

"Exploring the Evolution: Growth Trends in India's Public and Private Telecommunication Sectors"

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Abstract

In 1991, after the introduction of Liberalization, Privatization and Globalization (LPG) policies in India, the telecommunication sector has changed dramatically. This sector experienced a big transformation due to LPG policies. As of 1992, various services like manufacturing of mobile handsets, value added services (VAS), radio paging, and other VAS were unlocked slowly to the private telecom sector. These policies removed many restrictions of entry-exit and hence doors were opened for private operators. In 1997, Telecom Regulatory Authority of India (TRAI) was set up, on appeal of telco companies, by the government of India which condensed the government intervention in deciding tariff plans and policies. Earlier there were only two state-owned telecom operators or diarchy of wireless segment i.e. Bharat Sanchar Nigam Limited (BSNL) and Mahanagar Sanchar Nigam Limited (MTNL). In 2000, the public sector enjoyed a monopoly and ranked Rank 1st in terms of mobile connections. After March 2000, the administration turned out to be more open-handed or liberal. This leads to a state of threat among landline operators i.e. BSNL and MTNL. In September, 2008 various private or foreign cellular/mobile operators like Bharti Airtel, Loop mobile, Tata communications, Vodafone and Idea cellular Ltd. dwarfed the state-owned telecom operators by crossing the big number in terms of mobile connections. The current study will study the trend analysis in terms of growth indicators in public and private sector.

Keywords: telecommunication, private sector, public sector, trend percentages

1. Introduction:

The statistics of the year May 13-14 reveals a breakthrough in telecommunication public-private sector. The economic times saw an internal memo of telecom commission and commented that private telecom carrier dominance continues. Between May 2013 and May 2014, over 4.8 crore new mobile connections were sold by private carriers, whereas BSNL+MTNL jointly lost over 1 crore connections. Therefore, over the last 10 years, BSNL has been losing subscribers at a very faster rate i.e. 1.4 lakh customers every month. Therefore, landline customer base has shrunk by 40 % i.e. nearly 1.82 crore in total.

Hence, **it is clear that the happy-go-lucky public sector of March 2000 becomes the un-happiest in March 2016 in terms of mobile phone and landline connections.** Moreover, the condition got more competitive due to the entry of Reliance Jio which has the backing of India's richest man Mr. Mukesh Ambani, owner of Reliance Industries. This entry has traumatized not only BSNL and MTNL but also the entire telecommunication sector got shaken up. All the companies' profits are continuously declining because of decreasing tariff rates. Decreasing tariff rates are result of intense competition prevailing in the industry. The condition was more worsened due to JIO free distribution policy i.e. free voice calls and three months data free (later extended until end-March and then till end-June), which has badly affected both sectors, especially state-owned public sector (slipped at Rank 4th (last position)). It is then concluded that "ONCE COUNTRY'S LEADING PUBLIC TELECOM CARRIER (BSNL) NOW BECOMES FOLLOWER OR INFERIOR TELECOM CARRIER". The below statistics reveal the status on 30th September 2018 when there were total 116.81 crore subscribers, out of which public sector has only 9.67% market share and the rest is enjoyed by private sector.

Table 1: Wireless Telecom operators with their respective rank (As on Sep 30, 2018)

WIRELESS/MOBILE OPERATORS	TYPE OF OPERATOR	TOTAL SUBSCRIBER BASE (IN CRORE)	MARKET SHARE	RANK (as on Sep 30, 2018)
A) Voda-Idea limited	Private	22.06+21.32= 43.38	18.87+18.23=37.20%	1 st
B) Airtel- Tata limited	Private	34.35+2.19= 36.54	2.938+ 1.88=31.36%	2 nd
C) Reliance Jio limited	Private	25.22	21.67%	3 rd
D) BSNL	Public	11.3	9.67%	4 th and last.

Source: “Press Release on Telephone Subscription Data July 2018(PDF)”. Telecom Regulatory Authority of India. Retrieved 18th September, 2018

The above statistics revealed the scenarios of public and private sector. Only after two years of its launch, JIO has 21.67% market share, a really big number and leaving behind the public sector having share of 9.67% only.

“Their changing scenarios clearly demand analyses of the trends (in terms of growth indicator) which will further help in proper understanding of behavioural pattern & inconsistencies. This exploration gives an idea whether the telecom carriers are leading, lagging, performing or non-performing”.

Telecom Secretary, Aruna Sundararajan, presented a speech at a panel discussion organised by Broadband India forum on the theme „Digital infrastructure for transforming India“ and remarked that INDIAN TELECOMMUNICATION SECTOR IS “VIBRANT AND EXCITING”, IT IS ALSO “BRUTUALLY CHALLENGING”. Telecom sector is under a huge debt or loan. In fact, no telco mobile operator in India has declared any dividend so far. Therefore, it is very essential to study the trends in terms of growth indicators of public and private telecommunication sector individually.

2. What is Trend Analysis?

CONCEPTUAL FRAMEWORK: For Financial analysis of an enterprise, six different tools can be used, namely Comparative financial statements, Common size statements, Trend analysis, Ratio analysis, Funds Flow statement and Cash flow statement. Every technique/ tool has its own utility and limitation. An enterprise can choose any tool as per their prerequisite. The Procedure/ Steps for the computation of trend percentages or change over the successive years are given below:

Step-1: Select the base year (Any one year is nominated as base year. It can be first year or last year)

Step-2: Base year statistics are assumed to be equal to 100.

Step-3: Then, one by one, dividing the current year figure“s by the base year figure/ amount and then multiply the result by 100 to get appropriate results in percentage (%).

Formula to calculate trend percentages:

$$\text{Trend Percentages} = \frac{\text{Current Year's Figure}}{\text{Base Year's Figure}} * 100$$

Growth or Performance Indicators : Savvy Sales Executives of Big corporations like telecommunication, banking, insurance and many more are often interested in knowing and measuring performance indicators or growth metrics. There are three types of performance measurements indicators

- KRI's (KEY RESULT INDICATOR)
- PI's (PERFORMANCE INDICATOR)
- KPI's (KEY PERFORMANCE INDICATOR)

Examples of KPI/ Growth Indicators:

KPI-1 Subscriber base/ Total number of subscribers

KPI-2 Gross Revenue (GR)

KPI-3 Adjusted Gross revenue (AGR)

KPI-4 Earnings before Interest and Taxes (EBIT)

The above shown list is the sum of all financial and non- financial lagging indicators. These indicators are known as lagging because they include activities and actions that can be chronicled or reported only after completion of entire sales process. These lagging financial KPI's are basically the „tangible output“ and the „tangible results“ of the analysis which every company or business wants to trace

Detailed Explanation of Growth or Performance Indicators of Telecom Sector Growth

Indicator-1: Total number of Customers or Subscriber base

Budding or growing number of subscriber is a strong indication of a prosperous business. Growing number of subscribers leads to growing network and vice versa. According to Cambridge Dictionary, a subscriber is one who subscribes to any service, product or an organisation and promises to pay for any of these at regular time intervals. In telecom public switched network, "a subscriber is a user or a customer who is paying for the communication services provided by a telecommunication service provider or an operator".

TABLE 2 : Descriptive Statistics & Trend Percentages of Subscriber Base (India)

SECTOR	OPERATORS/YEARS	Subscriber Base (India)									DESCRIPTIVE STATISTICS		
		In Crores									MEAN	DEVIAT-	COFF. OF VAR
		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18			
PUBLIC SECTOR	1. BSNL	5.21	6.95	9.18	11.27	10.07	9.46	7.72	8.63	10.10			
	1. BHARTI AIRTEL	9.39	12.76	16.22	18.13	18.82	20.54	22.60	25.12	27.36			

PRIVATE SECTOR	2. IDEA CELLULAR	3.89	6.38	8.95	11.27	11.93	13.58	15.78	17.51	19.54	ION	20%	
	3. TATA TELESERVICES	3.51	6.69	8.91	8.17	6.70	6.30	6.63	6.01	4.90			
	4. VODAFONE	6.88	10.09	13.46	15.05	14.99	16.66	18.38	19.79	20.91			
	5. REL COMMUNICATIONS	7.27	10.24	13.57	15.30	12.30	11.09	10.95	10.24	8.35			
	TOTAL SUB. BASE	PUBLIC SUBSCRIBERS	5.21	6.95	9.18	11.27	10.07	9.46	7.72	8.63			10.10
	PRIVATE SUBSCRIBERS	30.94	46.17	61.11	67.93	64.73	68.16	74.34	78.68	81.06	63.68	15.15	24%
TREND PERCENTAGES	PUBLIC SECTOR TREND (%)	100	133.19	176.12	216.17	193.06	181.51	148.10	165.59	193.67			
	PRIVATE SECTOR TREND(%)	100	149.23	197.54	219.56	209.24	220.33	240.30	254.31	262.01			

The table reveals that public- private sector subscriber base has continually increased from 2010 to 2013, thereafter, it has been decreasing from 2013 to 2017 and then again started increasing in 2018. This reflects that there are many variations in subscriber base in different years as explained above. Hence, mean is not a true measure in this growth parameter to understand the performance of both sectors. Therefore, there is need to compute some other measures of dispersion to interpret the performance of both sectors in a better way. The private sector standard deviation is 15.15 crores and coefficient of variation is 24%. The public sector standard deviation is 1.75 crore and coefficient of variation is 20%. This confirms higher amount of inconsistency and volatility in private sector.

Gross Indicator 2: Gross Revenue (India): Gross revenue includes an amount of revenue earned from all the licenced telecom activities under the explicit licences. *According to the CLAUSE 19.1 of the UAS agreement,* "The Gross Revenue is the sum total of all incomes from sale of goods and services. Moreover, also includes installation charges, late fees, roaming charges, earnings from selling handsets, interest income, dividend income, income from value added services and other miscellaneous income, without deducting any operating and non-operating expenses.

TABLE-3: Descriptive Statistics & Trend Percentages of Gross Revenue (India)

SECTOR	OPERATORS/YEARS	GROSS REVENUE (INDIA)									DESCRIPTIVE STATISTICS				
		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	<i>In Crores</i>				
PUBLIC SECTOR	1. BSNL	2,930.12	2,526.73	2,338.17	2,593.62	2,520.70	2,467.95	2,455.12	2,209.66	1,429.75				STD.	COFF.
	1. BHARTI AIRTEL	8,895.95	9,541.69	10,565.77	11,601.22	12,994.30	14,334.38	15,644.26	14,725.02	14,987.86	MEAN	-		DEVIAT	OF

PRIVATE SECTOR	2	IDEA CELLULAR	2,867.70	4,307.00	5,441.96	6,075.22	7,078.22	8,565.99	9,575.16	8,201.22	6,833.00	ION	(%)
	3	TATA TELESERVICES	2,135.86	2,719.58	3,194.58	3,164.68	2,857.11	3,352.48	3,275.16	1,855.56	1,206.00		
	4	VODAFONE	5,500.82	6,765.73	8,204.10	8,895.72	9,954.47	10,919.07	11,441.79	10,329.60	9,853.02		
	5	REL COMMUNICATIONS	3,132.33	3,097.25	2,996.54	3,041.31	3,069.70	2,859.43	2,457.26	1,653.67	159.13		
	TOTAL GR	GROSS REVENUE -PUB SECTOR	2,930.12	2,526.73	2,338.17	2,593.62	2,520.70	2,467.95	2,455.12	2,209.66	1,429.75		
TOTAL GR	GROSS REVENUE-PVT SECTOR	22,532.66	26,431.25	30,402.95	32,778.15	35,953.80	40,031.35	42,393.63	36,765.07	33,039.01	33369.76	5952.21	17.84 %
TREND	GR PUBLIC SECTOR TREND %	100	86	80	89	86	84	84	75	49			
PERCENTAGES	GR PRIVATE SECTOR TREND %	100	117	135	145	160	178	188	163	147			

(Source: Compiled and calculated from TRAI annual reports)

The given data set revealed results of standard deviation. The public sector has low standard deviation i.e. 385.34 which shows that most of the values are very near to the expected value i.e. average or mean but private sector has high standard deviation i.e. 5952.21 reflects that the numbers are not close to average mean. Additionally, the results of coefficient of variation (C.V.) states that high riskiness and volatility is found in gross revenue earned by private sector.

Gross Indicator 3: Adjusted Gross Revenue (India): Adjusted gross revenue is the most significant or important key growth indicator to calculate and analyse because the payment made by telco service providers to the government is solely calculated on the basis of adjusted gross revenue. It is the nurturing block of an organisation.

Table 4: Descriptive Statistics and Trend percentages in terms of Adjusted Growth Revenue

SECTOR	OPERATORS/YEARS	ADJUSTED GROWTH REVENUE (INDIA)									DESCRIPTIVE STATISTICS	
		In Crores									STD.	COFF.
		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		

PUBLIC SECTOR	1. BSNL	2,400.89	1,867.64	1,648.19	1,921.73	1,857.82	1,859.82	2,191.44	1,967.27	1,251.42			
PRIVATE SECTOR	1. BHARTI AIRTEL	6,838.37	7,017.43	7,700.24	8,036.21	9,174.94	10,439.07	12,032.24	10,361.86	7,086.49	MEAN	DEVIAT	OF
	2. IDEA CELLULAR	2,223.11	3,121.76	3,883.48	4,234.12	5,080.42	6,396.35	7,663.14	6,401.13	4,033.39		ON	VAR
	3. TATA TELESERVICES	1,453.97	2,112.35	2,347.04	1,712.49	2,010.84	2,444.58	2,595.85	1,381.41	271.00			(%)
	4. VODAFONE	4,093.02	4,769.29	5,686.46	6,015.54	6,886.82	7,828.49	8,616.26	7,258.12	5,095.78			
	5. REL COMMUNICATIONS	2,226.69	1,837.76	1,924.57	1,966.50	2,034.65	1,830.88	1,360.97	732.99	81.07			
TOTAL AGR	AGR -PUBLIC SECTOR	2,400.89	1,867.64	1,648.19	1,921.73	1,857.82	1,859.82	2,191.44	1,967.27	1,251.42	1885.14	303.19	16.08 %
	AGR-PRIVATE SECTOR	16,835.16	18,858.59	21,541.79	21,964.86	25,187.67	28,939.37	32,268.46	26,135.51	16,567.73	23144.35	5113.59	22.09 %
TREND	AGR-PUBLIC SECTOR TREND %	100	78	69	80	77	77	91	82	52			
PERCENTAGES	AGR-PRIVATE SECTOR TREND %	100	112	128	130	150	172	192	155	98			

Source: Compiled and calculated from TRAI annual reports

Conclusion

Both private and public sectors are degrowing and are showing declining trend in making revenue during last nine years but public sector is showing more dreadful position which directly cuts off the revenue earned by government from telco operators. The table reflects their **trend percentages** decreasing trend (98% (PRIVATE) Verses 52% (PUBLIC)).

Mean Score results indicate that the private sector is making more revenue than public sector, after deducting all deductions because of its huge subscriber base (33369.76 crore (PRIVATE) Verses 2385.76 crore (PUBLIC)).

Standard deviation of public sector and private sector is 385.34 crore & 5952.21 crore respectively. Whereas **coefficient of variation** of public sector and private sector is 16.15% and 17.84% respectively.

These three descriptive statistics when looked by the lens of financial analyst revealed that despite being degrowing, private sector is performing better than public sector and is having high mean score which shows that this sector is making more revenue because of its huge subscriber base. Customers are interested in buying or using services of private sector therefore, private sector is growing in terms of revenue base than public sector. Both sectors have more or less same volatility or riskiness but more variations are found in private sector but these variations have no effect on end users choice of buying services.

Growth Indicator 4: EBIT/ PBT: EARNINGS BEFORE INTEREST AND TAXES.

In any business concern, for the purpose of examining profitability and financial performance, numerous indicators are available which are helpful in comparing many firms functioning in same industry or sector. Out of all available multiple metric's earnings before interest and taxes & earnings before interest, taxes, depreciation and amortization and profit after taxes are undoubtedly the most significant indicators. These two indicators share some likenesses and have distinctions too.

Table 5: Descriptive Statistics and Trend Percentages of Profit Before Tax

SECTOR	OPERATORS/YEARS	PROFIT BEFORE TAX									DESCRIPTIVE STATISTICS		
		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	MEAN	STDEV	COEFF OF VARIATION (%)
PUBLIC SECTOR	1. BSNL	1271.63	-2342.49	-6599.27	-8820	-7954.51	-7123.35	-8842.64	-4859.16	-4793.21			
PRIVATE SECTOR	1. BHARTI AIRTEL	8161.53	10604.1	8727.1	6975.2	6491.1	8455.7	15736.3	10308.6	-8170.6			
	2. IDEA CELLULAR	285.06	507.43	235.19	-160.7	235.81	244.41	-331.1	2412.7	-4222.2			
	3. TATA TELESERVICES	-1804.51	-1333.68	-3508.05	-4228.28	-4858.41	-6166.52	-3846.16	-3386.02	N.A.			
	4. VODAFONE	1086.86	1168.74	906.32	842.26	1288.64	2605.28	4339.09	4070.85	-1419.01			
	5. REL COMMUNICATIONS	4815.23	591.29	-758	156	-770.94	-1934.94	157	-3561	-1890			
PROFIT BEFORE TAX	PBT PUBLIC SECTOR	1271.63	-2342.49	-6599.27	-8820	-7954.51	-7123.35	-8842.64	-4859.16	-4793.21	-5562.56	3140.48	-56%
	PBT PRIVATE SECTOR	12,544.17	11,537.88	5,602.56	3,584.48	2,386.20	3,203.93	16,055.13	9,845.13	-15,701.81	5450.85	8721.05	160%
TREND PERCENTAGES	PUBLIC SECTOR TREND (%)	100	-184.21	-518.96	-693.60	-625.54	-560.17	-695.38	-382.12	-376.93			
	PRIVATE SECTOR TREND (%)	100	91.98	44.66	28.57	19.02	25.54	127.99	78.48	-125.17			

(Source: Compiled and calculated from TRAI annual reports)

The tabular presentation statistics reveal trend percentages from March 2010 to March 2018 along with their descriptive coefficients of public and private sector. The scandalous figures of profit before taxes reveal that both sectors are degrowing or degrading in terms of earning profits which is a matter of concern for telco operators. More than that, the negative trend percentages shows that the profits are decreasing or depleting which creates threat in front of overall telecommunication sector but BSNL is in most tragic situation. BSNL is incurring losses continually right from the year 2010 and has been confirmed as “Incipient Sick Unit” in 2017-2018.

Conclusion:

In March 2018, for the very first time, the private telecom sector shows negative trend percentage i.e. (-125.17%) but on the other side the public sector shows negative **trend percentage** consecutively from last nine years and show degrowth in earning profits by (-376.93%). More than that, this reflects that both sectors are incurring losses and in a pathetic position but public sector is in most severe condition and needs reconstruction.

- Mean score of private sector is 5450.85crore and public sector mean score is a (-5562.56crore). Negative mean score of public sector shows negative earnings or losses.
- Standard deviation of public sector and private sector is 3140.48crore & 8721.05crore respectively whereas coefficient of variation of public and private sector is (-56%) and 160% respectively. Following are the conclusions drawn from the analysis of finding out trends in terms of growth of public and private sector in India. The analysis part of this chapter indicates the outcomes explored on the basis of trend percentages and descriptive statistics (Mean, Standard Deviation and Coefficient of Variation (%)) calculated for every growth indicator considered for this study. The public sector comprises only one company i.e. BSNL and private sector comprises five companies such as Airtel Bharti, Vodafone, Idea cellular, Tata teleservices and Reliance communications.

Table 6: Results based on Mean Performance of all indicators

Growth Indicator name	SB	GR	AGR	EBIT
LEADING OR GOOD PERFORMER	Private sector	Private sector	Private sector	Private sector

(Source: Researcher's own interpretation after doing excel calculations)

Table 7: Results on the basis of Volatility of all indicators

Growth Indicator name	SB	GR	AGR	EBIT
High Volatility	Private sector	Private sector	Private sector	Public sector

(Source: Researcher's own interpretation after doing excel calculations)

Table 8: Results based on Trend percentages for all indicators

Growth Indicator name	SB	GR	AGR	EBIT
Sector that has degrowing and has inconsistencies	Both are degrowing	Public sector is degrowing	Both degrowing but public is more	Both degrowing but private is more

(Source: Researcher's own interpretation after doing excel calculations)

References :

1. Bhandary, P. R., & Bhat, S. S. (2013). Financial performance of top 4 Indian telecom companies: A comparative study. *EXCEL International Journal of Multidisciplinary Management Studies*, 3(5), 137-144.
2. Bujaki, M., & Durocher, S. (2014). Financial Ratios and Strategy in the Canadian Telecommunication Sector. *International Journal of Case Method Research & Application*, 26(2), 88-89.
3. Khizindar, T. M., Al-Azzam, A. F. M., & Khanfar, I. A. (2015). An empirical study of factors affecting customer loyalty of telecommunication industry in the kingdom of Saudi Arabia. *British Journal of Marketing Studies*, 3(5), 98-115.

4. KHAN, M. M., & SAFIUDDIN, D. S. K. (2016). LIQUIDITY & PROFITABILITY PERFORMANCE ANALYSIS OF SELECTED TELECOM COMPANIES. *Anveshana's International Journal of Research in Regional Studies, Law, Social Sciences, Journalism and Management Practices*, 1(8), 365-376.
5. Kumar, D. M. P. (2014). TELECOM SERVICES: EMERGING TRENDS, OPPORTUNITIES AND RISK. *International Journal of Business and Administration Research Review*, 1(5), 34-41.
6. Kushwah, S. V., & Bhargav, A. (2014). Service quality expectations and perceptions of Telecom sector in INDIA. *International Journal of Advancements in Technology*, 5(1), 1-10.
7. Karlsson, J., Back, B., Vanharanta, H., & Visa, A. (2001). Analysing financial performance with quarterly data using self-organising maps. *Turku: Turku Centre for Computer Science*.
8. Kim, M. K., Park, M. C., & Jeong, D. H. (2004). The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services. *Telecommunications policy*, 28(2), 145-159.
9. i, Y., Qi, J., & Shu, H. (2008). A study on customer satisfaction in mobile telecommunication market by using SEM and system dynamic method. In *Research and Practical Issues of Enterprise Information Systems II* (pp. 1221-1226). Springer, Boston, MA
10. Mitra Debnath, R., & Shankar, R. (2008). Benchmarking telecommunication service in India: an application of data envelopment analysis. *Benchmarking: An International Journal*, 15(5), 584-598.
11. Muthusamy, A. (2012). A financial analysis of selected telecommunication companies in India. *International Journal of Marketing and Technology*, 2(8), 366.

