CHAPTER 5

INTERPRETATION

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The present study is an attempt to analyze marketing organization structure and strategies adopted by cellular operators of Gujarat. The approach adopted is analytical and interpretative in nature.

On the basis of the review and the objectives of this study, quantitative descriptive methods of analysis were employed.

For better understanding of the functioning of each operator, inter-operator comparison of cellular services has been taken into consideration in this chapter.

To study various variables, tests that have been conducted are, Uni-variate tables generated for each variable (quest) with 6 independent variables City, Age, Sex, Income, Education, and Occupation. Also, cellular providers as independent variable have been used. Majority bi-variate tables have been generated using the latter mentioned variable. Statistical test applied to figure out the significance level is Pearson's chi-square. Also, Mean and Standard Deviation for those variables, which are continuous, like cost has been done.

1.0 PERSONAL PROFILE

In order to fulfill the objectives of the study, a total of 477 respondents were interviewed from three cities of Gujarat viz. Ahmedabad, Vadodara and Surat. The personal profile of these respondents is outlined in table 1.0. A majority of the respondents were from Ahmedabad (40%), followed by Vadodara (37.3%) and Surat (22.6%), wherein males formed a greater part of the respondents than females (87.8% vs 12.2%). Mean age of the respondents was 28.6.

As regards education, more than one third (37.9%) of the respondents were graduates / double graduates and 10.5% of the respondents were postgraduates, the rest were undergraduates (26.2%) or had education below class 12 (22.0%). The source of livelihood was service as reported by more than half of the respondents (52.8%) followed by business or self-employment (21.4%) and professionals (6.3%). Others were students, housewives and retired persons. One third of the respondents reported their monthly income less than Rs. 5000/- per month. Thirty five percent of the respondents belonged to the lower middle income group i.e. between Rs. 5001-10000, and less than one fifth of the respondents were in the high-income category i.e. between Rs.10001-20,000/- (15.1%) and those with incomes of Rs.20,000/- and over were negligible (2.5%).

Table 1.0: Personal Profile

Variables		N = 477
% Respondents (city-wise)		
	Ahmedabad	40.0
	Vadodara	37.3
	Surat	22.6
Sex-wise distribution of respondents (%)		
	Males	87.8
	Females	12.2
Mean age of respondents		28.6
Educational qualification of respondents (%)		
	Below class 12	22.0
	Undergraduate	26.2
	Graduate / Double Graduate	37.9
	Postgraduate and above	10.5
	Others	3.4

Variables		N = 477
Occupation of respondents (%)		
	Business/self employed	21.4
	Service	39.4
	Service (Govt./Semi govt.)	13.4
	Professional	6.3
	Housewife	1.5
	Student	16.6
	Retired	0.4
	Others	1.0
Approximate monthly income of the respondents		
	Below Rs.5000/-	33.1
	Rs.5001-10000	35.4
	Rs.10001-20000	15.1
	Rs.20000 and above	2.5
	Not earning	5.7
	NR	8.2

2.0 GENERAL INFORMATION

2.1 Mode of telecommunication used

With the introduction of new telecom policy in 1994, telecommunication sector was transformed from a State owned monopoly into an increasingly competitive industry. A revolution of sorts has taken place in this field.

The respondents of the current research were queried regarding the mode of telecommunication that they used. Besides using cellular service as reported by a majority (87.2%), landline users were maximum (57%)

followed by WLL-mobile (23.3%) and WLL-fixed (9.9%). This is indicative of the fact that cellular services have taken over the conventional telecommunication sector.

Table 2.1 Mode of telecommunication used

Variables	No. of responses	% (N=477)
Landline	272	57.0
WLL (fixed)	47	9.9
WLL (mobile)	111	23.3
Cellular Service	416	87.2
Total*	**846**	**177.4**

* Multiple responses, percent calculated on total respondents

2.2 General information regarding handset used by the respondents

Different brands of handsets are flooding the market. Almost every other day companies launch different models with specialized features with cost ranging from economy to some very expensive models. In the present study, the most popular brand of handset used was Nokia as revealed by almost 80% of the respondents. The respondents had spent on an average Rs. 4955/- on their handsets. T-test for equality of means was carried out. The T value was .253 and the difference was statistically insignificant.

There was warranty cover for 75.5% of the handsets.

The cellular phone users of the three cities were asked regarding the place of purchase of their handsets. Overall comparison of variables brought to the fore that handsets were purchased from a licensed dealer by a majority of the respondents (73.4%) as against a very small percentage of purchase (7.3%) from the grey market. Less than one fifth

(18.9%) of the respondents stated having purchased second hand handsets. The difference was found to be highly significant, statistically as well. A similar trend was observed on comparison of variables between the three cities. On independent assessment, Surat reflected a lower percentage (60.2%) of purchase of handsets from a licensed dealer vis-à-vis Vadodara (77.5%) and Ahmedabad (77%) and consequently a higher percentage (16.7%) of purchase of handsets from the grey market. (Tables 2.2a & b).

Table 2.2a Information regarding brand and cost of handset

Variables		**N = 477**
Brand of handset used (%)		
	Motorola	4.0
	Panasonic	2.3
	Samsung	8.0
	Nokia	79.9
	Hyundia	0.2
	Siemens	1.3
	Sony / Ericson	2.1
	LG	1.0
	Others	1.3
Mean cost of handset (Rs.)		4955.73
t- test for equality of means (t-value)		0.253
Handset covered under a warranty (%)		
	Yes	75.5
	No	24.5

Table 2.2b Place of purchase of handsets (city wise)

Variables		City			Total
		Vadodara	Ahmedabad	Surat	
Licensed dealer	N	148	137	65	350
	%	77.5%	77.0%	60.2%	73.4%
Grey market	N	12	5	18	35
	%	6.3%	2.8%	16.7%	7.3%
Second hand	N	30	36	24	90
	%	15.7%	20.2%	22.2%	18.9%
NR	N	1	-	1	2
	%	.5%	-	.9%	.4%
Total	N	191	178	108	477
	%	100.0%	100.0%	100.0%	100.0%
Pearson Chi-Square value***		24.675(a)			

*** Significant at p<0.001

2.3 General information regarding cellular services used by the respondents

Cellular technology came to Gujarat soon after introduction of new telecom policy. Initially, only two operators were given the license to operate in Gujarat, viz. Hutch and Idea. Other providers entered later, increasing from 2 to 4. The respondents of the study were asked about their knowledge of the cellular operators in the market (Table 2.3a). Maximum awareness was about Fascel (87.0%) while two thirds of the respondents were aware of Idea, Bharti and BSNL.

A similar trend was observed when respondents were queried about the cellular services that they were using currently independently as well as city wise (Tables 2.3b). A little over half (53.7%) of the respondents were using Fascel, followed by similar number of users for Idea and Bharti Cellular (16%) and the least number of users were for BSNL, i.e. 13%.

Table 2.3a Cellular Operators Known

Variables	No. of responses	% (N=477)
Fascel	415	87.0
Idea	322	67.5
Bharti Cellular	315	66.0
BSNL	316	66.2
Total*	**1368**	**286.8**

*Multiple responses, per cent calculated on total respondent

Table 2.3b Cellular services used city-wise

Variables			City			Total
			Vadodara	Ahmedabad	Surat	
Cellular service used	Fascel	N	97	96	63	256
		%	50.8%	53.9%	58.3%	53.7%
	Idea	N	40	31	8	79
		%	20.9%	17.4%	7.4%	16.6%
	Bharti Cellular	N	32	27	19	78
		%	16.8%	15.2%	17.6%	16.4%
	BSNL	N	22	22	18	62
		%	11.5%	12.4%	16.7%	13.0%
	NR	N		2		2
		%		1.1%		.4%
Total		N	191	178	108	477
		%	100.0%	100.0%	100.0%	100.0%

The study tried to find out the product that the respondents used. The pre-paid card was used by two thirds of the respondents (66.2%) and the post-paid card was used by the remaining one third (33.8%) as depicted in the following Figure1. Reasons for using post paid/pre paid services were investigated (Tables 2.3c & 2.3d). Respondents using post paid connection by and large felt that there were better schemes available (21.7%), 14% respondents used it under company's scheme, 8.3% respondents used it as frequent re-charging was not required and 6.4% felt that bills were generated.

A maximum number of respondents (19.5%) holding pre paid card found it to be economical as expenses could be kept in check, followed by better schemes (17.6%). Few respondents felt there were better schemes and better choice available.

Fig. 1:Type of Product used

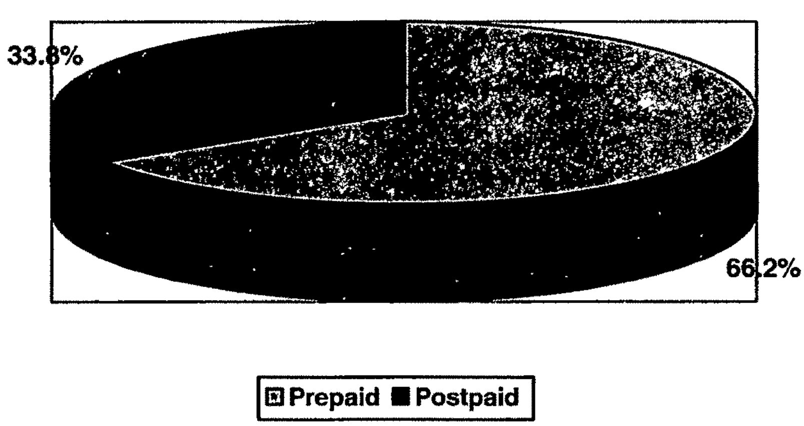

Table 2.3c Reasons for using postpaid services

Variables	No. of responses	% (N=161)
Economical use	5	3.2
Business purpose	8	5.1
Better schemes	34	21.7
Billing convenience	10	6.4
Better choice	4	2.5
Permanent use / Frequent recharging not required	13	8.3
Under company's scheme	22	14.0
Roaming / Good coverage	6	3.8
Others	4	2.5
Irrelevant	1	.6
NR	60	38.2
Total*	**167**	**106.3**

*Multiple responses, percent calculated on respondents using post paid services

Table 2.3d Reasons for using prepaid services

Variables	No. of responses	% (N=316)
Economical use	61	19.5
Business purpose	5	1.6
Better schemes	55	17.6
Billing convenience	16	5.1
Better choice	1	0.3
Under co-schemes	3	1.0
Roaming / Good coverage	4	1.3
Others	12	3.8
Irrelevant	1	.3
NR	168	53.7
Total*	**326**	**104.2**

*Multiple responses, percent calculated on respondents using prepaid services

The respondents were probed regarding the period since they were using the current cellular services. A majority of the respondents were using the service since the last one year. The percent decreased with the increase in number of years, as it is evident in the following table 2.3e. On inquiring about the period since the respondents were using a cellular phone, less than one fifth of them were using since 6 months, followed by about a third using it since 7 to 12 months, 29% using since 1 to 2 years and about one fifth using since 2-5 years. T-test for equality of means was carried out, which was not significant.

Table 2.3e Period since using current services and cellular phone

Variables		**N = 477**
Period since using current services (%)		
	1 – 6 mths	25.6
	7 – 12 mths	34.6
	1 – 2 yrs.	25.6
	2 – 3 yrs.	9.0
	3 – 4 yrs.	4.4
	4 – 5 yrs.	0.8
Mean time period since using the current services (months)		15.55
t- test for equality of means (t-value)		1.484
Period since using a cellular phone (%)		
	1 – 6 mths	18.0
	7 – 12 mths	31.4
	1 – 2 yrs.	29.1
	2 – 3 yrs.	14.0
	3 – 4 yrs.	5.2
	4 – 5 yrs.	2.1
Mean time period since using a cellular phone (months)		18.72
t- test for equality of means (t-value)		1.626

With many attractive offers and sometimes dissatisfaction with the provider, it is a common practice to change subscribers. When the respondents of the present study were asked as to whether they were with the same subscriber or had switched, it was brought to the fore that slightly less than two thirds of the respondents (61.2%) had always used the same provider while the remaining (38.8%) had changed (Table 2.3f).

Table 2.3f Change, if any in the cellular operator used

Variables	**N**	**%**
Always used the same	292	61.2
Switched over	185	38.8
Total	477	100.0

Reasons for changing the operator were investigated. The responses are outlined in Table 2.3g below. A majority had problems with the coverage (48.6%) followed by poor schemes (36.8%), billing problems (27.0%), poor quality of service (25.9%) and pricing (20.0%).

Table 2.3g Reasons for changing the cellular operator

Variables	**No. of responses**	**% (N=185)**
Poor schemes	68	36.8
Coverage Problem	90	48.6
Poor Quality of Service	48	25.9
Billing Problems	50	27.0
Pricing	37	20.0
Others, specify	9	4.9
NR	7	3.8
Total*	309	167.0

*Multiple responses

The cellular phone users were asked regarding the average monthly bill that they had to pay. On an average, the respondents paid about Rs.600/- every month. This was significant statistically.

A majority of them paid the bill by themselves (71%) while in case of one fifth of them the monthly bill was paid by their family (21.2%). In case of 12% respondents the company that they worked for paid the bill (Table 2.3h).

Table 2.3h Billing related information

Variables		**N = 477**
Payee of the bill (%)		
	Self	71.1
	Family	21.2
	Company / Employer	11.9
	Others	1.5
Average monthly bill (Rs.)		604
t- test for equality of means (t-value)*		2.215

*Significant at $p<0.05$

The respondents in the current study using different cellular providers provided inputs about the factors that were instrumental their choosing a particular provider. The responses are tabulated in the following Table 2.3i. Network (73.4%) followed by pricing (60%) and Schemes (48.2%) were ranked as the main deciders for choice of services for the respondents.

Table 2.3i Factors influencing choice of services

Variables	No. of responses	% (N=477)
Price	286	60.0
Network	350	73.4
Scheme	230	48.2
Others	52	10.9
Total*	**918**	**192.5**

*Multiple responses, percent calculated on total respondents

Opinions of friends (49.7%), followed by personal decision (42.1%) were by and large responsible for choice of cellular service. Opinions of salespersons and relatives mattered to 28.7% and 17.2% of the respondents respectively (Table 2.3j).

Table 2.3j Influences in choice of cellular service

Variables	No. of responses	% (N=477)
Operator/Salesman	137	28.7
Friends	237	49.7
Relatives	82	17.2
Self	201	42.1
Others	16	3.4
Total*	**673**	**141**

*Multiple responses, percent calculated on total respondents

On comparing the ranking given to different cellular operators that the respondents of the present study had used, it was revealed that Rank 1 was given by a majority (72.9%) of the Hutch users. In case of Idea, 44.1% of its users Ranked it as 1, while Bharti Cellular was ranked 1 by 45.9% of its users. BSNL was ranked 1 by 35.7% of its users. The BSNL was ranked 4th by maximum of its users as compared to Fascel (6.9%), Idea(14.1%) and Bharti Cellular (11.3%). Table 2.3k outlines the trend described.

Table 2.3k Ranking given to cellular service operators used

Variables		N = 477
Ranking given to Hutch by its users (%)		
	Rank 1	72.9
	Rank 2	13.8
	Rank 3	6.4
	Rank 4	6.9
Ranking given to Idea by its users (%)		
	Rank 1	44.1
	Rank 2	22.4
	Rank 3	19.4
	Rank 4	14.1
Ranking given to Bharti Cellular by its users (%)		
	Rank 1	45.9
	Rank 2	26.3
	Rank 3	16.5
	Rank 4	11.3
Ranking given to BSNL by its users (%)		
	Rank 1	35.7
	Rank 2	23.5
	Rank 3	19.1
	Rank 4	21.7

Ranking was based on the prices the providers offered (Table 2.3l). Here again, Hutch was given the top rank @ majority (63.3%) of its users, followed by BSNL who was voted on top by 49.4% of its respondents, Idea was ranked 1 by 41.7% of its respondents and the least number of respondents (33.7%) belonging to Bharti Cellular ranked it as Number 1. On comparison, maximum respondents (22.4%) using Idea gave it 4th place.

Table 2.3l Ranking given to cellular service operators based on prices offered.

Variables		**N = 477**
Ranking given to Hutch by the prices they offer (%)		
	Rank 1	63.3
	Rank 2	15.0
	Rank 3	10.0
	Rank 4	11.7
Ranking given to Idea by the prices they offer (%)		
	Rank 1	41.7
	Rank 2	19.8
	Rank 3	16.1
	Rank 4	22.4
Ranking given to Bharti Cellular by the prices they offer (%)		
	Rank 1	33.7
	Rank 2	29.7
	Rank 3	24.4
	Rank 4	12.2
Ranking given to BSNL by the prices they offer (%)		
	Rank 1	49.4
	Rank 2	20.6
	Rank 3	15.6
	Rank 4	14.4

3.0 INFORMATION REGARDING CELLULAR SERVICES

(A) Sales / Pre-sales

Telecommunication in today's world has become highly competitive with so many providers in the market. Proper service has become a benchmark of sorts for a provider to be popular with the customers. In the present study, respondents using different providers were asked about the availability of dealers. A majority of the respondents (91.8%) answered in affirmative about the ease of availability of the dealers (table 3.1.1). Pearson's chi-square was carried out, which was not significant.

Table 3.1.1 Easy availability of dealers provider wise

Variables			Easy availability of dealers		Total
			Yes	No	
Cellular service provider	Fascel	N	236	20	256
		%	92.2%	7.8%	100.0%
	Idea	N	72	7	79
		%	91.1%	8.9%	100.0%
	Bharti Cellular	N	75	3	78
		%	96.2%	3.8%	100.0%
	BSNL	N	53	9	62
		%	85.5%	14.5%	100.0%
	NR	N	2		2
		%	100.0%		100.0%
Total		N	438	39	477
		%	91.8%	8.2%	100.0%
Pearson Chi-Square			5.540(a)		

On inquiring about the time taken to obtain a prepaid / postpaid connection pertaining to the provider that the respondents were with, the responses ranged from within no time to more than two days. Majority of the responses were for 1-2 hours for all the providers (Table 3.1.2).

Pearson's chi-square was carried out which was not significant.

Table 3.1.2 Time taken to obtain a working prepaid/postpaid card connection, provider wise

			Time taken to obtain a working prepaid/postpaid card connection						Total
			No time	1-2 hrs.	3-4 hrs.	5-12 hrs.	13-24 hrs.	25+ hrs.	
Cellular service provider	Fascel	N	11	172	15	26	21	11	256
		%	4.3%	67.2%	5.9%	10.2%	8.2%	4.3%	100.0%
	Idea	N	7	35	5	14	11	7	79
		%	8.9%	44.3%	6.3%	17.7%	13.9%	8.9%	100.0%
	Bharti Cellular	N	3	47	3	5	11	9	78
		%	3.8%	60.3%	3.8%	6.4%	14.1%	11.5%	100.0%
	BSNL	N	4	31	6	8	4	9	62
		%	6.5%	50.0%	9.7%	12.9%	6.5%	14.5%	100.0%
	NR	N		2					2
		%		100.0%					100.0%
Total		N	25	287	29	53	47	36	477
		%	5.2%	60.2%	6.1%	11.1%	9.9%	7.5%	100.0%
Pearson Chi-Square			31.294(a)						

As it is evident from table 3.1.3, offers and schemes offered by the providers were easy to understand for most of the respondents. Pearson's chi-square was carried out, which was not significant.

Responses were solicited about the sources from which respondents learnt from about these schemes and offers. A majority of the respondents had learnt about these schemes from friends (52.2%) and operators (51.8%). One third of the respondents reported to have learnt from advertisements and 24% had learnt from relatives. (Table 3.1.4).

Table 3.1.3 Ease of understanding of the offers and schemes provider wise

Variables			Ease of understanding of the offers and schemes			Total
			Yes	No	Can't say	
Cellular service provider	Fascel	N	206	26	24	256
		%	80.5%	10.2%	9.4%	100.0%
	Idea	N	55	14	10	79
		%	69.6%	17.7%	12.7%	100.0%
	Bharti Cellular	N	66	5	7	78
		%	84.6%	6.4%	9.0%	100.0%
	BSNL	N	49	9	4	62
		%	79.0%	14.5%	6.5%	100.0%
	NR	N	2			2
		%	100.0%			100.0%
Total		N	378	54	45	477
		%	79.2%	11.3%	9.4%	100.0%
Pearson Chi-Square			8.640(a)			

Table 3.1.4 Sources of schemes and offers

Variables	No. of responses	% (N=477)
Operator	247	51.8
Relatives	115	24.1
Friends	249	52.2
Advertisement	160	33.5
Others	19	4.0
Total*	790	165.6

*Multiple responses, percent calculated on total respondents

In case of promotional schemes that the providers launch (table 3.1.5) although majority of the respondents felt it was easy to understand, there were about one fifth of the respondents who could not say for sure in case of Fascel (22.7%), Bharti (21.8%) and BSNL (25.8%).

Pearson's chi-square was carried out, which was not significant.

Table 3.1.5 Satisfaction with the promotional schemes offered provider wise

Variables			Satisfaction with the promotional schemes offered			Total
			Yes	No	Can't say	
Cellular service provider	Fascel	N	155	43	58	256
		%	60.5%	16.8%	22.7%	100.0%
	Idea	N	55	17	7	79
		%	69.6%	21.5%	8.9%	100.0%
	Bharti Cellular	N	51	10	17	78
		%	65.4%	12.8%	21.8%	100.0%
	BSNL	N	37	9	16	62
		%	59.7%	14.5%	25.8%	100.0%
	NR	N	1		1	2
		%	50.0%		50.0%	100.0%
Total		N	299	79	99	477
		%	62.7%	16.6%	20.8%	100.0%
Pearson Chi-Square			10.810(a)			

On inquiring whether the respondents were satisfied with the tariff and taxes collected, it was revealed that majority of the respondents were not satisfied. When the question was analyzed city wise, it came to the fore that the lowest number of respondents from Ahmedabad (15.2%) were satisfied as against 39.8% from Vadodara and 35.2% from Surat. A majority of the respondents from Ahmedabad could not say for sure whether they were satisfied with the tariff and taxes. Within the city, more than half (52%) of the respondents were not satisfied as against 40% respondents who were satisfied. In case of Surat, slightly more than one third (35.2%) of the respondents reported being satisfied as against 40.7% who were not satisfied while 24.4% couldn't say (Table 3.1.6).

Table 3.1.6 Satisfaction with the tariff & taxes collected city wise

Variables			Satisfaction with the tariff & taxes collected			Total
			Yes	No	Can't say	
	Vadodara	N	76	99	16	191
		%	39.8%	51.8%	8.4%	100.0%
	Ahmedabad	N	27	86	65	178
		%	15.2%	48.3%	36.5%	100.0%
	Surat	N	38	44	26	108
		%	35.2%	40.7%	24.1%	100.0%
Total		N	141	229	107	477
		%	29.6%	48.0%	22.4%	100.0%

(B) Network Availability, Performance and Reliability

Network availability is vital when one is traveling. Respondents in the present study were asked whether they traveled frequently. Table 3.2.1 shows that frequency of travel was greater in case of respondents belonging to Surat (67.6%) as compared to Ahmedabad (41.0%) and Vadodara (41.9%).

Table 3.2.1 Frequency of travel city wise

Variables			Frequency of travel		Total
			Yes	No	
	Vadodara	N	80	111	191
		%	41.9%	58.1%	100.0%
	Ahmedabad	N	73	105	178
		%	41.0%	59.0%	100.0%
	Surat	N	73	35	108
		%	67.6%	32.4%	100.0%
Total		N	226	251	477
		%	47.4%	52.6%	100.0%

Coverage is a very important aspect with the cellular services. About 50% of the respondents were happy with the type of coverage that was provided by their cellular operators i.e. Fascel (57.8%), Idea (55.7%), Bharti Cellular (59%) and BSNL (50%). As compared to Idea (27.8%), Bharti (25.6%) and BSNL (25.8%), Fascel (15.6%) had minimum respondents with complaints of coverage. Pearson's chi-square was carried out, which was not significant (Table 3.2.2).

Table 3.2.2 Sufficient coverage provider wise

Variables			Sufficient coverage provided by the cellular operator			Total
			Yes	No	Can't say	
Cellular service provider	Fascel	N	148	40	68	256
		%	57.8%	15.6%	26.6%	100.0%
	Idea	N	44	22	13	79
		%	55.7%	27.8%	16.5%	100.0%
	Bharti Cellular	N	46	20	12	78
		%	59.0%	25.6%	15.4%	100.0%
	BSNL	N	31	16	15	62
		%	50.0%	25.8%	24.2%	100.0%
	NR	N		1	1	2
		%		50.0%	50.0%	100.0%
Total		N	269	99	109	477
		%	56.4%	20.8%	22.9%	100.0%
Pearson Chi-Square			14.966(a)			

Respondents were also not entirely happy with the cellular service they were with and faced several problems as outlined in Table 3.2.3a to Table 3.2.3f. They revealed that they faced problems in making calls. In case of Fascel, 47.3% of the respondents had faced problems at some point of time in making calls. In case of Idea, 20.3% of the respondents reported having always faced a problem while 49.4% faced problems sometimes. Sixty per cent of the respondents with Bharti cellular faced problems sometimes and 10% always whereas 51% respondents faced problems sometimes and 14.5% always. Pearson's chi-square was carried out which was not significant.

Table 3.2.3a Problems related to cellular network provider wise

Variables			Problems faced in making calls				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N		32	121	103	256
		%		12.5%	47.3%	40.2%	100.0%
	Idea	N		16	39	24	79
		%		20.3%	49.4%	30.4%	100.0%
	Bharti Cellular	N		8	47	23	78
		%		10.3%	60.3%	29.5%	100.0%
	BSNL	N	1	9	32	20	62
		%	1.6%	14.5%	51.6%	32.3%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	1	65	241	170	477
		%	.2%	13.6%	50.5%	35.6%	100.0%
Pearson Chi-Square			17.311(a)				

Similar was the case with receiving calls. About 60% of the respondents were unhappy with Idea (62.0%), Bharti (62.0%) and BSNL (58.1%) while 49.2% of the respondents were unhappy with Fascel. Pearson's chi-square was carried out, which was not significant.

Table 3.2.3b Problems related to cellular network provider wise

			Problem faced in receiving calls				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N		23	126	107	256
		%		9.0%	49.2%	41.8%	100.0%
	Idea	N		12	49	18	79
		%		15.2%	62.0%	22.8%	100.0%
	Bharti Cellular	N	1	5	49	23	78
		%	1.3%	6.4%	62.8%	29.5%	100.0%
	BSNL	N		7	36	19	62
		%		11.3%	58.1%	30.6%	100.0%
	NR	N			1	1	2
		%			50.0%	50.0%	100.0%
Total		N	1	47	261	168	477
		%	.2%	9.9%	54.7%	35.2%	100.0%
Pearson Chi-Square			19.950(a)				

Signal availability was never a problem with about one third of Fascel subscribers (32.4%) and about one fifth of Idea (20.3%), Bharti Cellular (19.2%) and BSNL (22.6%) subscribers. Other respondents faced a problem sometimes or always. Pearson's chi-square was carried out, which was not significant.

Table 3.2.3c Problems related to cellular network provider wise

			Problems faced in coverage/signal availability				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	1	28	144	83	256
		%	.4%	10.9%	56.3%	32.4%	100.0%
	Idea	N		14	49	16	79
		%		17.7%	62.0%	20.3%	100.0%
	Bharti Cellular	N	2	8	53	15	78
		%	2.6%	10.3%	67.9%	19.2%	100.0%
	BSNL	N		9	39	14	62
		%		14.5%	62.9%	22.6%	100.0%
	NR	N			1	1	2
		%			50.0%	50.0%	100.0%
Total		N	3	59	286	129	477
		%	.6%	12.4%	60.0%	27.0%	100.0%
Pearson Chi-Square			17.078(a)				

Almost a similar trend as that of above was evident in the problem faced in voice quality. Respondents with Fascel had lesser problems than Idea, Bharti and BSNL. Pearson's chi-square was carried out, which was not significant.

Table 3.2.3d Problems related to cellular network provider wise

			Problems faced in voice quality				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	2	22	135	97	256
		%	.8%	8.6%	52.7%	37.9%	100.0%
	Idea	N		12	46	21	79
		%		15.2%	58.2%	26.6%	100.0%
	Bharti Cellular	N	2	9	48	19	78
		%	2.6%	11.5%	61.5%	24.4%	100.0%
	BSNL	N		10	40	12	62
		%		16.1%	64.5%	19.4%	100.0%
	NR	N			1	1	2
		%			50.0%	50.0%	100.0%
Total		N	4	53	270	150	477
		%	.8%	11.1%	56.6%	31.4%	100.0%
Pearson Chi-Square			18.335(a)				

The problem of voice drop was slightly lower as compared to other problems mentioned with respondents of all four subscribers. No problem was faced by 43% of Fascel subscribers, 30.4% Idea, 34.6% Bharti Cellular and 34.6% BSNL subscribers. Pearson's chi-square was carried out, which was not significant.

Table 3.2.3e Problems related to cellular network provider wise

Variables			Problems faced in drops			Total	
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N		22	124	110	256
		%		8.6%	48.4%	43.0%	100.0%
	Idea	N		9	46	24	79
		%		11.4%	58.2%	30.4%	100.0%
	Bharti Cellular	N	2	6	43	27	78
		%	2.6%	7.7%	55.1%	34.6%	100.0%
	BSNL	N	1	5	33	23	62
		%	1.6%	8.1%	53.2%	37.1%	100.0%
	NR	N			1	1	2
		%			50.0%	50.0%	100.0%
Total		N	3	42	247	185	477
		%	.6%	8.8%	51.8%	38.8%	100.0%
Pearson Chi-Square			13.093(a)				

Problems were also encountered in sending SMSs. Respondents who had subscribed to Idea faced the maximum problem as compared to other subscribers. The difference was statistically significant.

Table 3.2.3f Problems related to cellular network, provider wise

Variables			Problems faced in using SMS				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	1	29	114	112	256
		%	.4%	11.3%	44.5%	43.8%	100.0%
	Idea	N		10	49	20	79
		%		12.7%	62.0%	25.3%	100.0%
	Bharti Cellular	N	3	7	32	36	78
		%	3.8%	9.0%	41.0%	46.2%	100.0%
	BSNL	N	1	9	27	25	62
		%	1.6%	14.5%	43.5%	40.3%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	5	55	224	193	477
		%	1.0%	11.5%	47.0%	40.5%	100.0%
Pearson Chi-Square*			21.841(a)				

* Significant at p< o.05

(C) Customer Care

Customer care has become an integral part of services of a cellular provider today. More than half of the respondents using Fascel (51.6%) and Idea (55.7%) and more than one third of the respondents using Bharti Cellular (35.9%) and BSNL (41.9%) confirmed easy accessibility to a customer care agent always. Out of the four providers, respondents with Idea had the best of agent accessibility. Pearson's chi-square was carried out which was not significant. (Table 3.3.1).

Table 3.3.1 Easy accessibility of a customer care agent provider wise

Variables			Easy accessibility of a customer care agent			Total
			Always	Sometimes	Never	
Cellular service providers	Fascel	N	132	93	31	256
		%	51.6%	36.3%	12.1%	100.0%
	Idea	N	44	28	7	79
		%	55.7%	35.4%	8.9%	100.0%
	Bharti Cellular	N	28	38	12	78
		%	35.9%	48.7%	15.4%	100.0%
	BSNL	N	26	29	7	62
		%	41.9%	46.8%	11.3%	100.0%
	NR	N	2			2
		%	100.0%			100.0%
Total		N	232	188	57	477
		%	48.6%	39.4%	11.9%	100.0%
Pearson Chi-Square			11.476(a)			

The variables were analyzed city wise (Table 3.3.2). For more than half of the respondents residing in Vadodara and Ahmedabad, the customer care agent was always easily accessible as compared to Surat, wherein the agent was always accessible only for 30.6% of the respondents. For one third and more respondents of Vadodara (33%) and Ahmedabad (37.6%), the agent was sometimes accessible whereas for Surat, the agent was accessible for 53.7% of respondents sometimes. Also, the customer care agent was never accessible to a greater percent of respondents from Surat (15.7%), followed by 13.6% of respondents from Vadodara and 7.9% respondents from Ahmedabad.

Table 3.3.2 Easy accessibility of a customer care agent city wise

Variables			Easy accessibility of a customer care agent			Total
			Always	Sometimes	Never	
	Vadodara	N	102	63	26	191
		%	53.4%	33.0%	13.6%	100.0%
	Ahmedabad	N	97	67	14	178
		%	54.5%	37.6%	7.9%	100.0%
	Surat	N	33	58	17	108
		%	30.6%	53.7%	15.7%	100.0%
Total		N	232	188	57	477
		%	48.6%	39.4%	11.9%	100.0%

Along with easy accessibility to customer care, it is important that the agent responds appropriately. It could be gauged from the responses given in the table 3.3.3, that respondents with Fascel (56.3%) and Idea (54.4%) had better satisfaction on this count as compared to Bharti Cellular (37.2%) and BSNL (30.6%). The difference was highly significant statistically at $p < 0.001$.

Table 3.3.3 Appropriateness of response of a customer care agent provider wise

Variables			Appropriateness of response of a customer care agent			Total
			Always	Sometimes	Never	
Cellular service provider	Fascel	N	144	77	35	256
		%	56.3%	30.1%	13.7%	100.0%
	Idea	N	43	31	5	79
		%	54.4%	39.2%	6.3%	100.0%
	Bharti Cellular	N	29	38	11	78
		%	37.2%	48.7%	14.1%	100.0%
	BSNL	N	19	35	8	62
		%	30.6%	56.5%	12.9%	100.0%
	NR	N	2			2
		%	100.0%			100.0%
Total		N	237	181	59	477
		%	49.7%	37.9%	12.4%	100.0%
Pearson Chi-Square value***			26.660(a)			

*** Significant at p< 0.001

City wise analysis given in Table 3.3.4 showed a similar trend with Surat showing minimum percent of respondents (34.3%) reporting the customer care agent responding appropriately as against Vadodara (56.5%) and Ahmedabad (51.7%).

Table 3.3.4 Appropriateness of response of a customer care agent city wise

Variables			Appropriateness of response of a customer care agent			Total
			Always	Sometimes	Never	
	Vadodara	N	108	64	19	191
		%	56.5%	33.5%	9.9%	100.0%
	Ahmedabad	N	92	71	15	178
		%	51.7%	39.9%	8.4%	100.0%
	Surat	N	37	46	25	108
		%	34.3%	42.6%	23.1%	100.0%
Total		N	237	181	59	477
		%	49.7%	37.9%	12.4%	100.0%

The solutions that the operators offered were satisfactory to less than half of the respondents belonging to the four operators. Pearson's chi-square was carried out, which was not significant (Table 3.3.5).

Table 3.3.5 Satisfaction with solutions offered by a customer care agent provider wise

Variables			Satisfaction towards solutions offered by a customer care agent			Total
			Always	Sometimes	Never	
Cellular service provider	Fascel	N	113	126	17	256
		%	44.1%	49.2%	6.6%	100.0%
	Idea	N	38	35	6	79
		%	48.1%	44.3%	7.6%	100.0%
	Bharti Cellular	N	27	46	5	78
		%	34.6%	59.0%	6.4%	100.0%
	BSNL	N	27	26	9	62
		%	43.5%	41.9%	14.5%	100.0%
	NR	N	2	-	-	2
		%	100.0%	-	-	100.0%
Total		N	207	233	37	477
		%	43.4%	48.8%	7.8%	100.0%
Pearson Chi-Square			11.264(a)			

(D) Billing

Billing related information elicited from the respondents is outlined in Table 3.4.1. Respondents who were using a post-paid connection were asked whether the presentation of information in their bill was complete and clear. A majority of them reported that the information on their bill was always clear and complete (21.4%) followed by about 9% who said this was the case only sometimes. Five percent felt it was never complete.

The prepaid card users were asked whether they would like to have a statement of calls made. By and large (50.7%) respondents wanted it always, about 13% preferred to have it sometimes while about 9% did not ever want it.

Satisfaction with respect to billing was gauged by probing whether the billing was accurate, whether the process of handling billing related complaints was alright and whether the billing related disputes were settled or not. Almost similar percent of respondents reported that they were always (15.5%) and sometimes (14.5%) satisfied with accurate billing. A small percent (6.1%) were never satisfied. With respect to satisfaction with handling of billing complaints, 11% respondents were always satisfied as compared to 13.2% respondents who were sometimes satisfied and 9.2% respondents were never satisfied. Thirteen percent respondents were always satisfied with settlement of billing disputes by their operator, followed by 9.4% of the respondents who were sometimes satisfied while 10.5% were never satisfied.

Billing related problems faced by the respondents were investigated. The problem of double charges was never faced by about one fifth of the respondents, followed by 13% respondents who had faced this problem sometimes and a negligible percent of respondents (3.6%) always faced this problem.

The problem of delayed bills was never faced by 23% respondents. 10.3% respondents had faced this problem sometimes and a miniscule percent (1.5%) reported to have faced it always.

The problem of payments made but not reflected, wrong address and delay in refunds was also not faced by many respondents as can be seen from the table 3.4.1 given below.

Table 3.4.1 Billing related information

Variables		N = 477
Clear and complete presentation of information on postpaid card (%)		
	Always	21.4
	Sometimes	9.0
	Never	5.2
	NA	64.4
Preference of a statement of calls on prepaid card (%)		
	Always	50.7
	Sometimes	13.8
	Never	8.6
	NA	26.8
Satisfaction with accurate billing (%)		
	Always	15.5
	Sometimes	14.5
	Never	6.1
	NA	63.9
Satisfaction with process of lodging/handling of billing complaints (%)		
	Always	11.1
	Sometimes	13.2
	Never	9.2
	NA	66.5
Satisfaction with settlement of billing disputes		
	Always	12.8
	Sometimes	9.4
	Never	10.5
	NA	67.3

Variables		N = 477
Problems faced in billing		
(a) Wrong/double charges (%)		
	Always	3.6
	Sometimes	13.0
	Never	19.1
	NA	64.4
(b) Delayed bills (%)		
	Always	1.5
	Sometimes	10.3
	Never	23.3
	NA	65.0
(c) Payments made but not reflected (%)		
	Always	2.7
	Sometimes	5.2
	Never	26.8
	NA	65.2
(d) Wrong address (%)		
	Always	1.0
	Sometimes	3.8
	Never	30.0
	NA	65.2
(e) Delay in refunds (%)		
	Always	1.0
	Sometimes	3.6
	Never	29.4
	NA	66.0

(E) Value Added Services

Several value added services are provided by cellular operators. Its knowledge and source of knowledge was tried to find out from the respondents of the present study. The responses are described in the following tables (Table 3.5.1 to Table 3.5.8). In case of respondents with all four different providers, more than 90% of them were aware short message service and availed of it as well. A negligible percent were aware but did not use it. The difference was not statistically significant.

Table 3.5.1 Knowledge about value added services

Variables			Knowledge about Short message services			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	4	7	245	256
		%	1.6%	2.7%	95.7%	100.0%
	Idea	N	1	2	76	79
		%	1.3%	2.5%	96.2%	100.0%
	Bharti Cellular	N		2	76	78
		%		2.6%	97.4%	100.0%
	BSNL	N	1	1	60	62
		%	1.6%	1.6%	96.8%	100.0%
	NR	N			2	2
		%			100.0%	100.0%
Total		Nt	6	12	459	477
		%	1.3%	2.5%	96.2%	100.0%
Pearson Chi-Square			1.582(a)			

The highest source of knowledge for all the users was friends, followed by operators and relatives. The Pearson's chi-square was not found to be significant.

Table 3.5.1a Source of knowledge about value added services

Variables			Source of knowledge about Short message service				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	56	22	167	11	256
		%	21.9%	8.6%	65.2%	4.3%	100.0%
	Idea	N	29	5	42	3	79
		%	36.7%	6.3%	53.2%	3.8%	100.0%
	Bharti Cellular	N	24	6	46	2	78
		%	30.8%	7.7%	59.0%	2.6%	100.0%
	BSNL	N	15	6	41		62
		%	24.2%	9.7%	66.1%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	125	40	296	16	477
		%	26.2%	8.4%	62.1%	3.4%	100.0%
Pearson Chi-Square			16.981(a)				

When the respondents were asked about their knowledge of roaming, about two thirds of the respondents with all four providers were aware but did not avail this service (Hutch, 66%; Idea, 67.1%; Bharti Cellular, 61.5%; and BSNL, 61.5%). About one third were aware and availed it while very few were not aware about this service at all. The difference was not significant statistically.

Table 3.5.2 Knowledge about value added services

Variables			Knowledge about Roaming			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	17	169	70	256
		%	6.6%	66.0%	27.3%	100.0%
	Idea	N	1	53	25	79
		%	1.3%	67.1%	31.6%	100.0%
	Bharti Cellular	N	3	48	27	78
		%	3.8%	61.5%	34.6%	100.0%
	BSNL	N	3	40	19	62
		%	4.8%	64.5%	30.6%	100.0%
	NR	N		1	1	2
		%		50.0%	50.0%	100.0%
Total		N	24	311	142	477
		%	5.0%	65.2%	29.8%	100.0%
Pearson Chi-Square			5.678(a)			

The source of knowledge in case of roaming was also friends as reported by a majority of the users of Hutch (59.8%), Idea (63.3%), Bharti Cellular (59%) and BSNL (54.8%). The operator was a source for 28.1% of Hutch users, 31.6% of Idea users, 32.1% of Bharti users and 35.5% 0f BSNL users. In case of some, the source was a relative. Pearson's chi-square was not significant.

Table 3.5.2a Source of knowledge about value added services

Variables			Source of knowledge about Roaming				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	72	25	153	6	256
		%	28.1%	9.8%	59.8%	2.3%	100.0%
	Idea	N	25	4	50		79
		%	31.6%	5.1%	63.3%		100.0%
	Bharti Cellular	N	25	5	46	2	78
		%	32.1%	6.4%	59.0%	2.6%	100.0%
	BSNL	N	22	6	34		62
		%	35.5%	9.7%	54.8%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	145	41	283	8	477
		%	30.4%	8.6%	59.3%	1.7%	100.0%
Pearson Chi-Square			12.446(a)				

The respondents discussed their knowledge of voicemail. A majority of them were aware about this service but did not avail of it in case of all the four providers. Around one fifth of them were aware and availed it as well while some were not aware of it. The difference in knowledge provider wise was statistically insignificant though.

Table 3.5.3 Knowledge about value added services

Variables			Knowledge about Voicemail			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	19	187	50	256
		%	7.4%	73.0%	19.5%	100.0%
	Idea	N	5	54	20	79
		%	6.3%	68.4%	25.3%	100.0%
	Bharti Cellular	N	4	57	17	78
		%	5.1%	73.1%	21.8%	100.0%
	BSNL	N	5	42	15	62
		%	8.1%	67.7%	24.2%	100.0%
	NR	N	1		1	2
		%	50.0%		50.0%	100.0%
Total		N	34	340	103	477
		%	7.1%	71.3%	21.6%	100.0%
Pearson Chi-Square			9.504(a)			

A similar trend was observed as seen from the table below. The main source of knowledge was friends in case of all four providers followed by the operator and relatives. Statistically there was no significance noticed.

Table 3.5.3a Source of knowledge about value added services

Variables			Source of knowledge about Voicemail				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	70	19	161	6	256
		%	27.3%	7.4%	62.9%	2.3%	100.0%
	Idea	N	23	7	49		79
		%	29.1%	8.9%	62.0%		100.0%
	Bharti Cellular	N	22	7	47	2	78
		%	28.2%	9.0%	60.3%	2.6%	100.0%
	BSNL	N	20	5	37		62
		%	32.3%	8.1%	59.7%		100.0%
	NR	N	2				2
		%	100.0%				100.0%
Total		N	137	38	294	8	477
		%	28.7%	8.0%	61.6%	1.7%	100.0%
Pearson Chi-Square			9.228(a)		12	.683	

In this case again, majority of the respondents from Hutch (78.1%), Idea (78.5%), Bharti Cellular (82.1%) and BSNL (66.1%) were aware of this service but did not avail of it. There were few respondents who were aware and availed of the same, whereas the rest of them were unaware. Pearson's chi-square was not significant.

Table 3.5.4 Knowledge about value added services

Variables			Knowledge about video-clips			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	26	200	30	256
		%	10.2%	78.1%	11.7%	100.0%
	Idea	N	7	62	10	79
		%	8.9%	78.5%	12.7%	100.0%
	Bharti Cellular	N	5	64	9	78
		%	6.4%	82.1%	11.5%	100.0%
	BSNL	N	10	41	11	62
		%	16.1%	66.1%	17.7%	100.0%
	NR	N		2		2
		%		100.0%		100.0%
Total		N	48	369	60	477
		%	10.1%	77.4%	12.6%	100.0%
Pearson Chi-Square			6.799(a)			

Again the source of knowledge for a maximum of the respondents was friends, followed by the operator and relative as it is observed from the table below. There was statistically no significant difference noticed between the source of knowledge and the provider.

Table 3.5.4a Source of knowledge about value added services

Variables			Source of knowledge about video-clips				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	65	24	162	5	256
		%	25.4%	9.4%	63.3%	2.0%	100.0%
	Idea	N	23	5	50	1	79
		%	29.1%	6.3%	63.3%	1.3%	100.0%
	Bharti Cellular	N	25	6	47		78
		%	32.1%	7.7%	60.3%		100.0%
	BSNL	N	13	7	42		62
		%	21.0%	11.3%	67.7%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	127	43	301	6	477
		%	26.6%	9.0%	63.1%	1.3%	100.0%
Pearson Chi-Square			11.597(a)		12	.479	

As visible from the following table, the respondents had a fair knowledge about multimedia but did not avail this service. Around one fifth know and used the service where as the rest did not know about it. The difference was not significant statistically.

Table 3.5.5 Knowledge about value added services

Variables			Knowledge about Multimedia services			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	27	174	55	256
		%	10.5%	68.0%	21.5%	100.0%
	Idea	N	5	59	15	79
		%	6.3%	74.7%	19.0%	100.0%
	Bharti Cellular	N	4	59	15	78
		%	5.1%	75.6%	19.2%	100.0%
	BSNL	N	8	36	18	62
		%	12.9%	58.1%	29.0%	100.0%
	NR	N		1	1	2
		%		50.0%	50.0%	100.0%
Total		N	44	329	104	477
		%	9.2%	69.0%	21.8%	100.0%
Pearson Chi-Square			8.555(a)			

A similar trend was again observed as the source of knowledge was friends, the operator and relative in descending order. No statistical significance was observed. (Table below)

Table 3.5.5a Source of knowledge about value added services

Variables			Source of knowledge about -Multimedia services				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	60	28	164	4	256
		%	23.4%	10.9%	64.1%	1.6%	100.0%
	Idea	N	24	5	50		79
		%	30.4%	6.3%	63.3%		100.0%
	Bharti Cellular	N	26	5	47		78
		%	33.3%	6.4%	60.3%		100.0%
	BSNL	N	14	6	42		62
		%	22.6%	9.7%	67.7%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	125	45	303	4	477
		%	26.2%	9.4%	63.5%	.8%	100.0%
Pearson Chi-Square			14.239(a)				

A similar trend was observed regarding knowledge about paid services as well as the source of knowledge for the same as clearly visible from the following tables. There was no significant difference observed in both the cases.

Table 3.5.6 Knowledge about value added services

Variables			Knowledge about Paid services			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	19	181	56	256
		%	7.4%	70.7%	21.9%	100.0%
	Idea	N	5	56	18	79
		%	6.3%	70.9%	22.8%	100.0%
	Bharti Cellular	N	2	53	23	78
		%	2.6%	67.9%	29.5%	100.0%
	BSNL	N	6	39	17	62
		%	9.7%	62.9%	27.4%	100.0%
	NR	N		1	1	2
		%		50.0%	50.0%	100.0%
Total		N	32	330	115	477
		%	6.7%	69.2%	24.1%	100.0%
Pearson Chi-Square			6.114(a)			

Table 3.5.6a Source of knowledge about value added services

Variables			Source of knowledge about Paid services				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	63	26	166	1	256
		%	24.6%	10.2%	64.8%	.4%	100.0%
	Idea	N	24	6	49		79
		%	30.4%	7.6%	62.0%		100.0%
	Bharti Cellular	N	25	5	47	1	78
		%	32.1%	6.4%	60.3%	1.3%	100.0%
	BSNL	N	17	5	40		62
		%	27.4%	8.1%	64.5%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	130	43	302	2	477
		%	27.3%	9.0%	63.3%	.4%	100.0%
Pearson Chi-Square			10.402(a)				

A maximum number of respondents know about web-surfing but did not use the service. The Pearson's chi-square was not significant.

Table 3.5.7 Knowledge about value added services

Variables			Knowledge about Surf the web			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	25	191	40	256
		%	9.8%	74.6%	15.6%	100.0%
	Idea	N	5	61	13	79
		%	6.3%	77.2%	16.5%	100.0%
	Bharti Cellular	N	4	59	15	78
		%	5.1%	75.6%	19.2%	100.0%
	BSNL	N	8	39	15	62
		%	12.9%	62.9%	24.2%	100.0%
	NR	N		1	1	2
		%		50.0%	50.0%	100.0%
Total		N	42	351	84	477
		%	8.8%	73.6%	17.6%	100.0%
Pearson Chi-Square			8.176(a)			

The same trend was observed wherein friends, the operator followed by a relative were the source of knowledge. The difference was statistically not significant.

Table 3.5.7a Source of knowledge about value added services

Variables			Source of knowledge about Surf the web				Total
			Operator	Relative	Friend	Others	
Cellular service provider	Fascel	N	61	21	170	4	256
		%	23.8%	8.2%	66.4%	1.6%	100.0%
	Idea	N	23	9	47		79
		%	29.1%	11.4%	59.5%		100.0%
	Bharti Cellular	N	24	5	49		78
		%	30.8%	6.4%	62.8%		100.0%
	BSNL	N	17	5	40		62
		%	27.4%	8.1%	64.5%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	126	41	306	4	477
		%	26.4%	8.6%	64.2%	.8%	100.0%
Pearson Chi-Square			12.308(a)				

Knowledge of ring tones was common with a majority of the respondents and they availed of the service. The difference was not significant statistically.

Table 3.5.8 Knowledge about value added services

Variables			Knowledge about Ring tones			Total
			Not Aware	Aware and Do not Avail	Aware and Avail	
Cellular service provider	Fascel	N	2	7	247	256
		%	.8%	2.7%	96.5%	100.0%
	Idea	N	1	2	76	79
		%	1.3%	2.5%	96.2%	100.0%
	Bharti Cellular	N	1	2	75	78
		%	1.3%	2.6%	96.2%	100.0%
	BSNL	N	1	3	58	62
		%	1.6%	4.8%	93.5%	100.0%
	NR	N			2	2
		%			100.0%	100.0%
Total		N	5	14	458	477
		%	1.0%	2.9%	96.0%	100.0%
Pearson Chi-Square			1.449(a)			

Friends were the major source of information followed by the operator and a relative. The difference was statistically significant.

Table 3.5.8a Source of knowledge about value added services

Variables			Source of knowledge about Ring tones				Total
			Operator	Relative	Friend	Others	
Which Cellular service do you use?	Fascel	N	54	13	181	8	256
		%	21.1%	5.1%	70.7%	3.1%	100.0%
	Idea	N	23	1	55		79
		%	29.1%	1.3%	69.6%		100.0%
	Bharti Cellular	N	25	2	49	2	78
		%	32.1%	2.6%	62.8%	2.6%	100.0%
	BSNL	N	18	2	42		62
		%	29.0%	3.2%	67.7%		100.0%
	NR	N	1	1			2
		%	50.0%	50.0%			100.0%
Total		N	121	19	327	10	477
		%	25.4%	4.0%	68.6%	2.1%	100.0%
Pearson Chi-Square value*			24.119(a)				

* Significant at p< 0.05

Respondents were asked to rate the value added services provided by their respective subscribers. Rating was obtained for services such as SMS, roaming, surf the web, multimedia, etc. on a 1-5 scale. Highly satisfied was given the rating 1 followed by satisfied, neither satisfied nor dissatisfied, dissatisfied and highly dissatisfied, rated in ascending order. The responses obtained are described and tabulated below (Table 3.5.9a to Table 3.5.9g).

- Short Messaging Services (SMS)

With respect to ratings given to SMS, maximum respondents subscribing to Idea (43.0%) rated the service as highly satisfying as against minimum respondents subscribing to Bharti Cellular (24.4%) giving the same rating. However, none of the respondents using the latter operator rated it as highly dissatisfactory either. Satisfactory rating was given by a majority of the respondents in case of all operators, viz. Fascel (55.9%), Idea (46.8%), Bharti Cellular (64.1%) and BSNL (56.5%).

Table 3.5.9a Rating to value added services provider wise

Variables			Rating to Short Messaging Services						Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatis-fied	Dissatis-fied	Highly dissatis-fied	
Cellular service provider	Fascel	N	1	83	143	23	3	3	256
		%	.4%	32.4%	55.9%	9.0%	1.2%	1.2%	100.0%
	Idea	N	2	34	37	4	1	1	79
		%	2.5%	43.0%	46.8%	5.1%	1.3%	1.3%	100.0%
	Bharti Cellular	N		19	50	9			78
		%		24.4%	64.1%	11.5%			100.0%
	BSNL	N	1	19	35	5	2		62
		%	1.6%	30.6%	56.5%	8.1%	3.2%		100.0%
	NR	N		1			1		2
		%		50.0%			50.0%		100.0%
Total		N	4	156	265	41	7	4	477
		%	.8%	32.7%	55.6%	8.6%	1.5%	.8%	100.0%

- Roaming services

As majority of the respondents were pre paid card users, maximum rating was given to NA followed by satisfactory rating given to all operators for this service by most of the respondents (Fascel, 23.4%; Idea, 17.7%; Bharti Cellular, 25.6%; and BSNL, 21.0%). On comparison within operators, Idea was rated highly satisfactory by a majority (10.1%) of respondents.

Table 3.5.9b Rating to value added services provider wise

Variables			Rating to Roaming Services						Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatis-fied	Dissatis-fied	Highly dissatis-fied	
Cellular service provider	Fascel	N	170	7	60	12	6	1	256
		%	66.4%	2.7%	23.4%	4.7%	2.3%	.4%	100.0%
	Idea	N	50	8	14	6	1		79
		%	63.3%	10.1%	17.7%	7.6%	1.3%		100.0%
	Bharti Cellular	N	46	4	20	6	2		78
		%	59.0%	5.1%	25.6%	7.7%	2.6%		100.0%
	BSNL	N	42	2	13	4	1		62
		%	67.7%	3.2%	21.0%	6.5%	1.6%		100.0%
	NR	N	1		1				2
		%	50.0%		50.0%				100.0%
Total		N	309	21	108	28	10	1	477
		%	64.8%	4.4%	22.6%	5.9%	2.1%	.2%	100.0%

- Clip services

  Again maximum respondents rated NA to clip services. The rest of the respondents rated between satisfied to neither satisfied nor dissatisfied.

Table 3.5.9c Rating to value added services provider wise

			Rating to Clip Services					Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatisfied	Dissatis-fied	
Cellular service provider	Fascel	N	212	8	29	7		256
		%	82.8%	3.1%	11.3%	2.7%		100.0%
	Idea	N	63	7	6	3		79
		%	79.7%	8.9%	7.6%	3.8%		100.0%
	Bharti Cellular	N	62	2	8	4	2	78
		%	79.5%	2.6%	10.3%	5.1%	2.6%	100.0%
	BSNL	N	47	2	9	4		62
		%	75.8%	3.2%	14.5%	6.5%		100.0%
	NR	N	2					2
		%	100.0%					100.0%
Total		N	386	19	52	18	2	477
		%	80.9%	4.0%	10.9%	3.8%	.4%	100.0%

- Voice mail

  A similar trend as above was observed for this service as well. Highly satisfactory rating was given to Idea again for this service by maximum respondents (12.7%), within operators.

Table 3.5.9d Rating to value added services provider wise

			Rating to Voice mail						Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatis-fied	Dissatis-fied	Highly dissatis-fied	
Cellular service provider	Fascel	N	196	6	42	10	1	1	256
		%	76.6%	2.3%	16.4%	3.9%	.4%	.4%	100.0%
	Idea	N	56	10	10	2	1		79
		%	70.9%	12.7%	12.7%	2.5%	1.3%		100.0%
	Bharti Cellular	N	56	1	14	6	1		78
		%	71.8%	1.3%	17.9%	7.7%	1.3%		100.0%
	BSNL	N	46	1	10	5			62
		%	74.2%	1.6%	16.1%	8.1%			100.0%
	NR	N	1		1				2
		%	50.0%		50.0%				100.0%
Total		N	355	18	77	23	3	1	477
		%	74.4%	3.8%	16.1%	4.8%	.6%	.2%	100.0%

- Multi media services

  Maximum respondents rated this service as NA.

Table 3.5.9e Rating to value added services provider wise

Variables			Rating to Multi media services						Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatis-fied	Dissatis-fied	Highly dissatis-fied	
Cellular service provider	Fascel	N	186	6	43	14	6	1	256
		%	72.7%	2.3%	16.8%	5.5%	2.3%	.4%	100.0%
	Idea	N	63	6	7	3			79
		%	79.7%	7.6%	8.9%	3.8%			100.0%
	Bharti Cellular	N	56	2	12	6	1	1	78
		%	71.8%	2.6%	15.4%	7.7%	1.3%	1.3%	100.0%
	BSNL	N	43	1	11	6	1		62
		%	69.4%	1.6%	17.7%	9.7%	1.6%		100.0%
	NR	N	1		1				2
		%	50.0%		50.0%				100.0%
Total		N	349	15	74	29	8	2	477
		%	73.2%	3.1%	15.5%	6.1%	1.7%	.4%	100.0%

- Paid services

  Following a similar trend, besides NA being rated the maximum, satisfactory rating was given by maximum respondents subscribing to Fascel (19.5%), Idea (11.4%), Bharti Cellular (20.5%) and BSNL (22.6%).

Table 3.5.9f Rating to value added services provider wise

Variables			Rating to Paid services						Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatis-fied	Dissatis-fied	Highly dissatis-fied	
Cellular service provider	Fascel	N	185	4	50	13	3	1	256
		%	72.3%	1.6%	19.5%	5.1%	1.2%	.4%	100.0%
	Idea	N	62	5	9	3			79
		%	78.5%	6.3%	11.4%	3.8%			100.0%
	Bharti Cellular	N	53	2	16	6	1		78
		%	67.9%	2.6%	20.5%	7.7%	1.3%		100.0%
	BSNL	N	43	1	14	3	1		62
		%	69.4%	1.6%	22.6%	4.8%	1.6%		100.0%
	NR	N	1		1				2
		%	50.0%		50.0%				100.0%
Total		N	344	12	90	25	5	1	477
		%	72.1%	2.5%	18.9%	5.2%	1.0%	.2%	100.0%

- Surf the web

  Maximum respondents rated this service as NA, followed by satisfactory, highly satisfied and dissatisfied rating given to various providers.

Table 3.5.9g Rating to value added services provider wise

Variables			Rating to Surf the web						Total
			NA	Highly Satis-fied	Satis-fied	Neither satisfied nor dissatis-fied	Dissatis-fied	Highly dissatis-fied	
Cellular service provider	Fascel	N	198	4	41	9	3	1	256
		%	77.3%	1.6%	16.0%	3.5%	1.2%	.4%	100.0%
	Idea	N	67	4	4	3		1	79
		%	84.8%	5.1%	5.1%	3.8%		1.3%	100.0%
	Bharti Cellular	Count	60	1	10	6	1		78
		%	76.9%	1.3%	12.8%	7.7%	1.3%		100.0%
	BSNL	N	47	1	8	5	1		62
		%	75.8%	1.6%	12.9%	8.1%	1.6%		100.0%
	NR	N	1		1				2
		%	50.0%		50.0%				100.0%
Total		N	373	10	64	23	5	2	477
		%	78.2%	2.1%	13.4%	4.8%	1.0%	.4%	100.0%

(F) Short Message Services

Besides making and receiving calls, cellular phone subscribers use Short Message Services the most. In the present study, respondents were asked regarding the number of times they use SMS in a day. More than one third of the respondents (36.5%) used this service 1 to 3 times a day, about one fifth (17.6%) used it 4 to 6 times a day, 13.4% respondents used this service 7 to 10 times a day and 8% respondents used this service even 11 to 20 times and even 20 to 50 times a day. 5% respondents reported using SMS more than 50 times a day (Table 3.6.1).

Table 3.6.1 Per day use of SMS

Variables	N	%
No SMS	54	11.3
1 to 3 times	174	36.5
4 to 6 times	84	17.6
7 to 10 times	64	13.4
11 to 20 times	38	8.0
21 to 50 times	39	8.2
50+	24	5.0
Total	**477**	**100.0**

Information was sought regarding the types of difficulties that they faced in sending SMSs. The responses given are detailed in Tables 3.6.2a to 3.6.2e.

- Delayed delivery

  A majority of the respondents subscribing to Fascel (55.9%), Idea (55.7%), Bharti Cellular (60.3%) and BSNL (38.7%) never encountered delayed delivery. Out of the respondents facing this problem always or sometimes, BSNL users were more (21% and 38.7% respectively) as compared to other providers. The difference was significant at $p < 0.01$.

Table 3.6.2a Difficulties faced in sending SMS, provider wise

Variables			Delayed delivery				Total
			NA	Never	Always	Sometimes	
Cellular service provider	Fascel	N	1	143	38	74	256
		%	.4%	55.9%	14.8%	28.9%	100.0%
	Idea	N	2	44	19	14	79
		%	2.5%	55.7%	24.1%	17.7%	100.0%
	Bharti Cellular	N	1	47	11	19	78
		%	1.3%	60.3%	14.1%	24.4%	100.0%
	BSNL	N	1	24	13	24	62
		%	1.6%	38.7%	21.0%	38.7%	100.0%
	NR	N			1	1	2
		%			50.0%	50.0%	100.0%
Total		N	5	258	82	132	477
		%	1.0%	54.1%	17.2%	27.7%	100.0%
Pearson Chi-Square value**			19.042(a)				

** Significant at p< 0.01

- Poor inter network delivery

  Poor inter network delivery problem was faced by respondents using Fascel (48.8%) and Bharti Cellular (35.4%) followed by BSNL (33.9%) and Idea (35.4%). As compared to other providers i.e. Fascel (21.1%), Bharti Cellular (17.9%) and BSNL (27.4%), more respondents using Idea (35.4%) faced the problem of inter-network delivery all the time. Pearson's chi-square was not significant.

Table 3.6.2b Difficulties faced in sending SMS, provider wise

Variables			Poor inter-network delivery				Total
			NA	Never	Always	Sometimes	
Cellular service provider	Fascel	N	1	125	54	76	256
		%	.4%	48.8%	21.1%	29.7%	100.0%
	Idea	N	1	28	28	22	79
		%	1.3%	35.4%	35.4%	27.8%	100.0%
	Bharti Cellular	N		38	14	26	78
		%		48.7%	17.9%	33.3%	100.0%
	BSNL	N		21	17	24	62
		%		33.9%	27.4%	38.7%	100.0%
	NR	N		1	1		2
		%		50.0%	50.0%		100.0%
Total		N	2	213	114	148	477
		%	.4%	44.7%	23.9%	31.0%	100.0%
Pearson Chi-Square			16.000(a)				

- Getting delivered

  Getting the message delivered was a problem as reported by the respondents using four different providers. Fifteen percent respondents subscribing to Fascel always faced a problem in delivery while about one third (35.5%) faced the problem sometimes. Almost similar percent of respondents using Idea (30.4% & 30.2%) faced this problem always and sometimes respectively. A very small percentage of respondents using Bharti Cellular faced this problem always (14.1%) and 42.3% respondents faced it sometimes. About one fifth of the BSNL users reported facing this problem always and 35.5% reported facing this problem sometimes. On comparing the four operators, maximum respondents using Fascel (48.8%) had never faced this problem.

Pearson's chi-square was not significant.

Table 3.6.2c Difficulties faced in sending SMS, provider wise

Variables			Difficulty in getting the SMS delivered				Total
			NA	Never	Always	Sometimes	
Cellular service provider	Fascel	N	1	125	39	91	256
		%	.4%	48.8%	15.2%	35.5%	100.0%
	Idea	N	2	26	24	27	79
		%	2.5%	32.9%	30.4%	34.2%	100.0%
	Bharti Cellular	N		34	11	33	78
		%		43.6%	14.1%	42.3%	100.0%
	BSNL	N	1	26	13	22	62
		%	1.6%	41.9%	21.0%	35.5%	100.0%
	NR	N		1	1		2
		%		50.0%	50.0%		100.0%
Total		N	4	212	88	173	477
		%	.8%	44.4%	18.4%	36.3%	100.0%
Pearson Chi-Square value			19.286(a)				

- Busy Network

  Most of the respondents had busy network problem sometimes, with respondents using BSNL forming a majority (51.6%). Comparatively, greater percentage of respondents using Idea (31.6%) faced this problem always. Pearson's chi-square was not significant.

Table 3.6.2d Difficulties faced in sending SMS, provider wise

Variables			Busy network				Total
			NA	Never	Always	Sometimes	
Cellular service provider	Fascel	N	1	98	41	116	256
		%	.4%	38.3%	16.0%	45.3%	100.0%
	Idea	N	1	23	25	30	79
		%	1.3%	29.1%	31.6%	38.0%	100.0%
	Bharti Cellular	N	1	27	15	35	78
		%	1.3%	34.6%	19.2%	44.9%	100.0%
	BSNL	N		18	12	32	62
		%		29.0%	19.4%	51.6%	100.0%
	NR	N			1	1	2
		%			50.0%	50.0%	100.0%
Total		N	3	166	94	214	477
		%	.6%	34.8%	19.7%	44.9%	100.0%
Pearson Chi-Square			14.504(a)				

- Poor Network Delivery

  It is evident from the table below, that maximum respondents using Fascel (50.8%) had never faced the problem of poor network delivery followed by Bharti Cellular (46.2%), Idea (40.5%) and BSNL (40.3%). As compared to others, maximum respondents using Idea (22.8%) faced this problem always. Pearson's chi-square was not significant.

Table 3.6.2e Difficulties faced in sending SMS, provider wise

Variables			Poor network delivery				Total
			NA	Never	Always	Sometimes	
Cellular service provider	Fascel	N	2	130	31	93	256
		%	.8%	50.8%	12.1%	36.3%	100.0%
	Idea	N	2	32	18	27	79
		%	2.5%	40.5%	22.8%	34.2%	100.0%
	Bharti Cellular	N	1	36	7	34	78
		%	1.3%	46.2%	9.0%	43.6%	100.0%
	BSNL	N	1	25	10	26	62
		%	1.6%	40.3%	16.1%	41.9%	100.0%
	NR	N		1	1		2
		%		50.0%	50.0%		100.0%
Total		N	6	224	67	180	477
		%	1.3%	47.0%	14.0%	37.7%	100.0%
Pearson Chi-Square			14.254(a)				

4.0 OVERALL CUSTOMER SATISFACTION

In order to ascertain the overall customer satisfaction, respondents were asked to rate several aspects of cellular services, such as presales/sales, network availability, performance and reliability, etc. The rating scale was 1 to 5 with 1 being Excellent followed by Good, Average, Below Average and Poor. The responses were analyzed vis-à-vis the service provider as follows (Table 4.1a to Table 4.1e).

- Presales / Sales

  A majority of the respondents rated this service as Good in case of all four providers, Fascel (60.2%), Idea (50.6%), Bharti Cellular (47.4%) and BSNL (38.7%). Maximum users of Bharti Cellular rated it as Average (29.5%) and BSNL as Below Average (11.3%). The difference was highly significant statistically.

Table 4.1a Rating given to overall satisfaction on various aspects of cellular services, provider wise

Variables			Rating to Presales / Sales					Total
			Excellent	Good	Average	Below Average	Poor	
Cellular service provider	Fascel	N	47	154	51	3	1	256
		%	18.4%	60.2%	19.9%	1.2%	.4%	100.0%
	Idea	N	22	40	13		4	79
		%	27.8%	50.6%	16.5%		5.1%	100.0%
	Bharti Cellular	N	17	37	23	1		78
		%	21.8%	47.4%	29.5%	1.3%		100.0%
	BSNL	N	17	24	13	7	1	62
		%	27.4%	38.7%	21.0%	11.3%	1.6%	100.0%
	NR	N		1		1		2
		%		50.0%		50.0%		100.0%
Total		N	103	256	100	12	6	477
		%	21.6%	53.7%	21.0%	2.5%	1.3%	100.0%
Pearson Chi-Square value***			66.289(a)					

*** Significant at p<0.001

- Network availability

  This service was rated Good by most of the respondents in case of all four providers. The rating of Below Average and Poor was given by a negligible percentage of respondents. Pearson's chi-square was not significant.

Table 4.1b Rating given to overall satisfaction on various aspects of cellular services, provider wise

Variables			Rating to Network availability					Total
			Excellent	Good	Average	Below Average	Poor	
Cellular service provider	Fascel	N	50	149	52	3	2	256
		%	19.5%	58.2%	20.3%	1.2%	.8%	100.0%
	Idea	N	16	46	15	1	1	79
		%	20.3%	58.2%	19.0%	1.3%	1.3%	100.0%
	Bharti Cellular	N	13	40	23	1	1	78
		%	16.7%	51.3%	29.5%	1.3%	1.3%	100.0%
	BSNL	N	9	40	10	2	1	62
		%	14.5%	64.5%	16.1%	3.2%	1.6%	100.0%
	NR	N		1	1			2
		%		50.0%	50.0%			100.0%
Total		N	88	276	101	7	5	477
		%	18.4%	57.9%	21.2%	1.5%	1.0%	100.0%
Pearson Chi-Square			8.744(a)					

- Performance and reliability

  A similar trend as above was noticed as maximum respondents (more than half) rated this service as Good, followed by Average and Excellent. However, in this case the difference in rating between the providers was highly significant statistically.

Table 4.1c Rating given to overall satisfaction on various aspects of cellular services, provider wise

Variables			Rating to Performance & reliability					Total
			Excellent	Good	Average	Below Average	Poor	
Cellular service provider	Fascel	N	41	149	64		2	256
		%	16.0%	58.2%	25.0%		.8%	100.0%
	Idea	N	10	45	21	3		79
		%	12.7%	57.0%	26.6%	3.8%		100.0%
	Bharti Cellular	N	11	44	22		1	78
		%	14.1%	56.4%	28.2%		1.3%	100.0%
	BSNL	N	7	32	19	4		62
		%	11.3%	51.6%	30.6%	6.5%		100.0%
	NR	N		1		1		2
		%		50.0%		50.0%		100.0%
Total		N	69	271	126	8	3	477
		%	14.5%	56.8%	26.4%	1.7%	.6%	100.0%
Pearson Chi-Square value ***			48.486(a)					

*** Significant at $p<0.001$

- Customer Care

  This aspect was also rated by a majority of the respondents as Good, followed by Average and Excellent. No statistically significant difference was noticed with Pearson's chi-square.

Table 4.1d Rating given to overall satisfaction on various aspects of cellular services, provider wise

Variables			Rating to Customer care					Total
			Excellent	Good	Average	Below Average	Poor	
Cellular service provider	Fascel	N	30	141	77	6	2	256
		%	11.7%	55.1%	30.1%	2.3%	.8%	100.0%
	Idea	N	10	44	22	1	2	79
		%	12.7%	55.7%	27.8%	1.3%	2.5%	100.0%
	Bharti Cellular	N	6	46	25		1	78
		%	7.7%	59.0%	32.1%		1.3%	100.0%
	BSNL	N	9	34	16	3		62
		%	14.5%	54.8%	25.8%	4.8%		100.0%
	NR	N		1	1			2
		%		50.0%	50.0%			100.0%
Total		N	55	266	141	10	5	477
		%	11.5%	55.8%	29.6%	2.1%	1.0%	100.0%
Pearson Chi-Square			9.612(a)					

- Value added services

  Fifty percent of the respondents rated this service as Good in case of Fascel (50.4%), Idea(51.9%) and Bharti Cellular (51.3%) while only 41% respondents using BSNL rated it as Good. Also, 8% respondents with BSNL rated this service as Below Average and Poor. Pearson's chi-square was not significant.

Table 4.1e Rating given to overall satisfaction on various aspects of cellular services, provider wise

Variables			Rating to Value added services					Total
			Excellent	Good	Average	Below Average	Poor	
Cellular service provider	Fascel	N	23	129	92	3	9	256
		%	9.0%	50.4%	35.9%	1.2%	3.5%	100.0%
	Idea	N	7	41	24	6	1	79
		%	8.9%	51.9%	30.4%	7.6%	1.3%	100.0%
	Bharti Cellular	N	7	40	29	1	1	78
		%	9.0%	51.3%	37.2%	1.3%	1.3%	100.0%
	BSNL	N	8	26	18	5	5	62
		%	12.9%	41.9%	29.0%	8.1%	8.1%	100.0%
	NR	N		1	1			2
		%		50.0%	50.0%			100.0%
Total		N	45	237	164	15	16	477
		%	9.4%	49.7%	34.4%	3.1%	3.4%	100.0%
Pearson Chi-Square			23.409(a)					

The respondents identified the most popular service provided by their operator. The responses are detailed in Tables 4.2a to 4.2l.

- Short Messaging Service

  A majority of the respondents reported always liking the SMS service provided by their operator. More than one third of the respondents liked this service sometimes. However the difference was not statistically significant.

Table 4.2b Services most liked, provider wise

Variables			Multimedia services				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	181	31	31	13	256
		%	70.7%	12.1%	12.1%	5.1%	100.0%
	Idea	N	59	7	9	4	79
		%	74.7%	8.9%	11.4%	5.1%	100.0%
	Bharti Cellular	N	57	7	13	1	78
		%	73.1%	9.0%	16.7%	1.3%	100.0%
	BSNL	N	46	4	7	5	62
		%	74.2%	6.5%	11.3%	8.1%	100.0%
	NR	N	1		1		2
		%	50.0%		50.0%		100.0%
Total		N	344	49	61	23	477
		%	72.1%	10.3%	12.8%	4.8%	100.0%
Pearson Chi-Square			9.459(a)				

- Video Clip

  This service was also Not Available to a maximum of the respondents as it is seen from the table below. In rest of the case, only a small percent of the respondents liked this service sometimes or always. Statistically the difference was not significant.

Table 4.2d Services most liked, provider wise

Variables			Coverage				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	5	116	120	15	256
		%	2.0%	45.3%	46.9%	5.9%	100.0%
	Idea	N		37	36	6	79
		%		46.8%	45.6%	7.6%	100.0%
	Bharti Cellular	N	2	33	40	3	78
		%	2.6%	42.3%	51.3%	3.8%	100.0%
	BSNL	N	1	29	29	3	62
		%	1.6%	46.8%	46.8%	4.8%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	8	215	227	27	477
		%	1.7%	45.1%	47.6%	5.7%	100.0%
Pearson Chi-Square			5.636(a)				

- Voice Clarity

  Less than 50% of the respondents were always happy with this service. The rest were happy sometimes. A negligible percent also reported never liking this service. Pearson's chi-square was not significant.

Table 4.2e Services most liked, provider wise

Variables			Voice clarity				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	4	117	116	19	256
		%	1.6%	45.7%	45.3%	7.4%	100.0%
	Idea	N		38	34	7	79
		%		48.1%	43.0%	8.9%	100.0%
	Bharti Cellular	N	1	35	36	6	78
		%	1.3%	44.9%	46.2%	7.7%	100.0%
	BSNL	N	1	25	29	7	62
		%	1.6%	40.3%	46.8%	11.3%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	6	215	217	39	477
		%	1.3%	45.1%	45.5%	8.2%	100.0%
Pearson Chi-Square			5.253(a)				

- Customer care services

  A majority of the respondents were only happy sometimes with the customer care service of their provider as it is evident from the table below. The difference provider wise was not statistically significant.

Table 4.2f Services most liked, provider wise

Variables			Customer care services				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	6	99	140	11	256
		%	2.3%	38.7%	54.7%	4.3%	100.0%
	Idea	N	5	35	34	5	79
		%	6.3%	44.3%	43.0%	6.3%	100.0%
	Bharti Cellular	N		34	40	4	78
		%		43.6%	51.3%	5.1%	100.0%
	BSNL	N	2	18	35	7	62
		%	3.2%	29.0%	56.5%	11.3%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	13	186	251	27	477
		%	2.7%	39.0%	52.6%	5.7%	100.0%
Pearson Chi-Square			16.663(a)				

- Surfing the web

  In the present day and age, the utility of cell phones has gone much beyond making and receiving calls. However, in the present study, this service was Not Available with most of the respondents. Pearson's chi-square was insignificant.

Table 4.2g Services most liked, provider wise

Variables			Surf the web				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	198	20	23	15	256
		%	77.3%	7.8%	9.0%	5.9%	100.0%
	Idea	N	63	5	7	4	79
		%	79.7%	6.3%	8.9%	5.1%	100.0%
	Bharti Cellular	N	59	4	12	3	78
		%	75.6%	5.1%	15.4%	3.8%	100.0%
	BSNL	N	50	2	5	5	62
		%	80.6%	3.2%	8.1%	8.1%	100.0%
	NR	N	1		1		2
		%	50.0%		50.0%		100.0%
Total		N	371	31	48	27	477
		%	77.8%	6.5%	10.1%	5.7%	100.0%
Pearson Chi-Square			9.704(a)				

- Tracking business needs

  This aspect was not applicable to a majority of the respondents. Out of the rest, most of them liked this service sometimes. Statistically, there was significance.

Table 4.2h Services most liked, provider wise

Variable			Track of business needs				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	123	42	76	15	256
		%	48.0%	16.4%	29.7%	5.9%	100.0%
	Idea	N	41	15	20	3	79
		%	51.9%	19.0%	25.3%	3.8%	100.0%
	Bharti Cellular	N	34	12	24	8	78
		%	43.6%	15.4%	30.8%	10.3%	100.0%
	BSNL	N	39	6	12	5	62
		%	62.9%	9.7%	19.4%	8.1%	100.0%
	NR	N	1		1		2
		%	50.0%		50.0%		100.0%
Total		N	238	75	133	31	477
		%	49.9%	15.7%	27.9%	6.5%	100.0%
Pearson Chi-Square			11.129(a)				

- Paid services

An equal number of respondents always and sometimes liked the paid services offered by their cellular operators. Statistical significance was not observed.

Table 4.2i Services most liked, provider wise

Variables			Paid services				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	170	33	38	15	256
		%	66.4%	12.9%	14.8%	5.9%	100.0%
	Idea	N	56	8	11	4	79
		%	70.9%	10.1%	13.9%	5.1%	100.0%
	Bharti Cellular	N	49	9	15	5	78
		%	62.8%	11.5%	19.2%	6.4%	100.0%
	BSNL	N	43	7	9	3	62
		%	69.4%	11.3%	14.5%	4.8%	100.0%
	NR	N	1		1		2
		%	50.0%		50.0%		100.0%
Total		N	319	57	74	27	477
		%	66.9%	11.9%	15.5%	5.7%	100.0%
Pearson Chi-Square			4.017(a)				

- Billing accurately

  Again an equal number of respondents with different providers liked this service always, and sometimes. A small number never liked it. However, the difference was statistically insignificant.

Table 4.2j Services most liked, provider wise

Variables			Billing accurately				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	73	74	100	9	256
		%	28.5%	28.9%	39.1%	3.5%	100.0%
	Idea	N	22	28	24	5	79
		%	27.8%	35.4%	30.4%	6.3%	100.0%
	Bharti Cellular	N	27	23	23	5	78
		%	34.6%	29.5%	29.5%	6.4%	100.0%
	BSNL	N	19	20	21	2	62
		%	30.6%	32.3%	33.9%	3.2%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	141	145	170	21	477
		%	29.6%	30.4%	35.6%	4.4%	100.0%
Pearson Chi-Square			9.795(a)				

- Prompt solution to problem

  Maximum users of Fascel (50%) felt that this service was useful sometimes as against about one third who found it useful always. A small percentage (4.3%) never found this service useful. A similar trend was observed in case of all the three remaining users. Pearson's chi-square was not significant.

Table 4.2k Services most liked, provider wise

Variables			Prompt solution to problems				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	30	87	128	11	256
		%	11.7%	34.0%	50.0%	4.3%	100.0%
	Idea	N	6	33	34	6	79
		%	7.6%	41.8%	43.0%	7.6%	100.0%
	Bharti Cellular	N	10	27	35	6	78
		%	12.8%	34.6%	44.9%	7.7%	100.0%
	BSNL	N	7	15	37	3	62
		%	11.3%	24.2%	59.7%	4.8%	100.0%
	NR	N			2		2
		%			100.0%		100.0%
Total		N	53	162	236	26	477
		%	11.1%	34.0%	49.5%	5.5%	100.0%
Pearson Chi-Square			10.752(a)				

- Roaming

  For a majority of the respondents with all four users, this was not applicable. In case of the remaining respondents about an equal number (one fifth) found it useful always and sometimes. The difference in responses between providers was not significant statistically.

Table 4.2l Services most liked, provider wise

Variables			Roaming				Total
			NA	Always	Sometimes	Never	
Cellular service provider	Fascel	N	163	39	48	6	256
		%	63.7%	15.2%	18.8%	2.3%	100.0%
	Idea	N	50	16	13		79
		%	63.3%	20.3%	16.5%		100.0%
	Bharti Cellular	N	47	14	17		78
		%	60.3%	17.9%	21.8%		100.0%
	BSNL	N	39	11	11	1	62
		%	62.9%	17.7%	17.7%	1.6%	100.0%
	NR	N	1		1		2
		%	50.0%		50.0%		100.0%
Total		N	300	80	90	7	477
		%	62.9%	16.8%	18.9%	1.5%	100.0%
Pearson Chi-Square			6.882(a)				

The present study attempted to gauge respondents' perception of cellular technology related to mobile services. The following responses were obtained, (Table 4.3) :

- Important to you/need of times

  A majority of the respondents (60.0%) agreed that it was important to them and was the need of the times whereas about one third of them strongly agreed to this. A negligible percentage disagreed.

- Add to your convenience

  About two thirds of the respondents agreed with the fact that the cellular technology added to their convenience while 26.4% strongly agreed. Very few somewhat agreed (6.3%).

- Provides safety and security

  A similar trend was observed in responses obtained for this variable as above. As 66% respondents agreed with this, about a fifth strongly agreed whereas 11.7% somewhat agreed.

- Enhance status in society/luxury

  There was not very strong agreement on this among about 14% of the respondents; about a similar percentage of them somewhat agreed, 7.5 % disagreed, 63.7% agreed with this.

- Good value for money

  A majority (66.7%) agreed that the technology provided good value for money. Strong agreement was expressed by 14% of the respondents and a similar percentage somewhat agreed.

- Help in keeping pace with modern advancement

  Agreement was given by two third of the respondents, while one fifth strongly agreed.

- Complicated and confusing

  A majority of the respondents (58.3%) disagreed with this as against one fifth who agreed and 11.3% respondents who somewhat agreed.

Table 4.3 : Perception of cellular technology related to mobile services

Variables		N = 477
Important to you/need of time (%)		
	Strongly agree	33.3
	Agree	60.0
	Somewhat agree	6.1
	Disagree	0.2
	Strongly disagree	0.4
Add to your convenience (%)		
	Strongly agree	26.4
	Agree	66.7
	Somewhat agree	6.3
	Disagree	0.4
	Strongly disagree	0.2
Provides safety and security (%)		
	Strongly agree	19.9
	Agree	66.0
	Somewhat agree	11.7
	Disagree	1.7
	Strongly disagree	0.6
Enhance status in society/luxury (%)		
	Strongly agree	13.8
	Agree	63.7
	Somewhat agree	13.8
	Disagree	7.5
	Strongly disagree	1.0

Variables		N = 477
Good value for money (%)		
	Strongly agree	14.5
	Agree	66.7
	Somewhat agree	14.0
	Disagree	3.6
	Strongly disagree	1.0
Help in keeping pace with modern advancement (%)		
	Strongly agree	19.5
	Agree	66.7
	Somewhat agree	10.5
	Disagree	2.1
	Strongly disagree	1.3
Complicated and confusing (%)		
	Strongly agree	1.9
	Agree	20.8
	Somewhat agree	11.3
	Disagree	58.3
	Strongly disagree	7.8

The respondents were asked to rank the services by the maximum usage. Maximum respondents (45.3%) ranked receiving calls as 1. 26% ranked it 2nd and a fifth ranked it 3rd.

As for keeping in touch with the family, Rank 1 was given by 32% of the respondents, followed by Rank 2 given by 38% respondents, Rank 3 by 17% and Rank 4 given by 14% respondents.

Not many respondents used the cell phone for arranging business. Maximum percent (47.9%) ranked it 4th, about one fifth ranked it 3rd, 15.7% ranked it 2nd and 14.6% ranked it 1st.

Socializing with friends was given rank 3 by maximum respondents (41.3%). Similar percent of respondents (24%) ranked it 2nd and 4th (Table 4.4).

Table 4.4: Ranking given to services used by cellular phone users

Variables		N = 477
Ranking given to receiving calls (%)		
	Rank 1	45.3
	Rank 2	26.0
	Rank 3	19.7
	Rank 4	9.0
Ranking given to keeping contact with family (%)		
	Rank 1	31.7
	Rank 2	37.9
	Rank 3	16.6
	Rank 4	13.8
Ranking given to arranging business (%)		
	Rank 1	14.6
	Rank 2	15.7
	Rank 3	21.8
	Rank 4	47.9
Ranking given to socializing with friends (%)		
	Rank 1	11.2
	Rank 2	23.7
	Rank 3	41.3
	Rank 4	23.9

Multiple operators in the market indicate more competition, by which the consumer benefits most of the time. On being queried about this, majority of the respondents (57%) replied in the affirmative as against less than a fifth (17.2%) who said no and there were 25% of the respondents who couldn't say anything about this (Table 4.5).

Table 4.5 Consumer getting better value for money due to presence of multiple operators

Variables	N	%
Yes	272	57.0
No	82	17.2
Can't say	123	25.8
Total	**477**	**100.0**

The possibility of respondents switching over from their current cellular operator to another one was explored. More than 50% respondents using Fascel said that perhaps they might switch to another provider. The same number of respondents (19%) were confident that they would not switch or were not sure. There were 6% respondents who revealed that there were fair enough chances that they would switch providers.

In case of the users of Idea, 38% respondents said perhaps they might switch, as against one fifth who would not 26% respondents did not know what they may do in future while 15.2% respondents expressed fair chances of a future switch.

More chances of a switch were observed with users of Bharti Cellular. 61% said maybe as against 14 % who were confident that they would not change. There were 7.7% respondents who revealed fair chances of a switch while 16.7% did not know.

Slightly more than one fifth of the respondents (22.6%) using BSNL were confident of not switching as against 47% who may switch and 11.3% respondents who said there was fair chance of a switch. The differences were not statistically significant (Table 4.6a).

Table 4.6a Chances of switching from current cellular operator to another one

Variables			Chances of switching from current cellular operator to another one				Total
			Fair enough	Maybe	Do not know	Not at all	
Cellular service provider	Fascel	N	17	138	50	51	256
		%	6.6%	53.9%	19.5%	19.9%	100.0%
	Idea	N	12	30	21	16	79
		%	15.2%	38.0%	26.6%	20.3%	100.0%
	Bharti Cellular	N	6	48	13	11	78
		%	7.7%	61.5%	16.7%	14.1%	100.0%
	BSNL	N	7	29	12	14	62
		%	11.3%	46.8%	19.4%	22.6%	100.0%
	NR	N		1	1		2
		%		50.0%	50.0%		100.0%
Total		N	42	246	97	92	477
		%	8.8%	51.6%	20.3%	19.3%	100.0%
Pearson Chi-Square			15.545(a)				

Out of the respondents who reported fair chances of a switch, the same number of them (66.7%) wanted to switch due to poor schemes and coverage problems, followed by poor service quality (38.1%) and billing problems (23.8%) and pricing (23.8%). In case of respondents who perhaps wanted to switch, a similar trend in reasons was observed. A majority wanted a switch due to coverage problems (47.2%), followed by about a third of them wanting a switch due to poor schemes and poor service quality, pricing (28.9%) and billing problems (21.5%). These are detailed in Table 4.6b.

Table 4.6b Reasons for switching from current cellular operator to another one

Variables	Poor Schemes	Coverage problem	Poor service quality	Billing problem	Pricing	Others	Total
Fair enough	28 (66.7)	28 (66.7)	16 (38.1)	10 (23.8)	10 (23.8)	2 (4.8)	42 (14.6)
Maybe	81 (32.9)	116 (47.2)	77 (31.3)	53 (21.5)	71 (28.9)	4 (1.6)	246 (85.4)
Total	109 (37.8)	144 (50)	93 (32.3)	63 (21.9)	81 (28.1)	6 (2.1)	288 (100)

*Figures in parenthesis denote percentages, calculated on total respondents

5.0 GOVERNMENT POLICY, ETHICS, HEALTH

In India, the private sector has made a slow but steady advance in the strictly government controlled sectors such as banks, investments, insurance, aviation, telecommunication, etc. In the present study, the respondents were asked whether they found the Government owned landline service to be more reliable than cellular service, 50% of them answered in affirmative as against about 20% who did not agree and the other 29% respondents were not sure.

When the respondents were asked whether the private sector was equipped to provide better services without Government intervention, 46% respondents were positive, 25% were negative and 29% were unsure. These responses indicate that in case of services, people have more expectations from the private sector where they do not wish Government's intervention but on the other hand they have more faith in the Government controlled services.

As for privacy getting compromised on using a cellular phone, 45% respondents replied in affirmative, while 28.5% said no and 26.6 percent couldn't say for sure (Table 5.1).

Table 5.1 Government Policy and Ethics

Variables		N = 477
Better reliability of a Government controlled landline service (%)		
	Yes	50.1
	No	21.0
	Can't say	28.9
Ability of private sector to provide better services without Government intervention (%)		
	Yes	45.9
	No	25.2
	Can't say	28.9
Privacy getting compromised on using a cellular phone (%)		
	Yes	44.9
	No	28.5
	Can't say	26.6

Although the impact on the health of cellular phone users is not completely established, there is growing evidence of the potential danger of cellular phones. On investigating the perception of respondents of the present study about this aspect, it was revealed that 53% respondents agreed with this as against 16.6% who did not agree while 29.8% were not sure. Education had little bearing on this, as there was not much of a difference between responses given by the respondents who were not graduates and those who were graduates and above as can be seen from Table 5.2.

Table 5.2 Respondents' perception about cellular phone radiation being harmful to health (education qualification wise)

Variables			Respondents' perception			Total
			Yes	No	Can't Say	
Education qualification	Below 12	N	53	22	30	105
		%	11.1%	4.6%	6.2%	100.0%
	Undergraduate	N	55	19	51	125
		%	11.5%	3.9%	10.7%	100.0%
	Graduate / double graduate	N	103	31	47	181
		%	21.5%	6.4%	9.8%	100.0%
	Postgraduate and above	N	36	5	9	50
		%	7.5%	1.04%	1.9%	100.0%
	Others	N	9	2	5	16
		%	1.9%	0.04%	1.04%	100.0%
Total		N	256	79	142	477
		%	53.7%	16.6%	29.8%	100.0%

Those respondents who answered in the affirmative were further asked on what they based their opinion. A majority (72.7%) had based their opinion on information, research, 45% reported having heard about this from friends while about one fifth had personal experience/knowledge of it (Table 5.3).

Table 5.3 If yes, on what do you base your opinion?

Variables	N	%
Information / research	186	72.7
Friends	115	44.9
Personal experience/knowledge	54	21.1
Other sources, pl. specify	11	4.3
Total	256	100.0

The respondent's awareness on specific side effects of using a cellular phone were investigated. A little less than one fifth (16.8%) did not think there were any side effects. There were a majority (68.3) who did not answer this question. Very few respondents thought that cellular phone use leads to health problems such as heart, brain and fertility disorders and mental stress. A few respondents (5.2%) also thought that it disturbed the personal life (Table 5.4).

Table 5.4 Side effects of using a cellular phone

Variables*	N	%
No side effects	78	16.8
Long term health problems	10	2.2
Harmful radiations	24	5.2
Disturbs personal life	24	5.2
Head/brain related problems	23	5.0
Heart problems	22	4.7
Mental stress/ lowers concentration	19	4.1
Reduces fertility in males	2	.4
NR	317	68.3
Total	519	119

*Multiple responses, percent calculated on total respondents

Suggestions to improve the existing services were also sought (Table 5.5). The suggestion that there be more service stations was made by 16.2% of the respondents followed by better schemes by 10% of the respondents, 4.5% respondents suggested free SMS. Other suggestions were less service tax, low prepaid charges, lower outgoing charges, etc.

Table 5.5 Suggestions to improve existing services

Variables*	No. of responses	% (N=477)
More service stations	76	16.2
Prepaid customer should be benefited	3	0.6
Reduction in service tax	9	1.9
Satisfied with current service	7	1.5
Should charge less for SMS / Free SMS	21	4.5
Better schemes / Schemes at reasonable rates	46	9.7
Less political control on the system	1	0.2
Prepaid charges should be as per the rules	12	2.6
Customer complain should always be considered	5	1.1
Should increase services	2	0.4
Outgoing charges should be reasonable	11	2.3
Full transparency, transparency in price	7	1.5
Activation of availed services should be fast	3	0.6
Irrelevant / DK / Can't say / No comments	13	2.7
NR	317	67.4
Total	533	113.4

*Multiple responses, percent calculated on total respondents.