

*A Study on Relationship between Factors Affecting Selection of  
a Particular Telecom Service Operator*

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*Abstract: Being the only industry that remained shielded from the aftermath of the Global Economic Slowdown of 2008-09, the telecom industry is all set to enter the next level of competition. The main aim of the project is to analyze the need and usage behaviour of the consumers and to deduce conclusions regarding the questions as, what is the most preferred telecom company, what is the reason for the switching of customer loyalty from one telecom operator to another, etc. The objective is to evaluate the perceptions about mobile services and factors that affect their choice for the service provider. The data consisted of personal details, demographic details, usage characteristics (as usage of services, number of calls made and amount spent on telecommunication etc). After this assimilated data was processed using the SPSS software for Statistical analysis. A number of tests were conducted and analysis and comparisons made. These included cross tabulation diagrammatic representation of the data, chi-square test, KMO and Bartlett's test and Factor Analysis were conducted. The result represents that call rate is a factor that is highly influential followed by convenience, services centres and brand.*

*Keywords: Factors, Affecting, Selection, Telecom, Service provider.*

## I. INTRODUCTION

The telecom industry started with the introduction of telegraph. In 1850 the first telegraph line was started between to cities Kolkata and Diamond Harbour. The development of telephone exchange in India was started with two companies namely The Oriental Telephone company Ltd. and Anglo India Telephone company Ltd. 1947, the country had about 82,000 telephone connections, which slowly rose up to 3.05 million by the year 1984. Communications in India is highly developed. Since 1998 India telecom sector has underwent high growth. All the parts of world are connected to India through major communications system like telephone, mobile, television telegraph and Internet. After becoming the second most populated country in the world, India is set to achieve another record of having half a billion wireless connections, thus becoming the second largest group of mobile phone users after China. With the introduction of private sector telecom service provider in the state the competition in the telecom industry has increased significantly. Now a day's telecommunications involved the use of various sources like fiber optic cable, coaxial cable, and microwave radio relay. For economic and social development of the nation telecommunication is prime support. Due to modernization there is rapid growth in telecom sector. The economic benefits by the telecom services in India are Rural and Urban development, employment, Growth in GDP, Government Revenues, Large scale private investment and many more. Telecommunication also helps in facilitating efficiency.

The telecom services have been recognized the world-over as an important tool for socio-economic development for a nation. It is one of the prime support services needed for rapid growth and modernization of various sectors of the economy.

## II. LITERATURE REVIEW

The constant development and innovation in mobile phones influenced the tech savvy people to spend more into the mobile phones. (Bhatt, a study of Mobile phone Usage among the Post Graduate Students, 2008). The purchasing behavior of a customer does not depend only on the features and technology of the mobile phone but also largely depends on the fact that what is the level of the services of the mobile service provider (Liu, C.M., 2002, 42-51) There is no benefit of purchasing the Hi tech mobile phones since the usage of features depend upon the mobile service provider to a great extent. If the service provider is not efficient, there is no use of purchasing a mobile phone that has a feature of Internet. The choice of customer regarding the features of mobile phones is changing rapidly and service providers have to be along with them, if they want to maintain their market share for long. (Riquelme, 2001, )the customer is aware what they want, what are their requirements when they are availing the mobile sets and what are the services that they do require from the mobile service providers as per their mobile phones. The customer would not settle on lesser than the best according to their needs and that's what drives the service provider to come up with the best of all services. (Fernandez, Fronnie, Added Services (2007) the consumer wants the value added services that justifies the value of the mobile phone and their services. More of Value added services, more satisfaction is the tradition prevailed and hence it is the requirement on the part of service providers to bring out the best possible services at least possible prices.

## III. OBJECTIVES OF THE STUDY

- To discuss the various factors affecting the mobile phone user behavior in the Andhra Pradesh and Telangana Region
- To reduce these factors to a minimum number through the use of factor analysis.
- To know whether the service operator selection variables influence the mobile service provider choice.

## IV. HYPOTHESIS

- There is no significant relationship between various factors affecting selection of a particular Telecom service operator and current service provider of the respondents.

## V. RESEARCH METHODOLOGY

The research has conducted a descriptive research method to get the insights to approach the problem. A questionnaire is designed to collect the primary data. The hypothesis test is conducted to verify the hypothesis acceptance. The final result is generated after analyzing the hypothesis and achieving the objectives of the research.

### Sampling

Convenience Sampling- This sampling technique has been used as the data generally pertains to common people and the type/ demographics of the respondents does not affect the purview of the research. Also this aids in getting data from diverse samples without additional effort.

Target population-Survey conducted on all those having mobile phones, without looking for demographic profiles and geographical limit being Andhra Pradesh and Telangana Region.

Sampling Frame-Online questionnaire to tap youth population and in field survey to approach people having limited internet knowledge, non-English speaking and illiterate people.

### Sample Size

Study has been conducted on the sample size of 210 respondents from AP&TGN region to study the consumer motives and perception about the mobile phone services. Both male and female respondents have been included in the sample. A large sample size has been taken so that appropriate statistical tools may be used and

conclusive inferences may be drawn.

## VI. DATA ANALYSIS

### Demographic Characteristic of Respondents

The data presented in the above table indicates that sample is dominated by male respondent as it is indicated by 53.3% respondent in the sample. Age analysis of respondents indicates that most of respondents fall in the age group of 19-25 years as it was indicated by 34.8 percent respondents in the sample. The information related to educational qualifications of the respondents indicates that majority of the respondent falls in those categories who are educated upto post-graduation to their credit. Information pertaining to level of education of respondents sample is dominated by those respondents who are having monthly income above 25000. Table1 in annexure.

### Factor Analysis

Factor analysis is a method of data reduction. It does this by seeking underlying unobservable (latent) variables that are reflected in the observed variables. The purpose of factor analysis is to discover simple patterns in the pattern of relationships among the variables. In particular, it seeks to discover if the observed variables can be explained largely or entirely in terms of a much smaller number of variables called factors. In our case suppose each of 210 people, who are all familiar with different kinds of motivating factor in selecting a particular mobile service provider, rate each of 10 variables on the question. We could usefully ask about the number of dimensions on which the ratings differ.

In order to accurately capture the respondent's perception, reliability analysis is carried out. So first reliability analysis was carried out with the help of Reliability Test Here, the reliability is shown to be good using all 10 items because alpha is .852 (Note that a reliability coefficient of .60 or higher is considered "acceptable" in most social science research situations.

### Descriptive statistics

Descriptive statistics of mean and standard deviation of various variable influencing selection of mobile phone service provider by the consumer of Delhi state indicates that Call Rate scored highest mean ( $M=6.04$ ) it was followed by Network Quality with mean ( $M=5.97$ ). Consumer are of the opinion that Responsiveness of Customer care is most helpful to them in selecting particular service provider as it scored mean 5.24. The Accessibility to the customer care on phone has also found place in customer preference as it score mean of 5.20. The higher standard deviation of variable like Satisfaction With Time gap Between Service sought and Deliver, Relationship with Vendor/Sales person, and Advance features provided in services indicates that customer response to such variable are very inconsistent which infers that some customer give high preference to such factors where as some give very low preference to such factors. Table 2 in Annexure

To reduce the total number of variables to a manageable number, factor analysis was carried out through SPSS 17 version. For convenience we have shown variance table which is as below Table 3&4 in annexure.

After careful examination of the factor loadings, the 10 variables were associated with the respective dimensions as shown in table below. Principal components & associated Variables indicates that first factor indicating the customers preference in favor of particular service provider is the combination of Satisfaction with time gap between service sought and deliver, Relationship with Vendor/ Sales Person and Responsiveness of Customer Care accounting 43.754% variance of the total variances. The second Factor is the combination of Trust in Company/Brand Name, Accessibility to the customer care on phone and network quality which accounts 11.281% variance of total variance. Third factor is the combination of Call rate, Proximity of Service Center, Advanced features provided in services and Overall satisfaction level with the service provider which account 10.174 %

variance of the total variances.

Principal components & associated Variables

Service Factors	Brand Factors	Economic and Convenience Factors
Satisfaction with time gap between service sought and deliver	Trust in Company /Brand name	Call rate
Relationship with Vendor/Sales person	Accessibility to the customer care on phone	Proximity of Service Center
Responsiveness of Customer Care	Network Quality	Advance features provided in services
		Overall satisfaction level with the service provider

Hypothesis: “There is no significant relationship between various factors affecting selection of a particular service operator and current service provider of the respondents.”

Table 5 depicts the relationship between the various factors affecting selection of a particular service operator and the current service provider of the respondents at 5% level of significance. There is a significant relationship between the various factors such as call rate, proximity of service center, satisfaction with time gap between service sought and deliver, relationship with vendor/ salesperson, responsiveness of customer care, advance features provided in services, overall satisfaction level with the service provider and the current service provider of the respondents and hence the hypothesis is rejected. There is no significant relationship between the various factors such as trust in company/ brand name, accessibility to the customer care on phone, network quality and the current service provider of the respondents and hence the hypothesis is accepted.

## VII. CONCLUSION

Information technology has brought tremendous change in the present socio- economic environment. The telecommunication services in India have increased its horizon. The craze for mobile services in India is increasing substantially. The entry of private sector in the field of communication industry has intensified the competition. Therefore, the knowledge of “what the customer thinks” and “what consequently would contribute to his satisfaction” is at the requirement of the marketer. The present study aims to assess the consumer’s awareness and their attitude towards different mobile service provider’s companies operating in Andhra Pradesh and Telangana States. It also intends to know the consumer’s satisfaction and factor affecting their purchase decision and its future impact on socio economic changes.

The study concludes that a large number of factors of a service operator can be reduced into three main factors. So the company should ultimately focus on these three areas, which in turn results into the acquisition of a large number of customers. The study also concludes the relationship between various service operator selection factors and the current service provider of the respondents. The call rate followed by the network quality is the most important factor which influences the decision of choosing the particular service provider. It is concluded that Airtel is having the highest market share in the field of telecommunications.

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## Annexure

Table 1 Demographic Characteristic of Respondents

	Categories	Count	Percentage
Gender	Male	112	53.3
	Female	98	46.7
Age	Less than 18 years	44	21.0
	19 to 25 years	73	34.8
	26 to 35 years	47	22.4
	36 to 50 years	29	13.8
	Above 50 years	17	8.1
Education Level	Higher Secondary	33	15.7
	Graduate	57	27.1
	Post Graduate	78	37.1
	Professional Degree	39	18.6
	Others	3	1.4
Monthly Income	Below 8000	49	23.3
	8000 to 15000	44	21.0
	15000 to 25000	41	19.5
	Above 25000	76	36.2

Table 2 Descriptive Statistics

	N	Mean	Std. Deviation
Call rate	210	6.04	1.450
Proximity of Service Center	210	4.91	1.629
Satisfaction with time gap between service sought and deliver	210	4.64	1.864
Relationship with Vendor/Sales person	210	3.95	1.802
Trust in Company/Brand name	210	5.12	1.626
Accessibility to the customer care on phone	210	5.20	1.549
Responsiveness of Customer Care	210	5.24	1.554
Network Quality	210	5.97	1.388
Advance features provided in services	210	4.56	1.703
Overall satisfaction level with the service provider	210	5.73	1.577
Valid N (list wise)	210		

Table 3 Total Variance Explained

	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.375	43.754	43.754	4.375	43.754	43.754	2.489	24.887	24.887
2	1.128	11.281	55.035	1.128	11.281	55.035	2.019	20.195	45.081
3	1.017	10.174	65.209	1.017	10.174	65.209	2.013	20.128	65.209
4	.874	8.738	73.947						
5	.697	6.965	80.912						
6	.481	4.813	85.725						
7	.438	4.383	90.108						
8	.381	3.810	93.918						
9	.346	3.459	97.377						
10	.262	2.623	100.000						

Extraction Method: Principal Component Analysis.

Table 4 Rotated Component Matrix<sup>a</sup>

Factors	Com		
	1	2	3
Call rate	.036	.171	.740
Proximity of Service Center	.504	.041	.510
Satisfaction with time gap between service sought and deliver	.825	.125	.284
Relationship with Vendor/Sales person	.812	.146	.078
Trust in Company/Brand name	.541	.638	.051
Accessibility to the customer care on phone	.449	.707	.085
Responsiveness of Customer Care	.535	.463	.354
Network Quality	-.101	.832	.293
Advance features provided in services	.156	.049	.668
Overall satisfaction level with the service provider	.278	.369	.672

Table 5 Relationship between the various factors affecting selection of a particular service operator and the current service provider

Factors	Vodafone		Airtel		Reliance		BSNL		Idea		Tata Indicom		Virgin Mobile		Aircel		F value	Sig.
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Call Rate	6.16	1.304	6.02	1.469	5.78	1.436	6.50	.674	6.44	.870	6.50	.535	6.00		7.00	.000	4.575	.000 S
Proximity of Service Center	4.68	1.955	5.26	1.396	5.19	1.101	4.67	1.073	4.88	1.424	5.63	1.598	7.00		5.40	.548	4.938	.000 S
Satisfaction with time gap between service sought and deliver	4.95	1.967	4.59	1.568	5.35	1.438	4.42	1.443	4.16	2.192	3.75	1.909	6.00		5.40	1.342	4.691	.000 S
Relationship with vendor/salesperson	4.50	1.758	3.62	1.899	4.41	1.641	4.08	1.084	4.16	1.650	2.38	1.408	4.00		3.20	.837	4.492	.000 S
Trust in Company/ Brand name	5.23	1.878	4.79	1.714	5.51	.989	5.42	1.311	5.28	1.595	4.88	.835	2.00		5.00	.000	1.225	.286 NS
Accessibility to the customer care on phone	5.16	1.638	5.07	1.336	5.59	1.404	5.42	1.505	5.20	1.633	4.50	1.773	3.00		6.00	.000	1.097	.367 NS
Responsiveness of customer care	5.27	1.679	5.21	1.424	5.59	1.279	5.75	1.055	5.52	1.531	4.88	.835	5.00		5.60	.894	4.956	.000 S
Network Quality	6.00	1.514	5.97	1.256	5.76	1.362	5.92	1.621	5.96	1.306	6.63	.518	6.00		6.60	.894	.481	.868 NS
Advance features provided in service	4.63	1.987	4.48	1.719	4.70	1.450	3.33	1.435	5.08	1.038	4.63	1.302	4.00		6.00	1.225	2.290	.023 S
Overall satisfaction level with the service provider	5.80	1.645	5.84	1.281	6.14	.918	4.75	2.050	5.56	1.417	6.50	.926	3.00		6.80	.447	4.687	.000 S