

INDIAN TELECOM INDUSTRY: EVOLUTION, PRESENT SCENARIO & FUTURE CHALLENGES

Manek Yamini H.

Ph.D Research Scholar,
Department Of Commerce & Business Administrations, Saurashtra University,
Rajkot- 360005
Email: Yaminibadiyani@Gmail.Com

Abstract

India's telecom sector is considered to be the second largest in the world with 1.17 billion subscribers and crossing tele-density over 90%. It is still growing at a rapid pace in India. In recent year's telecom sector is considered to be the backbone of the digital wave which takes our country ahead by providing affordable tariffs, expanded availability, rising 4G and 5G coverage, changing subscriber consumption patterns and a supportive regulatory environment are all driving factors for the sector's exponential expansion. Considering the statistics, in 2022, the industry is predicted to contribute 8% of India's GDP from 6.5% and it will create approx 4.5 million additional jobs by 2023. As per the new reforms of Government, the sector is optimistic heading into the new era, hoping for a favorable outcome on a 5G spectrum price in the upcoming mega auction.

On one hand the Telecom sector is witnessing the spectacular growth while on the other hand it is also facing some major hurdles like consistent demand from customers to enhance customer service and also in the area of government regulations.

Keywords: Telecommunications, 4G, 5G, Subscriber base, Broadband, Tele-density, Network

INTRODUCTION

Telecom sector in India is considered to be 170 years old. Introduction of Telecommunications in India dates back to 1851 when the first landlines were made operational by the Britisher's at a place in Bengal near Kolkata. Telephone services were formally introduced in India in 1881 and were subsequently merged with the postal system in 1883. Post-Independence, Posts, Telephone and Telegraph (PTT) body was formed by nationalization of all telecommunication companies and its governance was under the Ministry of Communication.

Until 1984 Indian telecom sector was wholly owned by Government, after which the private sector was allowed to manufacture telecommunication equipments only. In 1985 Central Government had decided to separate Department of Post and Telegraph and two new Departments were formed- Department of Posts and the Department of Telecommunications (DoT) after that telecommunication sector developed drastically.

Tele-density of Indian telecom industry (wireless plus wire line) has grown from a low rate of 3.58% in March 2001 to 93.27% in March 2018. The mobile subscriber base has grown from under 4 million at the end of March 2001 to 1188.99 million at the end of March 2018. This substantial leap, both in terms of number of consumers as well as revenues from telecom services has contributed significantly to the growth of Indian GDP and also provided much needed employment.

DATA SOURCES AND METHODOLOGY

This paper throws light on the evolution of telecom sector in India. Key focus of this paper is on providing and understanding the growth and challenges of telecom sector. For this purpose, secondary data has been collected from journals, websites, govt. reports etc. In addition, following key points were considered as a part of research methodology—supply, demand, barriers to entry, bargaining power of suppliers and customers and competition.

OBJECTIVES OF THE STUDY

1. To understand and evaluate the current set of challenges faced by Telecom industry in India;
2. To propose a future road map to overcome these challenges;
3. To submit the findings as an outcome of this research;

Accordingly, key telecom players who are the market leaders, encompassing top private and public sector companies were selected.

The methodology adopted for research was analysis of data available on public domain network including research articles and private and government publications.

Evolution:

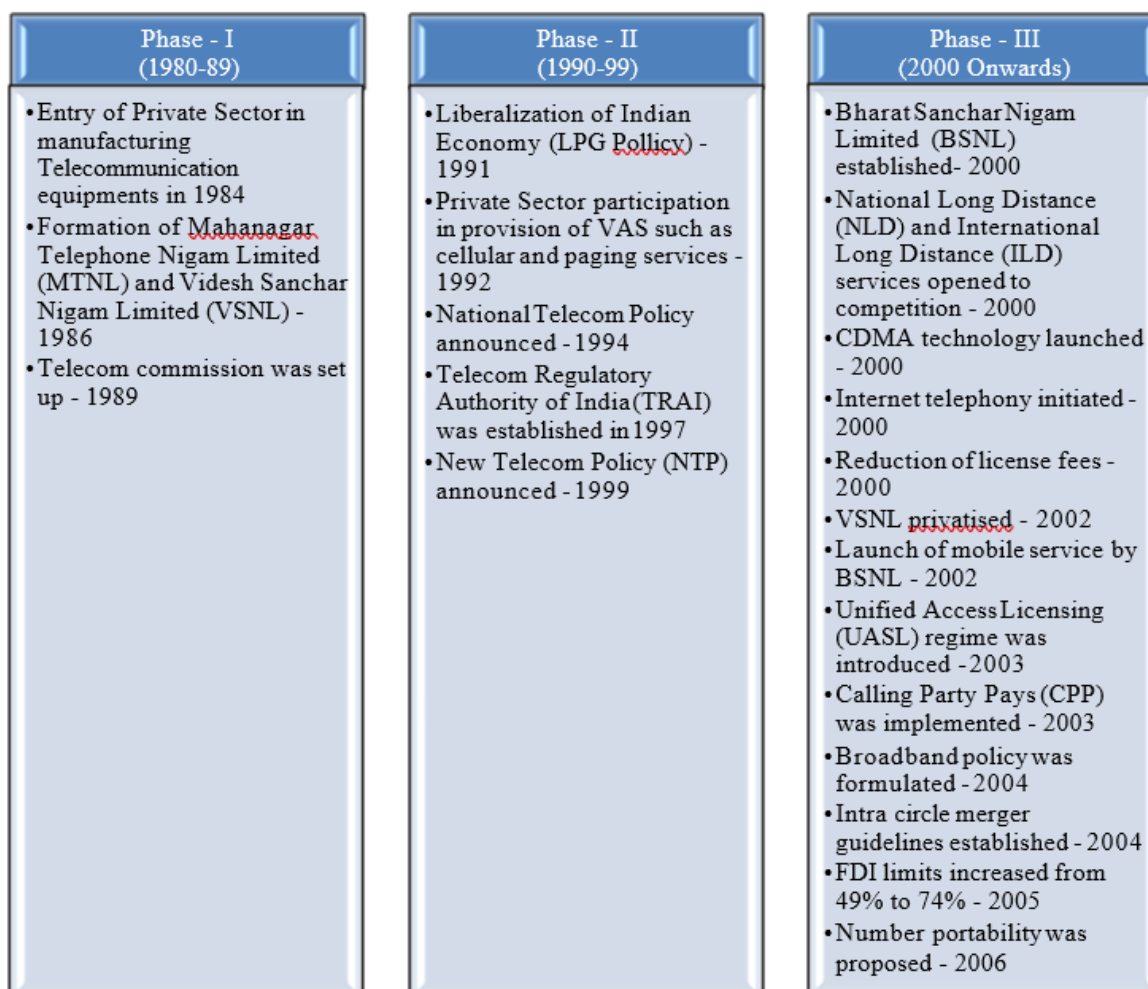


Fig: 1 Phases of Telecom Sector

Source: Telecom Regulatory Authority of India (TRAI) website

Until 1984, Telecom sector was owned by the government, subsequent to which private players entered the area of manufacturing. Although growth momentum in the first two phases was slow, disinvestment of VSNL in 2002 (phase III) saw entry of private players in the service provider domain.

Growth in the wireless sector (technology getting upgraded from 1G to 4G) has resulted in a significant boom in the data usability space, providing users with mobile broadband and fast speed data services.

Current Industrial Structure:

Rapidly growing telecom sector in India is being serviced by both private and public players. Permission to private players has been given for all segments of the telecom industry, including ILD, NLD, basic cellular and internet. A diagrammatic representation of the structure of the telecom industry in terms of service providers is given below:

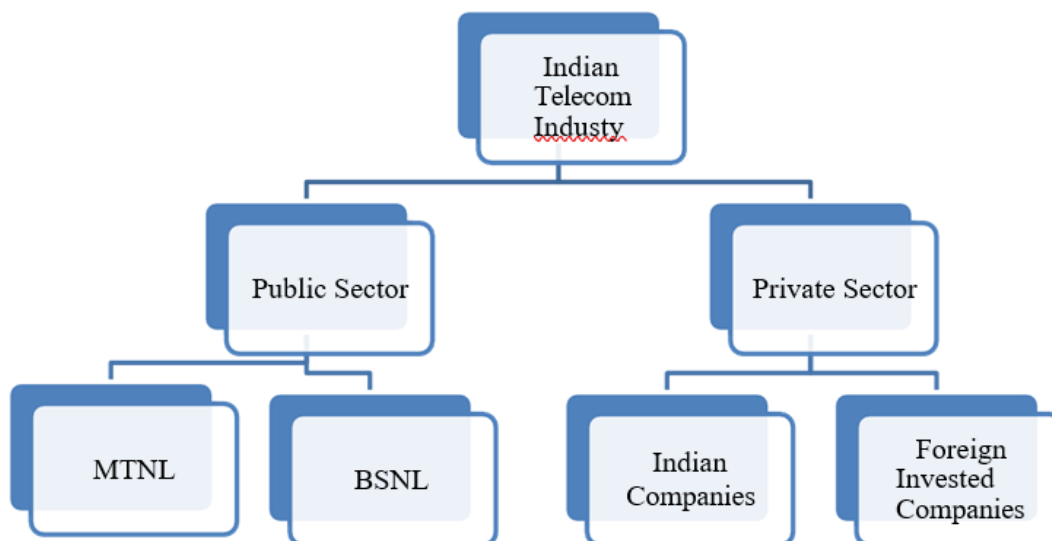
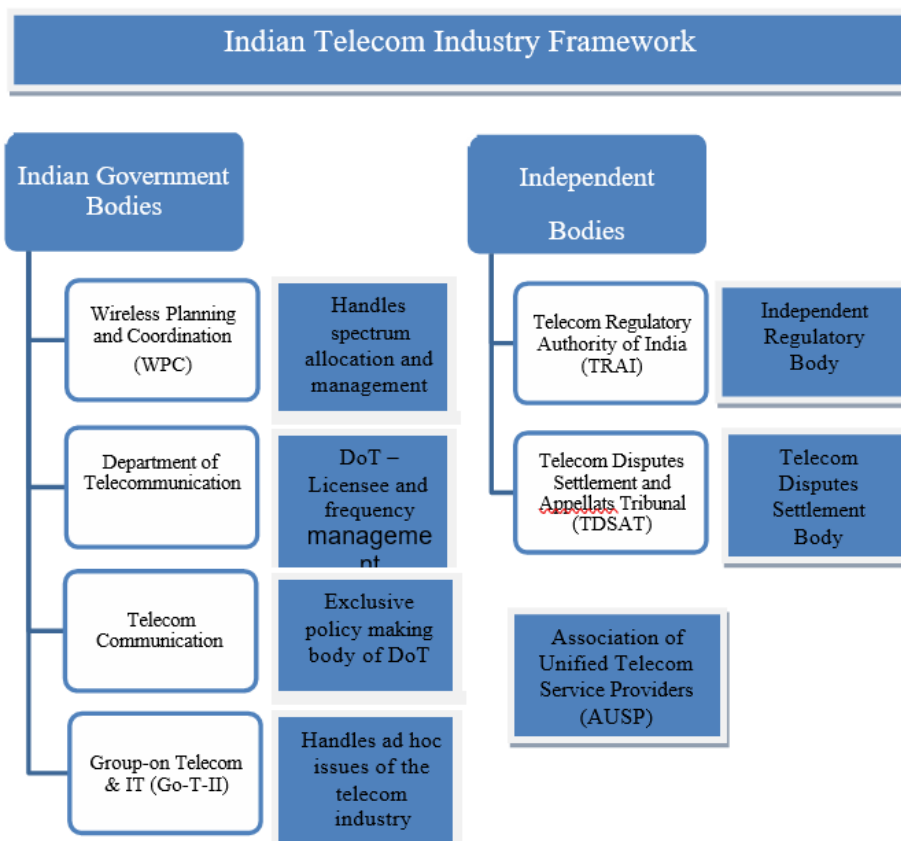


Fig: 2 Structure of Telecom Industry
Source: Telecom Regulatory Authority of India (TRAI) website

Indian Telecom Industry Framework:

Current Indian Telecom industry framework has been bifurcated into:

1. Indian government bodies encompassing WPC, DoT, Telecom Commission and GoI Telecom & IT, and
2. Independent bodies constituting TRAI, TDSAT and AUSPI.



<https://www.gapgyan.org/>

Fig: 3 Telecom Industrial Frameworks
Source: Telecom Regulatory Authority of India (TRAI) website

Key Objectives:

Indian Government Bodies (WPC, DoT, Telecom Commission and GoT Telecom & IT)

1. WPC (Wireless Planning and Coordination wing) is responsible for:
 - Spectrum Management pertaining to frequency.
 - Licensing of wireless stations.
 - Catering to the needs of all wireless users in India.
2. DoT (Department of Telecom)
 - Policy and coordination matters including licensing, relating to telegraphs, telephones, wireless, data and other forms of communication.
 - Framing of rules related to security of telecom networks and coordination with security agencies.
 - Spectrum management and spectrum allocation.
3. Telecom commission
 - Formulate policy.
 - Matters related to telegraphs, telephones, data services and forms of communication of similar nature.

Independent Bodies (TRAI, TDSAT)



1. TRAI
 - Prime objective of TRAI is to provide complete transparency in the policy environment which in turn will help provide unique opportunities to various telecom players.
 - TRAI provides recommendation on various policy matters and in addition also possesses regulatory and judicial powers.
2. TDSAT
 - TDSAT has been given exclusive powers to decide on any dispute between:
 - DoT (licensor) and licensee
 - Various service providers and
 - Multiple service providers and customers.




Key Telecom Players:

- Players in the public sector: BSNL, MTNL
- Key players in the private sector: Jio, Bharti (Airtel), Tata Telecom, Vodafone Idea,

While BSNL and MTNL are key government players based on customer size and revenue generated, Jio, Vodafone Idea and Airtel are the key players in the private sector, considering the subscriber base and revenue earned.

Key Companies in the Market

	Company	Ownership	Presence
	Mahanagar Telephone Nigam Ltd (MTNL)	Government (56.3 percent)	Fixed line and mobile telephony (in Delhi and Mumbai), data and internet
	Bharat Sanchar Nigam Ltd (BSNL)	Government (100 Percent)	Fixed line and mobile telephony (GSM-outside Delhi and Mumbai), data and internet in 22 circles

	Reliance Jio Infocomm Limited	Reliance Industries	LTE network 22 circles
	Bharti Airtel	Bharti Group (45.7) Pastel Ltd (15.57 percent), LIC India (4.3 percent)	Broadband and mobile in 22 circles
	Vodafone Idea Limited	Vodafone (28.5 percent), Idea (17.85 percent)	Broadband and mobile in 22 circles

FDI in Telecom:

- Between April 2008 to March 2019, FDI inflow in telecom sector experienced an increase of 8.2% of the total foreign direct investments (FDI) amounting to US\$ 30,284 million, as per report published by the TRAI.
 - During the period April 2014 to March 2018, FDI equity inflow in telecom sector was US\$ 17,302 million which was 60% of total FDI in last 10 years.
- Substantial FDI inflows, emphasizes the importance of Telecom sector in the overall industrial growth in India and the need for further rationalization of existing Telecom policy.

Current Industrial Status:

Telecommunication sector has become an integral part of the Indian economy. While the industry is working under stringent regulations, latest government policies are providing this sector with good growth opportunities through reduced spectrum charges and flexible rate plans.

- India's telephone subscriber base has increased by 26.84% between FY 2014- 19.
- In March 2014 total subscribers was 933.02 million it increased to 996.13 million in March 2015 it raised to 1059.33 million subscribers in India in March 2016. This is first time in Indian history that telephone subscriber base crossed 1000 million mark. During March 2019 it was noticed that 1183.41 million total subscriber base in India.
- If we look at the difference between Urban and Rural subscribers than the gap is narrowing down. Than to there is still much wider gap between both Urban and Rural subscribers. In March 2014 in urban areas subscribers were 555.23 million whereas in rural areas it was 377.78 million subscribers. Difference between both was around 180 millionsubscribers.
- Likewise, in March 2019 total subscribers were 1183.41. Out of that in Urban area it was around 669.14 million and in rural areas it was around 514.27 million subscribers. Again gap between urban and rural areas was observed it decreased but not that much still around 155 million subscribers were more in urban areas.

Telephone subscriber base stood at 933.02 million in March 2014 and tele- density stood at 75.23% (refer table below). Whereas in March 2019 Telephone subscriber base stood at 1183.41 and tele-density stood at 90.1%

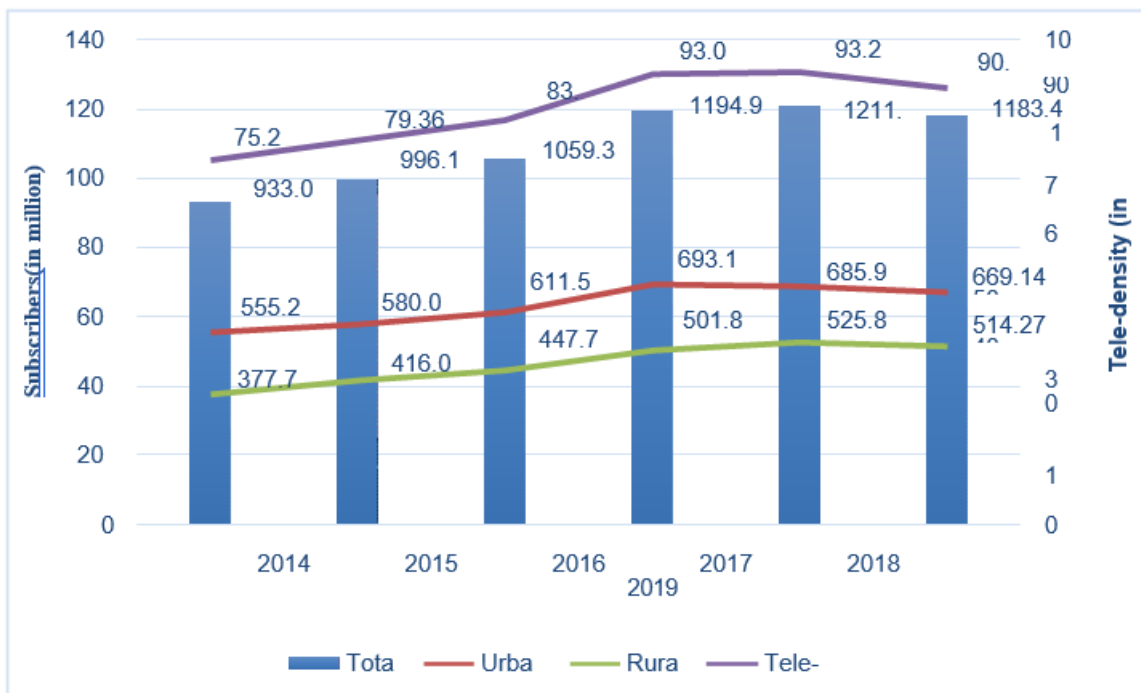


Fig: 4 Graph representing Subscriber base & Tele-density in Urban & Rural area
Source: Telecom Regulatory Authority of India (TRAI) Report

With the growth in subscriber base, spectrum requirement increased at Rs.11,485 crores for 1 MHz, the 700MHz band was the most expensive on offer at the auction. At that price, it made a bidder liable to pay Rs.57,425 Crores for 5MHz on a Pan-India basis, and had the potential to fetch bids worth over Rs.4 trillion. Most analysts had expected Telco to avoid bidding for the band, given the steep price, the financial strain on the debt-ridden telecom industry and more intense competition following the entry of Reliance Jio Infocomm Ltd.

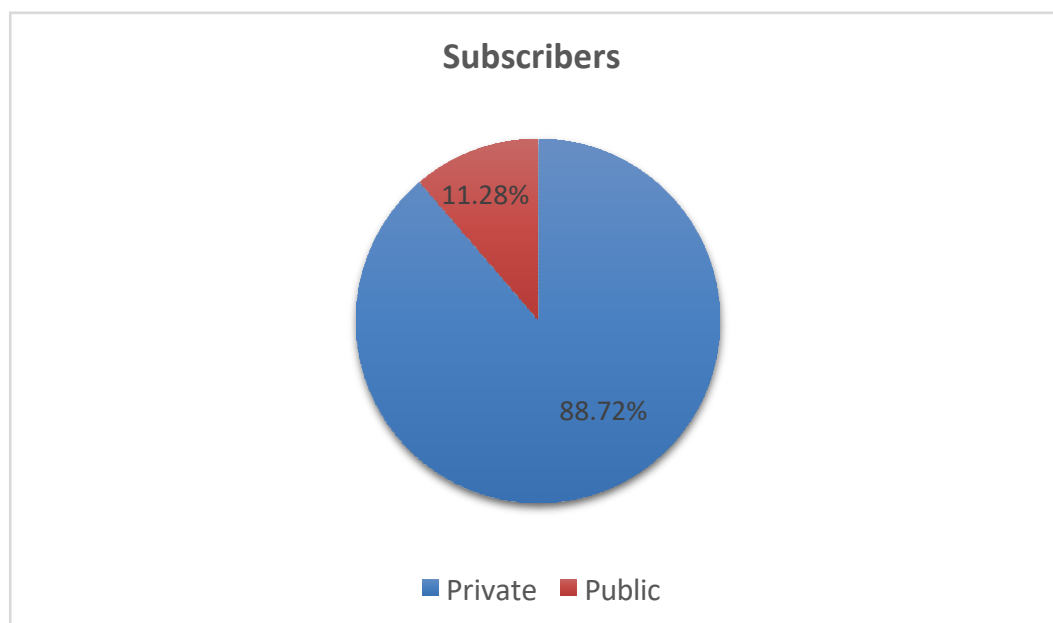
SPECTRUM: WHO BOUGHT WHAT		
Band	Airwaves bought (in MHz)	Value of airwaves bought (in Rs cr)
800 MHz		
Jio	15	3,623.49
1,800 MHz		
Jio	39.6	2,153.91
Airtel	18.8	2,396.8
Idea	54.6	5,403.9
Vodafone	42.6	3,743.5
Tata	12.4	4,619.2
R-Com	5	65
Aircel	18	111.6
2,100 MHz		
Airtel	25	4,840
Idea	20	3,985
Vodafone	40	7,315
2,300 MHz		
Jio	160	7,895.06
Airtel	130	7,006.78
Idea	30	888.28
2,500 MHz		
Idea	170	2,520.8
Vodafone	200	9,220.8

Source: Government

<https://www.gapgyan.org/>

Telephone subscribers in India (March 2019):

Total Telephone Subscribers in March 2019 was 1183.41million out of that Public company' subscribers were 133.51 million where as Private companies' subscribers were 1049.90 Million.
 Fig: 5 Composition of total subscribers –Public & Private Operators at the end of March 2019 (%share) Source: Telecom Regulatory Authority of India



Present Scenario:

- India is currently the world's second-largest telecommunications market and has registered strong growth in the past decade and half.
- 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 deregulation of FDI norms has made the sector one of the fastest growing and a top five employment opportunity generator in the country.

Strength:

- **Strong demand:** World's second largest in terms of telecom network, internet subscribers as well as app downloads; telecom sector likely to have economic value of \$217 billion by 2020
- **Increasing data usage:** India is also one of the largest data consumers (an average 1 GB data per day per user) globally
- **Good telecom infrastructure:** Large telcos have been investing on network infrastructure to improve customer experience for last few years
- **Fast-tracked reforms provide room for growth:** National digital communications policy, 2018 aims to attract \$100 billion worth of investments in the sector by 2022.

Weakness:

- **Intense competition:** Cut-throat price war among telcos has led to consolidation in the industry as well as declining overall profits for last couple of years Lot of freebies were added which cannot be taken back.
- **Debt and finances:** Incumbents are currently having unsustainable debt levels owing to intense competition in the industry.
- **Late adoption of 4G and advanced wireless technologies:** Due to regulatory uncertainties and delayed spectrum auctions, India were late to the 4G. Though world moves towards the first commercial

deployment of 5G in 2019- mid, India to be a late adopter of 5G services

Opportunity:

- **Mobile penetration:** Unique mobile subscribers to the total population are expected to reach around 63% in 2025.
 - **Increase in internet users:** Rise in mobile-phone penetration along with decline in data costs is expected to add 500 million new internet users in India.
 - **Untapped rural market:** Rural tele-density reached 58.8% and 44.6% of the total wireless subscribers are from rural market
- Challenges faced by Indian telecom sector are:
- **Financial Health of the Sector:** Gross revenue has dropped by 15% to 20% for the year 2017-18 over the preceding year for the incumbents and overall sector revenue has dropped. Also, there is drop in voice and data revenue per user
 - **Limited Spectrum Availability:** Available spectrum is less than 40% as compared to European nations and 50% as compared to China. Hence, it is imperative that spectrum auctioning at sustainable prices is the need of the hour. Also, government auction spectrum at an exorbitant cost which makes it difficult for mobile operators to provide services at reasonable speeds.
 - **High competition and tariff war:** Competition heating up post entry of Reliance Jio, other telecom players have to drop in tariff rates both for voice and data.

MEASURES NEEDED

- **Infrastructure Sharing:** Since telecom business is heavy on capex and as much as 40%-60% of the Capex is utilized for setting up and managing the Telecom infrastructure. By sharing infrastructure, operators can optimize their capex, and focus on providing new and innovative services to their subscribers.
- **Availability of Affordable Smart Phones and Lower Tariff Rates:** This would increase tele penetration in rural areas.
- **Lower License fee:** The license fee of eight per cent of the Adjusted Gross Revenue including five per cent as Universal Service Levy (USL) is one of the highest in the world.
- **Reduce reserve price for spectrum auction:** In the past, some of the operators participated recklessly in these auctions leading to exaggerated prices — much above their true valuations. Reasonable reserve prices for the market mechanisms induce -truthful bidding, and not leading to -winners' curse as witnessed in some of the previous auctions.

CONCLUSION

The telecom sector in India have to deal with various challenges like maintaining the sufficient spectrum, Adoption of new technologies faster to be able to use new features and techniques to serve the customers with better and feature rich service, Government and regulatory agencies, various mobile handsets available from various companies brings lot of issues and content partners etc. Also, it is evident from the current scenario that the Voice alone will not be sufficient to generate revenue and hence the focus is required to be shifted towards various data services.

REFERENCES

- [1] Telecommunications Industry Outlook 2016–Deloitte & Touche Research Publication (2016 Telecommunications Industry Outlook | Deloitte US)
- [2] Indian Brand Equity Foundation (IBEF) (<https://www.ibef.org/industry/telecommunications>)
- [3] Telecom Statistics of India - 2019 by Department of Telecommunication. (<https://www.trai.gov.in/release-publication/reports/study-paper>)
- [4] Telecom Subscription Data Of 2020
- [5] (<https://www.trai.gov.in/release-publication/reports/telecom-subscriptions-reports>)