

Project report
on
Telecom Crisis in India

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CERTIFICATE

This is to certify that, Roll No: EMBA/2k18/522, student of Masters of Business Administration (Executive 2018-2020) at Delhi Technological University, Delhi has accomplished the project titled “Telecom Crisis in India” under my guidance and to the best of my knowledge completed the project successfully, for the fulfilment of the course Executive MBA.

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DECLARATION

I hereby declare that the submission is my own and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher except where due acknowledgement has been made in the text.

Neha Yadav

(Roll No:- EMBA/2k18/522)

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I, wish to show my deep sense of gratitude to my project guide & mentor Mr. Chandan Sharma, for his support, invaluable guidance & suggestions throughout the course of project and for providing all the necessary information during the project work.

Neha Yadav

(Roll No:- EMBA/2k18/522)

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ABSTRACT

India is a vast country with enormous population. There is a strong relationship between telecommunication infrastructure and enhancement of economic activities in all industrialized and developing countries. This project report focuses on Telecom Crisis in India. The study aims to investigate and evaluate the impact of Telecom Crisis in India. This study reports new results in the field of buying behavior of consumers' response. A survey of 65 respondents were taken from Delhi/NCR to analyse the Telecom Crisis in India.

Our analysis found that two main reasons for telecom mess in this country is indiscriminate issue of licences by govt without studying consumption capacity and indiscriminate bidding by operators to loot the public.

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Chapter-1

Introduction

India is a vast country with enormous population. There is a strong relationship between telecommunication infrastructure and enhancement of economic activities in all industrialized and developing countries (Dutta, 2001). Countries with open communication and financial sectors are found to attain 1.5 times more economic growth (Mattoo, Rathindran, & Subramanian, 2006). The investments in the telecommunication sector in developing countries were inadequate and researchers suggested that it had to be increased in order to attain economic growth (Saunders)

1.1 Background

Warford, & Wellenius, 1994). The communication sector is now so important that it is considered to be the part of the basic infrastructure for individual and business requirements. This is because of the network externalities due to which the value of the services increases with more number of users (Kateja & Jha, 2008). Indian Telecom Industry has provided spectacular economic benefits. Directly it has increased the GDP of the country, earnings of the government and employment to the Indian citizens. Apart from these there are benefits which have been obtained indirectly. Dissemination of information is the most important input of the improved telecommunication in Indian economy. As the information collection became less expensive in terms of time and money, cost of business eventually came down. There has been drastic reduction in transaction costs. Advancement of telecommunication has fostered developments in the banking, financial services, digital commerce, education and health services.

Scenario of Telecommunication sector in Pre-Liberalisation era of India

In India, prior to 1985 the Ministry of Post and Telegraph were responsible for the developments of the services of telegrams and telexes. At this time, the other countries of the world were already accepting the new wave of digital telephony and facsimile machines. In

1985 the Government separated the post and telecommunications in two different departments (Gopika.G.G, 2014). Department of Telecommunication (DoT) provided domestic and long distance telephone services. The telecommunication sector of India was regulated by the Government.

This included the telephone and telex services provided by MTNL to Delhi and Mumbai and international long distance (ILD) service by VSNL. All other telecommunication services to the entire country were the responsibility of Department of Telecommunication. In the early planning periods the telecommunication sectors was not prioritized. It was only in the Seventh Five year Plan, the sector was considered important and was allotted funds. Until late 1990s the Indian telecom industry had no private players. Government of India held a monopoly and it was a small sized market (TRAI, 2012).

Subscriber Trunk Dialing (STD) Services & Public call offices (PCO)

STD service started in India in 1960 (Saran). In 1976 International Subscriber Dialing Services were available amid Mumbai and London. All this was done by the public sector. A major change in the telecom sector came in 1986 with the inclusion of a private telecom equipment manufacturing company Anjaleem who were responsible for designing, manufacturing and distribution of PCOs in India. The objective of DoT was to make communication through telephone accessible with Anjaleem's "Subscriber end Metering" telecom product Intellitrac. MTNL recorded 197,000 PCOs by 1994. From 300 stations in 1985, the STD /ISD network reached 850 cities and each city was connected to 160 countries (Mehta, 2009). However there were challenges of call drops during that period.

The calls got through 2/3 trials in non-peak hours. People preferred PCOs over their STD lines. The tariffs were on the higher side. Quarter rate ISD was Rs. 60 per minute. There was huge demand of telephones which could not be met by the department. Another major hurdle for STD/ISD lines were unavailability of itemized bills. There was fear of large bill amount due to internal abuse (Mehta, 2009). Though the Subscriber End Market was privatized, modern technology to take care of market need was yet to arrive. However, inclusion of a single private company Anjaleem strengthened the path of privatization and liberalization of Indian Telecom Industry.

Liberalization in India

In India the dawn of novel economic era started in the year 1991. With the proclamation of the New Economic Policy, the economy was free up, opened to private companies and world-wide commerce was cheered. Until now different sectors of Indian economy experienced the monopoly of the Government of India but now they were opened to the private competition. This changed the scenario of the sectors drastically. Telecommunication was one sector of Indian economy which was thoroughly liberalized and almost all wings of the sector were opened to private participation. The liberalization of the Indian Telecom Industry is a success story that is recognized at global forums. The evolution of this sector has influenced other sectors of the economy to contribute to the overall progress of the nation.

1.2 Problem Statement

Above all the growth of India in this particular era has been fueled by telecommunication sector. The telecom sector has to be center if India wants to become entrepreneurial superstar. But the main question is why telecom industry right now is in so deep crisis and it looks like that Indian govt. instead of boosting telecom sector and making sure it remains competitive and healthy is also pushing the telecom commerce into debt burden and maybe to ultimate bankruptcy. The present study will explore the telecom crisis in India.

Chapter-2

Research Methodology

The methodology chapter of this work deals with the details of the population under study, the research design, measurement scales used for data collection, the statistical tests used to draw various implications of the study. For this study we have used mixed methodology.

2.1 Objectives

- To know the recent telecom crisis in India
- To understand the telecommunications system in India
- To know the impact of recent telecom crisis on Indian economy.

2.2 Data Collection

Primary and Secondary data was used in this study.

Sample Size-65 peoples

2.3 Data Analysis

The data will be collected from secondary resources using various methods and techniques and then will, organized and analysed. The major findings was summarized and presented using descriptive statistical tools by using T-Test.

2.4 Scope of the Study

As this work give valuable findings and contribution from both practical and theoretical point of view it will help students, general public and companies to get an insight about the crisis and possible suggestions to implement.

2.5 Hypothesis

H1 The Process and policies factors of Telecom Regulatory of India is one of the reasons for telecom crisis in India.

H2 The framework of Telecom Regulatory of India is not clear and pragmatic and is one of the reasons for telecom crisis in India.

Chapter-3

Literature Review

The term “reform” means many things to many people but some of the mostly used and accepted interpretations according American Heritage Dictionary, 2000.

Reforms are the need of the hour, in every area of our society starting from reforms in political scenario, economic scenario, infrastructure, etc, as everything has to change according to the situation and not continue as it was always. This is the same scenario in all parts of the world, including India.

Arvind Panagariya (2002) while enumerating the accomplishments of Indian economic reforms as well as the list of things yet to be achieved when he said Indian reforms continued in a stop-go fashion.

The reforms in our country have been said to be crisis driven which though has been beneficial it is always better to have reforms which are consensus driven for the betterment and general good of the public rather than wait for the crises to happen (Dr. Vijay I. Kelkar, 2001).

The telecommunication reforms which fall under the meso-economic reforms i.e. the sector specific reforms also to some extent followed the similar pattern. These reforms were initiated due to the sorry picture of the telecommunication sector in India.

Pre Reform Era in the Indian telecommunications sector:

The pre reform era in Indian telecommunications did not present a very encouraging picture as it was characterized by low tele-density of 0.6 per 100 population prior to 1990's (source: DOT), monopolization of telecommunications services infrastructure and equipment by the government till 1980's and high call charges (R.U. S. Prasad, 2008). The telecom service was treated as a luxury and not as a necessity; the government funds were insufficient to satisfy the ever growing demand for telecommunication services.

The following points enumerate the picture of telecommunication services in India, before the reform process actually caught up (listed out by R.U.S. Prasad, 2008)

- Telecommunications services in India lagged even the developing countries in its performance,
- Tele-density in India was 0.8 per hundred in 2001
- High cost for local, long-distance and international calls when compared to others.
- Low customer satisfaction (long waiting period for phone services)
- Rate of growth of GDP from Telecom was an average of 6.3% per annum during 1980-1 to 1991-2 (Arvind Virmani, 2014).

Lack of competition or private operators in the telecom sector in India, was a very distinguishing feature in this era,

- Though MTNL and VSNL were setup as 100% government owned corporations in 1986 distinct from BSNL, but they still were monopolies in their respective areas.
- There was no operational license framework for private operators and for foreign investment in telecom industry.

The regulatory and adjudication mechanism in place was a weak one as the

- Telecom commission was set up only in 1989
- There was no independent regulatory body for telecom sector.
- There was no adjudication framework other than courts.

Crisis in Telecom Sector as listed by (Singh, 2017)

- Very little experience with management of a liberalized sector led to lack of confidence in success of these policies in the telecom sector.
- Entrenched trade-unions in the telecom sector saw this as curtailing their bargaining power and opposed these reforms.
- Bureaucratic processes and public sector officers saw these reforms as reducing their administrative powers and diminishing their role in the operation of telecom sector,

therefore they were not very much in favour of these changes taking place in the telecommunication sector.

- Some technocrats within telecom expressed concern about high cost involved in upgrading telecom infrastructure and reservations in regard to success of liberalization policy.
- Based on the existing telecom situation, people expected that tariff to end customer will be high and not sustainable as they thought the private operators would not be concerned for the general public but would concentrate on their own gains, if telecom sector was to be liberalized and privatization was to be introduced.
- Expected prolonged legal battles among various parties i.e. those not satisfied with the implementation of new telecom policies and legislations (private operators, government officials, consumers etc).

The service providers conduct their operations based on the licenses issued for the provision of their services. Process for awarding license was based on bid amount, rather than on financial or technical abilities of the bidder. Given the lack of entrepreneurial experience in Telecom, there were excessively high bids in many circles, as the Telecom sector had been reserved for the government by law. As a result many private projects were judged by potential lenders as financially un-viable and many companies failed to setup sustainable operations, to make these operations more viable Government changed one-time license fees payment to a percentage of revenue, but there continued to be a lack of transparency in policy decisions, licensing terms and weak regulatory regime (Arvind Virmani, 2004).

Formation of Bharat Sanchar Nigam Limited (BSNL)

Based on the reference made in NTP-99 Department of Telecommunication was duly restructured in order to separate the functions of policymaking, planning, licensing and rendering of telecom services, with the former being handled by department of telecommunications and the latter being handed over to the corporatized service wing of DOT i.e., Bharat Sanchar Nigam Limited (BSNL) in 2000.

Unified Access licensing (UASL):

Unified Access licensing (UASL) regime was introduced as opposed to separate licenses for basic and mobile services in 2003. Under this, operators were free to provide, within their area of operation, services, which cover collection, carriage, transmission and delivery of voice and/or non-voice messages over Licensees network by deploying circuit, and/or packet switched equipment.

From the usage of USOF leaves a lot wanting as depicted in the above table- 2.1, as out of the total funds collected till 2014 only around 32 % have been utilized. This leaves a lot for asking with the rural tele-density being 41.02% in 2013 which is far behind urban tele-density 146.96% in 2013 and many areas lacking proper communication connectivity in India it would do a world of good if the funds were aptly utilized.

The NLD services were offered only by the government controlled incumbent operator BSNL at the beginning of this decade and with the NLD services being liberalized the market was opened for the private companies. The pioneer in the private operators entering this field was Bharti, which was accorded the license in the year 2001 and started operations in 2002. It was followed by Reliance and VSNL which received license in 2002 and were functional by 2003. The scenario of competition became much keener with the government reducing the entry fee from Rs. 100 crores to Rs. 2.5 crores in the year 2005. 12 licenses were issued in 2006 itself making the competition much stiffer, with 4 being issued in 2007, 6 in 2008, about 3 in 2009, one each in 2010, 12 and 13 bringing the finally tally to 31 NLD operators out of a total of 34 as 3 licenses were surrendered. (Mahato, 2016)

The early entrants (competitors) in NLD services Bharti, Reliance, VSNL received their licenses between 2001-02 and 2002-03. BSNL who had the benefit of being the incumbent in NLD services was the market leader from the advent of competition in 2002-03 to 2007-08 but from 2008-09 onwards that coveted position was taken over by Bharti a private player emerging as the market leader. The top three positions in the NLD market was continuously held by the three companies BSNL, Bharti and reliance. The total revenue in this sector continuously showed an decrease with the exception of 2013-14 and 2016-77 during which phase the competition which brought down the tariff rates of the NLD services but the increase in the usage was not sufficient to compensate for there duction in the tariff. The reduction in tariff due to the introduction of competition in NLD segment has gone down very well with

the consumers, as it has drastically brought down the call rates of long distance domestic calls over the decade.(Pati 2016)

Dr.Nehaluddin Ahmad, (2012) The ILD market was a government monopoly with VSNL being the incumbent in the beginning of the century. The initial licenses were issued to 3 companies in 2002 bringing the number of ILD service operators to 4. There was a gradual entry of more and more players into the ILD market starting from 2002 and at present 4 ILD service providers are operating in the Indian telecom market. A major development in this category of service was the privatization of the incumbent state operator for ILD, Videsh Sanchar Nigam Limited which was privatized in 2002, with the Tata Group acquiring a controlling stake in the company. Many of these firms are also offering international connectivity services to cater to all corporate segments.

Tata Communications (erstwhile VSNL) started out as the market leader and continues to do so in the ILD market. The introduction of competition resulted in the much awaited reduction in ILD tariff (by 40%) and increase in the service usage in total minutes (from 3,120 million minutes to 3,700 million minutes) (V&D, 2004) but the increase in the usage of the service was not sufficient to compensate the same fall in tariff therefore the initial opening of the ILD market saw the fall in the total revenues.

Due to lower prices Voice over Internet protocol (VOIP) increased at a brisk pace. VSNL and Bharati were the two main players in the international connectivity market, which was growing at 65% mainly due to the Business Process Outsourcing (BPO) boom (Subhashish Gupta, 2017).

The price at which interconnection is offered is said to be at the heart of defining competition in a multiple network environment, Therefore the interconnection norms play a significant role during the liberalization of telecom services. And especially when the incumbent holds a dominant position regulation of interconnection terms becomes necessary so as to create a level playing field because the incumbent has no incentive to permit interconnection. In order to avoid restrictive pricing of interconnection either to discourage competition or to earn high profits by the incumbent the regulator has to play a significant role. (McCarthy Tetraault, 2011).

Chapter-4

Telecom Sector Crisis

Telecom sector is under stress due to unhealthy competition among service providers and inefficiency of government owned BSNL. An individual is greedy to become monopoly in telecom sector so that other companies will shut down and finally he can dictate tariff to public.

Healthy competition is necessary to maintain quality of services in any sector.

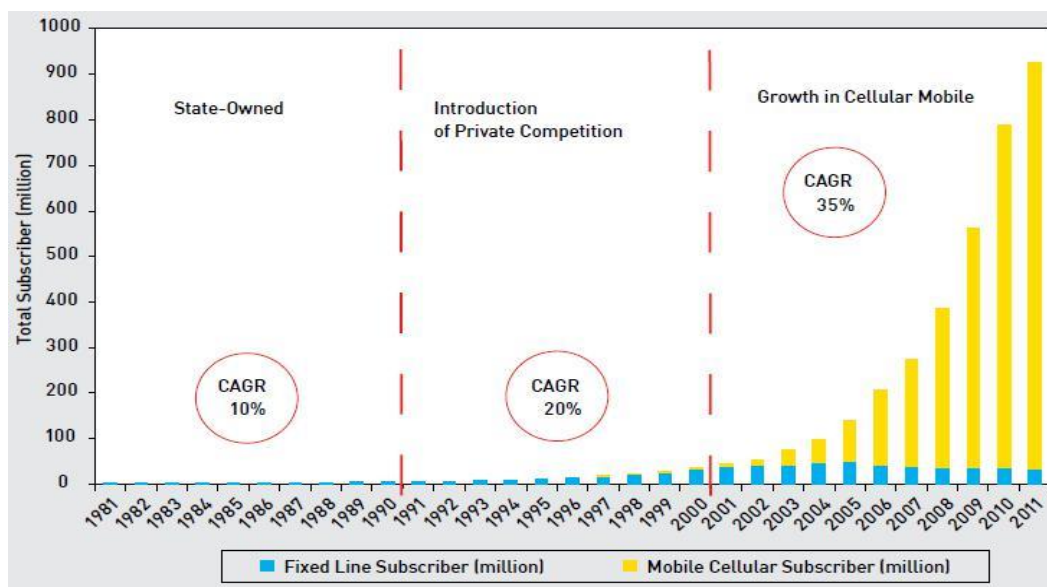
4.1 Telecommunication sector post LPG & Role of Private Sector

The then government realized the importance of telecommunication in the economy. After the announcement of New Economic Policy in the year 1991, the telecom equipment manufacturing was delicensed. The government for telephone exchange monopolized telecom sector allowed the private telecom companies to build up switches (Ghosh S. , 2013). At this point many manufacturing units were set up in India. Telecom equipments used for network expansion were produced within the country. Following this, in 1992 the value added services (VAS) were open to the private sectors who could now offer paging, cellular mobile and value added services to the Indian consumers.

The next major change in the telecom industry came with the New Telecom Policy in the year 1994 which marked the clear aim of the govt. to liberalize the sector and its objective of providing world class telecom facility to its citizen. The new policy tried to curb the setback of the licensing process and other issues. The policies mentioned high objectives and it was realized that to achieve them the resources required would be insufficient without the private sector.

This opened up all segments of the telecom industry to the private players from selective privatization. In addition to this it also mentioned the strengthening of regulatory regime and restructuring of departmental telecom services. As the private sector was allowed to operate in the sector it became essential to have an autonomous regulatory authority. (TRAI, 2012)

Figure 1: Telephone Subscribers in India, 1981-2011 (million)



Source: (TRAI, Telecom Sector in India)

Wireline and Wireless communication: At present, there are 933.02 million telephone subscribers in India. Out of these 904.52 million are wireless telephone connections (TRAI, Annual Report, 2014). The private sector holds the majority share of 87.13% in the wireless connection in 2014. The share of private sector has increased over the years.

Table 1: Percentage Share of Wireless Subscription

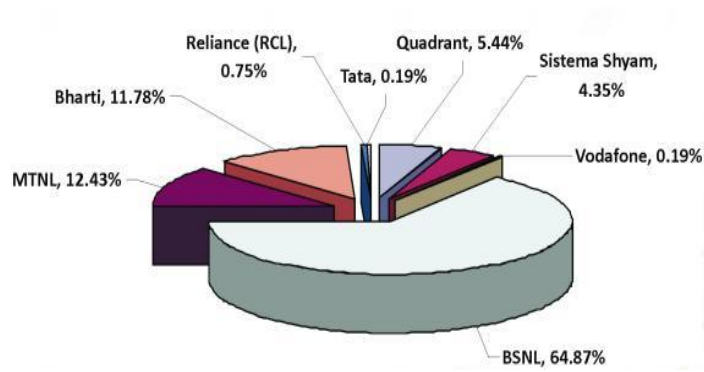
Item	At the end of March				
	2011	2012	2013	2014	
%	Wireless	95.90	96.62	96.64	96.95
	Public	14.89	13.69	14.49	12.87
Share	Private	85.11	86.31	85.51	87.13

Source: (TRAI, Annual Report, 2014)

Internet: By the end of March 2014, the total internet subscribers were 251.59 million. This includes the broadband and narrowband connection. 18.50 million subscribers accessed internet through the wired lines, rest accessed through wireless connections of fixed wireless (Wi fi, Wi Max, Radio, VSAT) and mobile wireless (Phone and dongle). (TRAI, Annual Report, 2014)

Prior to liberalization, Indian telecom sector was government monopolized. However, with the opening up of the industry to the private sector has changed the scenario altogether. In the wireline sector, the majority of the market share is with the public sector enterprises BSNL and MTNL followed by the private telecom service provider.

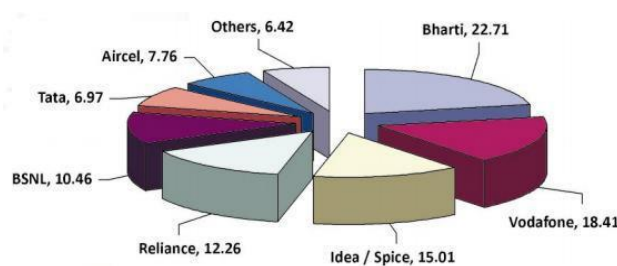
Figure 2: Market Share (%) of Wireline Service Provider as on 31st March, 2014



Source: TRAI Annual Report, 2013-14

However on the other side, the majority of the market share for the wireless services is with the private enterprises. Bharti is the market leader with 22% market share. Penetration of the wireless services has been phenomenal for the private service providers.

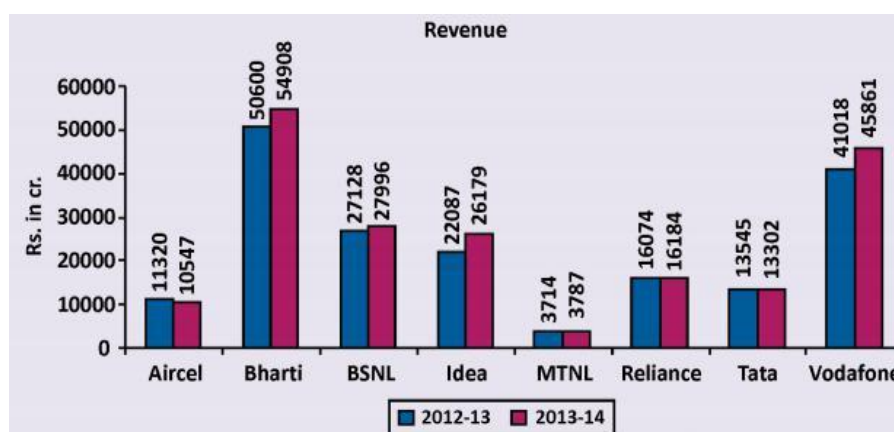
Figure 3: Market Share (%) of wireless service provider as on 31st March, 2014



Source: TRAI Annual Report, 2013-14

The network of PCO (Public call offices) and VPT (Village Public Telephone) has widened post the liberalization. The private operators have taken active action in this segment also. There are around 9.5 lakh PCOs and 5.8 lakh VPTs in the country at present. The revenue from the telecom services have been growing steadily. Private sector has major contribution in overall revenue.

Figure 4: Revenue of Major Access Telecom Service Provider



Source: TRAI Annual Report, 2014

The penetration of telecom services is indicated by tele-density, which is number of telephones per 100 populations. The tele-density of the country is reported to be 75.23% at the end of March 2014 (TRAI, Annual Report, 2014).

Table 3: Teledensity

Item	At the End of March				
	2016	2017	2018	2019	
Tele-density					
(Telephones	Overall	70.89	78.66	73.32	75.23
per 100	Rural	33.83	39.26	41.05	44.01
persons)	Urban	156.93	169.17	146.64	145.46

Source: TRAI Annual Report, 2018-19

The urban and rural teledensity of India during the same period is reported to be 145.46% and 44.01% respectively.

Foreign Direct Investment has been warmly invited for the telecom industry. The sector is attracting 74% to 100% FDI in various segments. Indian telecom industry has attracted Rs 58,782 crore of FDI in 13 years (PTI, 2013). Many private companies have set up their manufacturing facilities in India. Manufacturing of mobile handset makes the largest share of telecom manufacturing. The industry is experiencing the entry of many players both in manufacturing and services. However this has led to fierce competition and cut throat pricing. In order to increase customer base the service providers slashed the call charges as well as data usage charges. This made the telecom services affordable to most Indians.

Telecom sector has been one of the largest recruiter of the country in the last ten years. In the coming years it is expected to create more jobs for the rural market and internet penetration. This sector opened up opportunities for skilled technicians, engineers, installation and maintenance service providers, sales, marketing and HR.

4.2 Telecom Policies

The heralding of the telecommunication reforms in India basically revolutionized the telecom sector. These reforms have been divided into three phases, The first wave of reforms took place in the 1980's; the second phase started off in the last decade of the previous century i.e. in the early 1990's and the third phase of reforms started in the late 1990's nineties with the announcement of the New Telecom policy in 1999 and are continuing till date. The reforms which have transformed the telecom sector.

Significance of the Telecom Sector

- Telecom sector forms a key part of the infrastructure of any economy as it provides Information and Communication Technology.
- Services sector forms the lion's share of India's economy, the whole services sector heavily relies on ICT.

- It plays the role of key enabler in several welfare schemes related to health, education, agriculture, transport, energy and financial inclusion.
- Apart from it, the Telecom sector provides these services in a cost-effective and environment-friendly way.

4.3 Issues and Challenges of Telecom Sector

The telecom sector in India is on the brink of collapse. This crisis could spill on to the banking system if the telecom operators fail to repay their debt. It could add on to the Non-performing assets (NPAs) of the banks. This article explains everything about the distress in the telecom sector.

Why is the crisis in the telecom sector suddenly in the news?

It is because of the recent Supreme Court verdict on 24th October. It upheld the definition of 'Adjusted gross revenue'(AGR) as interpreted by the Government.

(As per the telecom industry, the AGR should include the revenue from core telecom operations only. As per the Government, the AGR should include the revenue from both core and non-core operations.)

The definition of AGR is important as it is the basis for calculating the two charges levied on the Telecom operators by the Government- license fee and spectrum usage charges. (License fees is 8 % of AGR and Spectrum usage charges is 3-5 % of AGR)

The Supreme Court upheld the definition of the AGR by the Government, so the telecom operators have to pay Rs.1.4 lakh crores to the Government within 3 months. It places a lot of burden on the already distressed telecom sector.

The definition of AGR has been under litigation for 14 years. So, a relatively smaller amount of Rs.23189 crores has turned into a massive sum of Rs.1.4 lakh crores. This amount includes the basic license fees and spectrum usage charges due, interest on the basic dues not paid, penalties on delayed payment and interest on penalties not paid. (License fees due- Rs.92640 crores; SUC due- Rs.46000 crores. Total- Rs.1.4 lakh crores)

This total amount of Rs.1.4 lakh crores is owed by 15 operators, but Telecom has consolidated over the years. Only 4 players are currently operational- Bharti Airtel, Vodafone Idea, Reliance Jio and BSNL/ MTNL.

A significant proportion of the amount is owed by Airtel and Vodafone, as Jio is a new entrant.

This decision is a blow to the debt-laden industry.

Why is the Telecom sector saddled with debt?

There are two major reasons specific to the Telecom sector-

1. **Cancellation of 2G licenses**– We know that in the year 2007, the Indian Government awarded 122 telecom licenses (with bundled 2G spectrum), without conducting auctions. The licenses were awarded on ‘first-come, first-serve’ basis with prices discovered in 2001. This was the genesis of the 2G scam with the Government favouring some players. In the year 2012, the Supreme Court arbitrarily cancelled all the licenses and ordered fresh auctions. About 10 mobile operators had to shut down operations overnight after investing billions of dollars. The Supreme Court should have gone after the people involved in the scam, rather than arbitrarily cancelling all licenses.
2. **The entry of Jio**– The entry of Jio led to intense price-wars in the industry. There has been rapid consolidation in the market, and only 4 out of 14 players have survived the competition.

Jio’s entrance into the market has been great news for Indian consumers, who now get high- .

- High Right-of-Way (ROW) cost:
- Lack of fixed line penetration
- Declining Average Revenue Per User (ARPU
- Limited Spectrum Availability
- Low Broadband Penetration
- Huge fluctuations in the duties on Telecom Equipment
- Timeframe of policy execution

- Lack of Telecom Infrastructure in Semi-rural and Rural areas
- Pressure on Margins Due to Stiff Competition

4.4 What is AGR issue?

- Under the National Telecom Policy in the year 1994, the telecom sector was liberalised, after which in return for a fixed license fee licenses were issued to companies.
- The govt. in the year 1999 gave an option to the licensees to migrate to the revenue sharing fee model to provide relief from the steep fixed license fee. Given the slowdown in the Indian economy and this huge financial liability under AGR rules, many telcos are on the verge of collapse. This may have far-reaching ramifications for various stakeholders.

Impact on the various stakeholders

Telecom Sector

- When the AGR issue, first went under litigation there were about 15 operators. However, until in the last 14 years 10 of them are undergoing insolvency proceedings or have either closed operations.
- Further given this, AGR due will seriously hurt financial stability of whatever telecom companies are doing business in the Indian market.

Indian Consumers

- It could lead to one or two players emerging near-monopolies because of the failure of a few large players. This may leave the Indian consumer vulnerable to high pricing, sub-standard products and lack of options.

Banks

- Across the economy failure of the spilling effect will be felt as banks face (non-performing assets will rise)the consequences of the company going bankrupt).
- The AGR issue may add to the vulnerability of an already fragile banking system.

Indian Economy

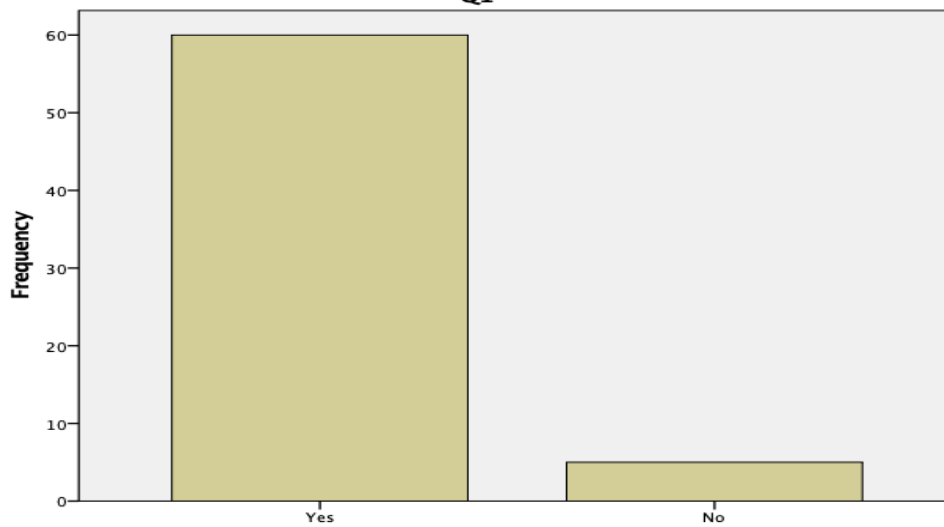
- Apart from impacting the banking sector, the collapse of the telecom sector may increase unemployment, and reduce investment, adding to our economic and social problems.
- The Telecom industry is vital to the govt. plans for 5G forms the part of critical infrastructure.

4.5 Primary Data Analysis

Q1

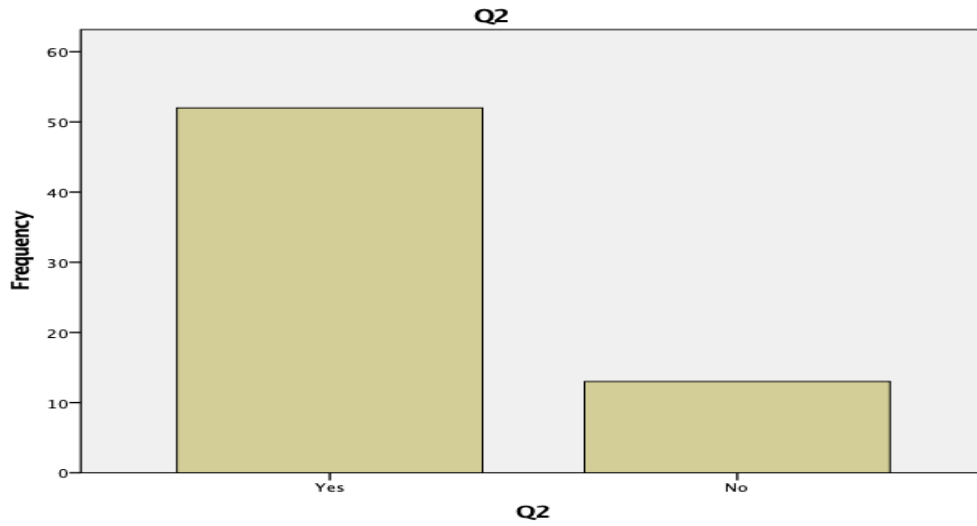
	Frequency	%	VA %	CU %
Yes	60	92.3	92.3	92.3
No	5	7.7	7.7	100.0
Total	65	100.0	100.0	

Q1



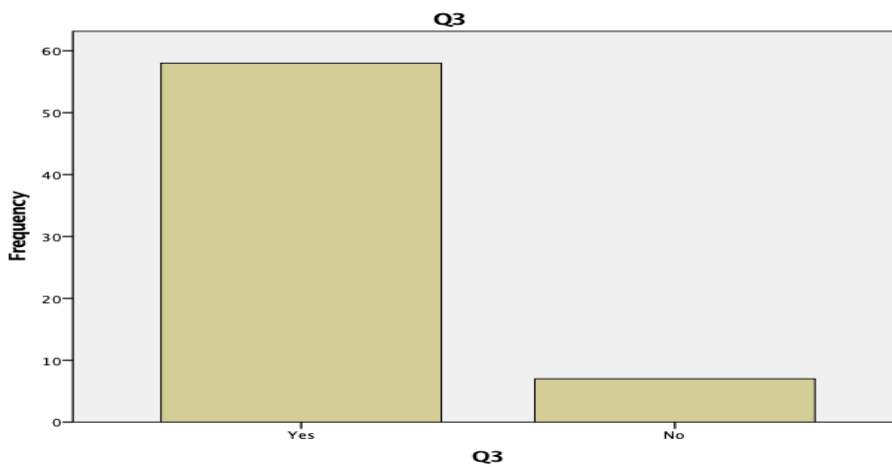
Q2

	Frequency	%	VA %	CU %
Yes	52	80.0	80.0	80.0
No	13	20.0	20.0	100.0
Total	65	100.0	100.0	



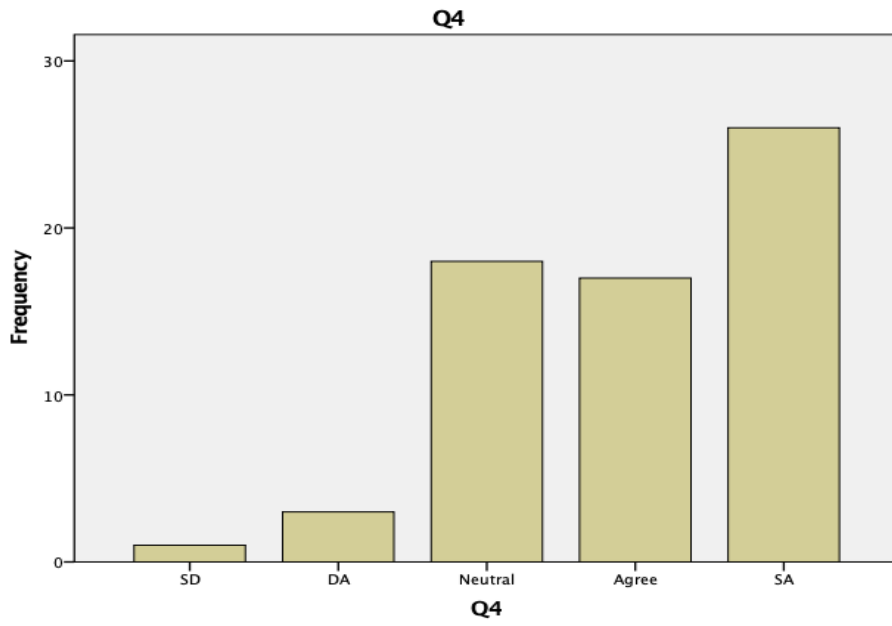
Q3

	Frequency	%	VA %	CU %
Yes	58	89.2	89.2	89.2
No	7	10.8	10.8	100.0
Total	65	100.0	100.0	



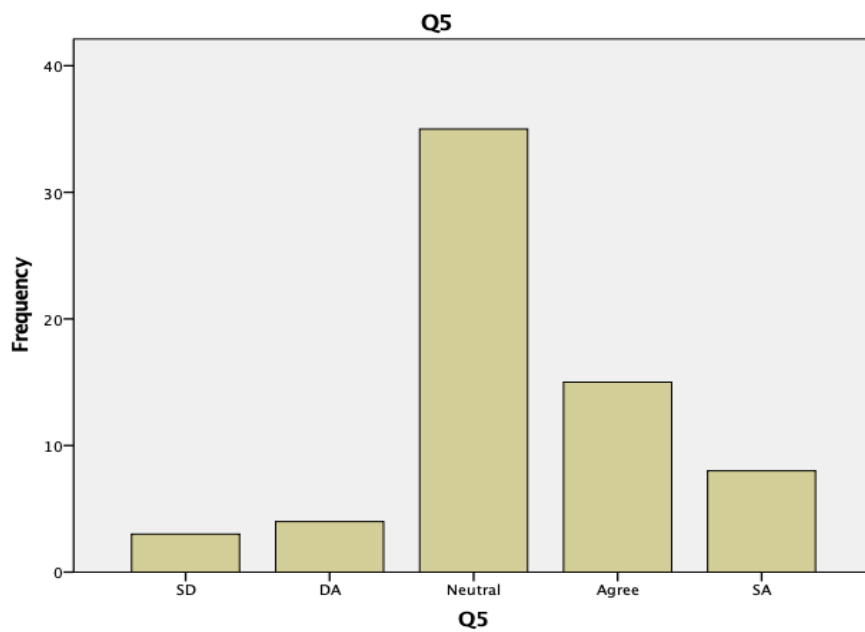
Q4

	Frequency	%	VA %	CU %
SD	1	1.5	1.5	1.5
DA	3	4.6	4.6	6.2
Neutral	18	27.7	27.7	33.8
Agree	17	26.2	26.2	60.0
SA	26	40.0	40.0	100.0
Total	65	100.0	100.0	



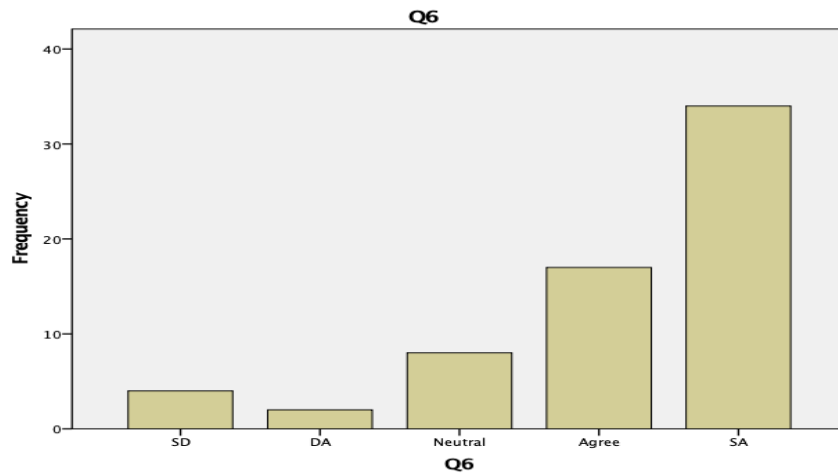
Q5

	Frequency	%	VA %	CU %
SD	3	4.6	4.6	4.6
DA	4	6.2	6.2	10.8
Neutral	35	53.8	53.8	64.6
Agree	15	23.1	23.1	87.7
SA	8	12.3	12.3	100.0
Total	65	100.0	100.0	



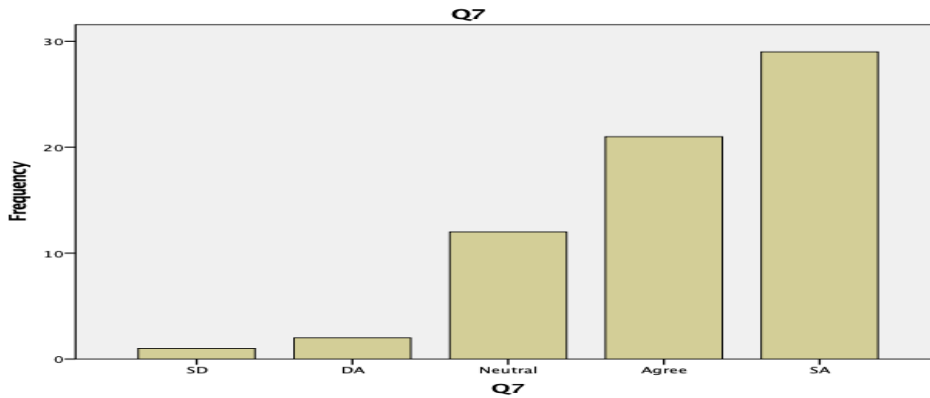
Q6

	Frequency	%	VA %	CU %
SD	4	6.2	6.2	6.2
DA	2	3.1	3.1	9.2
Neutral	8	12.3	12.3	21.5
Agree	17	26.2	26.2	47.7
SA	34	52.3	52.3	100.0
Total	65	100.0	100.0	



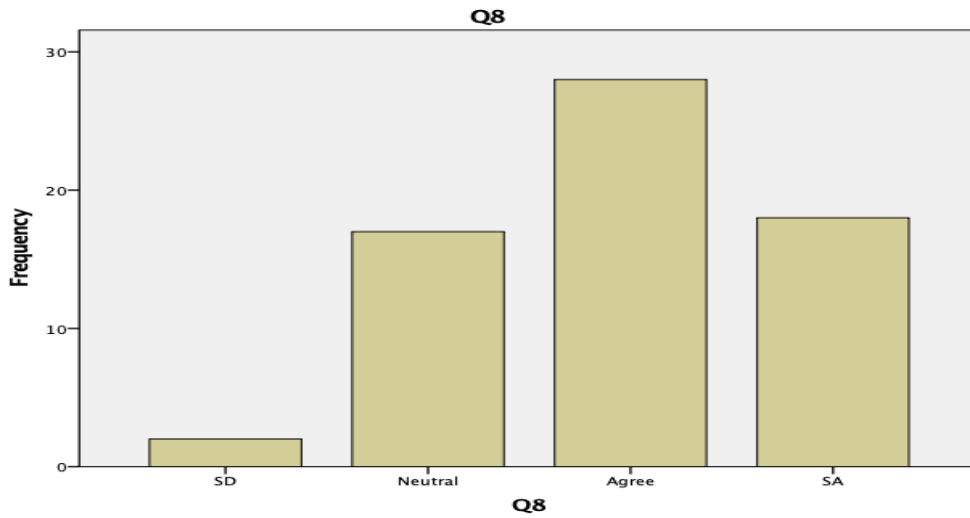
Q7

	Frequency	%	VA %	CU %
SD	1	1.5	1.5	1.5
DA	2	3.1	3.1	4.6
Neutral	12	18.5	18.5	23.1
Agree	21	32.3	32.3	55.4
SA	29	44.6	44.6	100.0
Total	65	100.0	100.0	



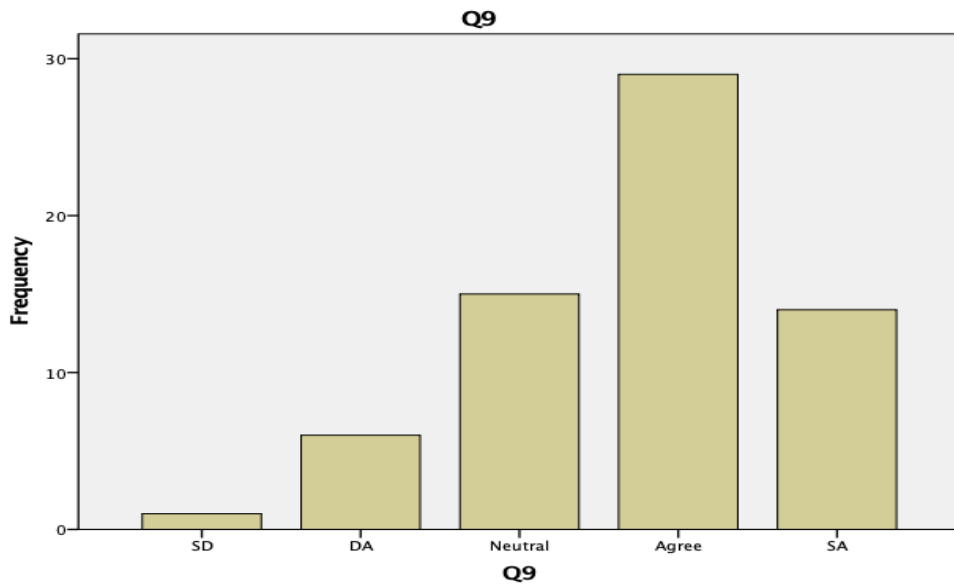
Q8

	Frequency	%	VA %	CU %
SD	2	3.1	3.1	3.1
Neutral	17	26.2	26.2	29.2
Agree	28	43.1	43.1	72.3
SA	18	27.7	27.7	100.0
Total	65	100.0	100.0	



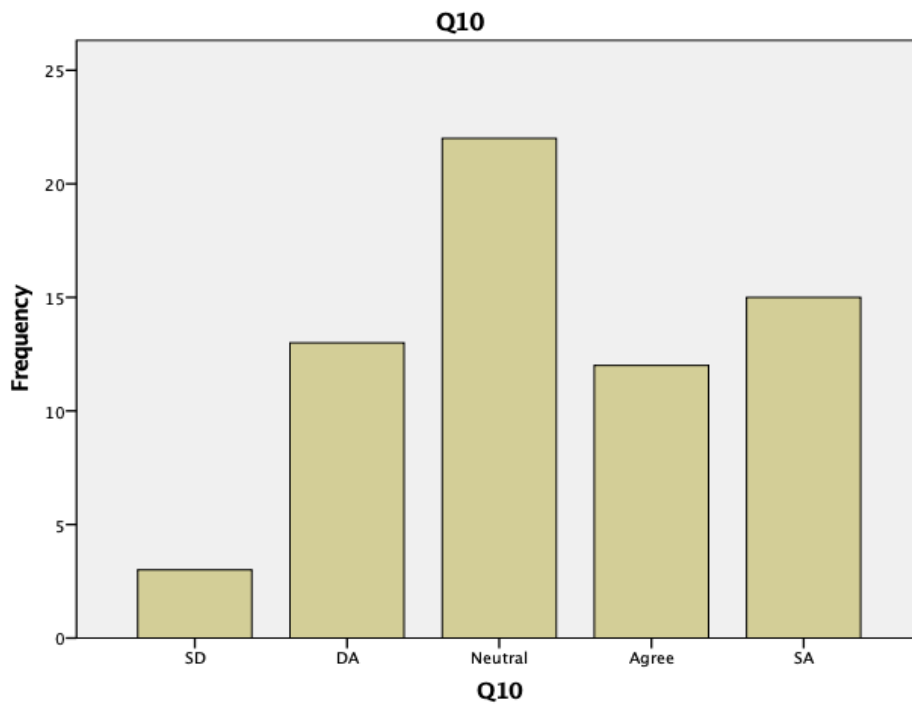
Q9

	Frequency	%	VA %	CU %
SD	1	1.5	1.5	1.5
DA	6	9.2	9.2	10.8
Neutral	15	23.1	23.1	33.8
Agree	29	44.6	44.6	78.5
SA	14	21.5	21.5	100.0
Total	65	100.0	100.0	



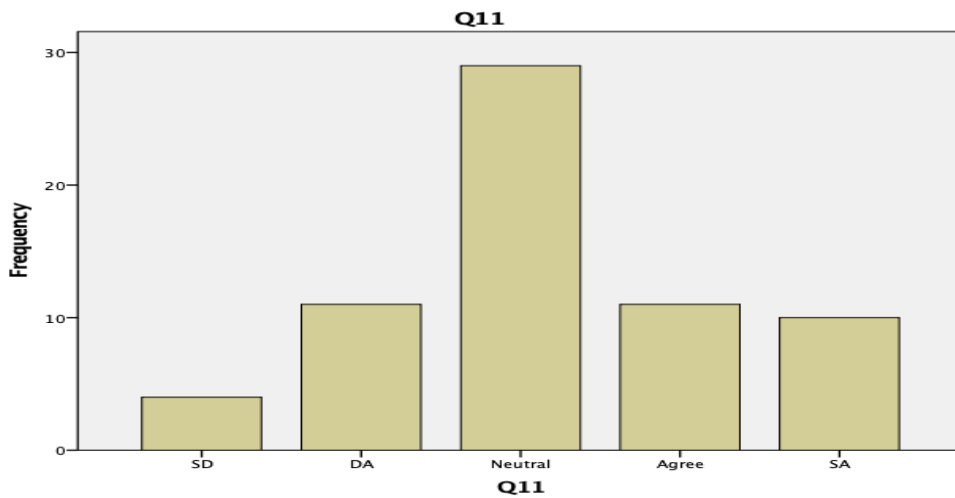
Q10

	Frequency	%	VA %	CU %
SD	3	4.6	4.6	4.6
DA	13	20.0	20.0	24.6
Neutral	22	33.8	33.8	58.5
Agree	12	18.5	18.5	76.9
SA	15	23.1	23.1	100.0
Total	65	100.0	100.0	



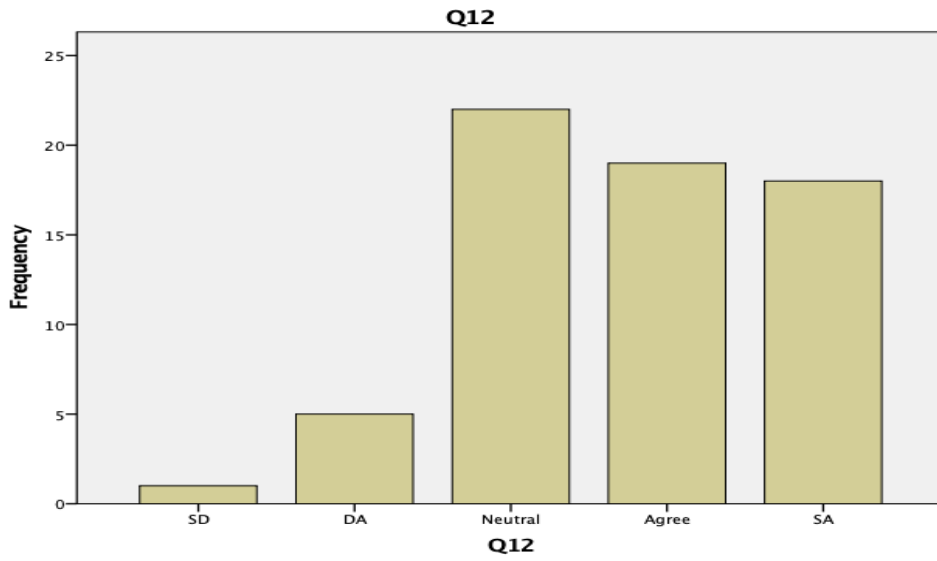
Q11

	Frequency	%	VA %	CU %
SD	4	6.2	6.2	6.2
DA	11	16.9	16.9	23.1
Neutral	29	44.6	44.6	67.7
Agree	11	16.9	16.9	84.6
SA	10	15.4	15.4	100.0
Total	65	100.0	100.0	



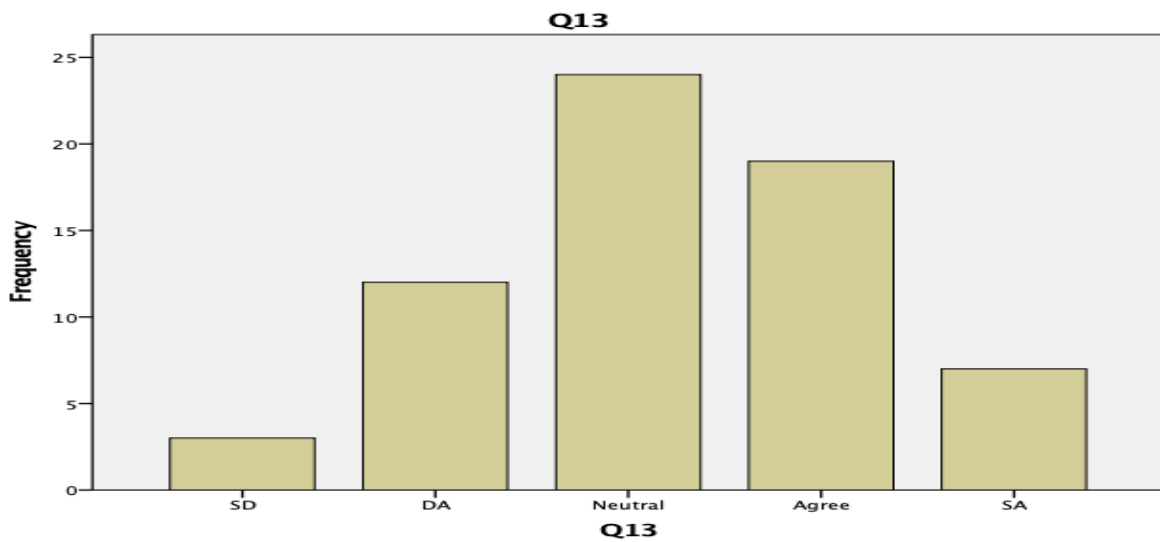
Q12

	Frequency	%	VA %	CU %
SD	1	1.5	1.5	1.5
DA	5	7.7	7.7	9.2
Neutral	22	33.8	33.8	43.1
Agree	19	29.2	29.2	72.3
SA	18	27.7	27.7	100.0
Total	65	100.0	100.0	



Q13

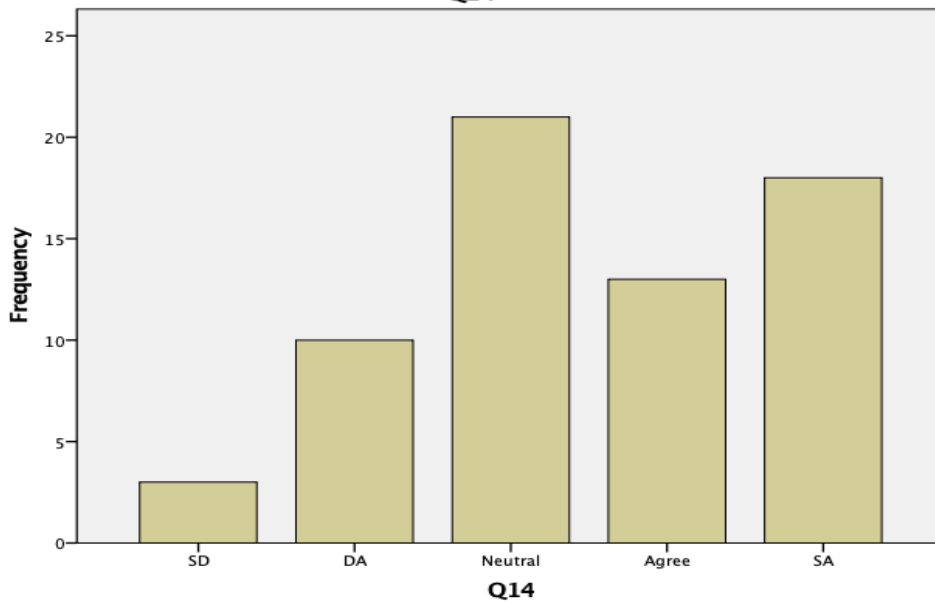
	Frequency	%	VA %	CU %
SD	3	4.6	4.6	4.6
DA	12	18.5	18.5	23.1
Neutral	24	36.9	36.9	60.0
Agree	19	29.2	29.2	89.2
SA	7	10.8	10.8	100.0
Total	65	100.0	100.0	



Q14

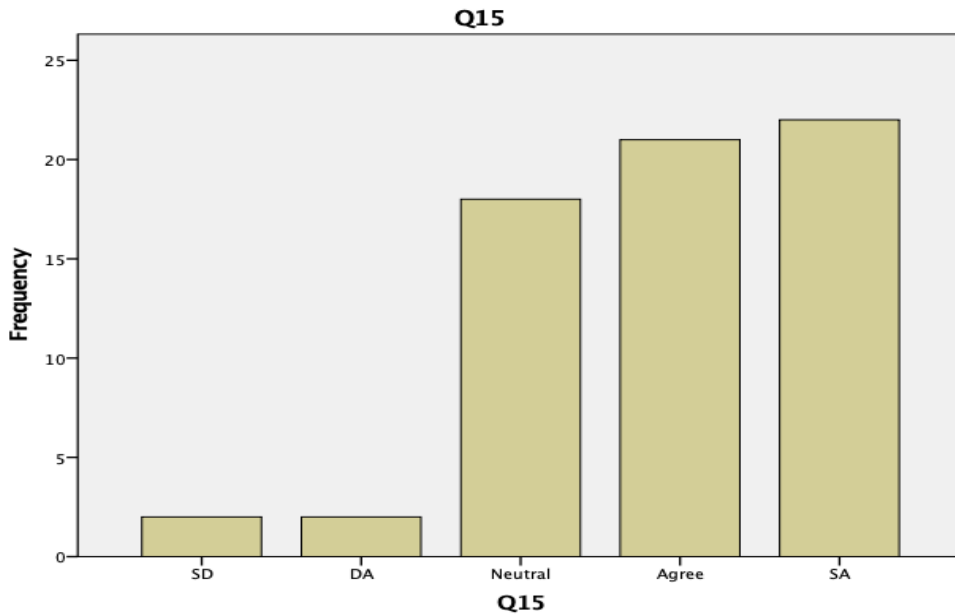
	Frequency	%	VA %	CU %
SD	3	4.6	4.6	4.6
DA	10	15.4	15.4	20.0
Neutral	21	32.3	32.3	52.3
Agree	13	20.0	20.0	72.3
SA	18	27.7	27.7	100.0
Total	65	100.0	100.0	

Q14



Q15

	Frequency	%	VA %	CU %
SD	2	3.1	3.1	3.1
DA	2	3.1	3.1	6.2
Neutral	18	27.7	27.7	33.8
Agree	21	32.3	32.3	66.2
SA	22	33.8	33.8	100.0
Total	65	100.0	100.0	



4.6 Hypothesis testing

H1 The Process and policies factors of Telecom Regulatory of India is one of the reasons for telecom crisis in India

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Q4	65	3.9846	1.00766	.12499
Q5	65	3.3231	.93721	.11625
Q6	65	4.1538	1.14879	.14249
Q7	65	4.1538	.93926	.11650
Q8	65	3.9231	.90671	.11246

One-Sample Test

Test Value = 0					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper

Q4	31.881	64	.000	3.98462	3.7349	4.2343
Q5	28.586	64	.000	3.32308	3.0908	3.5553
Q6	29.152	64	.000	4.15385	3.8692	4.4385
Q7	35.655	64	.000	4.15385	3.9211	4.3866
Q8	34.883	64	.000	3.92308	3.6984	4.1477

From the above table we can see the results of T-Test when applied on Q4 to Q8 the mean difference in every case is above 3 as we have considered factors with mean values less than 3 as not so influencing. In the above table for all the factors the value of mean difference is above 3 value at sig 2 tailed .000 which is below .05. SO we can say that all the above factors regarding Policies and process play a vital role in telecom crisis in India and hence above hypothesis is accepted i.e. The Process and policies factors of Telecom Regulatory of India is one of the reasons for telecom crisis in India.

H2 The framework of spectrum licensing and charges by Telecom Regulatory of India is not clear and pragmatic and is one of the reasons for telecom crisis in India

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Q9	65	3.7538	.95248	.11814
Q10	65	3.3538	1.17833	.14615
Q11	65	3.1846	1.08818	.13497
Q12	65	3.7385	1.00432	.12457
Q13	65	3.2308	1.02727	.12742
Q14	65	3.5077	1.18747	.14729
Q15	65	3.9077	1.01123	.12543

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q9	31.775	64	.000	3.75385	3.5178	3.9899
Q10	22.947	64	.000	3.35385	3.0619	3.6458
Q11	23.595	64	.000	3.18462	2.9150	3.4543
Q12	30.011	64	.000	3.73846	3.4896	3.9873

Q13	25.356	64	.000	3.23077	2.9762	3.4853
Q14	23.815	64	.000	3.50769	3.2135	3.8019
Q15	31.155	64	.000	3.90769	3.6571	4.1583

From the above table we can see the results of T-Test when applied on Q9 to Q15 the mean difference in every case is above 3 as we have considered factors with mean values less than 3 as not so influencing. In the above table for all the factors the value of mean difference is above 3 value at sig 2 tailed .000 which is below .05. So, we can say that all the above factors regarding framework of spectrum licensing and charges by Telecom Regulatory in India play a vital role in telecom crisis in India and hence above hypothesis is accepted i.e. The framework of Telecom Regulatory of India is not clear and pragmatic and is one of the reasons for telecom crisis in India.

4.7 Findings

- Unfair competition with each other and least customer satisfaction.
- Too much reliance on volume game
- Spectrum usage charges
- Spectrum trading
- Process and Policies

The poor substandard in customer services made the customers jump from one service provider to others. And to keep the customers to their folds (by satisfactory services) - the telecom companies resorted to the methods of unfair competition. Before the telecom revolution by Jio, all companies were looting the public and of course ill-treating their own customers. They were arrogant in their attitude and were never interested in sorting out the grievances of the users.

1. The govt owned telecom BSNL had the best of the network when telecom services started in India
2. The private service providers then influenced the political policy makers to weaken BSNL & divert the traffic to them. With shortage of funds & govt own inertia BSNL almost died & continue to be in that coma state even today

3. The private players made money at govt telecom expense. The private players used BSNL infrastructure, paid peanuts for it, charged heavily to the customers & made huge profits
4. Indian telecom players (private) never had any vision nor technology, believed only money counting machines, but never on quality of service or improving it depth & market penetration
5. Even today standing below a mobile tower (both caller & receiver), still one would experience call drops & out of range messages
6. The regulatory authority were bureaucrats who know nothing about telecom infrastructure, never knew “T” of telecom, started framing guidelines for the industry. Indian govt encouraged generalists & demoted technocrats to promote bureaucrats. Result is today it finds itself in mess.
7. It is a combination of poor vision by Govt, Private Players, poor policy making, no accountability, no financial guidelines when policies were framed, what constitutes “revenue” or what it means “revenue sharing”. Private players were happy paying bribes to Political parties & in return took no action & it went on going for more than a decade, till someone in govt wake up to falling revenues, dugged out “contract copy” & read it aloud the clauses.
8. The Telecom companies suddenly shaken from deep slumber went to court, which in historically always favored the companies for the lawyers are again active agents of political parties & there is a unwritten & tacit understanding between lawyers & judges (High Court & Supreme Court) (win-win situation) , unfortunately govt changed, recruiting judges or promoting judges criteria changed, family & political connections now getting thing of past, the telecom companies is facing new truths
9. With Supreme Court itself chasing Telecom Companies, they are left with no options but to go to Pakistan or USA or China (where they have their corrupt money stored & properties bought
10. Even after 25 years - India does not have enough mobile towers, no fibrenetwork, ordinary rain or strong wind will make entire telecom services go crashing without signals
11. The calls charges may be cheapest in the world, i.e. charge consumers irrespective of carrying their calls or not !! They went on making money without doing any service of whatsoever.

12. Most of the telecom service providers do not have proper website, poor usability & interface, most of the time they are under maintenance of some kind.

Crony capitilism, poor policy framing, corrupt deals & absolute failure in ensuring quality of service & infrastructure, charge consumers irrespective of service provided or not, bureaucrats flexing muscles, generalists ruling the roost, no vision for the country network, interested only in money counting machines = are the reasons for the current mess.

- All major telecom operators are currently in huge debt due to the licensing sales that have happened in recent past
- Laying any fiber optic cables requires a lot of bribing of officials, so expanding the network infrastructure costs twice as much as it should and is extremely painful
- The debt prevents improvement of overall cellular architecture, which impacts quality of service
- Indians are accustomed to just calling back, or trying again - so poor customer quality of service does not adversely impact the immediate customer spending, so QoS improvements can be postponed
- ARPU is consistently reducing from 2006, so target is to increase the customer base to meet revenue targets. Thats why you get free SIM cards.
- Extremely unreliable power supply - which means there are huge costs to run diesel generators to keep the cell sites running.

From a user perspective

- Network connectivity is unreliable for the most part - cell breathing causes increased call drops and increased bills for users.
- Bills (where postpaid) always require some clarifications, and the customer care is not adept at handling these queries
- Customer care centres are in need of serious revamp and training
- Bandwidth and network speeds, when available, have improved over a period of time, but still have a long way to go before reaching international reliability expectations

- There is no distinction in terms of QoS between high ARPU users and low ARPU users, causing business customers to move to lower payment plans, reducing ARPU further

So, what next?

It seems that Vodafone Idea is on the verge of bankruptcy. The 5G auctions that have been planned this year, will push the operators further into liquidation. The Government will have to take immediate steps to support the industry. Otherwise, we are looking at lost jobs, troubled banks and we also risk turning the telecom industry into a duopoly with only 2 major players.

Considering the above, the Government in recent times declared setting up of Committee of Secretaries (CoS), to recommend measures to mitigate financial stress in the Telecom sector.

Chapter-5

Conclusion

Earlier there were two operators per circle. Mobile tariffs were outrageous and were as high as Rs 16.80 per minute for both incoming & outgoing calls. 2006 saw the likes of A Raja at helm of affairs. Almost 10 licences were issued per circle at astronomical sums and operators quoted hundreds of crores to get spectrum. It was all on the assumption that there is enough business for all and tariffs will remain sky high. Government got handsome money and operators got licence to loot the public. New operators like ETISALAT, STEL, SWAN cropped up to share in the loot. However, events took a nasty turn and 122 licences were cancelled by Supreme Court. Reliance JIO made its debut in 2016 and entire telecom history was rewritten. The tariffs offered by JIO virtually compelled the incumbents to lower their loot and suffer in the process.

The two main reasons for telecom mess in this country is indiscriminate issue of licences by govt without studying consumption capacity and indiscriminate bidding by operators to loot the public. However, JIO caused a ruffle and small & medium players were forced to either exit the market or merge with larger operators. Idea-Vodafone combine is stark example where two large rivals merged. Airtel subsumed Uninor, Hexacom, Tata Tele services while Idea ate away RPG, Escotel, Spice etc in early 2000s. JIO has advantage of latest technology and skilled manpower whereas incumbents are saddled with 2G, 3G subscribers.

5.1 Suggestions

In this context, there is a need for a holistic set of reforms to save the telecom sector from this crisis.

- The government should give up demanding AGR as a lump-sum amount, rather, it can be broken in instalments to be paid over the period.
- Also, penalty and interest on penalty can be waived, as the Supreme Court recognises that there was no willful defiance of the law that is an essential ingredient to attract the levy of penalty.

- As this is a commercial matter, the government and telcos should also explore Alternative Dispute Resolution (ADR) mechanism.
- Since the telecom industry is crucial to India's next wave of growth through digitalisation and the government should not be blinded by short-term revenue considerations that imperil long-term prospects.
- In this light, the Government should consider accepting the Telecom Disputes Settlement and Appellate Tribunal (TDSAT) ruling of 2015 on AGR.
- Further, the government needs to actively facilitate shared infrastructure with policies and legislation. One way is through consortiums for network development and management, charging for usage by authorised operators.

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Appendices

Q1 Do you agree with International Investment Agencies who have termed the Indian Telecom Regulatory System as unpredictable and uncertain?

- Yes
- No

Q2 Is there a need for modifying/ redesigning the telecom regulatory framework?

- Yes
- No

Q3 In the current framework do you see role duplication in some entities?

- Yes
- No

To what level of agreement do think the following factors contribute to the crisis of Telecom industry in India?

STRONGLY DISAGREE to STRONGLY AGREE

Policy Formation

Q4 Opaqueness in policy formation post regulator's consultation process

Q5 Absence of distinct roles for policy formation & policy implementation

Q6 Lack of Autonomy to the regulator

Q7 Absence of a coherent Telecom policy

Q8 Process of Policy Formation

Framework

Q9 license for Telecom & Broadcasting

Q10 Interconnection& revenue share between telecom & broadcasting

Q11 Annual Licensing fees and Spectrum usage charges

Q12 Govt. Regulations and policies

Q13 Domestic competition

Q14 Industry trend and size

Q15 FDI Policy