital music streaming service that gives instant access to millions of songs and curated playlists. JioMags and Jio News provide access to the most popular collection of magazines and news from leading publishing houses across multiple languages.
**Digital Entrepreneurship:** Jio is building is a powerful platform on which a range of rich digital products and services can be enabled - digital currency, digital commerce, digital education, digital healthcare, e-governance, Smart Cities, M2M and the Internet of Things. It does not matter whether these services are created by Jio itself, its ecosystem partners or anyone globally. Reliance is committed to the principles of Net Neutrality.

**Impact of Reliance Jio on Market**

**Increase in Internet Speed**

Reliance Jio beat Airtel, Vodafone and others, becoming the fastest among all 4G service providers in India in December 2016, according to data released by the Telecom Regulatory Authority of India. TRAI's MySpeed portal had previously in October revealed that Reliance Jio was the slowest 4G service provider in India.

![Graph showing average upload speed comparison](image)

The graph for average upload speed shows, however, shows Telenor as number one with 2.8Mbps while Jio follows closely at second position with 2.6Mbps.

**Jio Cause Growth in Telecom Subscriber Base**

![Graph showing growth in total subscribers](image)

India's telephone subscriber base expanded at a CAGR of 19.96 per cent, reaching 1058.86 million during FY07–16. Tele-density (defined as the number of telephone connections for every hundred individuals) in India increased from 17.9 in FY07 to 83.36 in FY16. In 2016, total telephone subscription stood at 1058.86 million, while tele-density was at 83.36 percent.

**Jio Contribute Wireless Segment To Dominates The Market**
In 2016, India's telephone subscriber base reached 1,058.86 million. In 2016, the wireless segment (97.62 per cent of total telephone subscriptions) dominated the market, with the wireline segment accounting for an overall share of 2.4 per cent. Urban regions accounted for 57.29 per cent share in the overall telecom subscriptions in the country, while rural areas accounted for the remaining share.

**Robust Growth In Wireless Subscriptions**

During FY07-16, wireless subscriptions in the country increased at a CAGR of 22.94 per cent, with the number of subscribers reaching 1,058.85 million. In FY16, urban wireless teledensity stood at 148.73 while rural wireless teledensity stood at 50.88.

**Grows Over The Years In Wireless Teledensity**
The mobile segment's teledensity surged 6 times from 14.6 per cent in FY07 to 81.38 per cent, in FY16 GSM services continue to dominate the wireless market with a 95.73 per cent share.

Number Of Internet Subscribers Increasing At A Fast Pace

The number of Internet subscribers in the country increased at a CAGR of 44.56 per cent, with the number reaching 342.65 million in 2016 from 8.6 million in 2006. By December 2015, the number of internet users was anticipated to reach 402 million. Which has already reached to 462 million by the end of 2016 with the increasing number of subscribers coming online especially through mobile devices.

Emergence Of Tower Industry

A surge in the subscriber base has necessitated network expansion covering a wider area, thereby creating a need for significant investment in telecom infrastructure. To curb costs and focus on core operations, telecom companies have been segregating their tower assets into separate companies. For example: Reliance Communications has decided to finalise a deal to sell its stake in Reliance Infratel. The value of the deal is around USD 3.68 billion.
Mobile Number Portability has helped telecom companies lower operating cost and improve capital structure; this has also provided an additional revenue stream. Inspired by the success seen by Indian players in towers business, most of the operators around the world are replicating the model.

**Mobile Number Portability**

![Number of MNP requests (in million)](image)

Mobile Number Portability (MNP) in India was introduced in November 2010. MNP allows subscribers to change their mobile service provider while retaining their old mobile number. MNP requests in India increased to 209.13 million at the end of 2016.

**Change in Service and Marketing Strategies**
- Idea Cellular launched new campaign “Get idea and dance
- Airtel launched new ad campaign “Airtel my Plan Family”
- Airtel India launched a mobile app “Wynk Movies”, it is a library that includes videos and movies
- Vodafone launched “Choose Your Number” facility where prepaid and postpaid customers get numbers of their own choice
- To compete with Jio 4G services, Vodafone launched 'Double Data' scheme for its prepaid customers where users will get double data pack at the same price. Companies such as Vodafone, Airtel have already launched 4G technology at very competitive prices.

**Conclusion**

Reliance Jio is creating the most extensive and future-proof network in India, and perhaps, in the world. It will provide next generation legacy-free digital services over an end-to-end all-IP network, which can be seamlessly upgraded even to 5G and beyond. In addition to the existing pan India 2300 MHz spectrum and 1800 MHz in 14 circles, Jio invested over Rs 10,000 crore during this year's auction to acquire 800 MHz spectrum in 10 circles and 1800 MHz spectrum in 6 circles. This brings the cumulative investment in spectrum assets to nearly Rs 34,000 crores. Jio now has the largest footprint of liberalized spectrum in the country, acquired in an extremely cost effective manner.

Reliance Jio has laid more than 2.5 lakhs kilometres of fibre-optic cables, covering 18,000 cities and over one lakh villages, with the aim of covering 100% of the nation's population by 2018. It has an initial end-to-end capacity to serve in excess of 100 million wireless broadband and 20
million Fibre-to-Home customers. Reliance Jio has also built nearly half-a-million square feet of cloud data centres and a multi-Terabit capacity international network.

The current market trend indicate that the reliance will going to hamper the other companies to greater extent.

Reference
[7] www.trai.gov.in