
DIGITAL MODERNIZATION: AN ADVANCEMENT IN TELECOM LAWS

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PREFACE

This research paper is exclusively written in context of the Development in the field of Telecom Laws and analysis of, how the Telecom sector has been influenced and reacted towards the Digital India Initiatives and other associated policies. The telecommunications industry affects every aspect of our lives, starting with simple reality enables telephone communication between people in different locations to enable supply chains works seamlessly across continents to create products and meet demands. Telecommunication services is now recognized as the main and important tool for the rapid growth and modernization of the economy and for the socio-economic development of the nation.

The history of telecommunications in India dates back to the 19th century, when the British East India Company was founded. started telegraph services in India. The last two decades were considered a golden age for the Indian telecom industry, which is experiencing explosive growth and development technology, diffusion and politics. All this is equated with the liberalization of this industry and large investments from both domestic and foreign investors.

The Digital India Program and other important initiatives in the field of the Telecom Sector also helped the growth rate to boost and enactment of certain statutes. The TRAI report discusses aspects of digitization in the telecom sector in the context of consumer empowerment, ease of doing business, strategic initiatives, framework for futuristic telecom services, increasing consumer choice, etc. Innovations and the rapid expansion of telecommunications are cited as having increased the country's GDP from 6.1 percent to 6.5 percent in 2019. This increases new job opportunities. The sector can grow to 8.2% of FDI, which is about 10%. 30,284 million as revealed by TRAI in its report.

The main Objective of this research paper is to analyze the evolution and existence of present telecommunications law in India, to Point out flaws and the gap of laws in the Telecom Sector, to examine the Necessity of any specific Regulation/Statute, the examine the impact of Digital India on

Telecommunication sector, to understand the Functioning of TRAI and Ministry of Communication in the field of the Telecom, to analyze the Milestone achieved under Digital India Initiative, to examine and point out the Conflict between jurisdiction the TRAI and Ministry of Communications, and to understand the necessity of these objectives and to evaluate the Present Scenario in the Sector.

RESEARCH METHODOLOGY

A systematic review of the literatures on the evolution, development of telecommunication laws in India and its critical evaluation and assessment of impact of Digital India Initiative on it. The prima facie motto of review of research papers, reports, articles, books etc to understand the functioning of telecom sector before and after digitalization and its problems in the present context of laws and regulations.

LITERATURE REVIEW

REVIEW - 01

Book Title:- Telecom Sector Regulation In India –An Institutional Perspective.

ISBN-10- 0367360926, ISBN-13 - 978-0367360924

Author:- Maruthi P. Tangirala

Publisher:- Taylor & Francis

The Book has covered all legal and regulatory development, including political and economical aspects in the field of the Telecom sector after the establishment of Telecom Regulatory Authority of India (TRAI) and it's working in the first 2 decades. He has also covered three regulatory phases under the 2 decades of regulatory Institution. The Book also covers the institutional progress of TRAI and how it, directly or indirectly, influence the growth of Indian Telecom sector.

As according to the author, after the post liberalization India, country stands to the second largest subscriber base in the world due to telecom revolution. The author has tried to cover the detailed survey and analysis of TRIA progress and all the development of telecom sector. The

Book also covers the aspect of Judicialization of regulatory governance and TRAI governance mechanism at different levels.

He has presented the Indian telecom regulatory cases at 3 different levels. First at the micro institutional levels along with the study of the rules over time and its analysis of goodness or negative influence on the objectives and goals of the regulatory. Second at the level of institutional environment by bringing and highlighting important judgments of courts and third at the micro institutional level by processing the governance of TRAI. The book critical examine the interplay roles of legislative efforts and judicial activity. The book also examines the sufficiency of TRAI Act 1997 and amendments of 2000.

It examines the TRAI functioning under the phases of 2003, 2004-07 and 2008 and ongoing, from the initial development of sector to evolution of hypercompetitive market arrangements. The problems of spectrum resources and inadequate regulatory responses are covered by the author. Along with it, he has covered the important landmarks judicial decisions like 2G case, Supreme Court advisory opinion in the third phase, in 2008, MTNL vs TRAI case etc.

As mentioning the other areas dealt by the author under the books are the chronology and mode of commerce between the TRAI was established, the AGR (Adjusted Gross Revenue) definitions and the views of TRAI AND TSDAT on the AGR items, summary of judicialization events, other development leading to the limited mobility for fixed phone users and beyond, types of licensing in 2004, access service in the second phase, changes made in chapter 2 of TRAI Act, chairpersons and members of TRAI, Timeline of policy and other key regulating events etc.

Critically examining the central ideas of Book, there is a substantial gap in between the modern problems of telecom sectors and possible solutions to set aside it. The functioning of the TRAI and other authorities are well explained by the author but, there is a lack of solutions. Presence of which shall make the comprehensive and exhaustive of the subject Institutional Perspective of Telecom Sector in India.

REVIEW - 02

Book Title:- The Telecom Revolution In India: Technology, Regulation, And Policy

ISBN- 9780198075530

Author:- Varadharajan Sridhar

Publisher:- Oxford University Press

This Book simultaneously covers both the technology and business of telecom in India as well as the licensing, rules, policy and various regulations of Telecom sector in India. It gives the comprehensive understanding of Telecom Authority of India (TRAI), Department of Telecom (DOT), Telecom Dispute Settlement Appellate Tribunal (TDSAT). DOT has the licensing power whereas TRAI recommends in policy making. Like the other organs, TRAI does not have the regulatory or policy making functions.

The book also emphasizes on the jurisdictional clash between all the 3 organs. TRAI has only recommendation power which makes it a paper tiger. TRAI has no linear responsibility. However in 2G spectrum case, it had been asked for clarification on its recommendation.

The telecom revolution in India was due to the diligence, hard work, and consistent efforts of TRAI to make the lowest call charges and largest growth of subscribers with the lowest MTC rates attached to Calling party pay (CPP). The Book also focuses on political economy of telecom evolution, including the government techno-bureaucracy weakens the MTNL and VSNL through bureaucratic indifferences. In discussion of the Spectrum. The author avers that-

“If we want to achieve economic efficiency, a combination of allocative and technical efficiency, a combination of allocative and technical efficiencies should be achieved. Economic and allocative efficiencies are alike and the technical efficiency is the subset of economic efficiency.”

The author has also discussed the optimal combination of inputs i.e. Base Transceiver Station (BTS) and addressing the problem of spectrum availability in India as compared to other developed countries. He has also addressed the ways and technicalities issues and their solutions as adopted by the other nations of the world.

The Book also elaborates the history of telecom development and evolution of policy, Access Deficit Charges (ADC). The book is rich in information and theoretical aspects of telecom sector, but there is a scope of development and betterment of books on its data analysis and solution full positive approach. Although the book has covered the material and substantive

part of the revolution of telecom laws and its evolution, but it can be modified by including the modern day policies and initiatives of the government.

REVIEW:- 03

Research Paper:- Study of Functioning of Telecom Regulatory Authority of India

ISSN- 2350-1316

Author:- Vinay S. Joshi, Kapil Arora, and Anukool Manish Hyde

Publisher:- e-Journal of Management and Research

This research paper discusses about the functioning of the TRAI and its governing regulation. The authors discuss telecommunication as an important foundation stone for the economic development of the country. The paper also focuses on the issues and challenges faced by the Indian Telecom Industry Rapidly Falling Average Revenue Per Subscriber (ARPU) due to the high throat cut competition in the field. The competitive intensity is likely to put downward pressure on the telecom tariff.

The paper also arises the problem of lack of telecom infrastructure in rural areas, which results those areas continue to remain under penetrated. The Paper emphasizes on the price war between the service providers putting pressures on margins. Lack of 3G Spectrum availability is hampering the growth severely. The paper also states about the Regulatory Charge Structure, services tax, license fee, spectrum charges etc.

The authors have tried to discuss the functioning of TRAI and of other developed countries like China, Russia, UK, Brazil etc. The authors have laid down the test of reliability and testing hypothesis regarding impact of age. Experience, qualification and designation. According to the authors, in spite of the TRAI's tremendous hard work and growth of the telecom sector, operators are hard-pressed on margins and still struggling. In other countries telecom sector contribute overall growth in country economy, but TRAI has to do some more efforts for the same. Hence authors concluded there is no impact of age/experience/qualification and designation of the respondents on the perception of TRAI functioning.

The authors also quote that the telecommunication market has experienced enormous

difficulties and challenges in the last few years due to the reason of hostile business environment and regulatory disputes. They have also covered the struggle of the sector from beginning to the present point of time. They have tried an attempt to provide some solutions and recommendation for the further growth of the said sector.

The paper seems to be looking only one side of the sector. The new rules and regulation are not covered as they are also contributing for the development of the sector. So the paper is not exhaustive and comprehensive on the topic.

REVIEW - 04

Research Paper:- The Effect of Telecommunication law on Economic Development in India

ISSN- 2581-5369

Author:- Shivam Kumar Singh, Lakka Prathik Reddy and Raghu Yadaganti.

Publisher:- International Journal of Law Management and Humanities.

According to the authors, the telecom sectors has fast growth in last few years. In 2012, the number of telecom subscribers were nearly around 944.81 Million. There is an exponential growth till 2022 to 1172 million subscribers, including both in urban and rural areas. The authors have also done data analysis of market shares of telecom companies like Reliance Jio has 36.5 percent, VI has 23.5 and Airtel has 27.5 percent market share.

They have discussed teledensity i.e. number of telephone users in a region. According to the reports of the TRAI, the teledensity of India has increased from 75.23 percent of 2014 to 84.88 percent at the end of 2022. The paper also states about the National Telecom Policy 1994 and how its implementation helped in increase in teledensity in the country.

After the establishment of TRAI and its failure to achieve some of its target, New Telecom Policy 1999, promoted development of telecom facilities in rural and tribal parts of the country, increasing teledensity, providing high speed data etc. It has also helped new private telecom service providers to operate in the industry. CMTS also helped private telecom players of the market. Broadband Policy 2004 also helped government to create new employments and

increase GDP of the country. National Telecom Policy 2012 was also implemented to provide secure, affordable and high quality converged telecom services to everyone.

According to the authors, the telecom sector is the largest debtor in India and estimated debt of 6 lakh crores will be burdened on the sector by the 2022-23. The recent 5G auction will lead to more debt. The author have also tried to analyze and understand the role and functioning of the major policies and the changes made the environment of the sector to make it a competitive market instead of a monopolistic sector. The paper has also covered the examination of each policy and its impact on the growth of sector.

The paper contains a good analysis of data and policies of government. Hence the authors have done a good and hand clapping work of search. The only lack is in the solution bases approach of the paper. Apart from that the research paper is excellent and a must for everyone to go through.

REVIEW : 05

Research Paper:- A Study on Growth and Prospect of Digital India Campaign

ISSN- 2415-6663(Print), 2415-6671(Online)

Author:- Dr. Giridhari Mohanti, Dr. Sathya Swaroop Debasish, Dr. Sudipta Kishore Nanda.

Publisher:- Saudi Journal of Business and Management Studies.

The author has started paper quoting “Digital India Drive- The Dream Project of Indian Government” as launched on 1st July 2015 by PM Shree Narendra Modi to remodel India into a digitally empowered society. The Initiative was aimed for the universal digital literacy, smoothen the approachability and excess to all digital resources, digital convenience, availability of services in regional and local languages, Data Cloud management etc. The author has tried an attempt to analyze the impact, challenges of Digital India on all aspects of governance. The research methodology of descriptive cum analytical is adopted.

The three major aims/targets of the project were:-

Primarily to create and develop a digital infrastructure. Secondary to make the citizens digitally

empowered and Tertiary to develop governance and availability of services on demand of the citizens. The outcomes of the initiative are Digital locker system, online governance platforms, Swachh Bharat missions, e-hospitals, Large scale of internet deployment throughout the Country, Broadband highways, Outsourcing Policies, making Post Offices multi-service centres etc.

The main contribution of the program in the telecom sector is to replace and exchange all 30-40 years old telephone exchanges by BSNL Next Generation Network in order to manage all types of telecommunication services. The paper also covers the nine pillars of Digital India i.e. Broad Highways, Universal Access to phones, Public Internet Access Programmes, E-Governance & Reforming government through Technology, e-Kranti Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs, Early Harvest Programmes, uniform and fast adoption of internet.

It has also covered the impacts of Digital India on Technology, Economy, social order, Impact of Environment, Agricultural sector etc. The paper has covered each and every aspect of Digital India Initiative in every sector also its objects and impacts on the sectors. The author has also given the further scope of the study as the project is running and not ended. Hence till date of the review, the present paper has comprehensively covered the Topic and beautifully explained the goals and plans of government for the implementation of the programme.

REVIEW: 06

Research Paper:- Digital India Programme- An Overview

ISSN- 2320-2882

Author:- Dr. Sushama Yadav

Publisher:- International Journal of Creative Research Thoughts (IJCRT)

The Digital India Programme was launched by the Government of India to Digitally Empowered India. The main objectives were to accelerate the economic growth, access to information, access to technology, digital connectivity, economic advancement etc. The programme was the aim and Dream Project of Prime Minister Shree Narendra Modi to improve internet connections and grow in the areas of the electronic sector.

The Programme was started with 3 central objectives:- Primarily the development of the Digital Infrastructure, secondary authorities and services on orders and tertiary to digitally empowered the Nation. The Key developments under the Programme are E-signature, Digi locker, Digital Saksharta Abhiyan (DISHA), National Optical Fiber Network (NOFN), Proactive Governance and Timely Implementation (PRAGATI), DigiSevak, IndiaStack, BHIM App, etc.

For the Telecommunication Sector, the main pillars of the Programme are the Broadband Highways, Universal access to mobile connectivity etc. The main contribution of the program in the telecom sector is to replace and exchange all 30-40 years old telephone exchanges by BSNL Next Generation Network in order to manage all types of telecommunication services. The paper also covers the nine pillars of Digital India i.e. Broad Highways, Universal Access to phones, Public Internet Access Programmes, E-Governance & Reforming government through Technology, e-Kranti Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs, Early Harvest Programmes, uniform and fast adoption of internet.

It has also covered the impacts of Digital India on Technology, Economy, social order, Impact of Environment, Agricultural sector etc. The paper has covered each and every aspect of Digital India Initiative in every sector also its objects and impacts on the sectors. The author has also covered the challenges faced by the government in implementation of the Programme. The main of them are lack of infrastructure in the rural areas, Asian nation has extreme low web speed, lack of personal participation of people, awareness etc.

The author has also given the further scope of the study as the project in running and not ended. The paper has covered the aspects and areas of Digital India till the 5th year of its implementation. The paper had not covered the solutions or methods to be adopted for the better implementation of the Programme.

REVIEW: 07

Research Paper:- Indian Telecom Industry: Evolution, Present Scenario and Future Challenges.

ISSN- 2581-5830

Author:- Manek Yamini H.

Publisher:- A Global Journal of Social Sciences.

Indian Telecom sector is 170 years old. Telecommunication was first introduced in 1851 at a place near Kolkata in Bengal. Telephones were introduced in 1881 and were merged to postal system in 1883. After Independence all the telephone, telegraph, were wholly owned by the government till 1984. In 2001, the Tele-density were 3.58% growth rate which substantially grow to 93.27% in March 2018. The mobile subscriber grown to 1188.99 million till 2018.

The author has also inculcated the 3 phases of evolution of the telecommunication sector. Phase 1 from 1980-1989, Phase 2 from 1990-99 and Phase 3 from 2000-onwards. The author has discussed about the different government bodies like WPC, DoT, Telecom Commission, GoT Telecom and IT etc. The BSNL and MTNL are the government players while the Idea and Airtel are private ones. The paper also talks about the different companies involved in the telecom sector for providing services and the inter-competitive environment between them.

The Paper also emphasizes on the FDI (Foreign Direct Investment) of the telecom sector. The sector manages to score an increased to 8.2% of the total FDI, which amounts to approx. \$30,284 million as published by TRAI in its report. The author has also quoted the data of subscribers in different years like in 2019, it was 1183.41 million. The gap between the urban and rural subscribers numbers is declining day by day, which is a positive result/news. He has also graphically represented the subscriber base and Tele-density in Urban and Rural areas, as mentioned under the report of TRAI.

He has also brought the requirement of spectrum according to the number of subscribers under the light. Apart from the data analysis, the author has mentioned that India is currently the 2nd largest telecommunication market and the policies of the government are instrumental with the strong consumer demand and rapid growth of the sector. The author has also mentioned the aspects of strong demand, increasing data usage, good telecom infrastructure, Fast-Track reforms, intense competition, wireless advancement technologies, mobile penetration, increase in internet users etc.

The author has covered the measures needed for more responsive growth in the sector. The paper contains all the material aspects of the sector and give a comprehensive facts and data based knowledge of the evolution and growth of the telecommunication sector.

REVIEW: 08

Article :- Challenges of Competition and Regulation in the Telecom Sector

Author:- Adv. Smriti Parsheera

Publisher:- Economics and Political Weekly, Vol. 53, Issue 38(Micro Finance NIPFP GROUP)

The Telecom sector is a transition from government players to a multiplayer industry, which made India the 2nd largest telecom market in the world. According to the TRAI reports about 98% percent of India's 1.19 billion telecom subscribers are in wireless networks. At the same time, as linking between the digital connectivity and telecommunication, the broadband services will be driving the next and upcoming phase of telecom.

The author writes, as in 1990s we began to universal and global shift in the direction of the telecom liberalization. After the 1990, the sector was not only the involvement of the government players, but a start of privatization in the telecom sector. As after the privatization, JIO drastically entered in the market of telecom in Sept 2016 and the data tariff per Gb fallen from 226 to 19 rupee. The data also tells that the broadband internet users are increased in number as to 127 million in between 2016-17. The average megabyte increased from 99 MB per month to 1945 MB in 2018, i.e. approx. 20 times of before.

But in last 4 years, we have seen a consolidation in sector as we are left with only 4 major operators. Reliance Jio, VI, BSNL and Bharti Airtel. Researches indicates the market concentration. However the market has shifted to data tariff to quality of services. At present, wireless networks are also fully dependent on the expensive spectrum. The author has also clarified the network effects and interconnections. The range of disclosure and transparency norms are generally adopted by the regulators to address the information asymmetry in between the service provider and consumers. In ideal situation consumers switching decisions should be based on the information relating to the price and quality of the services. At present, the situation of complexities arisen in the sector of tariff structures.

The author has also discussed the diminishing role of tariff intervention and the approach that should be developed to deal with the spectrum management policies. The TRAI works in the field of maintaining competition in the market for the efficient services. The author has also

quoted the dimensions of overlapping of powers of CCI and TRAI. As CCI explicit power to regulate predatory prices under section 4 of its parent Act and the TRAI from the Sec 11 of TRAI Act. The SC held in BSNL case in 2013- *“There is no restriction on the power of the authority to make regulations, except that the regulations must be consistent with the TRAI Act and the rules framed under it”*. The paper has exclusively dealt the sector with proper data and reasoning, and a good text article of the competition and regulation of the telecom sector.

REVIEW: 09

Report:- Market Study on the Telecom Sector in India

Author:- Competition Commission of India (CCI)

Publisher:- Competition Commission of India (CCI)

In 2020, the commission started a survey of the competition level in the telecom sector to analyze the threats and challenges to competition and to identify the strength and opportunities of technological innovations and recommendations. The Commission has made a report of total operators which were 15 in 1999, and 21 in 2009, were reduced to 8 in 2019. The primary services at present are not only SMS/VOICE but also Internet , OTTs etc. the Mobile technology is upgraded to 5G. This index is called Herfindahi-Hirschman Index.

As after the privatization, JIO drastically entered in the market of telecom in Sept 2016 and the data tariff per Gb fallen from 226 to 19 rupee, which declined to 6.98 rupee per GB in 2019. The data also tells that the broadband internet users are increased in number as to 127 million in between 2016-17. The average megabyte increased from 99 MB per month to 1945 MB in 2018, i.e. approx. 20 times of before. The industry prices, measured by average revenue per user (ARPU), fell, and consumption of both voice and Data increased.

Internationally, India offers the cheapest data compared at current market exchange rate. It is lower from all the other countries like Brazil, UK, Russia, China, Canada etc. Competition was compelled to respond after the tariff regime started by JIO. The commission has also made a analysis of ARPU comparisons across all the operators.

Spectrum is the most crucial inputs for operational efficiency. Spectrum Liberalisation in 2016 enabled operators to bands across 2G, 3G, and 4G. At present the 5G spectrum band testing is

accelerating in India among the operators. The commission has also made a price and non-price parameters of competitions. The sector is facing depression as due to the presence of heavily indebted operators.

The need of regulation is the need for the Indian Telecoms. The tight duopoly now shifted to light regulation, entry is open, and spectrum is delinked from the license. The price war is going on in between the operators from last 3 years. In general, the competition between players is good in market but a heterogeneous market with a few weakened and totally debted operators may be inimical to it.

The commission has provided some recommendation for the good competition in the sector and further growth of the telecom sector.

REVIEW : 10

Report:- Digital Communication: The force multiplier in India's Progress.

Author:- Telecom Regulatory authority of India (TRAI)

Publisher:- Telecom Regulatory authority of India (TRAI)

The report of TRAI submits the aspects of Digitalization in Telecom sector under empowering of Consumers, ease of doing business initiatives, Strategic initiatives, Framework for Futuristic Telecom services, enhancing Consumer choice in Broadcasting, etc. It is quoted that the innovations and rapid expansions in telecommunication has increased the country's GDP from 6.1 % to 6.5% in 2019. It is increasing new employment opportunities. The sector manages to score an increased to 8.2% of the total FDI, which amounts to approx. \$30,284 million as published by TRAI in its report.

The Report states that till 2020, there are 1169 million telephone subscribers, 4G technological revolution, 86.22% tele-density, 8.13% increase in Gross Revenue of the Telecom Service Sector, 141 GB per subscriber data usage, 6.5% contribution to GDP by the sector of Telecom, Rs.11 per GB data cost, 228% increase in rural internet subscribers, 3,25,000 Crore netted by govt. through spectrum auction, urban internet subscriber up by 171%, 57.29% Internet Tele-density, Buyer's market with 520.80 million mobile number portability requests till date.

Internationally, India offers the cheapest data compared at current market exchange rate. It is lower from all the other countries like Brazil, UK, Russia, China, Canada etc. Competition was compelled to respond after the tariff regime started by JIO. The commission has also made a analysis of ARPU comparisons across all the operators.

The report also contains the extraordinary achievements of India like increase in total subscribers, broadband, affordable tariffs etc. The report also make the comparison between the Data usage and data tariffs of different years. It has stated the data usage per subscriber increases from 3.24GB in 2014 to 141 GB in 2020 and the data cost per GB decreased from 269 rupee in 2014 to 11 rupee in 2020.

In past 6 years, India's wireless Tele-density has grown tremendously by 24.06%, which is even greater than many developed countries. It has also quoted the wireless subscription data. It has also made several recommendations to government like to ease of doing business initiatives, removal of entry barriers, providing an efficient regulatory framework, connectivity to rural areas, etc.

The Report consist of positive data and achievements only. It is lacking for the problems and difficulties of the sector.

DIGITAL MODERNIZATION: AN ADVANCEMENT IN TELECOM LAWS

(Assessing How Government Initiatives Like Digital India Have Influenced Telecom Laws and Regulations)

ABSTRACT

The telecom zone of India has witnessed rapid and regular increase within the previous couple of years. When the variety of phone customers is taken because the factor, the Indian telecommunication network is the second one biggest in the world. In July 2012 the variety of phone subscribers in India became about 944.81 million. It has grown at an outstanding tempo with 1,172 million subscribers in July 2022, with each city and rural phone subscriptions experiencing increase making the Indian Telecommunication zone one of the quickest developing in the world. The telecom zone performs a vital function to the socio-monetary improvement of a country and the projects taken up via way of means of the Indian Government to make India digitally superior have performed a primary function for the increase of the zone. A growth in home demand, liberalization and globalization, coverage projects and coverage amendments, growing investments, regulatory reforms, and growing opposition are different elements influencing the telecom zone. This paper attempts to research the function of primary regulations and regulations, and the modifications they have got introduced to the telecom zone converting it right into an extra aggressive marketplace from a monopolistic marketplace. The status quo of the Telecom Regulatory Authority of India (TRAI) in 1997 and the creation of regulations just like the National Telecom Policy of 1992 and lots of extra over time helped adjust and maintain the aggressive nature of the industry. The paper examines every coverage and the effect it has at the increase of the Indian Telecommunication Sector. The paper also covers the area of the various government initiatives like Digital India have influenced the Telecom Sector and its Positive and Negative impact on it.

Keywords: Telecom Sector, Growth, TRAI, DoT, Tele-density, Digital India.

INTRODUCTION

The word “telecommunication” is a compound of the Greek prefix “tele” meaning 'a long way off', and the Latin “communicare”, meaning 'to share'. In its modern-day usage, it refers to transmission of indicators over a distance for the cause of verbal exchange. In early days, verbal

exchange among people happened with the aid of using method of drums, smoke indicators, flags, etc. Emerging from such humble beginnings, the method now contains state-of-the-art high-speed, submarine optical cables laid on ocean flooring and synthetic satellites circling the Earth in space. As the call for sign transmission has increased, the velocity of transmission has additionally increased. Recently, scientists at Karlsruhe Institute of Technology in Germany have succeeded in transmitting 26 terabits (same to approximately seven-hundred DVDs or approximately four million average paperback books) of records in keeping with 2d at the space of fifty kilometers¹

The telecommunications enterprise has effect on each issue of our lives, from the easy truth of allowing telephonic verbal exchange among human beings in specific places to allowing supply-chains to paintings seamlessly throughout continents to create merchandise and satisfy demands. Telecommunication offerings are actually diagnosed as a key to the fast increase and modernization of the financial system and an essential tool for socio-monetary improvement for a nation.

Telecommunications in India may be traced returned to the nineteenth century while the British East India Company brought telegraph offerings in India. The beyond many years were taken into consideration because the golden period for the telecommunications enterprise in India with exponential increase and improvement in phrases of technology, penetration, in addition to policy. All this has paralleled with the liberalization on this quarter and massive funding with the aid of using each home and overseas investors.

RESEARCH OBJECTIVES

- To analyze the evolution and existence of present telecommunications law in India.
- To Point out flaws and the gap of laws in the Telecom Sector.
- To examine the Necessity of any specific Regulation/Statute.
- The examine the impact of Digital India on Telecommunication sector.

¹ World Record in Ultra-Rapid Data Transmission. Science Daily

- To understand the Functioning of TRAI and Ministry of Communication in the field of the Telecom.
- To analyze the Milestone achieved under Digital India Initiative.
- To examine and point out the Conflict between jurisdiction the TRAI and Ministry of Communications.
- To understand the necessity of these objectives and to evaluate the Present Scenario in the Sector.

RESEARCH QUESTIONS & HYPOTHESIS

- 1) Is Digital India have influenced Telecoms laws and regulations? If Yes, then estimate their challenges and impact and also its Impact on Right to Privacy.
- 2) Are the Present Telecommunication laws and regulations sufficient and exhaustive according to the present Scenario? If no, then explain its Need and area of Concern?
- 3) Challenges and Future Direction:-
 - What are the current challenges and areas of concern within the Indian telecom sector? -
 - What future trends and regulatory changes can be expected in Indian telecommunications law?
- 4) Need of Emerging Technologies:
 - How do Indian telecom laws address emerging technologies like 5G, IoT, and satellite communications?
 - Are there specific regulations or policies for these technologies?

RESEARCH METHODOLOGY

A critical and systematic review of the literatures on the evolution, development of

telecommunication laws in India and its critical evaluation and assessment of impact of Digital India Initiative on it. The prima facie motto of review of research papers, reports, articles, books etc to understand the functioning of telecom sector before and after digitalization and its problems in the present context of laws and regulations.

TELECOM SECTOR AT PRESENT

Telecommunication performs a vital element in a country's socio-monetary improvement. The enterprise additionally creates employment possibilities and will increase India's Gross Domestic Product (GDP)², in addition assisting in growing the economy. The telecommunication enterprise presents an extensive variety of offerings which assist join different sectors and helps the shipping of social offerings and valuable administration. The telecommunications enterprise is split into the system zone and the provider zone. The system zone specifically specializes in production merchandise which might be used by each clients and telecom provider providers. They manufacture an extensive variety of merchandise that consist of wireless system, broadcast community system and different forms of system.

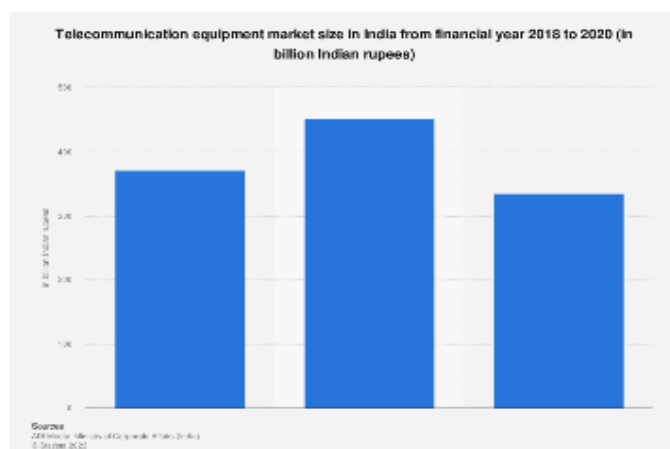


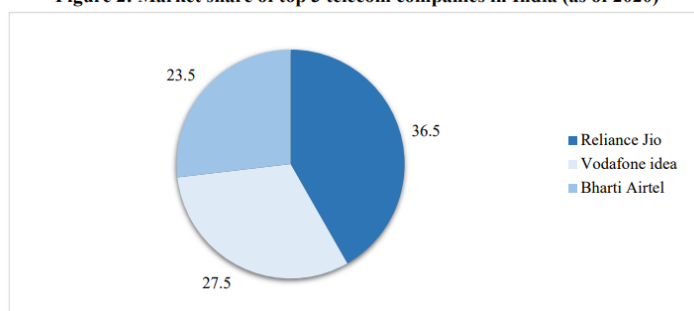
FIGURE 1 Equipment market size in India as 371.22, 452.8, 355.8 in respective years

The provider zone specifically works in the direction of offering wired, wireless, net and broadband offerings. The cooperation and collaboration of each the system and provider sectors are vital for the socio-monetary improvement of the country, in addition to the boom of the telecom zone as a whole.

² Gross Domestic Product: It is the total market value of finished goods and services produced in a country during a financial year.

The extraordinary boom of the Indian telecommunication enterprise has helped it steady a spot as the biggest phone community in the world, 2d handiest to China (The Indian Telecom Services Performance Indicators, 2021). Liberalization³ made it simpler for personal gamers to input the marketplace, which in addition helped in the rapid boom we've got witnessed and the telecom zone is anticipated to witness a 9.4 percentage boom from the 12 months 2020- 2025 making it one of the very best boom prices in the telecommunications zone of the world (CIO Insider Team, 2021). Currently, Reliance Jio, an organization absolutely owned via way of means of Reliance Industries released on 27th December 2015 is the no 1 telecom organization in India with a marketplace percentage of 36.5 %. The different huge businesses are Bharti Airtel Limited and Vodafone Idea Limited with a marketplace percentage of 27.5 % and 23.5% respectively.

Figure 2: Market share of top 3 telecom companies in India (as of 2020)



*Source: deshicompanies.com

A comparative look at of facts to be had from 2012 (Telecom Subscription Reports, 2012) and 2022 (Telecom Subscription Reports, 2022) on overall wireless subscriptions well-known shows that the overall wireless telecom subscription become 1,148 million on the completion of July 2022. Over the final decade, the telecom enterprise has visible exponential boom, with the enterprise operating in the direction of increasing community insurance. Wireless subscription in the rural components of India become 338.54 million on the end of December 2012 and has extended to 521.29 million via way of means of the end of July 2022 that's a 53.98 percentage growth in 10 years and concurrently insurance in city regions additionally extended from 556.96 million subscribers on December 2012 to 626.74 million on the end of July 2022 that's a 12.53 percentage growth.

The creation of low tariff prices helped the boom of the subscriber base. Subscription for net offerings has additionally extended to 658 million as of January 2022, the main catalyst for the

³ Liberalization: Elimination of control of the government over economic activities

boom become whilst Jio entered the telecom marketplace in December 2015 and furnished loose facts for a duration of one 12 months to new subscribers and later supplied reasonably-priced affordable plans. Since the beginning, the value of net facts has long gone down to ₹10.77 a GB from ₹160 in line with GB, as in line with the reviews posted via way of means of the Telecom Regulatory Authority of India. Within a 12 months of its launch, Jio received 35million customers. Data from GSMA Intelligence well-known shows that there had been 1.14 billion mobile cell connections in India that's equal to 81.3 percentage of the overall population (*many humans use a couple of mobile cell connections). The variety of phone customers in a location may be measured the use of tele-density. It indicates telecom penetration in a country. In less complicated terms, tele-density takes into attention the overall variety of landline telephones for each a hundred humans living in a positive area. When tele-density⁴ exceeds a hundred it way that the phone-to-humans ratio is high. Overall tele-density in India extended to 84.88 percentage on the end of March 2022 (TRAI, 2022) from 75.23 percentage on the completion of March 2014 (TRAI, 2014).

The telecom zone has converted from a 'monopolistic surroundings'⁵ to a 'competitive surroundings'⁶ and the government's regulatory measures have ensured the easy jogging of operations and a sustainable surroundings for the enterprise. The measures taken up via way of means of the Telecom Regulatory Authority of India to enforce coverage initiatives, and coverage amendments to shape a regulatory framework have helped to create a surrounding wherein the government promotes and assists the provider providers. The energetic participation of personal provider providers, the adoption of present day technology and big chunks of sales pooled from Foreign Direct Investment (FDI) have made the rapid boom of the enterprise a reality.

TELECOM SECTOR HISTORY AND EVOLUTION⁷

Indian telecommunication industry is more than 165 years old and till 1950 post was the only means of communication in India. In 1950, the first electric telegraph was started in India between Calcutta (Kolkata) and Diamond Harbor (suburbs of Kolkata) and in 1851 it was opened by the British East India Company and later electric telegraph lines were established

⁴ Number of fixed (landline) telephone connections per 100 people in a specified geographic area.

⁵ Monopolistic environment: one company owns 100% of the market share

⁶ Competitive environment: Market wherein many companies conduct their operations.

⁷The Telecom Revolution In India: Technology, Regulation, And Policy

all over India. In 1854, a separate section was opened to the public. In time, in 1883, telephone services merged with postal systems. The Indian Telegraph Act, 1885 is one of the oldest pieces of legislation still in force in India and an Act amending the Indian Telegraph Act.

The telecommunications sector is an important infrastructure sector. The industry is very capital intensive and payback period investments can often be very long. An effective telecommunications network is crucial for the economic development of the country. Indian Telecom is more than 165 years old, since inception the first telegraph line between Kolkata and Diamond Harbor 1839. In 1948, India had 0.1 million telephone connections a phone density of about 0.02 phones per hundred of the population.

After independence in 1947, the national government took over the activities of the institution given lines and the entire industry was originally state-owned, its development began in the 1980s when the Department of Telecommunications was separated from India Post and Department of Telecommunications (1985), establishment of an international corporation services (1986) and the Telecommunications Commission (1989). In the 1990s, Govt took some policy initiatives to allow private sector players to enter the industry, that was one of the most important steps to change and freed the industry from monopoly market structure. In 1991, India began its economic reforms by introducing a new Economic policy of the government The main objective of the policy was to establish India globally to the market, develop national infrastructure, attract more foreign direct investment, expand import and export etc. The telecommunications industry had to play an important role in achieving the goals was reached; quality telecommunications services were important.

In the later years after independence, all foreign telecommunications companies were nationalized, forming Post, Telephone and Telegraph (PTT). PTT was an administrative body managed by the Ministry of Communications. Until 1984, the telecommunications sector of India was fully state-owned, while the private sector was used only for production. In order to make a concrete effort to develop the research and development of the telecommunications industry, the government established an independent body – Centre for development of Telematics (C-DOT).

In 1984, C-DOT was established to develop the latest telecommunication technology to meet the growing need of India's telecommunication network. The entire development of the telecommunications industry began only after the government separated the postal and

telephone services by creating the Department of Posts and Telecommunications (DoT). The Wireless Telegraphy Act of India 1933 regulated the possession of wireless telegraph equipment and personal possession of wireless telegraph equipment is allowed only with a license issued by the Telecommunications Authority and also imposes a fine for possession of wireless telegraph equipment. without a valid license. The 1990s was the time when the government opened up to private investment in the telecommunications sector. The Telecom Regulatory Authority of India (TRAI) was established in 1995 and reduced government interference in tariffs and decision-making.

A significant change that occurred was that the Government of India created an operational wing of the DoT in 2000 and renamed the Ministry of Telecommunications like Bharat Sanchar Nigam Limited (BSNL). Over the past 10 years, many private operators, especially foreign investors, have successfully entered the potential Indian telecom market. TRAI Act 1997 The Telecom Authority of India Act was passed in 1997, which was to be chaired by a session or retired judge of the Supreme Court or the Chief Justice and as members, a person with specialized knowledge and personal experience in the field of telecommunications, industry, finance, accounting, law, administration and consumer affairs. After the arrival of the private sector, there was a need for a regulatory body. TRAI was first established in 1997 under the TRAI (Rule) Act, 1997, which was later replaced by the Act. The main objective of establishing TRAI was to have important advisory, regulatory and tariff functions of TRAI to make recommendations on the need and timing of introduction of new service provider in service license conditions. provider.

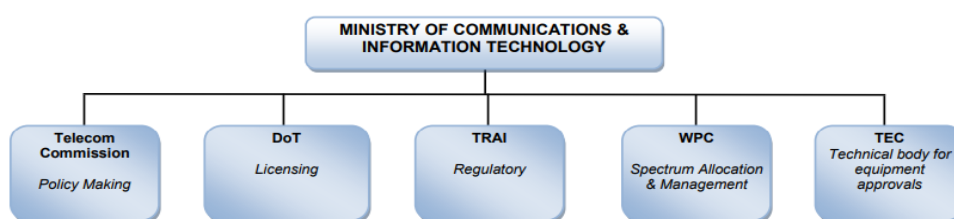
TRAI is also mandated to solve problems between service providers or service providers and group consumer regarding technical compatibility and affiliation of service provider and quality of telecommunication services and consumer interest and to ensure effective universal service commit, notify rates at which telecommunication services are provided in. India and outside India. TRAI is empowered to issue orders to the Service Provider and is guided by the principle of natural law and the appeal of TRAI's decisions to the Supreme Court.

In exercise of the powers conferred by Section 2(k) of the TRAI Act, the Central Government has declared broadcasting and cable services as telecommunication services vide notification no. SO 44 (E) dated 9th January 2004. The TRAI (Amendment) Act, 2000 brought about the reorganization of the agency.

The TDSAT, Telecom Dispute Settlement and Appellate Tribunal, an appellate court established by the central government in May 2000, had to decide between a licensor and a licensee between two or more service providers or between a service provider and a group of consumers. investigate and decide the complaint. Against the directions, decisions or orders of the Telecom Regulatory Authority of India, therefore the court exercised both original and appellate jurisdiction.

The Court of Appeal heard most of the binding cases involving disputes between the licensor and the basis for calculating license fees, frequency sharing and unreasonable usage and license fees, blocking of calls by a single group or service provider of the default traffic. TRAI approved tariff challenges etc.

TELECOM AUTHORITIES⁸



Telecom Commission: The Telecom Commission is an inter-ministerial excessive stage authorities frame. The Commission includes a Chairman, 4 complete time participants, who're ex-officio, Secretary to the Government of India withinside the Department of Telecommunications and 4 component time participants who're the Secretaries to the Government of India of the worried Departments. The vital capabilities of the Telecom Commission are as beneath:

- 1) coverage formulation, licensing and coordination subjects regarding telegraphs, telephones, wi-fi, data, facsimile offerings and different comparable varieties of communications;
- 2) worldwide cooperation in subjects linked with telecommunications;

⁸ The Telecom Sector by Nishith Desai Associates

- 3) advertising of standardization, studies and improvement in telecommunications;
- 4) advertising of personal funding in telecommunications;
- 5) getting ready the DoT price range and supervising its operations

Department of Telecommunications (“DoT”): As in keeping with the Indian Telegraph Act, 1885 and the Indian Wireless Telegraphy Act, 1933 the Central Government has the extraordinary privilege of establishing, retaining and running telegraph and wi-fi telegraphy system and is the authority to provide licenses for such activities. The Central Government acts via the DoT. Some of the crucial capabilities of the DoT are as follows:

- 1) licensing and law worldwide cooperation in subjects linked with telecommunications (consisting of International Telecommunication Union (ITU),
- 2) International Telecommunication Satellite Organization (INTELSAT), etc;
- 3) advertising of personal funding within the Indian telecommunications sector;
- 4) advertising of standardization, studies and improvement in telecommunications.

Telecom Regulatory Authority Of India (“TRAI”)⁹:

TRAI is an self sustaining statutory frame set up under Telecom Regulatory Authority of India Act, 1997 (“TRAI Act”) (mentioned In Chapter of this Liberalization made it vital for the Government to make certain that there may be an unbiased communications regulator. TRAI acts as an unbiased regulator of the telecommunications enterprise in the country. One of the primary targets of TRAI is to offer a truthful and obvious coverage environment which promotes a stage gambling discipline and allows truthful opposition among diverse telecom players. TRAI’s powers are recommendatory, obligatory, regulatory and judicial. The crucial recommendatory powers of TRAI are as follows:

- 1) hints concerning the want and timing for creation of recent provider carrier hints referring to the provide of telecom licenses such as their phrases and situations advocate

⁹<https://www.trai.gov.in>

revocation of license for non-compliance of phrases and situations of license.

- 2) TRAI is the only authority empowered to take binding choices on fixation of price lists for provision of telecommunication offerings. Emphasis wishes to be positioned at the interaction among the recommendatory powers of TRAI and the coverage making powers of DoT.

While the DoT is the only authority for licensing of all telecommunications offerings in India, it's far obligatory for the DoT to have earlier than it TRAI's hints with reference to subjects over which TRAI has recommendatory powers (referred to above). Having executed so, the DoT has the discretion to both be given or reject the hints of TRAI. TRAI has through the years come out with some of hints; DoT has widespread a few such hints both completely or partly or has rejected such hints. Below is the repute of a number of the hints made via way of means of TRAI to the DoT:

In this respect, there were worries that the very cause for the status quo of TRAI has been nullified in that a regulatory frame whose professional hints aren't sure to be observed can also additionally be taken into consideration to be a paper tiger in spite of everything mainly whilst comparisons are drawn with the extra advanced regulatory companies of the sector consisting of the Federal Communications Commission (FCC) of the US which has been entrusted with very huge powers in telecom law such as the granting of licenses. There were a few current reviews in which the authorities is thinking about giving wider powers to TRAI , but there was no formal coverage alternate as yet.

Last year, the DoT had sought a felony opinion from the regulation ministry which said that the DoT can alternate the phrases and situations of present licences and that TRAI's hints had been now no longer binding at the authorities. Subsequently, TRAI additionally received an unbiased felony opinion at the equal situation from a former Supreme Court judge, who became additionally the previous chairman of regulation commission, in addition to from a stated Supreme Court lawyer, declaring that the DoT cannot make any adjustments to telecom licence without consulting TRAI. The DoT has now referred each units of reviews lower back to the regulation ministry to take a very last name in this issue. The very last final results will outline the scope of regulators within the country.

Bharat Sanchar Nigam Ltd. v. Union of India (2006)¹⁰ This case involved a dispute regarding the allocation of 2G spectrum and the subsequent cancellation of licenses. The Supreme Court's decision had implications for the telecom sector's regulatory framework.

Bharti Hexacom Ltd. v. Union of India (2019):-The case involved issues related to spectrum charges and the calculation method adopted by the government. It addressed the telecom operators' concerns regarding the financial burden imposed by the government.

TRAI Recommendation/s	Status
Recommendations on Next Generation Networks (2006)	Not accepted by the DoT
Recommendations on Allocation and Pricing of Spectrum for 3G and Broadband Wireless Access Services (2006)	Some of the recommendations were accepted by the DoT
Recommendations on issues related to Internet Telephony	Not accepted by the DoT
Recommendations on Infrastructure Sharing	Most of the recommendations were accepted by the DoT
Recommendation on Growth of Value Added Services and Regulatory Issues (2009)	Decision of DoT is awaited
Recommendations on amendment to Unified Access Service Licensees regarding Lock-in period for promoter's equity for (2009)	Currently under consideration by the DoT

Telecom Disputes Settlement and Appellate Tribunal (“TDSAT”):

The TDSAT became set up in 2000 beneath a change to the Telecom Regulatory Authority of India Act, 1997 (mentioned In Chapter zero of this paper). The TDSAT has been vested with extraordinary powers to adjudicate any dispute among: the licensor (DoT) and a licensee; provider carriers; and provider carriers and corporations of customers. Any attraction from the selection of the TDSAT may be filed simplest with the Supreme Court of India that's the apex courtroom docket of the country.

Wireless Planning and Co-ordination Wing (“WPC”):

The WPC became created in 1952 and is a wing of the DoT that's answerable for Frequency Spectrum Management, such as licensing of wi-fi stations and caters to the wishes of all wi-fi users (Government and Private) in India. It sports the statutory capabilities of the Central Government and problems licenses to establish, hold and operate wi-fi stations.

¹⁰ Bharat Sanchar Nigam Ltd. v. Union of India (2006) 2003 3 SCC 239

WPC is split into:

- (i) Licensing and Regulation (LR),
- (ii) New Technology Group (NTG) and
- (iii) Standing Advisory Committee on Radio Frequency Allocation (SACFA).

The WPC is additionally the imperative company for the reason of representing India and to stick to India's commitments at the International Telecommunication Union ("ITU"), Asia-Pacific Telecommunity ("APT") and different agencies that India is a member or signatory of. The WPC is headed via way of means of the Wireless Advisor to the Government of India. Note on National Frequency Allocation Plan ("NFAP"): The NFAP is the premise on which spectrum frequencies are allotted in India. The ITU problems the worldwide frequency desk for the reason of giving the member nations a foundation on which they can formulate their very own frequency allocation plan. The NFAP is the frequency allocation plan of India.

Centre for Public Interest Litigation v. Union of India (2012):-This case is related to the 2G spectrum allocation scam. The Supreme Court, in its judgment, cancelled 122 telecom licenses and criticized the government's flawed allocation process.

Shyam Telelink Ltd. v. Union of India (2013):-The case dealt with issues related to the cancellation of telecom licenses post the 2G spectrum allocation judgment. It explored aspects of natural justice and fairness in license cancellation.

NATIONAL FREQUENCY ALLOCATION PLAN ("NFAP"):

The NFAP is the premise on which spectrum frequencies are allotted in India. The ITU problems the worldwide frequency desk for the reason of giving the member nations a foundation on which they can formulate their personal frequency allocation plan. The NFAP is the frequency allocation plan of India. This plan definitely allocates exceptional frequency bands for exceptional radio-verbal exchange services. Although it allocates frequency bands for positive services, it does now no longer provide possession rights to the ones services. NFAP81 become in pressure until December 31, 1999 for business and different uses. NFAP-81 become formulated for a time, while utilization of frequency bands become basically carried

out with the aid of using the authorities/groups with some exploitation with the aid of using non-public events for his or her committed networks.

However, with the proliferation of new technology within the country and the access of the non-public area in the telecommunication area the authorities determined it become prudent to revise NFAP-81. Accordingly, from January 1, 2000 the NFAP2000 changed NFAP-81 which will higher manipulate the multiplied use of spectrum. Later NFAP 2008 which become made powerful from April 1, 2009 changed NFAP 2000. NFAP 2011 has been advanced with unique emphasis to encourage / sell indigenous manufacturing / technology with the aid of using provisioning of small chew of spectrum in positive frequency band / 9 sub-bands in constrained geographical area. The WPC Wing of the DoT is now amidst formulating NFAP 2011. The WPC Wing issued the draft NFAP 2011 in March 2011 upon which diverse inputs had been provided. Various authorities/departments and telecom operators have written to the DoT and expressed war of words with the draft plan. The DoT could be sending some of these perspectives to the Empowered Group of Ministers (EGoM), so that you can provide you with the very last model of the NFAP 2011. It is predicted that the problems relating encryption, VOIP, new and rising technology, satellite TV for pc phones, spectrum allocation, and many others could be well addressed in NFAP 2011.

STANDING ADVISORY COMMITTEE ON FREQUENCY APPLICATION (“SACFA”):

SACFA is a wing of the DoT which offers acclaim for radio frequency (spectrum) utilized by telecom provider providers. Obtaining a telecom license isn't sufficient for the operator to start rolling out the services; a no objection from SACFA is required. This includes an in depth technical assessment such as area research which will decide inter alia viable aviation dangers and interference (Electro Magnetic Interference (EMI)/Electro Magnetic Compatibility (EMC)) to current and proposed networks.

Functions of SACFA:

- (i) To suggest on fundamental frequency allocation, problems requiring co-ordination among the diverse wi-fi customers within the country.
- (ii) To formulate/assessment the National Frequency Allocation Plans.

- (iii) To formulate country wide proposals for worldwide conferences/ conferences and to co-ordinate nationally all sports relating the ITU, and many others.
- (iv) To address frequency co-ordination troubles mentioned the committee with the aid of using the administrative Ministries/Departments.
- (iv) To clean websites of all wi-fi installations within the Country

TELECOMMUNICATIONS POLICIES

NATIONAL TELECOMPONENT POLICY 1994 AND ITS IMPLEMENTATION:¹¹

In 1994, the television density of India was 0.8%, which was less than the television density. from other Asian developing countries. In Asian countries like China, Pakistan and Malaysia tele-density 1.7%, 2% and 13%. At that time, the average television density of the world was 10% The National Telecom Policy was an attempt to help the country develop and grow telecommunications industry. It helped codify the objectives of the policy and set some goals such as: The telephone should be available on demand by 1997.

All villages should be covered by 1997. A PCO per 500 people must be provided in urban areas by 1997 and all value-added services available abroad implemented in India preferably by 1996 (National Telecom Policy, 1994). The resources needed to reach the goal of releasing 10 million connections have ended ₹23,000. Financing such a huge project was beyond the capacity of the central government. Therefore, the government allowed private operators for the first time to overcome the scarcity of resources register and participate in the provision of telecommunications services.

A further increase resources had to be created with international generation and methods such as BOT, BTO, deferred payments, leasing, etc. The police paid more attention to consumer protection and sales promotion and ensured its existence monopoly, ensuring fair competition. Establishment regulation of the telecommunications sector Authority of India (TRAI) in 1997 as an independent telecom regulator promotion of competition, promotion and protection of consumer interests, etc. Although TRAI is the regulatory body for the Indian telecom industry,

¹¹ <https://www.trai.gov.in/release-publication/regulation>

it acts as a licensing, standards and spectrum allocation are entirely in the hands of the central government. (National Telecommunications Policy, 1994)

NEW TELECOMPONENT POLICY 1999 AND ITS IMPLEMENTATION¹²:

The Telecom Regulatory Authority of India has failed to achieve some of its set targets the current policies that have affected the development of the telecom industry outside this India and the world experienced growth in the IT sector, the electronics industry etc. And factors like operators in one industry providing services in another industry made it important for TRAI to examine the previous policy and make some changes in the policy framework India's vision to become an IT superpower is as simple as Indirectly, this affected the telecommunications, which meant that the country had to develop telecommunications quality infrastructure that ensures the most achievable results. In 1999, a new telecommunications policy was prepared based on the report received after the audit the existing policy framework was implemented. Bringing investments that could help then Development of India's telecommunication infrastructure was at the core of its policy and core vision The goal was to provide affordable and efficient services to the citizens of the country. The other objectives of NTP'99 were:

- Promotes development of telecommunication services in remote and tribal areas of the country including rural areas.
- Teledensity will be reached by the end of 2010 from the current 0.4.
- To provide internet and high speed data to cities with population above 2000000
- To promote Indian telecom companies and provide a platform to enable it to become global giants.
- To protect the defense and security interests of the country. NTP'99 facilitated the activities of private service providers in that sector changing the system from a fixed fee royalty to a revenue sharing system, making it economical possible in terms of business operations.

Because of the country's long telephone queue, the government invited private individuals demands of operators, because the government did not do it itself. Demonstration licenses such

¹² <https://www.trai.gov.in/release-publication/regulation>

as Cellular Mobile Telephone Service (CMTS) and Basic Telecom service helped private entrepreneurs enter the market and offer their services. This later turned out to be one of the wisest decisions as it led to the current development and growth. The New Telecommunications Policy The year 1999 is seen as a catalyst for the growth of the telecommunications industry. Launched in 2015, the Digital India program has contributed to the growth of the telecom industry enabling services such as online/digital payments, Unified Payments Interface (UPI), eKYC and so on (New Telecom Policy, 1999).

BROADCASTING POLICY 2004 AND ITS IMPLEMENTATION:¹³

Recognizing that broadband services can help the government create jobs, and increase the Gross Domestic Product (GDP), which would contribute to development to the economy of the country, was presented by the Telecom Regulatory Authority of India (TRAI). Broadband policy in 2004, which aimed to accelerate broadband growth services in India. The provision of broadband services also meant the overall quality of life is enhanced with services such as employment, e-education, entertainment and easily accessible information online. At the end of December 2004, the broadband connection of the country was 0.4%. growth Broadband, Internet and PC penetration are strongly correlated. Internet and PC penetration was lower at 0.02% and 0.8% respectively. other Asian developing countries. The spread of word class infrastructure was very important for healthy competition The government took responsibility to ensure the development of telecommunications infrastructure has not been neglected in any way. To make it easily accessible and affordable, the Department of Telecommunications collaborated Together with the Ministry of Finance, develop a package that made the service financially viable to service providers rather than consumers. It also meant that broadband services could cover both rural and urban districts of the country. Broadband subscription increased to 778.095 million on March 31, 2021 compared to Broadband as on 31 March 2012 which was 13.81 million (TRAI's annual Report, 2020-21)- (TRAI Annual Report, 2011-12). In 2019, income accumulated broadband subscriptions were ₹14,500, this astronomical increase results in easy and fast availability of useful social applications.

NATIONAL TELECOM POLICY 2012 AND ITS IMPLEMENTATION:¹⁴

On June 31, the Government of India approved the National Telecom Policy 2012. Telecom

¹³ <https://www.trai.gov.in/release-publication/regulation>

¹⁴ <https://www.trai.gov.in/release-publication/regulation>

was a key driver of socio-economic development in an increasingly information-intensive global scenario, and the policy aimed to ensure that India played a leadership role, giving special attention to the provision of affordable and high-quality telecommunications services in remote areas of the country. The vision of NTP-12 was to provide secure, affordable and high-quality converged data communications services at any time to create a platform for accelerated socio-economic development. NTP 2012 highlighted the achievements of the One Nation - Free Roaming program that enabled consumers receive free incoming calls anywhere in India. The effort to create one nation - one license in all services and service areas was one of the political goals (National Telecom Practice, 2012). The political vision was as follows:

- Developing a robust, secure and world-class telecommunications network that provides seamless coverage and focuses mainly on peripheral and rural areas digital divide and promote socio-economic development.
- Implementation of affordable and high quality broadband services nationwide inclusive information society.
- Transfer of mobile devices as a means of socio-economic empowerment of citizens.
- Makes India a global hub for telecom equipment manufacturing converged telecommunications services.
- Focus on safety and green technology, promote research, development and planning state-of-the-art ICTE technology, products and services to match the infrastructure to the needs of domestic and global markets.
- Promotes the development of standards that help meet national requirements, create intellectual property rights and participate in international standardization promote adherence to global standards, making India a leader in the field of telecommunication standards.
- Attract foreign direct investment (FDI) and domestic investment.
- Enables work both directly and indirectly.

IMPACT OF POLICY INITIATIVES AND POLICY AMENDMENTS:

Before 1991, the telecommunication enterprise wasn't the great acting quarter that we see

today. The tele-density and best of carrier remained low whilst the tariff fees had been high. The telecommunication quarter became additionally absolutely beneath the management of the Central Government. Post-1991, after the LPG (Liberalization, Privatization, Globalization) reforms the regulatory framework became designed in any such manner that it made it simpler for the whole enterprise to manage with the brand new rising challenges. Challenges which include licensing, placing tariffs, developing present day and green infrastructure, purchaser pleasure, safety of purchaser interest, enlargement etc. Providing a platform for honest opposition through concerning non-public gamers withinside the procedure helped the telecom enterprise procure investments which in flip helped in the increase and enlargement of the enterprise in addition to elevating the pleasure stage of consumers. This regulatory framework has helped in the transformation in India.

LICENSE TO THE SERVICES:

The role of the telecommunications authority in the development of the licensing framework it played a decisive role in creating the "free market" structure. The TRAI Act has given an An important task for the DoT was to recommend the introduction of a new service service provider and license terms as per demand and requirement licensor It had a generally positive effect:

- The ISP licensing system has created space to remove restrictive ones of the applicable license conditions.
- VSAT features enable lower license fees for VSAT networks.
- Public Mobile Telephone Network Service (PMRTC), created more technology and helped lower license fees.
- "Sharing infrastructure".
- Broadband Policy 2004 was formed on the basis of the Telecommunications Regulatory Board Indian Recommendations. This later contributed to the growth of the Internet and broadband services All the above recommendations and other TRAI recommendations has had a positive impact on the creation of a free competitive market over the years.

TARIFFS

Behind the low rates was the phenomenal growth of the telecommunications industry over the years. The Telecom Regulatory Authority of India noted that affordable rates would make it possible the growth of the telecommunications network as a tool to help promote competition in the region area. Service providers have the ability to offer any rates as long as they operate within the limits of the regulatory framework, including the use of interconnection. Charges (IUC). This flexibility is limited and does not extend to certain industries. The Telecommunication Tariff Ordinance (TTO) of 1999 was an important step in tariff regulation made the tariff structure transparent. The calling party pays (CCP) system was at the initiative of TRAI and such initiatives along with other initiatives played its part in the significant decline of international and domestic long distance calls fees and lower rates, which in turn encouraged the growth of mobile communications telephone industry. Cheaper prices meant affordability and services at an easily affordable price and available helped market access and increased overall television density.

MEASURES TO PROTECT CONSUMER INTERESTS:¹⁵

The Telecom Regulatory Authority of India invitations client groups to workshops, seminars and meetings to tell them of numerous adjustments and traits within the industry. To higher apprehend consumers' problems, the TRAI holds half-every year conferences with the registered client groups. In March 2006 TRAI handed the Quality of Service Regulation. This law makes it obligatory for the provider carriers to audit their metering and billing gadget each yr and recommend an audit certificates via way of means of June 30 each yr. The annual audit can best be carried out via way of means of auditors accredited via way of means of the regulator. In the year 2006 and afterward the TRAI added in distinctive measures to defend consumers' interests. This blanketed measures such as:

- Require all of the provider carriers to offer whole info of the tariff plans they offer to their clients at registration
- Requiring provider carriers to study credit score limits often for a post-paid provider and

¹⁵ INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES The Effect of Telecommunications Law on Economic Development in India.

mirror it of their month-to-month invoice often.

- Requiring provider carriers to maintain their clients knowledgeable approximately the info of their tariff plans such as global hire line price lists and home leased line price lists.

The regulator additionally appointed impartial groups to survey to evaluate the effectiveness of the “Telecom Consumers Protection and Redressal of Grievances Regulation 2007”.

Objective 3: To identify the trends and growth in the telecom sector in India.

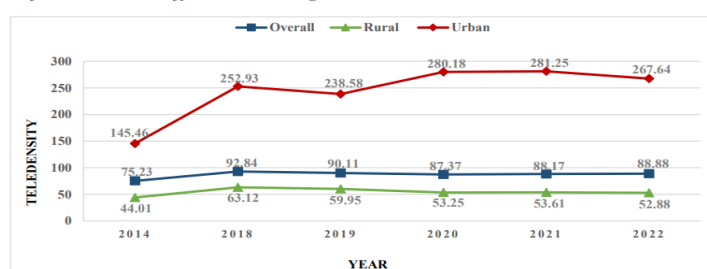


Figure 3: Growth of Teledensity in India

**Source: Telecom Regulatory Authority of India.*

To determine the effects of telecommunications policy on industry growth.

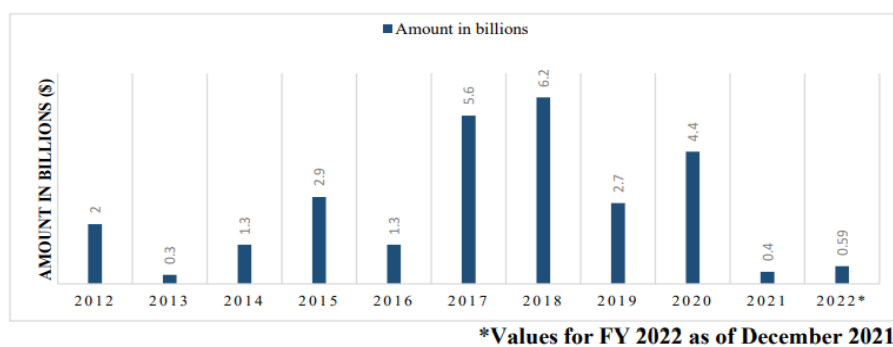
Cumulative impact of all regulations, policy initiatives and changes together the effectiveness of the recommendations is directly related to India's growth the telecommunications industry, which is reflected in the numbers, the growth of tele-density in urban and rural areas, increase in enrollments, increase in foreign direct investment (FDI). India, state-of-the-art infrastructure, better service quality and consumer awareness. for example, the remote density in India increased from 75.23 to 88.51% at the end of July 2021 percent at the end of March 2014, and wireless connections grew by 53.98 percent year over year decade and reached 521.29 million in 2022, compared to 338.54 million in 2012. shows that the regulatory framework has had a positive impact. Even in global times due to the pandemic, the telecom sector has enabled 30-35 percent of India's GDP.

Telecom area's contribution to the economy:

Telecom stays the 2d maximum sales earner for the Indian Government, handiest after income tax. The public sale of the 5G spectrum held on the end of July 2022 and permitted via way of means of the Government grossed \$18.77 billion. The Telecom area additionally contributes to 6.43 percentage of total FDI influx, among 2014-2021 the telecom area witnessed a 150% boom in FDI influx. The Foreign Direct Investment into the telecom area among 2014-2021 is

\$20.72 billion. On October 2021, the Government deregulated the framework and made it less difficult for the influx of FDI in the area because it notified 100% overseas direct funding through the automated route from the preceding 49% percentage. Research additionally confirmed that after funding in the telecom area will increase via way of means of 10% it results in a 3.2% boom in GDP growth. The gross sales of the telecommunication area of India in the first region of the economic year 2022 became \$8.7 billion and is anticipated to boom in the coming years. In the economic Year 2021, around \$four hundred million became the Foreign Direct Investment influx into the Indian telecommunications industry, relatively decrease than the FDI influx of the preceding economic year which became around \$4.4 billion. The telecommunications area additionally contributes to the boom in employment price via way of means of supplying 2.2mn jobs without delay and enabling 1.8mn jobs indirectly.

Figure 4: FDI Inflow in the telecom sector of India from F.Y 2012-22



*Source: Statista.com (Statista Research Department, 2022)

India realized the importance of telecommunications in the late 20th century. Today Indian telecom sectors are the fastest growing telecom sectors in the world. The With the approval, the Indian government is encouraging the telecom sector to move into foreign markets relevant policies. It can be said that the telecom sector plays a key role in growth and developing the economic and social upliftment of India. The telecommunications industry continued improves infrastructure and service quality, which increases customer satisfaction.

The Indian telecom sector has undergone rapid technological changes. There was a rapid change affected the telecommunications business. The competition has increased over the years markets and rural markets also appeared. There were many challenges, changes and opportunities in the telecommunications industry that can lead to its improvement. The telecom sector has a strong focus on technology and consumer segmentation targets. Major companies

in the telecommunications industry have been trying to reduce costs and reach a limit adapt to new technology as soon as possible.

Customers are becoming very aware products and services with tools such as portability. The telecommunications sector also plays an important role in the development of the service sector in determining financial stability. Also the Customer Relationship Management (CRM) is paramount. Despite the telecommunications industry there is still a lot to do to penetrate new markets. This could be achieved through a number of new business models, infrastructure reforms, etc. that help provide better customer service and satisfaction. That is why the telecommunications sector plays an important role play and influence many other sectors to boost economic growth. Telecommunication plays an important role in the mobile phone industry. Indian Telecommunications There is a growing demand for high speed data in the market and it has also grown tremendously number of subscribers. With the current 3G and 4G technology, India has achieved its goal to some extent quick demand, but not enough. India needs 5G to get up to speed requirements The introduction of 5G is very important because it solves the problem of rapid subscriber demand. The cell phone industry is dependent The telecommunications sector is adapting cutting-edge technology such as 5G. 5G will help the mobile manufacturers and service providers, offering new features in online banking, social media, and many other new features. Today, consumers have access to many new features such as video calls etc.

Today, online banking, telecommunication tower installation, maintenance, etc becomes very easy. Thus, the mobile phone industry is highly dependent on the telecommunications sector. India and many developing countries have always faced a huge capital problem. India can solve this problem by inviting FDI in Telecom sector India has seen a lot of foreign direct investment in the telecom sector in recent years. The Due to the fact that FDI flow into India was very low in the initial phase of the telecom industry slow economic growth and high inflation. Political initiatives have helped to improve of direct investments in the country. Direct investments in the telecommunications sector have quintupled in the financial sector in 2017-2018 compared to combined FDI in 1991-2000. So is the telecommunications industry rapid growth of direct investment. Today, India's big cities are very efficient Telecommunications systems. But there are other limitations, such as expensive electronics equipment, fragmented groups of actors, etc. Despite everything, India is developing and has increased its rank to 117 out of 159

countries in the global ICT index. India still has a long way to go to become the best like Japan and USA.

TELECOMMUNICATIONS LAWS AND REGULATIONS¹⁶

1. The Indian Telegraph Act, 1885

This Act is one of the oldest legislation nonetheless in impact in India and is an Act to amend the regulation referring to telegraphs in India. Some of the salient functions of this Act are:

- I) it empowers the Government of India to take manipulate of the present telegraph traces and lay down the essential infrastructure for similarly growth of telecommunications in India.
- II) it authorizes the Government of India to furnish telecom licenses on such situations and in attention of such bills because it thinks fit, to any man or woman to establish, maintain, paintings a telegraph inside any a part of India.
- III) it authorizes the Government of India to take ownership of certified telegraphs and to order interception of messages at the prevalence of any public emergency or withinside the hobby of public safety.
- IV) any dispute regarding a telegraphic equipment/ equipment/ line among the telegraph authority and a licensee (for whose gain the line, equipment or equipment is, or has been furnished) shall be decided via way of means of arbitration via way of means of an arbitrator appointed via way of means of the Central Government.

We would love to vicinity emphasis at the strength bestowed at the Government to furnish licenses to private our bodies to offer telecommunication offerings in India on situations it deems fit. This strength is in reality a proviso of the one of a kind privilege granted via way of means of the Indian Telegraph Act, 1885 to offer telecommunications offerings in India. In this recognize it's miles exciting to be aware the observations made via way of means of the Supreme Court in *Delhi Science Forum v Union of India*: “Central Government is predicted to

¹⁶ The Telecom Sector by Nishith Desai Associates

position such situations even as granting licences, which shall guard the general public hobby and the hobby of the nation. Such situations ought to be commensurate with the responsibilities that waft even as parting with the privilege which has been completely vested within the Central Government via way of means of the Act”.

It is likewise applicable to be aware that though the supply concerning dispute decision via arbitration is nicely settled in regulation, there had been times in which the courts/ different judicial our bodies have assumed jurisdiction over topics which ought to be settled via way of means of arbitration beneath the provisions of the Indian Telegraph Act, 1885. In a latest case of **General Manager, Telecom v M. Krishna and Anr (AIR 2010 SC 90)**, a dispute arose concerning the non-fee of payments via way of means of the respondent because of which the smartphone connection of the respondent changed into disconnected. The respondent filed a grievance earlier than the District Consumer Disputes Redressal Forum, Kohzikode, which allowed the grievance and directed the appellant to reconnect the smartphone and pay compensation. A writ filed via way of means of the appellant within the High Court of Kerala hard the jurisdiction of the patron discussion board changed into dismissed. The appellant then got here earlier than the Supreme Court via way of means of manner of unique leave.

The Supreme Court held that as there's a unique treatment via way of means of manner of arbitration furnished withinside the Indian Telegraph Act, and the treatment beneathneath the Consumer Protection Act, is via way of means of implication barred. It is nicely settled that a unique regulation overrides a widespread regulation. Accordingly, the Supreme Court set apart the order of the Kerala High Court in addition to the order of the District Consumer Forum.

2. The Indian Wireless Telegraphy Act, 1933

This Act changed into enacted to alter the ownership of wi-fi telegraphy apparatus. According to this Act, the ownership of wi-fi telegraphy equipment via way of means of any man or woman can most effective be allowed in accordance with a license issued via way of means of the telecom authority. Further, the Act additionally levies consequences if any wi-fi telegraphy equipment is held without a legitimate license.

3. The Telecom Regulatory Authority of India Act, 1997

The Telecom Regulatory Authority of India Act, 1997 enabled the status quo of the TRAI. The

position and capabilities of the TRAI have already been mentioned in Chapter III above. Interestingly, the 1997 Act empowered the TRAI with quasi-judicial authority to adjudicate upon and settle telecom disputes. Later this Act changed into amended via way of means of the Telecom Regulatory Authority of India (Amendment) Act, 2000 to carry in higher readability and difference among the regulatory and recommendatory capabilities of TRAI. Further, the 2000 change served a completely essential cause in absolutely differentiating the judicial capabilities of TRAI via way of means of putting in place of the TDSAT. The jurisdiction of civil courts has been expressly barred in instances in which the TDSAT has jurisdiction. The position and capabilities of the TDSAT has already been mentioned in Chapter III above.

4. The Information Technology Act, 2000

In 2000, the Indian Parliament handed the Information Technology Act, 2000 ("ITA") specifically to sell ecommerce and supply criminal reputation to digital files and virtual signatures as manner to authenticate digital files. Later, the Information Technology (Amendment) Act, 2008 ("ITAA 2008") changed into handed which furnished extra recognition on data protection in addition to brought numerous new sections on offences along with cyber terrorism and statistics protection.

It is to be stated that the ITAA 2008 changed into handed with none dialogue or debate in each Houses of Parliament. The ITAA 2008 offers for consequences for numerous offences consisting of cyber-crimes, numerous e-trade frauds like dishonest via way of means of impersonation and pornography. Though the ITAA 2008 changed into now no longer enacted to immediately observe to the telecom industry, it's miles a reality that the data generation zone and the telecom zone are intently connected and the 2008 amendments have in reality explicitly made the ITA and ITAA 2008 relevant to the telecom industry.

Further, via the 2008 amendments a brand new segment has been inserted which defines "communicate device" as mobi-celleular phones, non-public virtual help or mixture of each or any different tool used to communicate, ship or transmit any textual content video, audio or image. This revised definition honestly brings the telecom zone in the ambit of the ITA. As in line with the ITAA 2008, an middleman (which through definition now consists of a telecom provider provider) is accountable for any offence beneath the ITAA 2008. Under Section 79 of the ITAA 2008, an middleman is exempt from legal responsibility when it comes to any 1/3 celebration statistics or communicate hyperlink, supplied:

- (i) The function of the middleman is restrained to offering get right of entry to to a communicate machine over which 1/3 celebration statistics is transmitted or briefly stored; or
- (ii) The middleman does now no longer initiate, pick out the recipient of or pick out / adjust the statistics in the transmission; and
- (iii) The middleman observes due diligence at the same time as discharging his duties.

Notwithstanding the above qualifications, the amended Section 79 in addition is going directly to offer that no matter the exemptions supplied above and no matter the exercising of due diligence, an middleman could nonetheless be dependable in which: (ii) The middleman has conspired, aided, brought on or abetted in any illegal activity; or (iii) The middleman upon acquiring understanding or upon being notified fails to expeditiously eliminate or disable get right of entry to any statistics, statistics or communicate hyperlink managed through the Intermediary that's getting used to devote an illegal act. The critical detail which desires to be proved in an effort to pin legal responsibility on middleman is manage. The fundamental premise is that an middleman, within the regular direction of business, is simply performing as a conduit and isn't in a function to exercising manage over any fabric or statistics that's transmitted via its platform except required to achieve this under the provisions of the IT Act.

However, it must be referred to that the requirements of due diligence have now no longer been defined; as such it may be assumed that affordable industry requirements could want to be followed. The Department of Information Technology under the Ministry of Communications and Information Technology, Government of India, delivered sure policies in exercising of powers conferred beneath the ITA. These policies will act as enablers to precise sections of the ITA.

One such rule is the Information Technology (Intermediaries guidelines) Rules, 2011. As in line with the policies, the middleman has to study the vital due diligence at the same time as discharging his duties which incorporates publishing policies and regulations, privateness coverage and person agreement. Such policies and regulations, and so on shall tell the customers of pc aid now no longer to host, display, upload, adjust, post, transmit, replace or proportion any statistics, inter alia, that:

- i) belongs to some other individual and to which the person does now no longer have any proper to.
- ii) is grossly harmful, harassing, blasphemous, defamatory, obscene, pornographic, libelous, invasive of some other's privateness, disparaging, pertaining to or encouraging cash laundering or gambling, and so on or in any other case illegal in any way whatever.
- iii) damage minors in any manner infringes any highbrow belongings proper or different proprietary rights.
- iv) violates any regulation at the moment in force, and so on.

The following moves through a middleman shall now no longer quantity to hosting, publishing, enhancing or storing of any such statistics:

- i) transient garage of statistics robotically in the pc aid as an intrinsic characteristic of such pc aid, related to no exercising of any human editorial manage, for onward transmission or communicate to some other pc aid.
- ii) elimination of get right of entry to any statistics, statistics or communicate hyperlink through a middleman after such statistics, statistics or communicate hyperlink involves the real understanding of someone legal through the middleman pursuant to any order or course as in line with the provisions of the ITA.
- iii) The middleman upon acquiring understanding through itself or been added to real understanding through an affected individual in writing or via e-mail signed with digital signature approximately any such statistics as cited in aforesaid factor under this Rule, shall act inside 36 hours and in which applicable, paintings with person or proprietor of such statistics to disable such statistics that is in contravention of the stated aforesaid factor.
- iv) Further the middleman shall hold such statistics and related data for as a minimum 90 days for research purposes. The middleman shall tell its customers that during case of non-compliance with policies and regulations, and so on, the middleman has

the proper to terminate get right of entry to or utilization rights of the customers to the pc aid of Intermediary and eliminate non-compliant statistics.

- v) The middleman shall offer statistics / help to Government organizations who're lawfully legal for investigative, protective, cyber safety activity. The middleman shall record cyber safety incidents and additionally proportion cyber safety incidents associated statistics with the Government agency. The middleman shall take all affordable measures to stable its pc aid and statistics contained therein following the affordable safety practices and techniques as prescribed withinside the Information Technology (Reasonable safety practices and techniques and touchy private statistics) Rules, 2011.
- vi) The middleman shall post on its internet site the call and information of the criticism officer as well as mechanism through which customers or any sufferer who suffers because of get right of entry to or utilization of pc aid through any individual can notify their proceedings towards such get right of entry to or utilization.
- vii) Such criticism officer shall redress the proceedings inside one month from the date of receipt of complaint.

We agree with that the creation of this rule appears to had been delivered because of the multiplied litigation towards intermediaries who had been accused as parties / co-accused in instances of illegal or unlawful conduct through stop customers.

5. The Cable Television Network Act 1995

6. The Cable Television Network Rules 1994

BATTLES BETWEEN TRAI AND DOT

TRAI ardently asserted its regulatory powers and fought for a seat at the decision-making table on all important policy and regulatory issues. The first chairman of TRAI was Justice SS Sodhi and his authority was decisive, committed and insisted on promoting an independent regulatory agenda. Asserting its statutory jurisdiction, TRAI told the DoT that it should be consulted before the government takes any major regulatory or licensing decisions. DoT ignored the request and took a certain decision which was a certain key policy and licensing decision

because it was found that it was not used to taking orders from other agencies so they took decisions without consulting the authority.

As the DoT did not agree to TRAI's request, the parties challenged the DoT's decision before the TRAI, invoking the authority's statutory dispute resolution powers. DoT claimed that the decision was illegal as they were taken without mandatory prior consultation with TRAI. Apart from this, several preliminary objections were raised challenging the competence of TRAI to entertain the matter. TRAI did not focus on the issues raised by DoT as it did not achieve the initial target and continued to process cases.

In the case of **Aircel Digilink vs. Union of India**, TRAI ruled that DoT must ensure better connectivity to the fixed networks of the department for private mobile licensees. This decision added fuel to the fire and DoT was surprised by the decision and it marked the beginning of an adversarial relationship between DoT and TRAI. In addition, the agency prohibited the DoT from redeeming the bank guarantee of mobile license holders who failed to pay the license fee and revoked the agency's orders unilaterally cancelling the mobile, fixed network outside metropolitan areas.

The Delhi High Court judgment in MTNL-I significantly curtailed TRAI's regulatory authority and the microwave notification raised a huge question about TRAI's role as an effective and independent regulator of telecom services. The 2000 amendment straightened out the confusions that questioned the credibility and independent regulatory competence of TRAI. The aim was to clarify the extent of TRAI's statutory powers and strengthen the authority's image as an independent regulator. It was the creation of the TDSAT that was the improving achievement of the 2000 revision. The amendment does not change the existing licensing framework, which was a choice between DoT and TRAI. While the amendment ensured that the government should seek TRAI's recommendation in certain licensing matters, it did not limit the government's powers to grant, modify and cancel licences.

GOVERNMENT CONTROL OVER TRAI¹⁷

- Independency of TRAI was Held in **Delhi Science Forum vs UOI Case**.

¹⁷ The Telecom Sector by Nishith Desai Associates

However the government controls TRAI in three ways; First, Section 25 enables the Central Government to issue mandatory directions to TRAI from time to time. Second, the financing of the institution comes mostly from subsidies given by the state. Thirdly, the Government can make regulations under Section 35 of the TRAI Act on many matters and these regulations are binding on the authority. Section 25 of the Act empowers the Central Administration to issue directions to TRAI in the following matters:

1. Sovereignty and integrity of India;
2. national security;
3. Friendly relations with foreign countries
4. Public order;
5. Correctness; and
6. Morality.

Section 25(2) of the Act states that matters of government are binding on TRAI in matters of policy. According to Section 25(3), it is for the Central Government to decide whether the question is political. This provision gives the central government the final say on all policy decisions. TRAI must be given an opportunity to express its views before issuing a direction. Section 25 is considered a "fundamental flaw" in the TRAI Act as it does not fulfill the underlying legislative objective of creating an independent telecom regulator.

The Government was informed that Section 25 did not allow the Government to communicate its political views to TRAI. However, this did not explain the reason why the government's position on a political issue should in any case override the opinion of an independent regulator. Relationship to TDSAT TRAI had both regulatory and adjudicative powers and had original jurisdiction to resolve disputes between service providers and disputes between service providers and consumers.

After the establishment of TDSAT in 2000, TRAI lost its dispute resolution jurisdiction. Therefore, the supervisory authority must now go to court to resolve the dispute that has arisen in the telecommunications sector. Before the 2000 amendment, the original jurisdiction of the

TDSAT to hear and decide the dispute was much wider and more lenient than that of the TRAI adjudicating body. With this, the court also has appellate powers to review TRAI's directions, decisions and orders.

In **BSNL vs TRAI**, it was held that since the 2000 amendment took away dispute resolution powers from TRAI, the authority cannot compel service providers to intervene when a dispute arises between them. The adjudication of disputes and appeals now rests exclusively with the TDSAT as the "Sole Judiciary" in the telecommunications sector. The court's appellate jurisdiction over the authority is based on Section 14(b) of the TRAI Act and that provision empowers the TDSAT to hear and decide appeals against any direction, decision or order of TRAI made under the Act. The Comptroller and Auditor General of India cannot review TRAI's decisions, which can be appealed to TDSAT, although TDSAT cannot compel TRAI to issue a specific regulation or guideline.

DIGITAL INDIA INITIATIVE¹⁸

Digital India turned into an initiative taken with the aid of using the Government of India for imparting high-pace net networks to rural regions. Digital India Mission turned into released with the aid of using PM Narendra Modi on 1st July 2015 as a beneficiary to different authorities schemes which includes Make in India, Bharatmala, Sagarmala, Startup India, BharatNet, and Standup India.

Digital India Mission is in particular targeted on 3 regions:

- 1) Providing virtual infrastructure as a supply of software to each citizen.
- 2) Governance and offerings on demand.
- 3) To appearance after the virtual empowerment of each citizen.

Digital India turned into set up with an imaginative and prescient of inclusive increase in regions of digital offerings, products, production, and task possibilities. Digital India ambitions to offer the much-wanted thrust to the 9 pillars of increase regions. Each of those regions is a

¹⁸ <https://digitalindia.gov.in/>

complicated programme in itself and cuts throughout a couple of Ministries and Departments. The 9 pillars of Digital India are given below:

- 1) Broadband Highways– This covers 3 sub additives, particularly Broadband for All – Rural, Broadband for All – Urban and National Information Infrastructure (NII).
- 2) Universal Access to Mobile Connectivity- This initiative makes a speciality of community penetration and filling the gaps in connectivity withinside the united states.
- 3) Public Internet Access Programme- The sub additives of Public Internet Access Programme are Common Services Centres (CSCs) and Post Offices as multi-carrier centres.
- 4) e-Governance: Reforming Government thru Technology- Government Process Re-engineering the usage of IT to simplify and make the authorities tactics extra green is important for transformation to make the shipping of presidency offerings extra powerful throughout diverse authorities domain names and consequently wishes to be applied with the aid of using all Ministries/ Departments.
- 5) e-Kranti – Electronic Delivery of Services- To enhance the shipping of public offerings and simplify the system of having access to them. In this regard, numerous e-governance projects were undertaken with the aid of using diverse State Governments and Central Ministries to herald an technology of e-Government. e-Governance in India has step by step advanced from the computerization of Government Departments to projects that encapsulate the finer factors of Governance, together with citizen centricity, carrier orientation and transparency.
- 6) Information for All- This pillar ambitions to make sure transparency and availability of dependable records generated with the aid of using the road ministries for use, reuse and redistribution for the humans of India.
- 7) Electronics Manufacturing- This pillar makes a speciality of selling electronics production within the country.
- 8) IT for Jobs- This pillar makes a speciality of imparting schooling to the youngsters within the competencies required for availing employment possibilities within side the

IT/ITES sector.

- 9) Early Harvest Programmes- This pillar includes a collection of various short-time period initiatives that have instant impact at the Indian virtual environment like IT platform for mass messaging, crowd Sourcing of e-Greetings, biometric attendance in the authorities offices, WI-FI in all universities etc. To recognize approximately different authorities schemes, applicants can discuss with the related article

Objectives of Digital India:-The motto of the Digital India Mission is 'Power to Empower'. There are 3 middle additives to the Digital India initiative. They are virtual infrastructure creation, virtual shipping of offerings, and virtual literacy. The main goals of this initiative are indexed below:

- a)To offer high-pace net in all gram panchayats.
- b)To offer clean get entry to to Common Service Centre (CSC) in all of the locality.
- c)Digital India is an initiative that mixes a massive quantity of thoughts and mind right into a single, complete imaginative and prescient in order that every of them is visible as a part of a bigger goal.
- d)The Digital India Programme additionally makes a speciality of restructuring many current schemes that may be applied in a synchronized manner.

Advantages of Digital India Mission Digital India Mission is an initiative that encompasses plans to attach the agricultural regions of the united states with high-pace net networks. Public Internet Access Programme is one a number of the 9 pillars of virtual India. On the platform of virtual adoption, India ranks among the pinnacle 2 nations globally and the virtual financial system of India is possibly to cross \$1 trillion with the aid of using the 12 months 2023. Some of the blessings of Digital India are:

- 1) There is a boom in digital transactions associated with e-governance.
- 2) An optical fiber community of 2, 74,246 km has linked over 1.15 lakh Gram Panchayats below the Bharat Net Programme.
- 3) A Common Service Center (CSC) is created below the National e-Governance Project

of the Indian authorities which affords get entry to for data and conversation technology (ICT). Through laptop and Internet get entry to, the CSCs offer multimedia content material associated with e-governance, education, health, telemedicine, entertainment, and different authorities and personal offerings.

- 4) Establishment of virtual villages along side well-prepared centers together with sun lighting, LED meeting unit, sanitary serviette manufacturing unit, and Wi-Fi choupal. Internet records is used as a first-rate device for the shipping of the offerings and the city net penetration has reached 64%.

ACHIEVEMENT OF TELECOM SECTOR DURING DIGITALIZATION CAMPAIGN:¹⁹

- 1) The innovations and the rapid expansion in telecommunications are creating a plethora of opportunities, boosting the Indian economy. The contribution of the telecom sector to the country's GDP increased from 6.1% in 2014 to 6.5% in 2019.
- 2) Broadband internet is generating new employment opportunities, particularly in rural and remote areas, enabling a large number of office-goers and employees to work from home



- 3) FDI Inflows into the telecom sector from 2014 to 2020 totalled US \$24.3 billion, improving the country's Balance of Payments position.
- 4) Spreading Knowledge: 400 Universities and nearly 19,851 colleges in the country are now connected by the IP-based cloud of BSNL. Over 250 courses are accessible online in Phase I of National Programme on Technology Enhanced Learning. More than 990 courses in various disciplines of science and engineering are scheduled to go online in

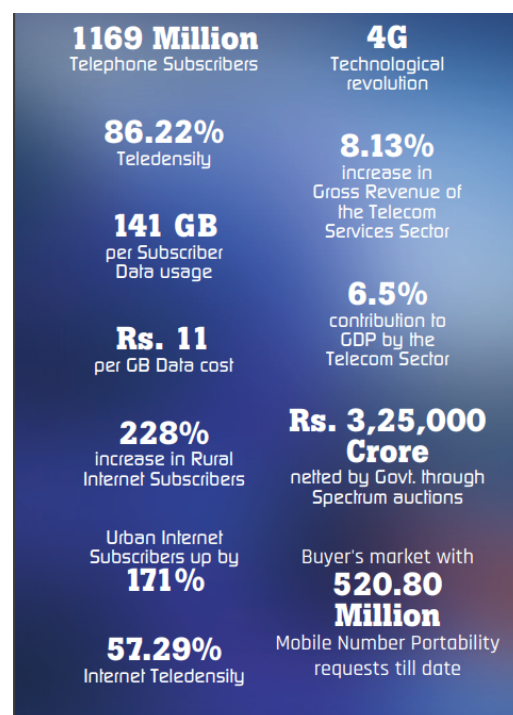
¹⁹ https://www.trai.gov.in/sites/default/files/ADC_31052021_1.pdf

Phase II. Online Education led to uninterrupted learning and prevented loss of education for students during the pandemic.

- 5) Revolutionising rural India:- Internet is playing a pivotal role in modernising Indian agriculture and improving the lives of Indian farmers. A multitude of mobile apps are improving the marketability of their farm produce by providing real-time market prices prevailing in Mandis and helping them sell their produce directly to buyers, eliminating middlemen.
- 6) Making healthcare accessible:- Development of electronic Healthcare Apps such as mHealth and Telemedicine services helped in fixing appointments and Doctor Consultations through video and audio, a boon during the pandemic.
- 7) The total subscribers (wireless and wireline) jumped from 922 million in 2014 to about 1169 million in 2020, a rise of 26.75%.
- 8) The total number of Broadband subscribers increased by almost 13 times, from 57 million in 2014 to about 726 million in 2020.
- 9) The overall tele-density increased from 74.50% in 2014 to 86.22% in 2020.
- 10) Data Tsunami: Per Subscriber Data Usage increased from 3 GB in 2014 to 141 GB in 2020, a seismic growth of 46 times since 2014.
- 11) Affordable Tariffs: The data tariffs have fallen steeply from Rs. 269 per GB in 2014 to around Rs. 11 per GB in 2020, a decrease by 25 times !
- 12) Our tariffs are one of the lowest in the world, enabled by mega telecom operators and intense competition among them.

13) Data Cost per GB (Tariff Rate) :-India has one of the cheapest tariff rates in the world and quality services at reasonable prices. The low tariff rates helped in increasing the internet teledensity in the country, aiding businesses and connecting the vast population, paving the way for growth and development of the economy.

14) Data Usage per Subscriber per Month in GB :- India outperforms many OECD countries. Increased data usage adds to revenues and further strengthens the telecom sector to leap forward as compared to other countries.



15) Digital Inclusion:- Total base of internet subscribers increased from a total of 238.71 million to 776.45 million, a rise of 225% ! . Rural internet subscribers increased from 92.18 million to 302.35 million, a massive 228% increase. Urban internet subscribers increased from 175.21 million to 474.11 million, an increase of 171%.

16)) Number of telephone (mobile and fixed) subscribers in rural areas jumped from 370.08 million to 524.39 million, a growth of 42%. In urban areas, the increase is from 551.96 million to 644.26 million, an increase of almost 17%.

17) The share of rural subscribers in total telephone subscribers increased from 40.14% to 44.87%.

18) The overall Teledensity in rural areas increased from 43.13% to 58.96%.

19) 4G LTE has brought about a technological revolution in the telecom industry and is fuelling a data boom in the country. With 4G LTE penetration, consumers are getting uninterrupted connectivity with amazing data speed, easy accessibility of Internet at lower cost and better voice quality making features like streaming media, video calling, etc., a reality.

20) India fares better when compared to the average teledensity of the Asia-Pacific and Arab countries. High internet teledensity is increasing the ease of doing business,

adding value to the services sector and contributing to the GDP, aiding India's transition from a developing to a developed country.

Wireless Teledensity			
Countries	2014	2019	% Growth
United States	111.56	129.01	16%
United Kingdom	119.93	118.37	-1%
Germany	122.2	128.36	5%
Australia	106.2	110.62	4%
France	101.92	110.61	9%
Canada	80.72	92.53	15%
India*	72.18	89.55	24.06%

TELECOM SECTOR DATA OF 2023²⁰

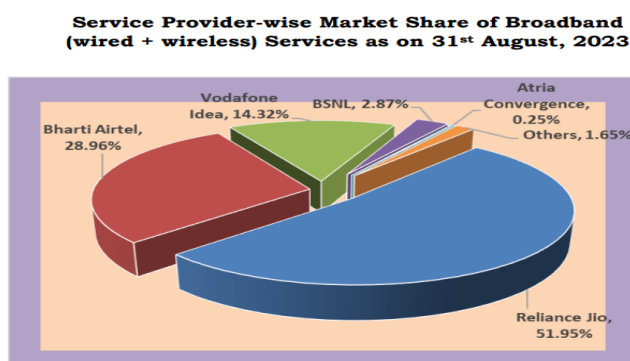
- 1) Number of active wireless subscribers in August, 2023 was 1043.38 million.
- 2) As per the information received from 1,087 operators in August, 2023 in comparison to 1,055 Operator in July 2023, the total Broadband Subscribers increased from 868.20 million at the end of July-23 to 876.53 million at the end of August-23 with a monthly growth rate of 0.96%. Segment-wise broadband subscribers and their monthly growth rates.

Table-1 : Overall Subscriber base and Tele-density

Particulars	Wireless	Wireline	Total (Wireless+Wireline)
Total Subscribers (Million)	1142.09	24.84	1166.93
Urban Subscribers (Million)	624.23	22.88	647.11
Rural Subscribers (Million)	517.86	1.96	519.82
Overall Tele-density	83.07%	1.81%	84.88%
Urban Tele-density	130.17%	4.77%	134.94%
Rural Tele-density	57.85%	0.22%	58.07%
Share of Urban Subscribers	54.66%	92.12%	55.45%
Share of Rural Subscribers	45.34%	7.88%	44.55%
No. of Internet Subscribers (Million)	797.61	27.27	824.89
No. of Broadband Subscribers (Million)	761.05	27.25	788.30

- 3) Top five service providers constituted 98.35% market share of the total broadband subscribers at the end of August-23. These service providers were Reliance Jio Infocomm Ltd 455.33 million, Bharti Airtel 253.86 million, Vodafone Idea 125.55 million, BSNL 25.12 million and Atria Convergence 2.19 million.

²⁰ <https://www.trai.gov.in/release-publication/reports/telecom-subscriptions-reports>



- 4) As on 31st August, 2023, the top five Wired Broadband Service providers were Reliance Jio Infocomm Ltd 9.59 million, Bharti Airtel 6.87 million, BSNL 3.71 million, Atria Convergence Technologies 2.19 million and Hathway Cable & Datacom 1.12 million.
- 5) As on 31st August, 2023, the top five Wireless Broadband Service providers were Reliance Jio Infocomm Ltd 445.73 million, Bharti Airtel 246.99 million, Vodafone Idea 125.54 million, BSNL 21.41 million and Intech Online Pvt. Ltd. 0.24 million.

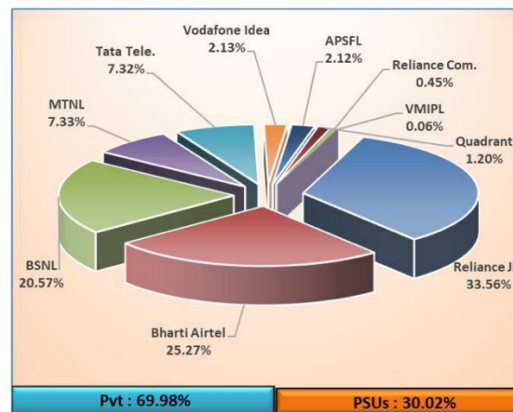
Reliance Jio Infocomm Ltd. v. Telecom Regulatory Authority of India (TRAI) (2016):-This case pertained to the interconnect usage charges (IUC) levied by telecom operators. It highlights the regulatory aspects of interconnection between different telecom networks.

- 6) **Wireline Subscribers** • Wireline subscribers increased from 30.61 million at the end of July-23 to 30.78 million at the end of August-23. Net increase in the wireline subscriber base was 0.17 million with a monthly growth rate of 0.56%. The share of urban and rural subscribers in total wireline subscribers were 91.24% and 8.76% respectively at the end of August, 2023.

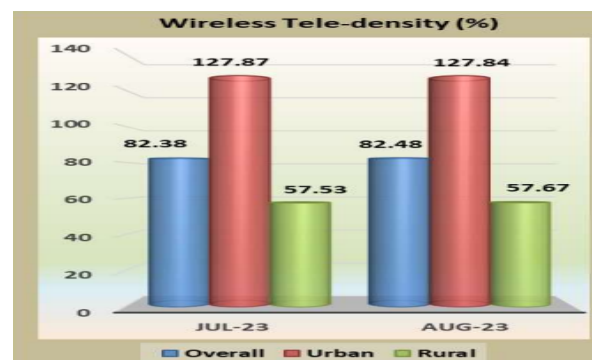
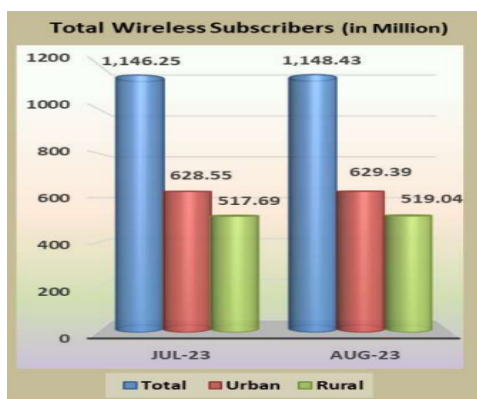
- The Overall Wireline Tele-density in India increased from 2.20% at the end of July-23 to 2.21% at the end of August-23. Urban and Rural Wireline Teledensity were 5.70% and 0.30% respectively during the same period.

- BSNL, MTNL and APSFL, the three PSU access service providers, held 30.02% of the wireline market share as on 31st August, 2023. Detailed statistics of wireline subscriber base.

**Access Service Provider-wise Market Share of Wireline Subscribers
as on 31st August, 2023**



- 7) Total wireless subscribers increased from 1,146.25 million at the end of July23, to 1,148.43 million at the end of August-23, thereby registering a monthly growth rate of 0.19%. Wireless subscription in urban areas increased from 628.55 million at the end of July-23 to 629.39 million at the end of August-23 and wireless subscription in rural areas also increased from 517.69 million to 519.04 million during the same period. Monthly growth rate of urban and rural wireless subscription was 0.13% and 0.26% respectively.
- 8) The Wireless Tele-density in India increased from 82.38% at the end of July23 to 82.48% at the end of August-23. The Urban Wireless Tele-density decreased from 127.87% at the end of July-23 to 127.84% at the end of August-23 however Rural Tele-density increased from 57.53% to 57.67% during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 54.80% and 45.20% respectively at the end of August-23. Detailed statistics of wireless subscriber base.



STEPS TAKEN UNDER DIGITAL INDIA ACT FOR TELECOM SECTOR²¹

Some of the major steps taken by the Modi government in the Indian telecom sector:

- 1) Digital India Initiative: - The Digital India campaign was launched to promote the use of digital technology and reduce the digital divide.
2. BharatNet Project: - The government's aim was to connect rural areas with high-speed internet under the BharatNet project, which improves digital infrastructure in remote areas.
3. National Digital Communication Policy (NDCP) 2018: - The government introduced a new policy to address various challenges in the telecommunications sector, focusing for example on broadband for all, 5G technology and internet of things applications.
4. Aadhaar-Mobile Link: - The government has tried to link mobile numbers with Aadhaar to improve security and simplify processes.
5. Frequency of auctions: - The government organized frequency auctions to allocate frequencies to telecommunications services, which supports the growth of mobile networks.
6. 5G Trials and Policy Framework: - The rules have been developed to facilitate the testing and deployment of 5G technology in India. Experiments have been started to study the characteristics of 5G networks.
7. FDI (Foreign Direct Investment) reforms: - To attract foreign investment in the telecommunications sector, reforms have been introduced that allow more direct investment.
8. Instructions for In-Flight Connection (IFC). - The flight received transfer instructions, which allows the passengers to use online services during the flight.
9. Telecom Regulatory Authority of India (TRAI) Reforms: - Telecom regulator TRAI has initiated various reforms to promote fair competition, protect consumer interests and ensure

²¹ <https://www.trai.gov.in/release-publication/reports/telecom-subscriptions-reports>

growth of the industry.

10. Ease of Doing Business:- In the telecommunications sector, efforts have been made to simplify regulations and ease of doing business. This includes measures to attract investment and promote innovation.

11. In the news:- The Union Government has approved various structural and procedural reforms in the telecommunications sector.

12. Key points Innovations include e.g. rationalization of adjusted gross revenue (AGR), Rationalization of bank guarantees, Rationalization of interest rates and abolition of fines, BG's waiver of the requirement to guarantee payments (in case of future auctions), Increase the frequency use period from 20 to 30 years (in future auctions), Permission to transfer frequencies after 10 years (in future auctions), Waiver of the spectrum usage fee charged for spectrum acquired in future spectrum auctions, 0.5% excess SUC removal from spectrum sharing; Allow 100 percent foreign direct investment (FDI) in the telecommunications sector under an automatic line subject to safeguards; Fixed time of spectrum auctions (usually the last quarter of each fiscal year), Licenses required since 1953. Customs declaration of wireless devices was replaced by self-declaration; Self-KYC authorization; e-KYC rate revised to just one rupee, Waiver of new KYC requirement when switching from prepaid to postpaid and vice versa; Replace paper customer acquisition forms with digital data storage, Facilitation of SACFA status for telecommunications towers; and meeting the liquidity requirements of service providers through a moratorium/delay.

13) 4G: 4G mobile phone coverage has reached 98% of the Indian population. This massive 4G deployment boosted economic activity across the country leading to economic growth and job creation.

14) 5G: For 5G, TSPs in India have been granted licenses to use and test applications for 5G technology.

15) Structural reforms

- Adjusted Gross Income Rationalization: Income other than telecommunications will be excluded from the definition of AGR going forward. Bank guarantees (BG)

rationalized:

- Huge discount on BG claims (80%) on license fee (LF) and other similar charges. There are no requirements for multiple BGs in the various Licensed Service Areas (LSAs) of the country. Instead, one BG will suffice. Interest rationalized / fines removed: From October 1, 2021, License Fee (LF) / Spectrum Usage Charge (SUC) will be payable on late payments at SBI MCLR with 2% interest instead of MCLR and 4%
- Interest is compounded annually, not monthly; the fine and delay were removed. In future auctions, BG does not have to guarantee partial payments. The industry has matured and the past practice of BG is no longer needed.
- Frequency Time: In future auctions, the frequency usage period was extended from 20 to 30 years. Frequencies are allowed to be transferred after 10 years of frequencies acquired in future auctions. Spectrum Usage Charge (SUC) will not be charged for spectrum acquired in future spectrum auctions. Frequency division recommends: An additional 0.5% spectrum sharing SUC was removed. Foreign Direct Investment Reforms.
- To encourage investment, 100% foreign direct investment (FDI) is allowed in the telecom sector on an automatic route. All safeguards apply.

16) Procedural reforms Fixed auction calendar

- frequency of auctions usually held in the last quarter of each fiscal year. Ease of administration is promoted: license requirements for wireless equipment were removed under the 1953 Customs Declaration.
- Replaced by self-declaration. Know Your Customer (KYC) Reforms: Self-KYC (app-based) enabled. E-KYC rate has changed to just one rupee. Switching from prepaid to postpaid and vice versa does not require a new KYC.

17) Importance of reforms Investment and Employment:

It opens the way to large-scale investment in the telecommunications sector. Investment

means employment - more investment, more employment.

Healthy Competition: This is a welcome step to strengthen the industry and ensure the survival of players to maintain healthy competition for the benefit of customers.

Cash flow and relief: These measures are expected to ease the cash flow problems faced by some industry players and provide relief to companies like Vodafone Idea, which have to pay thousands of crores of rupees in past due taxes.

Reduction in NPAs: The telecom package will come as a relief to banks as it will reduce the immediate possibility of default by vulnerable operators. This would help stabilize and reduce non-performing assets in the industry.

Increasing repayments: The measures announced by the state will help companies save money and significantly improve the probability of repayment for at least the next 3-4 years.

UPCOMING STEPS OF THE GOVERNMENT

- 1) **Draft Indian Telecommunication Bill, 2022:-** Bill stands out The Bill seeks to replace the Indian Telegraph Act, 1885, the Indian Wireless Telegraph Act, 1933 and the Telegraph Wires (Legal Property) Act, 1950. The maintenance of the telecommunications network and the provision of telecommunications services are based on an activity license. Telecom services also include broadcasting, OTT, M2M and telecom services. Frequencies can be allocated through an auction, administrative procedure or other mechanism decided by the central government. Central management can intercept, monitor or block messages between two or more people or message categories.

Remedial measures can be implemented if it is necessary or appropriate due to a crisis or situation threatening public security and it is in the interest of national security, public order or crime prevention. Television services may be suspended for similar reasons. The draft law provides a mechanism by which the right-of-way can be used for the construction of telecommunications infrastructure.

Key questions and analysis

The draft law does not include the procedural guarantees specified by the Supreme Court for the protection of privacy in case of interception of communications. The bill may violate the requirements for periodic review and authorization by a senior official. The bill could allow mass surveillance. Such measures may violate the fundamental right to privacy. The state has the right to grant operating licenses for the telecommunications network and services. Aspects related to network and service regulation may differ. This raises the question of whether they should be regulated in the same way. According to the bill, TRAI may not have any role in telecom licensing matters. The question is whether it matters. In cases of wrongdoing by companies, the bill does not protect employees due to ignorance or carelessness. It also does not hold the director, manager or other officers responsible for any compromise or omission. Some definitions may need to be revised. For example, cell phones would fall under the definition of wireless devices. This would mean that prior permission is required to own a mobile phone.

- 2) **DIGITAL INDIA BILL 2023:-** The recently announced Digital India Act 2023 (DIA) is an important step towards creating a future-proof legal framework for the country's growing digital ecosystem. This comes at a crucial time when India's digital transformation is in full swing. This proactive move by the Ministry of Electronics and Information Technology (MeitY) is in line with India's ambitious Digital India initiative. What is Digital India Act, 2023?

Purpose: Create evolving rules that match changing trends in technology and can be updated to meet the needs of the country's digital infrastructure. Provides an easily accessible judicial mechanism for online civil and criminal offenses. Provide citizens with timely redress, resolve cyber disputes and enforce the rule of law on the Internet. Create a legislative framework that considers holistic governance principles to ensure compliance. Main components: Open Internet: According to the Government of India, an open Internet should have choice, competition, internet diversity, fair market access, ease of doing business and ease of compliance for start-ups. These characteristics prevent the concentration of power and goalkeeping. Internet safety and trust: The law focuses on protecting users from cyber threats - such as revenge porn, defamation and cyberbullying - both online and on the dark web. It aims to promote digital rights such

as the right to be forgotten and the right to digital inheritance (the transfer of digital assets to named beneficiaries), protect minors and their data from addictive technology, and moderate fake news on social media platforms. Responsible Internet: The law seeks to increase the accountability of Internet users and functions by establishing legal mechanisms to resolve complaints, protect constitutional rights in cyber estates, algorithm transparency and periodic risk assessments, and disclosure of information collected by brokers.

Main features: The DIA replaces the two-decade-old Information Technology Act of 2000 (IT Act), which no longer adequately meets the challenges and opportunities of the dynamic growth of the Internet and new technologies. The DIA framework focuses on key elements such as network security, trust and accountability, ensuring an open internet and regulating new age technologies such as artificial intelligence and blockchain. The DIA will work in conjunction with other relevant laws and policies, including the Digital Personal Data Protection Act, Digital India Rules, National Data Governance Policy and amendments to the Indian Penal Code.

DIA inspections; a principle that protects online platforms such as Twitter and Facebook from liability for user-generated content. DIA imposes strict Know Your Customer (KYC) requirements for retail apparel and related criminal penalties and fines. DIA is aligned with Digital India 2026, which aims to create a trillion dollar digital economy and shape the future of global technologies.

- 3) **Personal Data Protection Act 2023:-** Bill stands out The bill deals with the processing of digital personal data in India, where data is collected online or collected offline and digitized. This also applies to such processing outside India if it is to supply goods or services in India. Personal data can be processed for legal purposes only with the consent of the individual. Consent may not be required for certain lawful uses, such as the voluntary sharing of an individual's data or government processing for permits, licenses, benefits and services. Data controllers are required to maintain data accuracy, keep data secure and delete data when their purpose has been achieved. The Bill gives individuals certain rights, including the right to access information, request correction and deletion, and complaints. The National Council can exempt state institutions from the application of legal provisions for certain reasons, such as national security, public

order and crime prevention. The central government will set up the Data Protection Board of India to deal with non-compliance of the bill.

Key questions and analysis:-Exceptions to data processing granted by the state, for example for reasons related to national security, may lead to the need for data collection, processing and storage. This may violate the fundamental right to privacy. The bill does not regulate the risks of damage associated with the processing of personal data. The bill does not give the data controller the right to data portability and the right to be forgotten. The bill allows the transfer of personal data outside India, except to countries notified by the government. This mechanism may not ensure adequate assessment of data protection standards in countries where the transfer of personal data is permitted. Members of the Data Protection Board of India are appointed for a period of two years and are eligible for re-appointment. A short term with the possibility of re-appointment can affect the independent functioning of the board.

Justice K.S. Puttaswamy (Retd.) & Anr. vs. Union of India & Ors²².- This case is the cornerstone of the 'Right to Privacy' jurisprudence in India. The nine Judge Bench in this case unanimously reaffirmed the right to privacy as a fundamental right under the Constitution of India. The Court held that the right to privacy was integral to freedoms guaranteed across fundamental rights, and was an intrinsic aspect of dignity, autonomy and liberty.

SUGGESTIONS:-

- 1) Ease of Doing Business Initiatives
- 2) Removed Entry Barriers and Cyber Security measures.
- 3) Providing an efficient Regulatory framework
- 4) Improved yields... reduced costs.
- 5) Telemedicine... taking healthcare far and wide
- 6) Strategic Initiatives and Spectrum Management

²² Justice K.S. Puttaswamy (Retd.) & Anr. vs. Union of India & Ors, 2017 - India

- 7) Framework for futuristic Telecom Services
- 8) Empowering the Consumers & Public-Private Partnerships (PPPs)
- 9) Removing non-telecom income from the definition of AGR and abolishing penalties is a much-needed change that has been made.
- 10) The government must step in to set sustainable telecommunications rates, as it did to protect competition in civil aviation.
- 11) Additional efforts are needed to address major losses on the balance sheet of most stakeholders.
- 12) To lead innovation in the next phase of technology development, the Department of Telecommunications has established a 6G Technology Research Group.
- 13) The government should work on the recommendations received from the Telecom Regulatory Authority of India (TRAI) on holding the International Mobile Telecommunications (IMT) / 5G spectrum auction in India.

CONCLUSION

So, Yes the Digital India Initiative have a positive impact on the Telecom Sector based on the above data analysis. Also government is trying to ensure the Data privacy and safety for the customers. Although the present Regulations are not sufficient as the need of the time is increasing day by day. So the Government should ensure the regular checkup the present need of the Time and make the necessary laws. The Challenges are the real and on ground implementation of the policies and initiative. Government should work for the proper implementation of the regulations and policies.

The telecommunication sector has yet to invest in infrastructure and can follow the international principle of global development because 5G and 6G, IOT AND Satellite Communication are the need of the hour. Therefore, there must be an acceptable frequency policy that is required for inspection. As the interconnection of telecommunications and the Internet becomes more complex, information and communication technologies can be a source of sophisticated abuse that must also be addressed. Next, the focus is on TRAI, which was an

area caught in a web of political obstacles. Regulators must be open and accountable to customers, and the focus of the regulator is to protect, promote consumer choice and quality. The frequencies of the current operators are still insufficient. The online marketing segment is still a challenging area.

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