

Comparative Study of Major Telecom Providers in India

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Abstract: Every company has its prime aim to Growth. With the changing times increase in competition has become their core competencies and has a competitive edge over others. Business matrices like Net sales, Profit (%) after tax, Total Income (Capitalization), Total Expenditures and level of satisfaction of the customers are important indicators representing the stand of companies in the market. A comparative analysis of the major telecom providers like Bharti Airtel Limited, Tata Communications Limited, Idea Cellular Limited, Reliance Communications Limited, Vodafone India Limited and Bharat Sanchar Nigam Limited (BSNL) and in India has been presented in this paper on the basis of secondary data which includes last five year Profit (%) after tax, Total Income and Total Expenditures. This data has been collected to measure the level of satisfaction (LOS) of the Indian telecommunication customers. This LOS was evaluated for various factors like network coverage; customer service, tariff rates, plan and accountability of bill. An empirical study has been done and conclusions have been brought out on the basis of the data collected through an online field survey to achieve this objective. An online questionnaire was prepared and was distributed to mobile phone users via social networking sites and email for this purpose. The collected data was analysed with the help of prowess software. A sensitivity analysis was done to verify the significance of the factors considered for determining the LOS. In this paper, it was concluded that Bharti Airtel is the overall leader in all business matrices mentioned above.

1. Introduction

The Information and Communication Technology (ICT) Industry in India has perceived a tremendous growth in the past 1.5 decade. With the boom in technology, the ICT Industry has experienced exciting possibilities, ranging from a speedy expansion in size to gaining importance in the overall Indian economy. The escalated effect of the ICT industry has led to the formation of a larger and more significant constituent of the overall export market. It is aiding the improvement of the local and global competitiveness of Indian companies across industries. The fact that the Indian ICT market is one of the most rapidly growing ICT market in the world for the third year stands as a secured testament to the increased leverage of ICT by the domestic industry [2]. Talking about the Telecommunications sector, which is a sub domain of the ICT industry, the sector is growing at a remarkable pace and India is the second largest telecom market globally since 2010. In April 2008, India surpassed the US as the second largest wireless market and as an indicator to the swelling global influence of Indian telecom companies. Seven Indians have featured in the list of the world's 100 most prominent and influential telecom leaders, compiled by Global Telecoms Business industry magazine [1]. Forthcoming services such as 4G will further augment the growth rate. The world's leading telecom handsets manufacturers, such as Nokia, Samsung, Micromax have their presence in India, along with leading global service companies and infrastructure majors, such as AT&T, Ericsson, Alcatel, Singapore Telecom and Siemens. India reached the target of having 300 million telephone subscribers; becoming the second largest telecommunications network in the world after China in June 2008. As per the report [3] India is having 800 million mobile subscribers and it expected to reach 900 million by 2015. India is emerging as one of the fastest growing telecom markets in the world. According to the report titled 'Mobile BRIC: Extreme Growth Ahead', BRIC (Brazil, Russia India and China) India is the second largest mobile market in the BRIC nations, with 650 million mobile users, since 2012 (after China with 800 million users). Indian telecom industry has had a long way and is expected to soar even higher and the growth rate is expected to double with every passing year. To make full use of this opportunity, a large number of players has entered into the telecom industry, the major being Airtel, Vodafone, Idea, BSNL, Tata, Reliance. In today's era, with the increase in telecom service providers, it has become essential for the various companies to excel and have a competitive edge over the others. The firms must innovate and come up with groundbreaking and novel services so as to stand out in the global market. It would be quite interesting to know about the performance of the various telecom service providers and to do a comparative analysis of them. This can disclose a number of facts about their stand in the market and also what image do they carry among their customers. A range of business matrices like year Total Expenses, net sales, Profit (%) after tax and capitalization reflect the health and wealth of the companies and also affect the subscriber base. At the same time it is essential to satisfy their customers in order to expand their subscriber base. Customer satisfaction is significant to be cashed upon for an accentuated growth. The companies can be compared on the basis of a number of parameters. The most significant ones can be, total net sales profit after tax reduction, market capitalization and level of satisfaction of the customers. Firstly, net sales is an important index of measuring a

company's growth as it is the amount of sales generated by a company after the deduction of returns, allowances for damaged or missing goods and any discounts allowed. The sales number reported on a company's financial statements is a net sales number, reflecting these deductions. It gives a more accurate picture of the actual sales generated by the company, or the money that it expects to receive. Secondly, profit after tax reduction, is the bottom line that reflects the position of the company as it is the net profits of a company after taxation. Thirdly, market capitalization, which is a measurement of corporate or economic size equal to the share price times the number of shares outstanding of a public company, is regarded as a valuable index to appraise a firm. And finally, level of satisfaction is the key indicator of the popularity of the service among the customers. Higher the level of satisfaction of the customers, greater will be the net sales, profit after tax and market capitalization. Thus, net sales, profit after tax, market capitalization and level of satisfaction have been included in our factors to measure the performance of the telecom service providers in India. As a matter of fact, not much literature is available concerning our present study. Thus, we have come up with a novel research which compares the telecom companies' on the basis of the important business matrices as discussed above.

In this paper, a comparative analysis of the leading telecom service providers has been presented. Companies like Bharti Airtel, Vodafone Communication, Idea Cellular, Reliance Communications and Tata Communication in India have been chosen for the analysis on the basis of secondary data which includes last five year values of net sales, profit after tax reduction, and market capitalization. The Level of Satisfaction (LOS) of the Indian telecommunications' customers has also been compared. The LOS has been determined on the basis of various factors like network coverage; tariff rates, plan, bill accountability, payment convenience, customer service etc. To achieve this objective, an empirical study has been done and conclusions have been brought out on the basis of the data collected through an online field survey. Section II discusses the notable features of the leading telecom service providers in the Bhopal region of India. It is then followed by Section III which illustrates the research methodology adopted for the present study. Section IV explains the data analysis and findings. The last section presents conclusions, limitations and recommendations.

2. Telecom Service Providers in India

The major telecom service providers in India are as follows:-

2.1 BSNL

Bharat Sanchar Nigam Limited (abbreviated BSNL) is an Indian state-owned Telecommunications company headquartered in New Delhi, India. It was incorporated on 15 September 2000 and took over the business of providing of telecom services and network management from the erstwhile Central Government Departments of Telecom Services (DTS) and Telecom Operations (DTO), with effect from 1 October 2000 on a going concern basis. It is the largest provider of fixed telephony, largest broadband services provider with more than 60% Market share, and fifth largest mobile telephony provider in India. However, in recent years the company's revenues and market share have plummeted into heavy losses due to intense competition in the Indian telecommunications sector. BSNL is India's oldest and largest communication service provider (CSP). It had a customer base of 117 million as of January 2014.

2.2 Bharti Airtel

Bharti Airtel, formerly known as Bharti Tele-Ventures Limited (BTVL) is India's largest cellular service provider with more than 75 million subscribers as of August 2008 [5]. It also offers fixed line services and broadband services. It offers its TELECOM services under the Airtel brand and is headed by Sunil Mittal. The company also provides telephone services and Internet access over DSL in 14 circles. The company complements its mobile, broadband & telephone services with national and international long distance services. The company also has a submarine cable landing station at Chennai, which connects the submarine cable connecting Chennai and Singapore. The company provides end-to-end data and enterprise services to the corporate customers through its nationwide fibre optic backbone, last mile connectivity in fixed-line and mobile circles, VSATs, ISP and international bandwidth access through the gateways and landing station.

2.3 Vodafone Communication

Vodafone Communication, previously Hutchison Essar is a cellular operator in India that covers 21 telecom circles in India. Despite the official name being Vodafone Communication, its products are simply branded Vodafone. It offers both prepaid and postpaid GSM cellular phone coverage throughout India and is especially strong in the major metros. Vodafone Communication provides 2G services based on 900 MHz and 1800 MHz digital GSM technology, offering voice and data services in 21 of the country's 23 license areas [6].

2.4 Idea Cellular

Idea Cellular is a wireless telephony company operating in various states in India. It initially started in 1995 as a joint venture between the Tatas, Aditya Birla Group and AT&T by merging "Wings Cellular" operating in Madhya Pradesh, UP West, Rajasthan and Tata Cellular as well as Birla AT&T Communications. Initially having a very limited footprint in the GSM arena, the acquisition of Escotel in 2004 gave Idea a truly pan-India presence covering Maharashtra, Goa, Gujarat, Andhra Pradesh, Madhya Pradesh, Chhattisgarh, Uttar Pradesh (East and West), Haryana, Kerala, Rajasthan and Delhi (inclusive of NCR) [7]. The company has its retail outlets under the "Idea n' U" banner. The company has also been the first to offer flexible tariff plans for prepaid customers. It also offers GPRS services in urban areas.

2.5 Reliance Communications

Reliance Communications (formerly Reliance Infocomm), along with Reliance Telecom and Flag Telecom, is part of Reliance Communications Ventures (RCoVL). According to National Stock Exchange data, Anil Ambani controls Telecommunications Company. It is the flagship company of the Reliance-Anil Dhirubhai Ambani Group, comprising of power (Reliance Energy), financial services (Reliance Capital) and telecom initiatives of the Reliance ADA Group. Reliance Infocomm is currently managed by Anil Dhirubhai Ambani. It uses CDMA2000 1x technology. RelCom is also into Wireline Business throughout India and has the largest OFC backbone architecture [roughly 110,000 km] in the country. The company also has licenses in the GSM telecom services space for most of the Telecom Circles (zones in layman's words). It currently operates in 8 circles and plans to launch in the others soon.

2.6 Tata Communication

Tata Teleservices Limited (TTSL) is a part of the Tata Group of companies, an Indian conglomerate. It runs under the brand name Tata Communication in India, in various telecom circles of India. The company forms part of the Tata Group's presence in the Telecommunication Industry in India, along with Tata Teleservices (Maharashtra) Limited (TTML) and TATA COMMUNICATIONS LTD. It was founded in the year 2000 and its chairman is Mr. Ratan Tata. In February this year, TTSL announced that it would provide CDMA mobile services targeted towards the youth, in a joint venture with Virgin, UK, on a Franchisee model basis [9].

3. Research Methodology

In this paper, a study to compare the major telecom service providers in India is presented. Telecom Service Providers such as Bharti Airtel, Idea Cellular, Reliance Communications, Tata Indicom and BSNL are compared. For this purpose secondary data was collected pertaining to last five year values of three important business matrices which are Market Capitalization, Net Sales and Profit after Tax Reduction. This data was collected from Capitaline Database [10] which is an online corporate database consisting of financial and nonfinancial information on more than 12000 companies. After collection of secondary data, graphs were plotted for each of the business matrices which present the comparison of the performance of the telecom service providers for the last five years for that particular business matrix. In the present study, the comparison of the telecom service providers is also presented in terms level of satisfaction of their customers. This was done for factors such as Tariff Rates, Plan, Accountability of Bill, Bill Payment Convenience / Recharge Facility, Value Added Services, Customer Services, and Schemes. In order to determine the level of satisfaction of Indian telecommunication customers, an online field survey was conducted. For this purpose, an online questionnaire was prepared on the website qualtrics and was sent to a number of people in Bhopal Region via e-mail and various social networking sites. Hence primary data was collected to get real time results. A total of 596 respondents filled the questionnaire out of which 480 were completely filled. The questionnaire comprised of questions regarding the demographics of the respondents, the name of the service provider whose service they are availing and their monthly expenditure. The respondents were also asked to express their level of satisfaction for the various factors on a scale of 1 to 5, 5 being the most satisfied and 1 being the least satisfied.

The factors used for determining the level of satisfaction of Indian telecommunication customers may or may not be significant in determining it. Hence, in order to find out which of these factors are significant and to justify that the factors used truly help in determining the level of satisfaction, a sensitivity analysis was done with the help of SPSS (Statistical Package for the Social Sciences) software version 12.0 for windows. A statistical hypothesis test namely Chi Square test was applied on the responses received to the question enquiring the level of satisfaction of the customers. Chi Square Test gives the value of a probability called Chi Square Probability, say P. If the value of P is less than 0.05 then the factor on which it is applied is said to be Sensitive Factor otherwise Nonsensitive Factor. The findings obtained by analysing the data are shown in the following section.

4. Data Analysis and Findings

4.1. Comparison on the basis of Secondary Data: Business Matrices

After a meticulous collection of secondary data of the telecom service providers such as Bharti Airtel, Idea Cellular, Reliance Communications, Tata Indicom and BSNL for the three important business matrices which are Net Sales, Profit after Tax Reduction, Total Income, Total Expenditure and individual graphs for each business matrix were plotted for the values of last five years so as to compare the performance of the telecom service providers in India.

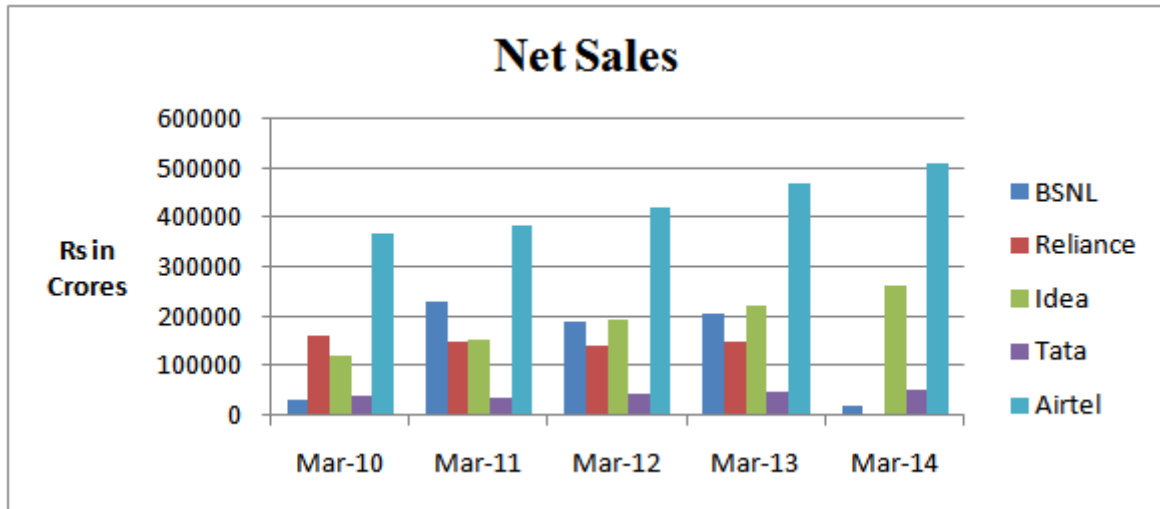


Figure 1

Figure 1 shows the graph between Net Sales (in crore rupees) of the various telecom service providers for the past four years. It can be clearly seen that the net sales of Airtel for the years March 2010 to 2014 are Rs. 367181 crores, Rs. 384795 crores, Rs. 422278 crores, Rs. 468310 crores and Rs. 509055 crores respectively. No other telecom service provider has ever managed to surpass Airtel's sales. Hence Airtel leads in terms of Net Sales. Figure 2 below depicts the graph between profits after tax reduction (in crore rupees) of the various telecom service providers for the past five years. From Figure 2 it can be undoubtedly said that the profits after tax reduction of Airtel from the year 2010 to 2014 have increased tremendously. The values of profits after tax reduction are Rs. 94267 crores, Rs. 77169 crores, Rs. 57300 crores, Rs. 50970 crores and Rs. 66002 crores from the period of March 2010 to 2014. Here also, no other telecom service provider has ever managed to surpass Airtel's profits. Hence Airtel leads in terms of profits after tax reduction too.

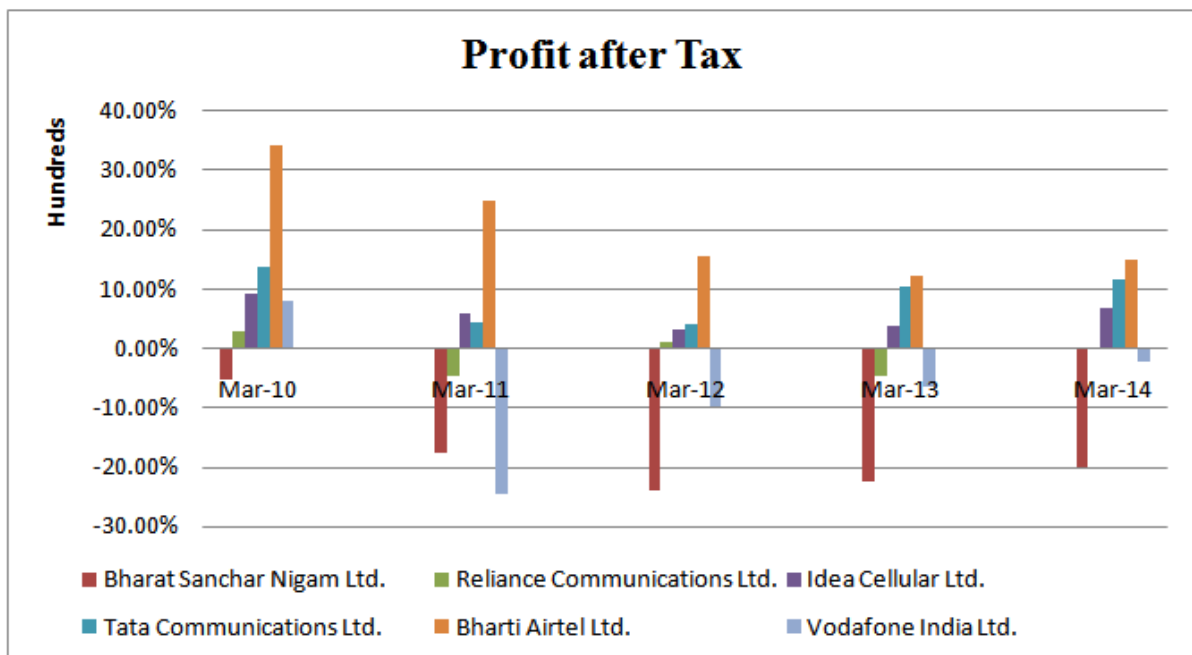


Figure 2

The following figure, figure 3 shows the graph between Total incomes (in crore rupees) of the various telecom service providers for the past five years. In this figure also, the tall rising towers of Airtel prove that its total income is highest amongst the rest. The values of per annum total income from March 2010 to 2014 are Rs. 368381 crores, Rs. 385065 crores, Rs. 422475 crores, Rs. 468503 crores and Rs. 509103 crores.

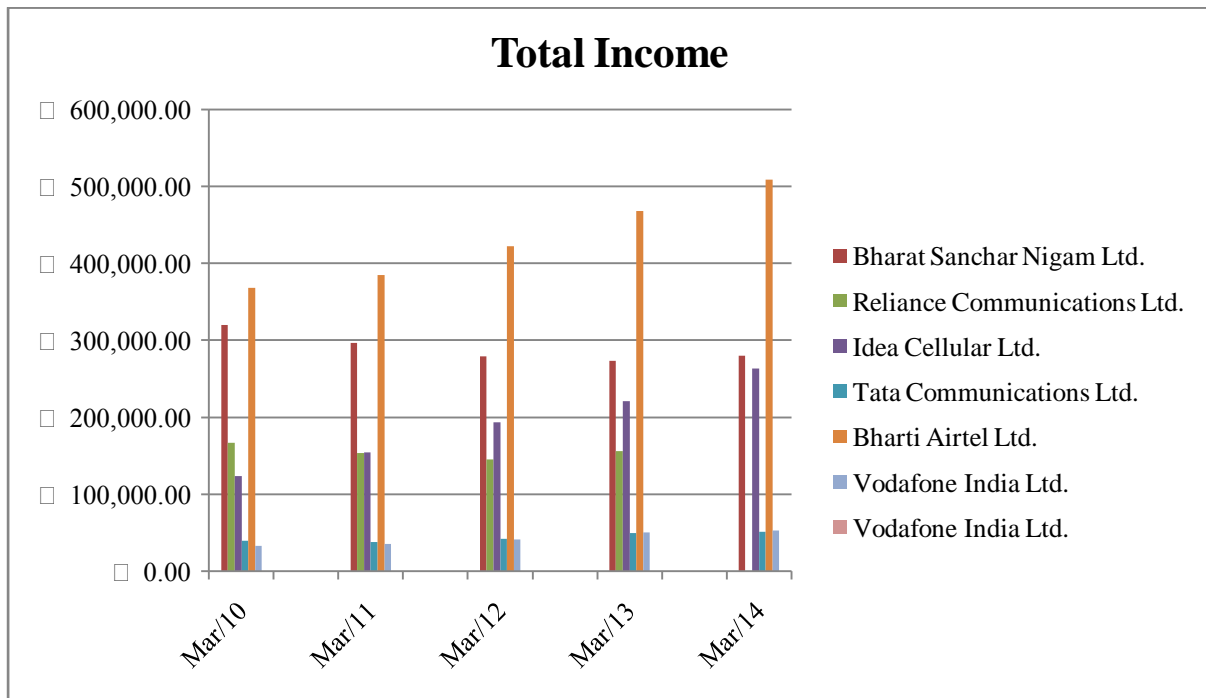


Figure 3

It can be clearly seen from the graph that no other telecom service provider has been able to give even a slight completion to that of Airtel as their Market Capitalization values are very low as compared to Airtel. For example, the telecom service provider with second highest total income is Idea with a value of Rs.247268.5 crores which is only 48.56% that of Airtel. Hence Airtel leads in terms of total income too.

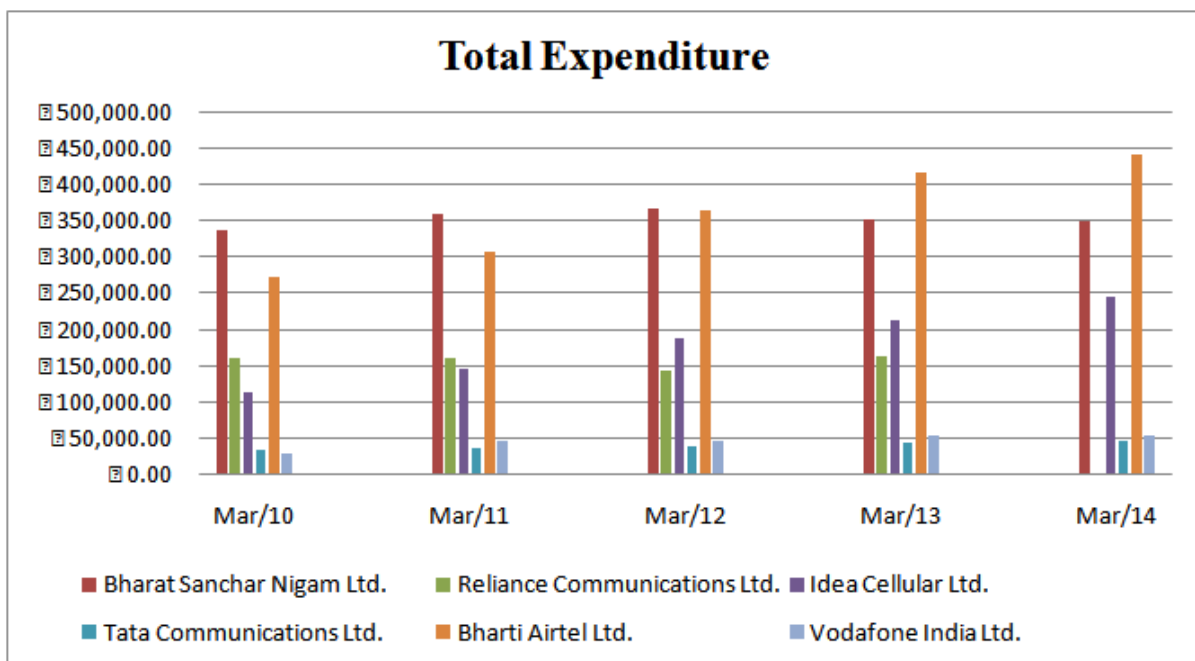


Figure 4

Taking all the four graphs shown above into account, it is very distinguishably visible that Airtel is the overall leader in every sense. Hence all the other service providers face a tough competition with Airtel and will have to work very hard to surpass it.

4.2 Comparison on the basis of Primary Data: Level of Satisfaction

After the meticulous comparison of the telecom service providers based on the secondary data collected, the comparison of the companies on the basis of primary data collected has been presented in this section. As mentioned in the research methodology section, the Indian telecommunications’ customers were asked to express their Level of Satisfaction for various factors like Network, Tariff Rates, Plan, Accountability of Bill, Bill Payment Convenience / Recharge Facility, Value Added Services, Customer Services and Schemes on a scale of 1 to 5 with 5 being the most satisfied and 1 being the least satisfied. The data collected has been presented in tabulated form in Table I below. This table is the collection of responses of the highest percentage of the surveyed population having equal Level of Satisfaction for a particular factor and a particular service provider. For example, maximum percentage of customers of Airtel surveyed, in the case of Network (here 53%), have ranked Airtel’s Network Coverage as 5 on a scale of 5 whereas maximum percentage of customers of BSNL (here 51%), have ranked Idea’s Network Coverage as 2 on scale of 5.

This shows that the customers of Airtel are highly satisfied with its Network Coverage whereas the customers of BSNL are very unsatisfied with the Network Coverage of BSNL in the region. Similar can be interpreted for other factors.

Table -1: Table showing the Level of Satisfaction (LOS) of Customers

Factor v/s Connection	Vodafone		Airtel		Idea		Reliance		BSNL		TATA INDICOM	
	LOS	%*	LOS	%*	LOS	%*	LOS	%*	LOS	%*	LOS	%*
Network	4	45	5	53	4	50	4	49	2	51	3	46
Tariff Rates	3	45	3	40	3	45	4	51	3	46	4	42
Plan	4	43	4	40	4	47	5	45	3	45	4	44
Accountability of Bill	4	44	4	41	4	46	4	44	5	47	4	45
Bill Payment Convenience / Recharge Facility	5	46	5	43	5	44	5	60	4	48	5	43
Value Added Services	3	47	3	44	3	45	4	47	3	44	3	41
Customer Services	4	50	4	42	3	43	3	46	4	43	4	45
Schemes	3	49	3	48	3	49	3	48	3	49	3	48

*: Maximum Percentage of the customers surveyed

From the above table it was concluded that the customers are highly satisfied with the network coverage of Airtel and least satisfied with that of Idea. However, Idea along with BSNL, lead in satisfying their customers when tariff rates are taken into consideration. Other telecom service Providers have averagely satisfied their customers’ tariff rates expectations. Talking about the accountability of bill and the bill payment convenience / recharge facility factors, almost every service provider has succeeded in satisfying its customers. On the other hand, the customers are moderately satisfied with the value added services, customer services and schemes provided by them.

c. Sensitivity Analysis

The sensitivity analysis was performed as discussed in the research methodology section. The results of the Chi-Square test have been presented in Table II below.

Table- 2: Sensitive Factors

Factors	Chi Square Probability (p value)	Significant
Network	0.000	Y
Tariff Rates	0.000	Y
Plan	0.003	Y
Accountability of Bill	0.035	Y
Bill Payment Convenience / Recharge Facility	0.025	Y
Value Added Services	0.027	Y
Customer Services	0.091	N
Schemes	0.854	N

From table II, it can be seen that the value of Chi-Square probability for factors like Customer Services and Schemes came out to be greater than 0.05. Hence these factors are statically non significant. Hence they do

no play an important role in determining the level of satisfaction of the customers. Rest six factors which are Network, Tariff Rates, Plan, Accountability of Bill, Bill Payment Convenience / Recharge Facility and Value Added Services came out to be statically significant and are hence called as Sensitive Factors. This analysis proves that the factors chosen for determining the level of satisfaction of the customers are Significant except for customer services and schemes. Therefore, the responses collected for these two factors can be ignored.

5. Conclusions, Limitations and Recommendations

After a detailed comparison of the telecom service provider companies in India, it was found out that Airtel outdoes its rest of the competitors in the case of all the three business matrices used which are Net Sales, Profit after Tax Reduction and Market capitalization. Also the level of satisfaction of the customers of Airtel is higher than that of other customers. As the analysis done in this paper is totally based on the data collected from the online survey, therefore the data collection could be biased as mostly young people in the age group of 15 to 35 years use the internet. Therefore responses of users more than 35 or say 40 years may not have been recorded. To overcome this limitation, a paperback form of the questionnaire can be used and data can be collected by personally going to users from all age groups. Secondly, the scope of the research done in this paper is limited to the Bhopal region. So, the results achieved show the LOS and LOA of the mobile users in Bhopal region only. This scope could be widened to cover whole of India to get a nationwide picture.

References

- [1]. IBEF 2008, <http://www.ibef.org/artdispview.aspx?in>
- [2]. Gartner 2006, http://www.gartner.com/DisplayDocument?doc_cd=138416.
- [3]. Annual Report 2013-14
- [4]. <http://en.wikipedia.org/wiki/BSNL>
- [5]. http://en.wikipedia.org/wiki/Bharti_Airtel
- [6]. <http://en.wikipedia.org/wiki/Vodafone>
- [7]. http://en.wikipedia.org/wiki/Idea_cellular
- [8]. http://en.wikipedia.org/wiki/Reliance_Communications
- [9]. http://en.wikipedia.org/wiki/Tata_Indicom
- [10]. www.capitalincc.com