Research Paper
Impact Factor: 3.029
Peer Reviewed & Indexed Journal

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

FOREIGN DIRECT INVESTMENT (FDI) IN TELECOMMUNICATION SERVICES IN INDIA

A. Muthusamy* Dr. M. Syed Ibrahim R.Vanitha*****

**Full-Time Ph.D., Research Scholar, Post-Graduate and Research Department of Commerce, Government Arts College (Autonomous), Salem, Tamil Nadu, South India.*

***Assistant Professor and Research Supervisor, Post-Graduate and Research Department of Commerce, Government Arts College (Autonomous), Salem, Tamil Nadu, South India.*

****Assistant Professor, Department of Commerce, Padmavani Arts and Science College, Salem, Tamil Nadu, South India.*

Abstract

The relaxation of telecom regulations has played a major role in the development of the Indian telecom industry. The liberalization policies of 1991 and the consequent influx of private players have led the industry on a high growth trajectory and have increased the level of competition. In the Post-liberalization era, the telecom industry has received more investments and implemented higher technology. The telecom sector requires huge investments for its expansion as it is capital-intensive and Foreign Direct Investment plays a vital role in meeting the fund requirements for expansion in the telecom sector. Telecom accounts for significant Foreign Direct Investment inflows in the country and has been the third-largest sector to attract Foreign Direct Investment in India. The study is diagnostic and exploratory in nature and makes use of secondary data. The study finds and concludes that the foreign direct investment in Telecommunication services in India have significantly improved the industry and developed the economy as well.

Keywords: Foreign Direct Investment, Telecommunication services, Post-liberalization.

Introduction

Foreign direct investment has been one of the major contributors in the growth of the Indian economy, and therefore, the need for higher FDI is felt across sectors in the Indian economy. The telecom sector has played a crucial role in attracting FDI in India. The relaxation in FDI norms has attracted many foreign telecom majors to the sector. The presence of foreign players has not only encouraged faster infrastructure development and up gradation but also has opened up the domestic industry to foreign competition.

The influx of foreign players in the Indian telecom industry has led to capacity creation, and better infrastructure, which in turn has bettered the network quality. The rise in FDI has also enabled technology transfer, market access and has improved organizational skills; going forward, FDI could be used for providing telecom services to rural areas, where teledensity is still very low.

Telecommunication Service

It means service of any description provided by means of any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence or information of any nature, by wire, radio, optical, visual or other electromagnetic means or systems, including the related transfer or assignment of the right to use capacity for such transmission, emission or reception by a person who has been granted a licence under the first proviso to sub-section (1) of section 4 of the Indian Telegraph Act, 1885 (13 of 1885).

Overview of Telecom Industry

The telecom industry has been divided into two major segments, that is, fixed and wireless cellular services. In today's information age, the telecommunication industry has a vital role to play. Considered as the backbone of industrial and economic development, the industry has been aiding delivery of voice and data services at rapidly increasing speeds, and thus, has been revolutionizing human communication.

Although the Indian telecom industry is one of the fastest-growing industries in the world, the current teledensity or telecom penetration is extremely low when compared to global standards. As majority of the population resides in rural areas, it is important that the government takes steps to improve rural teledensity. No doubt the government has taken certain policy initiatives, which includes the creation of the Universal Service Obligation Fund for improving rural telephony. These measures are expected to improve the rural teledensity and bridge the rural-urban gap in teledensity.

Foreign Direct Investment (FDI) in Telecommunication Sector

One of the important sources of the substantial financial investment required for the growth of teledensity has been FDI. In 2005, the government permitted 74% foreign investment in telecom companies from the earlier limit of 49%, which resulted

in unprecedented entry of foreign investment in the sector. The table below enumerates the FDI policy related to the telecom sector:

FDI policy for the Telecom Sector is as under,

Sector/Activity	FDI Cap/ Equity	Entry route	Other conditions
Telecom Services (including Telecom Infrastructure Providers Category – I) All telecom services including Telecom Infrastructure Providers Category-I, viz. Basic, Cellular, Unified Access Services, Unified license(Access services),Unified License, National/ International Long Distance, Commercial V-Sat, Public Mobile Radio Trunked Services (PMRTS), Global Mobile Personal Communications Services (GMPCS), All types of ISP licenses, Voice Mail/Audiotex /UMS, Resale of IPLC, Mobile Number Portability services, Infrastructure Provider Category – I (providing dark fiber, right of way, duct space, tower) except Other Service Providers.	100 %	Automatic up to 49%. FIPB beyond 49%.	subject to observance of licensing and security conditions by licensee as well as investors as notified by the Department of Telecommunications (DOT) from time to time.

Source: Department of Industrial policy and promotion.

Statement of the Problem

Under Foreign Direct Investment, the foreign investors consider the huge return on investment other than the economic development. Due to the progressive nature of the Tele-communication sector in India, several foreign companies are intending to invest in the country. The Indian Tele-communication too is confronted with many challenges; unlike any other emerging sector, several odds that would restrict or hamper its growth in spite of huge benefits, emerge out of foreign direct investment. Indian economy otherwise will have opportunities lost, with long standing implications on the economy. Hence, this study is pertinent to analyze the impact of FDI inflows in the telecommunication services in India.

Objectives of the Study

1. To examine the Foreign Direct Investment inflows into Telecommunication sector in India,
2. To find out the impact of Foreign Direct Investment in Telecommunication services, in India,
3. To offer valuable suggestions for the improvement of the FDI for the economic development of the country.

Review of Literature

A significant amount of research has been done on the Foreign Direct Investment in Telecommunication services in India by the researchers. The literature obtained by researchers, in the form of the research studies, articles of researchers, is briefly reviewed in this part.

G.Preetha (2011), examined the current status of Foreign Direct Investment (FDI) in the Indian telecommunication sector and the issues facing foreign companies seeking to invest in the Indian telecommunications sector and concludes with a brief econometric examination of the factors influencing the level of FDI, how Go-Green entered in FDI, Telecom and IT in the Indian telecommunication sector.

Sandeep Bansal and Surender Kumar Gupta (2013), find out the role played by FDI in telecommunication industry in India, and also try to find out the impact of FDI in Telecommunication on economic growth. The major impact of FDI in Telecommunications is the Faster economic growth, Increase in trade, Employment and skills levels, Technology diffusion and knowledge transfer and linkages and spillover to domestic firms.

Saravanan.S (2013), analyzes the trend of FDI and growth of telecommunication sector in India. The FDI inflow in telecommunication sector has increased with fluctuations during the study period. The telecom sector has been growing continuously with the help of more inflow of FDI. The government's policies have also encouraged investment of the foreign investors in this sector.

Gopika.G.G (2014), has stated in his study that hiking FDI limit from 74 per cent to 100 per cent in the telecom sector will not make much of a difference as foreign investors would continue to exercise control in more or less the same attitude as they did when the cap was 74 per cent. Foreign firms that have majority stake in Indian telecom companies look at buying entire stake of their minority partners to have free hand in business decision making.

Vijay M.Kumbhar (2015) has made an attempt for understanding the trend of FDI inflow in the telecommunication sector of Indian economy. The result shows that there is no sustainable growth of FDI in telecommunication sector. However there is no significant difference between FDI inflows in the various subsectors of the telecommunication sector of the Indian economy.

Research Methodology

It is based on secondary sources of data, collected from Telephone Regulatory Authority of India (TRAI) and Department of Industrial Policy and Promotion (DIPP) and other related sources. The study is undertaken for a period of 10 years from 2005-06 to 2014-15. The Annual Growth Rate (AGR), Compounded Annual Growth Rate (CAGR), One-way ANOVA and Chi-Square Test are used to analyze the FDI inflows during the period of study.

Analysis and Discussion

Inflow of Foreign Direct Investment and Revenues in Telecommunication Services

Inflow of Foreign Direct Investment refers to long term capital inflows into a country other than aid, portfolio investment or a repayable debt. It is done by an entity outside the host country in the home country. The Gross Revenue shall be inclusive of installation charges, late fees, sale proceeds of handsets (or any other terminal equipment etc.), revenue on account of interest, dividend, value added services, supplementary services, access or interconnection charges, roaming charges, revenue from permissible sharing of infrastructure and any other miscellaneous revenue, without any set-off for related item of expense, etc.

For the purpose of arriving at the "Adjusted Gross Revenue (AGR)" the following shall be excluded from the Gross Revenue to arrive at the AGR: -

a) PSTN related call charges (Access Charges) actually paid to other eligible/entitled telecommunication service providers within India;
b) Roaming revenues actually passed on to other eligible/entitled telecommunication service providers and;
c) Service Tax on provision of service and Sales Tax actually paid to the Government if gross revenue had included as component of Sales Tax and Service Tax.

The year wise amount of FDI inflow, Adjusted Gross Revenue of Telecommunication services are shown in Table No.1.

Table – 1,FDI Inflow And Revenue in Telecommunication Services

Year	**FDI Inflows** (Rs. in Crores)	**Annual Growth Rate** (in %)	**Adjusted Gross Revenue** (Rs.in Crore)	**Annual Growth Rate** (in %)
2005-06	2,751.45	-	86,719.55	-
2006-07	2,149.58	-21.87	1,05,318.63	21.45
2007-08	5,099.56	137.24	1,01,485.00	-3.64
2008-09	11,684.81	129.13	1,13,012.77	11.36
2009-10	12,269.66	5.01	1,16,803.02	3.35
2010-11	7,542.04	-38.53	1,21,614.13	4.12
2011-12	9,011.53	19.48	1,34,588.87	10.67
2012-13	1,654.30	-81.64	1,41,679.17	5.27
2013-14	7,987.28	382.82	1,58,041.85	11.55
2014-15	17,372.32	117.50	1,75,829.58	11.26
CAGR	**20.23%**		**7.32%**	

Source: Department of industrial policy and promotion (DIPP) and Telephone Regulatory Authority of India (TRAI).

The above Table-1 reveals that the FDI inflows and the Adjusted Gross Revenue of the Telecommunication services are increasing year after year. The FDI inflows have increased from 2,751.45 Crores in 2005-06 to 17,372.32 Crores in 2014-15. The increase over the period was 6.31 times. The highest growth rate has been observed (382.82%) in 2013-14. The lowest growth rate has been registered (-81.64%) in the year 2012-13. The Adjusted Gross Revenue of the telecom service is

increased from Rs.86,719.55 Crores in 2005-06 to 1,75,829.58 Crores in 2014-15. The highest Growth rate (21.45%) has been observed in 2006-07 and the lowest growth rate (-3.64%) has been observed during the year 2007-08.

The Compound Annual Growth Rate (CAGR) of FDI inflow was 20.23% which is a welcome trend. During the study period of ten years, it has been observed that for four years, the growth rate was above the CAGR and for the remaining years, the growth rate was below the CAGR. The CAGR of Adjusted Gross Revenue was 7.32% which is also a welcome trend. During the study period, it has been observed that for five years, the growth rate was above the CAGR and for the remaining years, the growth rate was below the CAGR.

To find out the significance of the variance between Foreign Direct Investment Inflow and Adjusted Gross Revenue of Telecommunication sector, one-way ANOVA has been employed to test the following Hypothesis.
H0 – There is no significance of the variance between FDI inflow and Adjusted Gross Revenue of Telecom sector.
H1 - There is significance of the variance between FDI inflow and Adjusted Gross Revenue of Telecom sector.

The test results are furnished in the table No. 2

Table – 2

ONE-WAY ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.050E9	1	2.050E9	3.549	.096[a]
	Residual	4.621E9	8	5.776E8		
	Total	6.671E9	9			
a. Predictors: (Constant), Inflow						
b. Dependent Variable: Revenue						

According to our study the significance level is 0.096>0.05. So there is no significance of the variance between Foreign Direct Investment Inflow and Adjusted Gross Revenue of Telecommunication services. (H0 is Accepted).

SUBSCRIBER BASE

The total Telecommunication (Wire line and Wireless) services opted by the customers are called as Subscriber base. The subscriber base is a relatively broad number of customers, with a smaller section of the base being comprised of repeat customers. The Subscriber base in telecommunication services are given in table no.3.

Table – 3 ,Subscriber Base iIn Telecommunication Services

Year	**Subscriber Base (in Millions)**			
	Wire line Services	**Annual Growth Rate** (in %)	**Wireless Services**	**Annual Growth Rate** (in %)
2005-06	193.87	-	288.52	-
2006-07	162.80	-16.03	556.42	92.85
2007-08	158.34	-2.74	888.68	59.71
2008-09	153.13	-3.29	1340.83	50.88
2009-10	148.86	-2.79	2008.43	49.79
2010-11	141.57	-4.90	2887.00	43.74
2011-12	132.46	-6.43	3538.32	22.56
2012-13	123.51	-6.76	3576.23	1.07
2013-14	116.39	-5.76	3534.75	-1.16
2014-15	109.03	-6.32	3758.98	6.34
CAGR	**-5.59**		**29.27**	

Source: Department of industrial policy and promotion (DIPP) and Telephone Regulatory Authority of India (TRAI)

The table-3 exhibits the Subscriber base in Wire line and Wireless services in India. The wire line subscribers are decreasing year by year and the wireless subscribers are increasing year after year during the study period. The wire line subscribers have decreased from 193.87 million 2005-06 to 109.03 million in 2014-15. The decrease over the period was 1.77 times. The highest growth rate has been observed (-2.74%) in 2007-08. The lowest growth rate has been registered (-16.03%) in the year 2006-07. The Compound Annual Growth Rate of the wire line subscribers was -5.59 which a negative growth is.

The wireless subscribers have increased from 288.52 million in 2005-06 to 3758.98 million in 2014-15. The increase over the period was 13 times. The highest growth rate has been observed (92.85 %) in 2006-07. The lowest growth rate has been registered (-1.16%) in the year 2013-14. The Compound Annual Growth Rate of the wire line subscribers was 29.27 % which is a welcome trend. During the study period, it has been observed that for five years, the growth rate was above the CAGR and for the remaining years, the growth rate was below the CAGR.

TELEDENSITY

Telephone density or teledensity is the number of telephone connections for every hundred individuals living within an area. It varies widely across the nations and also between urban and rural areas within a country. The Wire line and Wireless Teledensity of Telecommunication services are given in Table No.4.

Table – 4, Wire Line and Wireless Teledensity

Year	Tele-density			
	Wire line (in %)	**Annual Growth Rate** (in %)	**Wireless (in %)**	**Annual Growth Rate** (in %)
2005-06	4.44	-	6.61	-
2006-07	3.67	-17.44	12.52	89.41
2007-08	3.47	-5.38	19.48	55.61
2008-09	3.31	-4.68	28.98	48.77
2009-10	3.17	-4.15	42.81	47.72
2010-11	2.98	-6.07	60.69	41.75
2011-12	2.75	-7.72	73.49	21.08
2012-13	2.53	-7.91	73.28	-0.28
2013-14	2.36	-6.81	71.58	-2.32
2014-15	2.18	-7.52	75.2	5.05
CAGR	**-6.78%**		**27.53%**	

Source: Department of industrial policy and promotion (DIPP) and Telephone Regulatory Authority of India (TRAI).

The table - 4 shows that the wire line and wireless teledensity in India. The wire line teledensity was decreasing year by year during the study period and the wireless teledensity was increasing year after year except the year 2012-13 and 2013-14. The wire line teledensity has decreased from 4.44% in 2005-06 to 2.18% in 2014-15. The highest growth rate has been observed (-4.15%) in 2009-10 and the lowest growth rate (-17.44%) in the year 2006-07. The Compound Annual Growth Rate of the wire line teledensity was -6.78% which is a Negative growth. During the study period, it has been observed that for four years, the growth rate was above the CAGR and for the remaining years, the growth rate was below the CAGR.

The wireless teledensity has increased from 6.61% in 2005-06 to 75.2% in 2014-15. During the study period, the percentage of growth over the previous year lies between -0.28 % and 89.41%. The highest growth rate has been observed in 2006-07 and the lowest growth rate has been observed in the year 2012-13. The Compound Annual Growth Rate of the wireless teledensity was 27.53% which is a Welcome trend. During the study period, it has been observed that for five years, the growth rate was above the CAGR and for the remaining years, the growth rate was below the CAGR.

To find out the significant difference in the growth of Wire line Teledensity, the following hypothesis is framed and tested with the help of Chi-square Test.

Null Hypothesis (H0): "There is no significant difference in the growth of wire lines Tele- density during the period of the study"

Null Hypothesis (H1): "There is significant difference in the growth of wire lines Tele-density during the period of the study"

The test results are furnished in the Table No. - 5.

Table – 5,Chi-Square Test

	Observed N	**Expected N**	**Residual**
2.18	2	3.0	-1.0
2.36	2	3.0	-1.0
2.53	3	3.0	.0
2.75	3	3.0	.0
2.98	3	3.0	.0
3.17	3	3.0	.0
3.31	3	3.0	.0
3.47	3	3.0	.0
3.67	4	3.0	1.0
4.44	4	3.0	1.0
Total	**30**		

Test Statistics

	Wire-Lines
Chi-Square	1.333[a]
Df	9
Asymp. Sig.	.998

The expected frequencies of the 10 cells (100.0%) are less than 5. The minimum expected cell frequency is 3.0.From the above tables, it inferred that there was no significant difference in the growth of wire lines Tele-density during the period of the study because the calculated value of chi-square (1.333) was less than table value (16.919). So, alternative hypothesis has been rejected and null hypothesis has been accepted.

Findings of the Study

Major findings of the study are as follows,

- It is found that the Compound Annual Growth Rate of FDI inflows and Adjusted Gross Revenue of Telecommunication Services are 20.23% and 7.32% respectively.
- It reveals that there is no significant variance between Foreign Direct Investment Inflow and Adjusted Gross Revenue of Telecommunication services in India.
- It is found that the wire line subscribers are decreasing year by year and the Compound Annual Growth Rate of subscribers are -5.59%, which is a negative growth.
- The Wireless subscriber base has risen to 3758.98 million in 2014-15 from 288.52 million in 2005-06. It added a maximum of 878.57 million subscribers in the financial year 2010-11 during the study period. The Compound Annual Growth Rate of wireless subscribers is 29.27% which is a Positive sign for the wireless telecommunication services.
- Performance in terms of teledensity, wire line services are very poor. Because the growth rate is negative during the study period.
- It is found that the performance in terms teledensity of wireless services was better except the year 2012-13 and 2013-14. The Compound Annual Growth Rate of the wireless teledensity was 27.53% which is a Welcome trend.
- It reveals that there was no significant difference in the growth of wire lines Tele-density during the period of the study because the calculated value of chi-square was less than table value.

Suggestions

- The better telecom infrastructure facilities like, telecom tower and optic fiber network need to be created immediately for the faster development of telecommunications.
- The Government of India should attract more volume of Foreign Direct Investment which in turn would help the Indian wireless market as it is booming and has plenty of opportunities for growth.

- The country should be ready to grab any opportunity to its fullest potential by developing in all dimensions and make it an attractive destination for Investment.
- The total telecom outreach in the largely untapped potential rural markets of India is expected to increase, compared with the current teledensity. If the telecom companies concentrate more on rural markets, the industry will grow in the future.
- Better innovative marketing techniques should be used to attract the wire line subscribers.
- The Government and Policy makers should make sure a stable, transparent and non-discriminatory regulatory system in the telecommunication services which is the best way to attract a large amount of Foreign Direct Investment.

Conclusion

The Service sector in India is emerging as a major sector in terms of contribution to National incomes, trade flows, FDI inflows, and employment. The growth of the Telecommunication sector is closely linked to FDI inflows into this sector and the role of Multinational firms. Expanding demand for a broad range of telecom services has provided tremendous opportunities for investors in the telecom services. Provision of telecom services to the rural areas in India has been recognized as another important area by Government. This also helps for the huge opportunities in this sector. The introduction of Mobile Number Portability (MNP) in India has made the Indian Telecom market more competitive in terms of service offerings and quality. The drastic reduction of call rates and mind blowing technologies like 3G, 4G, Android and advent of innovative products like iPhone, Galaxy tab and smart phones in the country will expand the growth of telecommunication industry making India far ahead of other countries in near future.

References

1. Secretariat for Industrial Assistance, (SIA) of Department of Industrial Policy and Promotion (DIPP): Various Newsletters, (From 2005 to 2015), Ministry of Commerce and Industry, Government of India.
2. Performance Indicators Report of Telecom Regulatory Authority of India (TRAI) from 2005 to 2015.
3. G.Preetha. (2011). Foreign Direct Investment in the Indian Telecommunication Sector – An Overview. *International Journal of Multi disciplinary Research* , 107-116.
4. Gupta, S. B. (2013). FDI's in India - A study of Telecommunication Industry. *International journal of Advanced Research in Management and Social sciences* , 189-201.
5. S, S. (2013). Growth of Telecommunication Sector and Foreign Direct Investment . *International Journal of Applied Research & Studies* , 1-4.
6. G, G. G. (2014). Foreign Direct Investment Policies in the Liberalised Telecom Sector of India- A Review. *International Journal of Business and Management Invention* , 1-8.
7. Vijay.M.Kumbhar. (2015). An Anallytical Study of Foreign Direct Investment in Indian Telecom Sector. *ZENITH International Journal of Business Economics & Management Research* , 8-16.

Websites

1. www.dipp.org.in.
2. www.trai.gov.in.
3. http://www.dot.gov.in/investment-promotion/fdi-policy-telecom.