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## **A Comparative Analysis of Customers Perception towards Usage Purpose of Mobile Services in Warangal City, Telangana State, India**

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### ***Abstract:***

*Telecom sector is considered to be the one of the very rapidly growing industry in India. In recent times the competition in the industry has been constantly increasing especially in mobile services and all the service providers are competing with each other and are targeting the same customers to manage their market share by understanding the customer's perception and consumer behaviour towards their services. The present study throws a light on the usage purpose of mobile services by consumers of select mobile service providers such as BSNL, Airtel, Vodafone and Idea Cellular in Warangal region of Telangana State, India.*

***Keywords:*** Telecom sector, competition, consumer behaviour

### **1. Introduction**

The telecom industry is one of the fastest growing industries in India. India has nearly 200 million telephone lines making it the third largest network in the world after China and USA. With a growth rate of 45%, Indian telecom industry has witnessed the highest growth rate in the world. History of Indian Telecommunications started in 1851 when the first operational land lines were laid by the government near Calcutta (seat of British power). Telephone services were introduced in India in 1881. In 1883 telephone services were merged with the postal system. Indian Radio Telegraph Company (IRT) was formed in 1923. After independence in 1947, all the foreign telecommunication companies were nationalized to form the Posts, Telephone and Telegraph (PTT), a monopoly run by the government's Ministry of Communications. Telecom sector was considered as a strategic service and the government considered it best to bring under state's control.

The first wind of reforms in telecommunications sector began to flow in 1980s when the private sector was allowed in telecommunications equipment manufacturing. In 1985, Department of Telecommunications (DOT) was established. It was an exclusive provider of domestic and long-distance service that would be its own regulator (separate from the postal system). In 1986, two wholly government-owned companies were created: The Videsh Sanchar Nigam Limited (VSNL) for international telecommunications and Mahanagar Telephone Nigam Limited (MTNL) for service in metropolitan areas. In 1990s, telecommunications sector benefited from the general opening up of the economy. Also, examples of telecom revolution in many other countries, which resulted in better quality of service and lower tariffs, led Indian policy makers to initiate a change process finally resulting in opening up of telecom services sector for the private sector. National Telecom Policy (NTP) 1994 was the first attempt to give a comprehensive roadmap for the Indian telecommunications sector. In 1997, Telecom Regulatory Authority of India (TRAI) was created. TRAI was formed to act as a regulator to facilitate the growth of the telecom sector. New National Telecom Policy was adopted in 1999 and cellular services were also launched in the same year.

Telecommunication sector in India can be divided into two segments: Fixed Service Provider (FSPs), and Cellular Services. Fixed line services consist of basic services, national or domestic long distance and international long distance services. The state operators (BSNL and MTNL), account for almost 90 per cent of revenues from basic services. Private sector services are presently available in selective urban areas, and collectively account for less than 5 per cent of subscriptions. However, private services focus on the business/corporate sector, and offer reliable, high- end services, such as leased lines, ISDN, closed user group and videoconferencing. Cellular services can be further divided into two categories: Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA). The GSM sector is dominated by Airtel, Vodafone and Idea Cellular, while the CDMA sector is dominated by Reliance and Tata Indicom. Opening up of international and domestic long distance telephony services are the major growth drivers for cellular industry. Cellular operators get substantial revenue from these services, and compensate them for reduction in tariffs on airtime, which along with rental was the main source of revenue. The reduction in tariffs for airtime, national long distance, international long distance, and handset prices has driven demand for mobile services.

## 2. Need of the Study

Telecommunication markets have changed dramatically in recent years. Customers in many countries who used to have only one service provider now have a wide variety to choose from. The success of any telecom company, or in fact any business firm, depends on its ability to satisfy the ever changing needs and wants of customers. To study the needs of consumers, the marketers try to gather required information related to customers' perceptions expectations and customer satisfaction. This study aims to make a comparative analysis of the customers' perception towards usage purpose of mobile services and also compares the consumer satisfaction level among the subscribers of select mobile service providers in Warangal region.

## 3. Statement of Research Problem

In the recent times, the mobile is used by every one without any prejudice of gender, income, education and age. In fact, most of the customers whether they are using pre-paid or post-paid mobile services are not completely satisfied with the existing mobile services. Hence, it is important to study the customers' perceptions and intentions to use mobile services.

## 4. Objective of the Study

The main objective of the study is to analyse and compare the customers' perception towards usage purpose of mobile services in Warangal city of Telangana State in India.

## 5. Hypotheses of the Study

There is no significant difference of mobile usage purpose among subscribers of select companies.

## 6. Research Methodology

The present study is made through survey method and is based on both primary and secondary sources of data. The primary data was collected through structured questionnaire The secondary data was collected from published and unpublished available literature resources.

The research study considered four major cellular service providers i.e. BSNL, Airtel, Vodafone and Idea. Through a convenient sampling method, a sample of 200 respondents from each service provider were selected for administering questionnaire.

The area of the study is restricted to the tri cities of Warangal district. The data collected was processed, tabulated and analyzed using SPSS, MS-Excel and applying relevant statistical tools.

## 7. Limitations of the Study

- The accuracy of data is subjected to information collected from various sources.
- The study is confined to select cellular services providers i.e., BSNL, Airtel, Idea and Vodafone.
- The study is restricted to geographical region of tri cities Warangal, Hanamkonda and Kazipet of Warangal District, Telangana State, India.

## 8. Results and Discussion

Particulars	BSNL	Airtel	Vodafone	Idea
Students	25	40	55	35
Professionals	20	25	23	25
Govt. Employees	45	20	12	19
Pvt. Employees	46	48	55	46
Self Employed	40	50	45	65
Others	24	17	10	10

Table 1: Occupation Profile of Respondents  
Source: Primary Data

It is evident from the above analysis that, most of the subscribers are self-employed (25 per cent) followed by private employee (24 per cent), on the other hand students constitute (19 per cent) and govt. employees and professionals share 12 per cent each. Whereas others contributions are very insignificant.

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Male	180	179	169	184	712
Female	20	21	31	16	88
TOTAL	200	200	200	200	800

Table 2: Gender Composition of Respondents  
Source: Primary Data

The above chart indicates the gender wise composition of subscribers. From the above chart it can be inferred that, the majority of respondents are males (92 per cent) whereas females constitute a mere 8 percent.

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Basic wire line	17	4	16	9	46
Post-paid cellular	29	40	40	26	135
Prepaid cellular	135	135	137	141	548
WLL.	7	3	3	2	15
Internet	4	6	0	12	22
Broadband	8	12	4	10	34
TOTAL	200	200	200	200	800

Table 3: Analysis of Service Usage  
Source: Primary Data

The above figure reflects the various types services availed by the subscribers. It is evident from the above analysis that the majority of subscribers are availing prepaid services (68 percent) followed by post-paid services (17 percent) and basic wire line services (6 percent). Whereas other services such as broadband (4 percent), internet (3 percent) and wireless land line (2 percent) usage is insignificant.

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Local	140	130	150	125	545
S.T.D.	50	45	40	50	185
International	10	25	10	25	70
TOTAL	200	200	200	200	800

Table 4: Analysis of Types of Calls  
Source: Primary Data

The above chart explains the various types of calls availed by the respondents. It is understood from the above table, that the majority of respondents are making local calls (68 percent) followed by STD calls (23 percent). Whereas ISTD calls (9 percent) made by the respondents is less and insignificant.

#### 8.1. Evaluation of Usage Purpose of Mobile Services

##### PURPOSE TO STAY IN TOUCH

Particulars	BSNL	AIRTEL	VODAFONE	IDEA	TOTAL
Strongly Disagree	2	0	0	2	4
Disagree	4	0	10	4	18
Neutral	8	2	27	4	41
Agree	108	86	50	80	324
Strongly Agree	78	112	113	110	413
TOTAL	200	200	200	200	800

Table 5: Analysis of Purpose to Stay in Touch  
Source: Primary Data

Summary	Count	Sum	Average	Variance
Strongly Disagree	4	4	1	1.33333
Disagree	4	18	4.5	17
Neutral	4	41	10.25	130.917
Agree	4	324	81	572
Strongly Agree	4	413	103.3	284.917
BSNL	5	200	40	2458
AIRTEL	5	200	40	2986
VODAFONE	5	200	40	2024.5
IDEA	5	200	40	2634

Table 5.1: Anova: Two-Factor without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	37391.5	4	9348	37.1623	1.14E-06	3.259167
Columns	0	3	0	0	1	3.490295
Error	3018.5	12	251.5			
Total	40410	19				

Table 5.2: ANOVA

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage of mobile services to stay in touch.

$F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and we can understand that the usage of mobile services for the purpose to stay in touch is same among the select service providers.

### 8.1.1. Business / Professional Usage

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Strongly Disagree	4	0	0	2	6
Disagree	6	0	8	3	17
Neutral	36	2	29	5	72
Agree	94	88	55	81	318
Strongly Agree	60	110	108	109	387
TOTAL	200	200	200	200	800

Table 6: Analysis of mobile for Business/Professional usage

Source: Primary Data

Summary	Count	Sum	Average	Variance
Strongly Disagree	4	6	1.5	3.66666667
Disagree	4	17	4.25	12.25
Neutral	4	72	18	290
Agree	4	318	79.5	295
Strongly Agree	4	387	96.75	600.916667
BSNL	5	200	40	1446
AIRTEL	5	200	40	2962
VODAFONE	5	200	40	1898.5
IDEA	5	200	40	2620

Table 6.1: Anova: Two-Factor Without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	32101	4	8025.125	26.7096103	6.8E-06	3.259167
Columns	0	3	0	0	1	3.490295
Error	3605.5	12	300.458			
Total	35706	19				

Table 6.2: Anova

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage of mobile services for business/professional usage.

$F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and we can infer that, the usage of mobile services for business/ professional usage is same among the select service providers.

### 8.1.2. Mobile Usage as a Status Symbol

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Strongly Disagree	4	1	2	5	12
Disagree	11	11	17	19	58
Neutral	146	110	113	121	490
Agree	31	60	54	41	186
Strongly Agree	8	18	14	14	54
TOTAL	200	200	200	200	800

Table 7: Analysis of Mobile Usage as a Status Symbol

Source: Primary Data

Summary	Count	Sum	Average	Variance
Strongly Disagree	4	12	3	3.33333333
Disagree	4	58	14.5	17
Neutral	4	490	122.5	267
Agree	4	186	46.5	169.666667
Strongly Agree	4	54	13.5	17
BSNL	5	200	40	3619.5
AIRTEL	5	200	40	2036.5
VODAFONE	5	200	40	2043.5
IDEA	5	200	40	2226

Table 7.1: Anova: Two-Factor Without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	38280	4	9570	80.7594	1.4E-08	3.259167
Columns	0	3	0	0	1	3.490295
Error	1422	12	118.5			
Total	39702	19				

Table 7.2: Anova

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage of mobile services as a status symbol.

$F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and we can say that the usage of mobile services as a status symbol is same among the select service providers.

### 8.1.3. Mobile Usage over Landline

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Strongly Disagree	2	0	1	1	4
Disagree	5	3	5	1	14
Neutral	82	49	90	69	290
Agree	88	106	87	89	370
Strongly Agree	23	42	17	40	122
TOTAL	200	200	200	200	800

Table 8: Analysis of Mobile Usage over Landline

Source: Primary Data

Summary	Count	Sum	Average	Variance
Strongly Disagree	4	4	1	0.66666667
Disagree	4	14	3.5	3.66666667
Neutral	4	290	72.5	320.333333
Agree	4	370	92.5	81.6666667
Strongly Agree	4	122	30.5	153.666667
BSNL	5	200	40	1756.5
AIRTEL	5	200	40	1852.5
VODAFONE	5	200	40	1996
IDEA	5	200	40	1571

Table 8.1: Anova: Two-Factor without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	27024	4	6756	48.2571429	2.7E-07	3.259167
Columns	0	3	0	0	1	3.490295
Error	1680	12	140			
Total	28704	19				

Table 8.2: ANOVA

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage of mobile as advantage over landline.

$F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and we can understand that the usage of mobile services as an advantage over landline is same among the select service providers.

#### 8.1.4. Mobile Usage for Mobility

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Strongly Disagree	2	1	3	3	9
Disagree	2	1	20	4	27
Neutral	36	25	50	34	145
Agree	110	116	110	95	431
Strongly Agree	50	57	17	64	188
TOTAL	200	200	200	200	800

Table 9: Analysis of Mobile Usage for Mobility  
Source: Primary Data

Summary	Count	Sum	Average	Variance
Strongly Disagree	4	9	2.25	0.91666667
Disagree	4	27	6.75	79.58333333
Neutral	4	145	36.25	106.9166667
Agree	4	431	107.75	80.25
Strongly Agree	4	188	47	432.6666667
BSNL	5	200	40	1976
AIRTEL	5	200	40	2333
VODAFONE	5	200	40	1824.5
IDEA	5	200	40	1575.5

Table 9.1: Anova: Two-Factor without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	28735	4	7183.75	41.0304617	6.6E-07	3.259167
Columns	0	3	0	0	1	3.490295
Error	2101	12	175.0833333			
Total	30836	19				

Table 9.2: ANOVA

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage of mobile services for mobility.

$F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and we can understand that the usage of mobile services for the purpose of mobility is same among the select service providers.

#### 8.1.5. Mobile Usage for Convenience of Calling

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Strongly Disagree	2	1	1	2	6
Disagree	2	0	19	2	23
Neutral	16	12	56	22	106
Agree	113	67	80	90	350
Strongly Agree	67	120	44	84	315
TOTAL	200	200	200	200	800

Table 10: Analysis of Mobile Usage for Convenience of Calling  
Source: Primary Data

Summary	Count	Sum	Average	Variance
Strongly Disagree	4	6	1.5	0.33333333
Disagree	4	23	5.75	78.9166667
Neutral	4	106	26.5	403.666667
Agree	4	350	87.5	377.666667
Strongly Agree	4	315	78.75	1024.91667
BSNL	5	200	40	2380.5
AIRTEL	5	200	40	2758.5
VODAFONE	5	200	40	958.5
IDEA	5	200	40	1912

Table 10.1: Anova: Two-Factor Without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	26382	4	6595.375	13.9917794	0.00018	3.259167
Columns	0	3	0	0	1	3.490295
Error	5656.5	12	471.375			
Total	32038	19				

Table 10.2: ANOVA

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage of mobile services for convenience of calling.  $F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and it can be understood that the usage of mobile services for the convenience of calling is same among the select service providers.

#### 8.1.6. Mobile Usage for Easy Accessibility

Particulars	BSNL	Airtel	Vodafone	Idea	Total
Strongly Disagree	2	0	2	1	5
Disagree	2	1	25	3	31
Neutral	23	28	56	26	133
Agree	118	106	90	99	413
Strongly Agree	55	65	27	71	218
TOTAL	200	200	200	200	800

Table 11: Analysis of Mobile Usage for Easy Accessibility

Source: Primary Data

SUMMARY	Count	Sum	Average	Variance
Strongly Disagree	4	5	1.25	0.91666667
Disagree	4	31	7.75	132.916667
Neutral	4	133	33.25	234.25
Agree	4	413	103.25	139.583333
Strongly Agree	4	218	54.5	379.666667
BSNL	5	200	40	2371.5
AIRTEL	5	200	40	2061.5
VODAFONE	5	200	40	1148.5
IDEA	5	200	40	1882

Table 11.1: Anova: Two-Factor Without Replication

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	27192	4	6798	30.6446281	3.2E-06	3.259167
Columns	0	3	0	0	1	3.490295
Error	2662	12	221.8333333			
Total	29854	19				

Table 11.2: ANOVA

**H<sub>0</sub>:** There is no significant difference among subscribers of select mobile service providers with regard to usage for easy accessibility.  $F_{tab} = 0 < F_{crit} \Rightarrow 0 < 3.49025$ . Hence null hypothesis  $H_0$  is accepted and we can understand that the usage of mobile services for easy accessibility is same among the select service providers.

### 9. Conclusion of the Study

The study considered various mobile usage parameters such as convenience of calling, status symbol, advantage over landline, easy accessibility, mobility purpose and for business/professional usage and found that the perception of consumers towards usage purpose of select mobile service providers is same.

### 10. References

- i. Bitner, M. J. & Zeithaml, V. A. (2003), *Service Marketing* (3rd ed.), Tata McGraw Hill, New Delhi.
- ii. Boeselie, P., Hesselink, M. & Wiele, T.V (2002). "Empirical evidence for the relationship between customer satisfaction and business performance".
- iii. Cronin, J. J., & Taylor, S. A. (1992). Measuring Service Quality: A Re-examination and Extension. *Journal of Marketing*, 56(3), pp55-68.
- iv. Dabholkar, P., (1993). A Measurement of Service Quality for Retail Stores: Scale Development and Validation, *Journal of the Academy of Marketing Science*, 24(1), 3-16.
- v. Hossain, M.M. and N.J. Such, 2013. Influence of customer satisfaction on loyalty: A study on mobile telecommunication industry. *J. Soc. Sci.*, 9: 73.
- vi. Paraguayan, A., Zenithally, V. A., & Berry, L. L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(Spring), 2-40.