

A STUDY ON CUSTOMER SATISFACTION OF MOBILE PHONE SERVICE USERS OPERATING IN THE MALWA REGION OF THE PUNJAB

Vipan Bansal* and Bindu Bansal**

Abstract

The Indian telecom sector like any other industrial sector in the country has gone through many phases of growth and diversification. Starting from telegraphic services, the field of telecommunication has now expanded to make use of technologies like Global System of Mobile Communication (GSM), Code Division Multiple Access (CDMA) and Wireless in Local Loop (WLL) to 3G in the mobile phones. The research focuses on Customer Satisfaction of Mobile Phone Service Users Operating in the Malwa Region of the Punjab. In this study the opinions of 75 respondents were taken. The tools used for collecting the data were structured questionnaire and unstructured interview. For analysis purposes, Cronbach's Alpha, Weighted Average, Ranking, Chi Square and the Percentage method have been used. The results revealed that most of the respondents were satisfied with their current service provider but still twenty percent respondent's want to shift their service provider show maximum willingness for shifting to Airtel. Call Charges was the main reason of changing the service provider, with a weighed score of 3.53, followed by Poor Network and Poor Customer Care Service, having weighted scores of 3.21 and 2.20 respectively.

Keywords: Customer Satisfaction, Value Added Services, General Packet Ra-dio Service, Short Message Service and Customer Care.

บทคัดย่อ

ภาคโทรคมนาคมของอินเดียก็เหมือนกับภาคอุตสาหกรรมด้านอื่น ๆ ในประเทศที่ผ่านระยะต่าง ๆ ของการเติบโตและความหลากหลาย โดยเริ่มต้นจากการบริการโทรเลขแล้วขยายมาเป็นการใช้เทคโนโลยี เช่น GSM CDMA และ WLL จนถึงการใช้บริการ 3G ในมือถือ งานวิจัยนี้มุ่งศึกษาความพึงพอใจของลูกค้าต่อการให้บริการมือถือแก่ผู้ใช้ในเขตมัลวาของแคว้นปัญจาบ งานวิจัยนี้

*Mr. Vipan Bansal obtains M Phil (Management), MBA (Marketing), M Tech (Industrial Engineering) and B Tech in Mechanical. He is an assistant professor in Mechanical at DAV University, Jalandhar Punjab, India. His interests cover Production and Operation Management.

**Ms. Bindu Bansal obtains M Tech and B Tech in Computer Science Engineering. He is an assistant professor in Computer Science Department at Guru Nanak Dev Engineering College, Ludhiana Punjab, India. His interests cover Image Processing.

รวบรวมข้อมูลจากกลุ่มตัวอย่าง โดยเก็บข้อมูลจากแบบสอบถามและการสัมภาษณ์และวิเคราะห์ตามวิธี Cronbach's Alpha, Weighted Average, Ranking, Chi-Square และ Percentage ผลการวิจัยพบว่า กลุ่มตัวอย่างส่วนมากพอใจผู้ให้บริการ แต่ 20% ของกลุ่มตัวอย่างที่ต้องการเปลี่ยนผู้ให้บริการนั้น ต้องการที่จะเปลี่ยนไปใช้บริการ Airtel มากที่สุด สาเหตุหลักในการเปลี่ยนผู้ให้บริการได้แก่ ค่าโทรศัพท์เป็นค่าน้ำหนัก 3.53 คะแนน รองลงมาได้แก่ เครือข่ายไม่ดีและการบริการดูแลลูกค้าไม่ดี คิดเป็นค่าน้ำหนัก 3.21 คะแนน และ 2.20 คะแนน ตามลำดับ

INTRODUCTION

In 1880, two telephone companies, namely The Oriental Telephone Company Ltd., and The Anglo-Indian Telephone Company Ltd., approached the Government of India to establish telephone exchanges in India. The permission was refused on the grounds that the establishment of telephones was a Government monopoly and that the Government itself would undertake the work. In 1881, the Government later reversed its earlier decision and a license was granted to the Oriental Telephone Company Limited of England for opening telephone exchanges at Calcutta, Bombay, Madras and Ahmadabad and the first formal telephone service was established in the country. On the 28th January 1882, Major E. Baring, Member of the Governor General of India's Council declared open the Telephone Exchanges in Calcutta, Bombay and Madras. The exchange in Calcutta named the "Central Exchange" was opened on the third floor of the building at 7, Council House Street, with a total of 93 subscribers. Later that year, Bombay also witnessed the opening of a telephone exchange. While all the major cities and towns in the country were linked with telephones during the British

period, the total number of telephones in 1948 numbered only around 80,000. Post independence, growth remained slow because the telephone was seen more as a status symbol rather than being an instrument of utility. The number of telephones grew leisurely to 980,000 in 1971, 2.15 million in 1981 and 5.07 million in 1991, the year economic reforms were initiated in the country.

Emergences as a Major Player

In 1975, the Department of Telecom (DoT) was separated from Indian Post & Telecommunication Accounts and Finance Service. DoT was responsible for telecom services in the entire country until 1985 when Mahanagar Telephone Nigam Limited (MTNL) was carved out of DoT to run the telecom services of Delhi and Mumbai. In the 1990s the telecom sector was opened up by the Government for private investment as a part of the Liberalization-Privatization-Globalization policy. Therefore, it became necessary to separate the Government's policy wing from its operations wing. The Government of India corporatized the operations wing of DoT on 1st October 2000 and named it as Bharat Sanchar Nigam Limited (BSNL). Many

private operators, such as Reliance Communications, Tata Indicom, Vodafone, Loop Mobile, Airtel, Idea etc., successfully entered the high potential Indian telecom market. Today, the Indian telecommunication industry is the world's fastest growing industry with 951.34 million total phone subscribers as of 31st March 2012 according to the Telecom Regulatory Authority of India (TRAI). It is also the second largest telecommunication network in the world, in terms of number of wireless connections, after China. As the fastest growing telecommunications industry in the world, it is projected that India will have 1.159 billion mobile subscribers by 2013. Furthermore, projections by several leading global consultancies indicate that the total number of subscribers in India will exceed the total subscriber count in China by 2013.

Customer Satisfaction

Satisfaction of the customer is an invaluable asset for the modern organizations and providers unmatched competitive edge. It helps in building long term relationships as well as brand equity. Customer satisfaction is the valued outcome of good business practice. According to *Drucker (1954)*, the principal purpose of a business is to create satisfied customers. According to *Churchill and Surprenant (1982)*, customer satisfaction is an output, resulting from the customer's pre-purchased comparison of expected performance with actual performance with incurred cost. According to *Susan and David (1999)*, satisfaction is basically a post purchase evaluation by the consumers of their overall ex-

perience of a product or service. Organizations must strive to improve quality of their product and service to satisfy existing customers. A higher level of satisfaction ensures greater acceptability of product or service. Increasing customer satisfaction leads to higher future profitability and lower costs related to defective goods or services (*Anderson et al., 1994*).

Marketing analysis identifies customer satisfaction as a key determinant in a customer's decision making, relating to keeping, or dropping a given product or service. If a consumer has a good pleasant experience with use of a product or service and thus feels satisfied, then he or she will have a positive attitude towards that product or service. The product or service will be accepted by existing consumers and they will continue using it. On the contrary, if the consumer has a bad experience with use of product or service and thus feels dissatisfied, then he or she will have a negative attitude towards that product or service. The product or service will be rejected by existing consumers and they will discontinue its use. It is necessary, therefore, to monitor customer satisfaction regularly by surveying the customers to know whether they are highly satisfied, satisfied, indifferent, dissatisfied or highly dissatisfied with a product or service.

REVIEW OF LITERATURE

Butt and Run (2008) determined the factors that contributed towards consumer satisfaction in Pakistani mobile cellular services. A typically two stage survey was conducted. A qualitative research was con-

ducted at first stage to identify factors that contributed towards the customer satisfaction of mobile phone users. It was followed by a questionnaire to gather quantitative data and further analysis was done by using conformity factor analysis. The results confirmed a multidimensional construct of customer satisfaction in the Pakistani cellular phone communication sector. Customer satisfaction of cellular phone users in Pakistan consisted of four factors including price, transmission quality, usage ease and service support.

Qureshi and Sahu (2009) revealed that Airtel is the market leader in the lifetime plan segment in Bhopal followed by Idea. People like the lifetime plans provided by the companies. TATA Indicom has the least customers in Bhopal, whereas Reliance and BSNL have an almost equal percentage of customers. But respondents were not aware about the bond of cellular companies with TRAI, that cellular companies can deliver their services till their licenses have validity, and they have to renew them for providing further service.

Chander (2010) assessed the usage pattern of functionalities of mobile phone handsets and customer satisfaction level of mobile phone users. Presales/sales, network, VAS, cost of service, customer care and billing were identified as six broad parameters that contribute to overall satisfaction of mobile phone users with their mobile service provider. It has also been found that none of the mobile service providers in Jammu City were able to meet the benchmarks set up by TRAI, on any of six broad parameters namely presales/sales, network, VAS, cost of service, customer care and billing.

Chaterjee and Chaudhuri (2010) identified the most important and least important factors affecting choice of service provider operating in Kolkata. The study was conducted with 337 respondents within an age group of 18-25 years by using the Herfindahl Index (HHI), ANOVA and Rank Score Analysis. The result revealed that the factors like good network coverage and family or friends using the same network are of utmost importance to the customers whereas the offer of free connection with the handset being the least important one. *Sathish et al. (2011)* examined the factors that influence the consumers in switching the service provider. The area covered under this study was Chennai, with a sample size of 112 respondents. The variables considered for the study were consumer demographics, consumer satisfaction with the existing service provider. Factors influencing the switching behavior and factors that affect the switching behavior of consumers were grouped into customer service, service problems and usage cost. The results from the study revealed that call rates played the most important role in switching the service provider followed by network coverage; value added service and customer care while advertisement played the least important role.

Mariappan (2011) conducted a study on the sensitive issue of banning of mobile phones within the collegiate premises. A sample of size 1200 respondents was taken by mixing college students and their parents and teachers. For analysis chi-square, measures of central tendency and coefficient of variation were used. It was found that popular brands among the student respondents were Nokia followed by Sonny

Ericson. 43.42% of the respondents are accepting the banning of mobile phones within the educational premises as it affects and create a health hazard, waste of money, and leads to addiction etc.

Adhinarayanan (2011) examined the problems faced by the customer with Reliance postpaid services and consumer preferences and analyzed the level of awareness about Reliance products. The study was carried out in Salem city. In this study, opinions of 500 customers were taken for analysis. The tools used for collecting data were structured questionnaire and unstructured interview. For analysis purposes chi-square, rank correlation and the percentage method were used. The result revealed that lack or degradation in any of the services may affect the company badly. With the excellent rural awareness and rural market share in telecom services, the company should also try to boost up their urban market share.

Singh (2011) conducted a mobile phone satisfaction survey in the Punjab with a sample of size 100 respondents. The seven major parameters viz. convenience, responsiveness, reliability, tangible, assurance, network quality, and economy were studied. These parameters were further classified into 31 important factors which were related to the customer satisfaction of mobile phone users. The analysis of collected data was done by using Factor Analysis, which yielded 9 factors as critical factors out of the studied 31 factors which were accurate services followed by availability of modern equipment, timely delivery of bills; fulfilling the needs of the customer, ease of understanding of schemes and service offering.

Objective of the Study

1) To find out the reason for shifting the service provider.

Research Methodology

For this study, mainly primary and secondary data have been used. The primary data is collected with the help of pre-tested structured and unstructured questionnaires from 75 respondents. Secondary data and information is collected from the internet, newspapers, existing literature, magazines etc. Both descriptive and statistical analysis of the collected data has been done to study the problem. To validate the reliability Cronbach's coefficient (α) is calculated and the percentage method, weighted average, ranking and chi Square is used for analysis and interpretation of the collected data.

RESULTS AND INTERPRETATION

Among the 75 respondents who own a mobile phone, there were 60% men and 40% women. In this research, data have been collected to measure consumer satisfaction level across various service providers. In addition, research also tries to capture the factors that led to customers switching to other network providers. (Table 1, 2)

To validate the reliability, Cronbach's coefficient (α) was calculated as shown in the Table 3. A liberal minimum requirement for scale reliability is 0.60 (Churchill, 1979; Peter, 1979) while some scholars recommend stricter minimum requirement 0.70 (Nunnally, 1978). If the Cronbach's coef-

Table 1: Demographic Characteristics of the Respondents

Age group	Total	% age	Highest Level of Education	Total	% age
<=20	13	17	No Formal Education	2	3
21-30	41	55	Sr. Secondary School	10	13
31-40	13	17	Graduate	45	60
41-50	6	8	Post Graduate	22	29
> 50	2	3	Doctorate	1	1
Total	75	100	Total	75	100

Table 2: Profession and Income Level of the Respondents

Profession	Total	% age	Income Level (Per Month in Rupee)	Total	% age
Student	18	24	<= 10,000	6	8
Service	40	53	10,001-20,000	13	17
Business	7	9	20,001-30,000	23	31
Retiree	1	1	30,001-40,000	8	11
Housewife	8	11	>= 40,001	3	4
Others*	1	1	NA	22	29
Total	75	100	Total	75	100

Table 3: Reliability Statics for Different Factors

Name of Variable	No of Items	Cronbach's	Alpha
Mobile Phone Related Applications	To Make Calls	7	0.80
	Songs		
	Playing Games		
	Video Clips		
	Camera		
	Calculator/ Convertor		
	Alarm Clock		
Use of VAS	SMS	5	0.83
	MMS		
	Voice Message		
	Caller Tone		
	GPRS		
Need to Contact Customer Care Department	Billing or Recharge	6	0.91
	Roaming		
	Internet/ GPRS		
	SMS Plan		
	Voice Mail		
	Caller Tones		
Reason for Shifting the Service Provider	SMS Charges	6	0.79
	Call Charges		
	Poor Network		
	Billing Errors		
	Poor Customer Care Service		
	GPRS/ Internet Facility		

Table 4: Usage of Mobile Phone Applications by Respondents

Use of Mobile Phone for	Very Often	Often	Sometimes	Rarely	Never	Total	Weighted Average	Ranking
Making and Receiving Calls	39	26	7	3	0	75	4.35	1
Listening to Music	14	21	13	19	8	75	3.19	4
Playing Games	6	11	22	13	23	75	2.52	7
Video Clips	4	15	23	16	17	75	2.64	6
Operating Camera	13	21	18	12	11	75	3.17	5
Calculations	11	25	17	15	7	75	3.24	3
Alarm Clock	32	20	12	7	4	75	3.92	2

ficient (α) exceeds 0.60 no one doubts the level of credibility, but if the Cronbach's coefficient (α) is over 0.80, the level of credibility is said to be significantly high.

Results from data reveal the market share of various cell phone handset brands. There are varieties of phone brands coming up in the market. Different companies offer remarkably different cell phone models that respondents may choose from. 52% respondents use the Nokia made handsets followed by 28% Samsung. 12% each have been using Sony Ericson and LG. 8% have been using other handsets Like Spice, HTC etc.

With regard to the response on the use of mobile phone related applications by the respondents, it has been inferred from the Table 4 that the majority of respondents use the mobile phone to make calls as it is the only prime motive of the respondents followed by alarm clock which is an important gadget of mobile phone hand sets. Almost all the age group segments use the alarm clock. Games and Videos Clips are

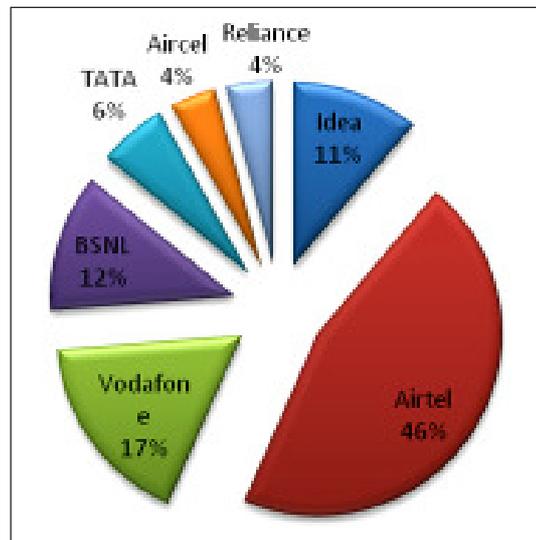


Figure 1: Percentage Shares of Subscribers

not considered as an important gadget by the respondents as it occupies the last place in the table.

Figure 1 depicts that Bharti Airtel has 46%, Vodafone 17%, BSNL 12%, Idea 11%, TATA 6%; Aircel and Reliance 4% share each.

Table 5 indicates that 54% of respon-

Table 5: Tariff Plan Used by Respondent

Which type of connection are you using?	F	%age F	M	%age M	Total	Total %age
Pre Paid	13	38	30	67	43	54
Post Paid	12	35	11	24	23	29
Both Pre Paid and Post Paid	9	26	4	9	13	16
Total	34	100	45	100	79	100

dents have been using pre-paid plans while 29% have been using post-paid plans and 16% of respondents use both pre-paid and post-paid connections. The reasons for a higher percentage of respondents using prepaid connection may be because of higher transparency in this category. Yet it has been observed that different respondents prefer different plans according to their requirement and there is also a category which enjoys the benefits offered by both the plans.

From the Table 6, it has been found that SMS is ranked first place by the respondents as usage of VAS followed by GPRS. A major driver of SMS may have been the TV reality and game shows etc. Even the start and close of VAS is also done with the help of SMS. Caller tones and GPRS occupy third and fourth place respectively in terms of usage of VAS. Voice Mail is the VAS which is least preferred by the respondents, having a weighted score of 1.51.

From the Table 7, it has found that billing is the main reason to contact the cus-

tomers care department followed by roaming and the SMS plan. As discussed above these Value Added Services were mostly used by the respondents but the lack of clarity in charges and activation and deactivation of these VAS make the respondents uncomfortable and they need to frequently talk to the customer care department for their queries. So, if the companies bring the more clarity into their billing and plans i.e. the SMS plan it will reduce the burden on the customer care department and brings more customer satisfaction.

It has been found that 45% of respondents are satisfied after contacting the customer care department. 11% of respondents are not satisfied with the customer care department. 44% are neither satisfied nor dissatisfied with the customer care department. 46% of respondents feel that difficulty in connecting with the customer care department was the main reason of dissatisfaction. Most of the time the call was not connected to the customer care department. If the call was connected, the respon-

Table 6: Usage Pattern of Value Added Services

Use of VAS	Very Often	Often	Sometimes	Rarely	Never	Total	Weighted Average	Ranking
SMS	27	19	13	1	15	75	3.56	1
MMS	1	8	5	6	55	75	1.59	4
Voice Mail	1	7	3	7	57	75	1.51	5
Caller Tone	5	14	11	10	35	75	2.25	2
GPRS	6	10	15	8	36	75	2.23	3

Table 7: Need to Contact Customer Care Department

Need to Contact Customer Care Department	Very Often	Often	Sometimes	Rarely	Never	Total	Weighted Average	Ranking
For Billing or Recharge	9	16	14	10	26	75	2.63	1
Roaming	0	16	22	5	32	75	2.29	2
GPRS	5	7	12	9	42	75	1.99	4
SMS	3	14	14	10	34	75	2.23	3
Voice Mail	1	9	6	10	49	75	1.71	6
Caller Tones	1	12	10	12	40	75	1.96	5

dents had to go through a number of options to talk to the customer care department, which irritates the respondents and brings dissatisfaction to the minds of the respondents. 27% of respondents feel that the time taken by the centre for a complaint was too long. 15% think that customer care executives were not equipped with adequate information. 6% said customer care executives were not polite and 6% have the opinion that customer care executives were not able to understand the problem. Very few think that customer care executives activated unwanted services which created a feeling of dissatisfaction.

Table 8 shows the Net Gain and Loss of Service Providers after shifting. It has been found that Airtel gains 27% respondents which shows the faith of the respondents in Airtel whereas Idea loses 20% respondents. Aircel and BSNL lose their respondents by 7% each.

The Analysis depicts that Airtel seems to be the best service provider in the Malwa region because of two reasons. First it has the maximum share (%age). Second maximum respondents shifted towards Airtel after their dissatisfaction with other service providers.

It has been depicted in Table 9 that Call Charges is the main reason for shifting the service provider followed by Poor Network and Poor Customer Care Service.

CONCLUSIONS

1. It has been found that the majority of respondents use the mobile phone to make calls (weighted score of 4.35) followed by alarm clock (weighted score of 3.92).

2. It has been found that SMS is the most widely used Value Added Service fol-

Table 8: Net Gain/Loss of service providers (% age)

Service Providers from which respondents shifted		Total %age	Service Providers to which respondents shifted		Total %age	Net Gain/Loss of service providers (% age)	
AT	3	20	AT	7	47	AT	27
TATA	0	0	TATA	1	7	TATA	7
BSNL	1	7	BSNL	0	0	BSNL	-7
Idea	4	27	Idea	1	7	Idea	-20
VF	5	33	VF	5	33	VF	0
AC	1	7	AC	0	0	AC	-7
Reliance	1	7	Reliance	1	7	Reliance	0

Table 9: Reason for Shifting the Service Providers

Reason for Shifting the Service Provider	Mostly	Average	Sometimes	Rarely	Never	Total	Weighted Average	Ranking
SMS	2	3	3	3	4	15	2.73	6
Call Charges	4	4	4	2	1	15	3.53	1
Poor Network	2	4	5	3	1	15	3.21	2
Billing Errors	3	2	5	2	3	15	3.00	4
Poor Customer Care	4	4	2	1	4	15	3.20	3
Poor GPRS Service	1	6	2	2	4	15	2.87	5

lowed by Caller Tones having weighted scores of 3.56 and 2.25 respectively.

3. It has been found that respondents were satisfied with their current service provider but still 20% of respondents who want to shift their service provider show maximum willingness for shifting to Airtel. Call charges was the main reason for changing the service provider with a weighed score of 3.53, followed by poor network and poor customer care service having weighted scores of 3.21 and 3.21 respectively.

SCOPE OF FUTURE WORK

A similar type of study can be done in other parts of the country.

REFERENCES

- Adhinarayanan, B. and Gurunathan, K.B. (2011) "A Study on Customer Satisfaction towards Reliance Telecom in Tamilnadu with Special Reference to Salem City", Vol. 2, No. 4, pp.39-44.
- Ahmad, Z., Ahmed, I., Nawaz, M.M., Usman, A., Shaukat, M.Z. and Ahmad, N. (2010) "Impact of Service Quality of Short Messaging Service on Customers Retention; an Empirical Study of Cellular Companies of Pakistan", *International Journal of Business and Management*, Vol. 5, No. 6, pp.154-160.
- Anderson et al. (1994) "Customer Satisfaction, Market Share and Profitability: Findings from Sweden", *Journal of Marketing*, Vol. 58, No. 3, pp.53-66.
- Butt, M. Mohsin and Run, E. Cyril (2008) "Measuring Pakistani Mobile Cellular Customer Satisfaction" *Icfaian Journal of Management Research*, Vol. 6, No. 1, pp.40-50.
- Chaterjee Debarati and Chaudhari Ishita (2010) "A study of Market Share and factor affecting the choice of cellular service provider among young age group of Kolkata", *IUP Journal of Marketing Management*, Vol. 9, No. 3, pp.41-56.
- Chander Vipen (2010) "Customer Satisfaction Survey of Mobile Phone Users - An Exploratory Study", GNDEC, Ludhiana.
- Churchill Jr, G.A. (1979) "A Paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16, No. 1, pp.64-73.
- Drucker, Peter F., (1954) "Reliability Assessment and Optimization of Marketing Measurement", *Journal of Marketing Research*, Vol. 34, No. 2.
- Mariappan, P. and Elumalai, K. (2011) "A Study on Banning Mobile Phone within the Educational Premises", *International Conference on Technology and Business Management*, pp.229-240.
- Chadha, S.K. and Kapoor, D. (2009) "Effect of Switching Cost, Service Quality and Customer Satisfaction on Customer Loyalty of Cellular Service Provider in Indian Market", *Icfaian Journal of Management Research*, Vol. 8, No. 1, pp.23-27.
- Nemati, A.R., Khan, K. and Iftikhar, M. (2010) "Impact of Innovation on Customer Satisfaction and Brand Loyalty, A Study of Mobile Phones users in Pa-

- kistan”, *European Journal of Social Sciences*, Vol. 16, No. 2, pp.299-306
- Ojha, S. (2009) “A Study on Banning Mobile Phone within the Educational Premises Consumer Awareness of VAS of Telecom Sector of India: A Study of Vadodara District of Gujarat”, *The IUP Journal of Infrastructure*, Vol. 7, No. 1, pp.56-69.
- Passerini, K., Patten, K., Bartolacci, M. R. and Fjermestad, J. (2007) “Reflections and Trends in the Expansion of Cellular Wireless Services in the U.S. and China”, *Communications of the ACM*, Vol. 50, No. 10, pp.25-28.
- Sahu, A. (2007) “A Project Report on Comparative Study of the Lifetime Plans of the Cellular Companies in Bhopal”, *Institute of Professional Education and Research*, Bhopal.
- Raja, K.G., Sharma, Uma and Shashikala, R. (2006) “Measuring Customer Satisfaction among Mobile Handset End Users: An Empirical Study”, *Icfaian Journal of Management Research*, Vol. 3, No. 1, pp.21-39.
- Ray, S. and Sarkar, A. (2006) “Analyzing influence of Brand vis-à-vis Price in Indian Mobility Industry”, *Icfaian Journal of Management Research*, Vol. 5, No. 4, pp.50-59.
- Satish et al. (2011) “A Study on Consumer Switching Behavior in Cellular Service Provider: A Study with Reference to Chennai”, *Far East Journal of Psychology and Business Hong Cong*, Vol. 2, No. 2, pp.71-81.
- Singh, L. (2011) “Study the Customer Satisfaction Level of Mobile Phone Users: A Case Study on Punjab Subscribers”, GNDEC, Ludhiana.
- Sivakumar, K. (2011) “A Study on Customer Satisfaction and Loyalty towards Aircel Pre and Post Paid Customers in Tamilnadu with Special Reference to Tiruchirappalli City”, Vol. 1, No. 5, pp.35-39.
- Susan and David (1977) “Rediscovering Satisfaction”, *Journal of Marketing*, Vol. 63, pp.5-23.
- Tiwari, S. and Mishra, M. (2007) “Satisfaction Down, Expectations Same”, *Voice and Data*, January, pp.28-47.