CHAPTER 5
FINDINGS, CONCLUSIONS, SUGGESTIONS & FUTURE DIRECTION

5.1 INTRODUCTION
In this chapter all the findings of 4th chapter are summarized and the concise results in the form of conclusions have been presented. This chapter gives a brief idea about the whole research work and results along with findings obtained through the survey. The chapter will help the reader of this research thesis to get a clear-cut overview of the work that is done by the researcher during the study.

5.2 CORE FINDINGS
Total 568 valid responses are taken into consideration during analysis. Questionnaire consist of six parts: General, Network Coverage, Billing, Customer Care, Call Drop & Multimedia (Value Added Services). Positive & Negative questions are categorized & appropriate weightage is assigned to each question. Important Findings, Conclusions and Suggestions of these parts are summarized as given below:

5.2.1 Findings, Conclusion of General Part
5.2.2 Findings, Conclusion, Suggestions of Network Connectivity
5.2.3 Findings, Conclusion and Suggestions of Billing Services
5.2.4 Findings, Conclusion and Suggestions of Customer Care
5.2.5 Findings, Conclusion and Suggestions of Call Drop
5.2.6 Findings, Conclusion and Suggestions of Multimedia (VAS)
5.2.1 General Part of Questionnaire
(Reference : Table No. 4.2.1 to 4.2.1.20)

5.2.1.A Findings

In this part of questionnaire, researcher has collected some general information regarding the Gender, Age, and Occupation for all the respondents. Here the researcher has attempted to consider all aspects while preparing the questionnaire. Since the customer perception may differ from person to person with respect to the basic use of mobile while selecting a particular service provider. So researcher has gathered the data from customer perspective in order to bring forth the voice of customer. This also helps to evaluate the reliability & validity of the study which can be referred as follows:

5.2.1.1 Out of 568 respondents survey include 42.4% Female & 57.6% Male respondents. (Reference : Table No. 4.2.1)

5.2.1.2 Around 62% of total respondents are in the age group of 20 to 30 years & 27% users are in age group of 31 to 45 years. Only 7% users are more than of age 45 years. 4% mobile users are below 20 years of age. This shows that the majority community who uses cell phones belongs to age group of 20 & 45 years. (Reference : Table No. 4.2.2)

5.2.1.3 The cross tabulation of Age and gender shows that 5.39%, 62.66%, 27.80% and 4.15% Female respondents (out of total 241 female respondents) are in age group of less than 20, 20 to 30, 31 to 45 and greater than 45 years respectively. And 3.36%, 61.16%, 25.68%, 9.79% are Male respondents (out of total 327 male respondents) in age group of less than 20, 20 to 30, 31 to 45 and greater than 45 years respectively.
to 30, 31 to 45 and greater than 45 years respectively. (Reference : Table No. 4.2.3)

5.2.1.2 34.12% Female & 65.88% Male respondents are working as Corporate Employee. Business profession has 26.67% Female & 73.33% Male respondents. Under Student category 40.54% are Female & 59.46% are Male respondents. Female are more in Other category compared to Male. (Reference : Table No. 4.2.4)

5.2.1.3 Around 39% users are from Student’s community, 30% respondents belong to Corporate Employee. 5.5% respondents are Civil Servant, 5% are Businessmen. The remaining 20% belongs to Other category. Here Other category includes schoolteachers, housewives & drivers. (Reference : Table No. 4.2.6)

5.2.1.4 In this survey the data is gathered directly from 568 respondents belonging to Idea, BSNL, AirTel, Tata indicom, Reliance & HutchVoda Service providers. 32.92% users belong to AirTel, 30.46% users belong to Idea, 13.2% users belong to BSNL, 9.51% to Reliance, 8.10% of HutchVoda and 5.81% customers belong to Tata indicom. (Reference : Table No. 4.2.1.1)

5.2.1.5 68.3% users had retained their First service provider. But 31.7% users have changed it. (Reference : Table No. 4.2.1.2)

5.2.1.6 Out of 180 users (who have change their service provider) 175 users had mentioned the reason for change in current service
provider. Of which 45% users had changed their service providers due to Excessive Billing, 23% had changed due to Poor Network Coverage. 9% have mentioned the reason of change as Poor Customer Care. Other reasons for change in service provider include factors like Limited Services (13%) & Excessive Call Drops (5%). Some respondents have mentioned more than one reason and so the round up percentage of respondent all together could be higher than 100. (Reference: Table No. 4.2.1.3)

5.2.1.7 63% users consider mobile phone services as Useful in their day today life. 55% users consider this as an Essential tool. Only 2% consider it as a Status symbol. (Reference : Table No. 4.2.1.4)

5.2.1.8 60% users prefer Coverage as the main factor while selecting a particular service provider. 59% users want Quality Service, & 42% mobile users want Fair Pricing. Only 25% users prefer Attractive Schemes. (Reference : Table No. 4.2.1.5)

5.2.1.9 It is observed that irrespective of profession majority of respondents prefer better Network Coverage and better Quality Service. (Reference : Table No. 4.2.1.6)

5.2.1.10 Around 46% users believe that receiving a call is the basic use of mobile, while 40% consider Outgoing as the basic use of mobile. But Almost 48% users think that Incoming, outgoing, roaming, Internet & SMS all these services belongs to the basic use of mobile. (Reference : Table No. 4.2.1.9)
5.2.1.11 With reference to table 4.2.1.11 the service card and age cross tabulation reveals that in every age group Prepaid users are more compared to Postpaid users. 83.33% users are of below 20 years of age who use prepaid card while only 16.67% use postpaid card. In the age group of 20 to 30 years 78.63% use prepaid card and 21.37% use postpaid card. The middle age group of 31 to 45 years has 57.62% with prepaid card and 42.38% postpaid card. 61.90% prepaid users and 38.10 postpaid users belong to age group of greater than 45 years of age. (Reference : Table No. 4.2.1.11)

5.2.1.12 Irrespective of age group majority of users think Incoming and outgoing as the basic use of mobile. SMS and Roaming is next to Incoming & Outgoing as preferred by the user while considering the basic use of mobile. Only 2.3% users prefer Internet on mobile as its basic purpose and they belong to age group of 20 to 45 years. (Reference : TableNo. 4.2.1.12)

5.2.1.13 58.3% users use cell daily for around 1 to 2 hrs. Around 25% use it for 2 to 5 hrs, 11% users use for 5 to 10 hrs, and 6% users use cell for more than 10 hrs. This extensive usage of mobile services by respondents can be considered as supporting factor for the reliability of survey. (Reference : Table No. 4.2.1.14)

5.2.1.14 Coverage, Customer care & Billing services are rated as critical areas wherein customer faces problems. 63% customers are facing problem in Network Coverage including Roaming service. 52% customers have faced difficulties in Customer Care including Poor Service, & Poor information
from service provider. Around 14% users face difficulty in Billing Services. Very few (5%) respondents face difficulty in Activation. (Reference: Table No. 4.2.1.18)

5.2.1.15 All service providers offers variou Value Added Services like: SMS, Voice mail, Call forwarding, Caller tune, Clip, Game & Ring-tone download, Internet access, Ticket booking, Roaming. 86% users use SMS service. This shows that SMS has become an essential service like Incoming & outgoing for users. 46% users avail Roaming as well as Call Waiting service. 39% use Caller Tune facility, 32% use the Ring-tone download. Internet access users are 21%. Only 12% users involved in Game Downloading. Very few, below 10% users are involved in using other Value Added Services like: Dial-in service, ticket booking, and clip download. (Reference: Table No. 4.2.1.20)

5.2.1.B Conclusion
Here researcher can acknowledge that the results obtained through this study are perfectly valid & reliable, since the data is collected from a group of people who are using cell phone services extensively. Moreover, all respondents are educated, experienced & matured persons and so their perception can be considered as the reliable voice of customer.

Study also shows that the Network Coverage & Quality Service has been considered as the prime factors while selecting the service provider. User changes their service provider due to poor Network Coverage, Poor Customer Care & Poor Billing Services.
5.2.2 Network Connectivity
(Reference: Table 4.2.2.1 – 4.2.2.8)

5.2.2.A Findings

In this part of questionnaire, information has been gathered & analyzed related to the network connectivity & associated services as provided by various service providers. The Findings, Conclusions & Suggestions regarding the Network Connectivity are given below:

5.2.2.1 50% customers have rated the Network Service of their service provider as Good, 14% customers have rated it as Very Good. 32% respondents feel the service as an Average. This shows that around 64% respondents are happy with the network service provided by their service provider. (Reference : Table No. 4.2.2.1).

5.2.2.2 68% respondents (combining the satisfied and highly satisfied responses) are Satisfied with Network Connectivity. 24% users are Neutral as far as satisfaction with network connectivity is concerned. Around 8% respondents are Dissatisfied with the network connectivity. (Reference : Table No. 4.2.2.2).

5.2.2.3 41% users (235 users out of 568) say that the network service is good if they have the satisfied network connectivity. 4% (25 users) have rated network service as very good with highly satisfied network connectivity. 16% (93) users have rated network service as average if they are neither satisfied nor dissatisfied with connectivity. (Reference : Table No. 4.2.2.3)

5.2.2.4 49% customers face Network Busy problem very frequently while availing the network service. 37% users never get the
desired range for connectivity and so cannot establish the communication. But 18% respondents get the range and so get connected but are of no use as their communication link gets Disconnected Frequently. 29% users face voice problem. (Reference : Table No. 4.2.2.4)

5.2.2.5 54% respondents face the Connectivity problem while traveling. 46% respondents face it within region & 23% face it outside region. (Reference : Table No. 4.2.2.5)

5.2.2.6 Cross tabulation of network connectivity with Connectivity problem reveals that 34% users (73 Neutral + 19 Dissatisfied & 3 H. Dissatisfied out of 276 users) are not satisfied due to Network busy, 46% users (64+30+3) out of 209 are not satisfied due to not getting range and 51% users (52 users out of 101) are not satisfied due to disconnected frequently problem, 37% (out of 162) are not satisfied due to voice problem. (Reference : Table No. 4.2.2.6)

5.2.2.7 28% of the users get 100% coverage. Only 50% users get the coverage as 75%. Only 13% users feel that the coverage is 50%. 4% users get 25% of coverage, 5% users have not commented on the subject. (Reference : Table No. 4.2.2.7)

5.2.2.8 76% users (120 out of 157 users) are satisfied with 100% network coverage, but 24% users (37 out of 157) are not satisfied with the network coverage even if they are getting 100% coverage. This could be due to the network connectivity problems which users face frequently. With 75% network coverage the satisfaction ratio is 60:40, 60% (168 out of 282)
users are satisfied with 75% coverage but 40% (114 out of 282) users are not satisfied. 73% users are not satisfied with network coverage if it is 50% or below 50%. (Reference : Table No. 4.2.2.8)

5.2.2.9 Overall service satisfaction is affected by network connectivity. 305 (239 Good+66 V. Good) mobile users are satisfied with the overall service of service provider if they have good network connectivity. Around 101 mobile users are either rated the overall service of service provider as Average or poor if they are not satisfied with the network connectivity. (Reference : Table No. 4.3.1.1)

5.2.2.10 Network Service affects the overall service of service provider. 54 users have rated the overall service of service provider as very good if the network service is very good. Around 254 (38 Very Good + 216 Good) users have rated the overall service as Good and Very Good if service provider provides good network service. (Table 4.3.1.3)

5.2.2.B Conclusion
The survey found that for a majority of the mobile subscribers, network coverage is the top criteria when it comes to the selection of a service provider. Availing better network connectivity is the customer expectation. But service providers are not able to fulfill such expectation, as only 68% respondents are satisfied with the network connectivity (point 5.2.2.2), which is far below then the benchmark as set by the TRAI (Table 2.2, page 57). Customer also faces different network connectivity problems like network busy, not getting range, Voice problems & disconnected frequently.
Network Service satisfaction is affected by the quality of network connectivity, and the frequency of various network related problems faced by user while in use. Findings of this survey show that some customers get the network coverage to the extent of 75% or even 100%, but still are not satisfied due to several network connectivity problems. Most of the time while traveling users do not get range or face voice problem. Further it has been observed that network service has positive association with the overall service satisfaction. To improve the overall service satisfaction, service provider must improve their network service in terms of better connectivity by resolving the connectivity problems.

5.2.2.C Suggestions

- It is recommended by the researcher that service provider should provide better connectivity.

- This requires increasing the number of base stations specifically in areas where frequency of signals are interrupted due to buildings or other constructions.

- Service provider should increase the bandwidth of signal in order to strengthen the network connectivity even while traveling. This will help in reducing the network connectivity problems and so can increase the network service satisfaction.
5.2.3 Billing Services

(Reference: Table 4.2.3.1 – 4.2.3.7)

5.2.3.A Findings

With increasing service competition among service providers, subscribers are now more & more interested in getting the billing awareness. Customer is giving now more importance to billing. This part of survey focuses on different parameters, which are associated with billing performance. Billing importance is measured against parameters like: call charges satisfaction, happiness with billing services, awareness of billing information on time with billing updates. Findings and conclusion along with suggestions are briefly summarized below:

5.2.3.1 Only 50% users are satisfied with call charges as charged by the service provider. Remaining 50% users are either neutral or dissatisfied with the tariff. (Reference: Table No. 4.2.3.1)

5.2.3.2 Only 53% users are satisfied & highly satisfied with billing service of service provider. 30% users remain neutral, and 20% users are dissatisfied with billing services. (Reference: Table No. 4.2.3.2)

5.2.3.3 Users have dissatisfaction with respect to billing, as some of them are not getting the billing information on time from their respective service provider. 83% mobile users are getting information regarding bill on time and 17% mobile users have indicated of not receiving the billing information on time. (Reference: Table No. 4.2.3.4)
5.2.3.4 The Table 4.2.3.6 and Chart 4.2.3.1 shows that the call charge satisfaction among postpaid users is high compared to prepaid users. Around 47% (H. Satisfied + Satisfied) prepaid users are happy with the call charges, whereas 57% postpaid users are happy with the call charges as offered by their respective service provider. 25% prepaid as well as postpaid card users are neither satisfied nor dissatisfied with call charges and so remains neutral. But 26% prepaid users are dissatisfied with call charges, and only 18% postpaid users have claimed of their dissatisfaction against call charges.

5.2.3.5 The Call charges satisfaction directly affects the overall service satisfaction. As shown in Table 4.3.2.1 & Chart 4.3.2.1 higher call charges satisfaction leads to higher service satisfaction. Around 35% (27% + 8%) users who are satisfied with call charges have rated the overall service of service provider as good & very good. Only 15% users who are dissatisfied with the call charges but still rated their service provider as good. Around 18% users are neutral with reference to call charges satisfaction but have rated the service satisfaction as good.

5.2.3.6 42.08% users (239 out of 568 users) who are satisfied (Satisfied + H. Satisfied) with billing services have rated the overall service of service provider as good (Good + V. Good). 31.51% (179 users) (Neutral + Dissatisfied + H. Dissatisfied) users who are not happy with call charges but still rated their service provider as good. (Reference: Table No. 4.3.2.3)
5.2.3.B Conclusion

The result of this part of survey shows that around 50% users are satisfied with call charges & billing services but 50% remain either dissatisfied or prefer to keep silent. As per the benchmark set by TRAI the desired satisfaction level for billing services is 90%, which is much higher than the observed figure. Regarding billing information & billing updates on time, users have unanimously agreed that service provider provides all such information on time.

As mentioned the result in point 5.2.3.5 and 5.2.3.6 call charges satisfaction & billing service satisfaction leads to better rating to overall service satisfaction. But even some dissatisfied as well as neutral users with reference to call charges have rated the overall service as good. This shows that billing is one among other parameters for measuring the service satisfaction. Call charges satisfaction affects the billing service satisfaction, which in turn affect the overall service rating of service provider.

5.2.3.C Suggestions

- It is found through research that people are very much interested in getting the reduced tariff including roaming charges. So researcher recommends that service providers should reduce their billing charges.

- Further the TRAI has to rethink on making strategy in order to bring the uniformity for call charges as charged by different service providers.

- Since the observed billing service satisfaction is far below than the set benchmark, so TRAI should take the necessary actions in
terms of billing updates, prepaid & postpaid call charges to improve the billing service satisfaction.

5.2.4 Customer Care
(Reference: Table 4.2.4.1 – 4.2.4.8)

5.2.4.A Findings
Customer care is a key area concerning the customer satisfaction. As per TRAI yearly reports maximum number of complaints are related to customer care only (TRAI Press release on 26\textsuperscript{th} May 2006). In competitive market today, service providers must have the excellent customer care. The survey result shows that 31% users (Ref. Table No. 4.2.1.18) have faced problem with customer care services provided by their respective service provider. The survey finding reveals following observations:

5.2.4.1 Mobile users’ opinion regarding the after sales service of their service providers is not very satisfactory. Survey result shows that only 47% users are (3.7% highly satisfied + 43% satisfied) are satisfied. Remaining 53% users are either dissatisfied or prefer to remain neutral. This increase in dissatisfaction could be because of the poor response to users from the customer care department of service provider. (Reference : Table No. 4.2.4.2)

5.2.4.2 63% mobile users are getting unwanted messages on their mobile. Only 20% users have indicated that their service provider has helped them in restricting these unwanted messages. It shows that most of the users have not received any help from their service provider in restricting unwanted messages. This is also one of the problems frequently faced by
mobile users and so increases the customer care dissatisfaction level. (**Reference : Table No. 4.2.4.3 and 4.2.4.5**)

5.2.4.3 **Activation time** taken by service providers for 60% customer is less than a day. 26% customers say that it is within 2 to 3 days & 9% says it as next day. 40% users have claimed that their service provider took more than 24 hours for activating their card. As per TRAI policy, service provider should not take more than 24 hrs for activating the services. This shows the major gap between the expected and actual service. (**Reference : Table No. 4.2.4.6**)

5.2.4.4 72% mobile users are getting fault cleared by their service providers within 24 hours. But for 28% mobile users service provider has taken more than 24 hours for the clearing of faults. (**Reference : Table No. 4.2.4.8**)

5.2.4.5 **Table 4.2.4.7 and chart 4.2.4.2** gives the comparative analysis of prepaid & postpaid card activation time. 65.28% prepaid users say that the activation time for their card takes less than a day, 21% users claim that it is 2 to 3 days, and 10% say that they get their card activation on next day of their purchase. But 39% postpaid card users say that the card activation time takes 2 to 3 days for activation. Only 48% postpaid card users indicate that the card is activated in less than a day. 6% indicate that it is activated next day and 7% postpaid card users think that it takes 4 to 5 days for activation.
5.2.4.6 After Sales service satisfaction has positive association with overall service of service provider. **Table 4.3.3.1 and chart 4.3.3.1** shows that 40% users (227 users combining the Good, V. Good & Satisfied & H. Satisfied) have rated the overall service of service provider as good if they are satisfied with the customer care service (After sales service).

5.2.4.7 **Table 4.3.3.3 and chart 4.3.3.2** shows that the customer is not satisfied if the frequency of receiving unwanted messages is more. 31.49% (154 Satisfied & H. Satisfied) users are satisfied with after sales service if the frequency of receiving unwanted messages is very rare or never. Only 12.67% users (62 Satisfied & H. Satisfied users) have rated the After sale service as satisfactory even if they receives messages occasionally.

5.2.4.8 After sales service satisfaction is also affected by the activation time. **Table 4.3.3.6** and **Chart 4.3.3.4** shows that 30% users (157 Satisfied+13 H. Satisfied) are happy if they get the activation of their service card in less than a day.

5.2.4.9 37% users (192 Satisfied+15 H. Satisfied) are satisfied with after sales service if service provider clears their fault within 24 hrs. In all other options (within 36, 48 hrs or after 48 hrs) user is not happy with after sales service. **(Table 4.3.3.7 and Chart 4.3.3.5)**

**5.2.4.B Conclusion**

In the cutthroat competitive market environment it has become the prime need of every service provider to satisfy the customer, so that they can attract more number of subscribers. This requires excellent
customer care to be provided by operators. But survey reveals that the customer is not very happy or satisfied with the after sales services provided by their service provider.

Customer satisfaction is directly affected by the customer care services like: Activation time, fault clearance, resolving complaints regarding unwanted messages & new scheme awareness. Survey shows that most of users are not aware of any promotional scheme. They are frustrated due to unwanted messages. Fault clearance by subscriber is a major activity to be performed by customer care on time. As per TRAI, the fault clearance by subscriber within 24 hours should be 100%. The observed figure shows that only 70% users are getting such clearance within 24 hrs. And so this all raises the dissatisfaction level among customers. To increase the overall customer satisfaction the need is to get the excellent customer care services.

5.2.4.C Suggestions
Customer care is the area, which interacts with customer directly in most of the time. It is basically after sales service given to mobile service customers. To improve the customer care service, the researcher recommends that:

- Service provider must provide a mechanism in order to restrict the unwanted messages & every subscriber should know of such mechanism.

- Service provider must reduce the activation time for new account as well as the recharge timing.

- Complaints must be resolved within 24 hrs.
Service provider should reach more closer to customer and should be more responsive. This requires an effective & efficient Customer Care Representative who must be accessible to customers and should have the skill to resolve their complaints in timely manner.

The researcher recommends that every service provider must have proper mechanism to improve their customer care in order to raise the customer satisfaction.

5.2.5 Call Drop
5.2.5.A Findings
Call drop happens when an established call terminates midway through the communication. It could be due to weak signal or when the user is out of range. This part of study highlights on some of the issues related to call drop problem.

5.2.5.1 Around 39% users face the call drop problem. 61% users do not face call drop problem. (Reference : Table No. 4.2.5.1)

5.2.5.2 43% users never face any call drop in a day. 39% users face only 10% call drop problem in a day. Only 19% users face the call drop problem more frequently and it ranges from 10% to 50% & more. (Reference : Table No. 4.2.5.2)

5.2.5.3 Around 55% users think the call drop rate within region is low. Only 11% users face high call drop rate within region while 33% have neutral opinion regarding this. 22% users face high call drop rates outside region, 45% users experience the call drop
rate outside region as low, while 33% users have neutral opinion regarding this. (Reference: Table No. 4.2.5.3)

5.2.5.4 26% users face partial call drop, 16% face complete call drop, & 22% users face the call drop problem as both the partial as well as complete call drop. While 36% users face neither of them. (Reference: Table No. 4.2.5.4)

5.2.5.5 With reference to Section 4.3.4 Call drop has negative association with Overall service satisfaction from customer perception. Lower frequency of call drop rate increases the customer satisfaction with reference to overall service satisfaction. (Table No. 4.3.4.2 and Chart 4.3.4.1)

5.2.5.B Conclusion
It is observed by the researcher that 43% users face the call drop problem, but in general the frequency of call drop occurrence remains very low. Further the call drop within region is low compared to outside region where user faces higher call drop, which is obvious due to weak signal. But sometimes user faces higher call drop within region also. This could be due to the signal congestion that might happen due to higher cellular traffic. Call drop is inversely associated with the customer satisfaction. Less number of call drop increases the overall customer satisfaction.

5.2.5.C Suggestions

- Call drop problem exists due to weak signal. Improving the signal strength could solve this problem.
Thus, the researcher recommend that service providers must make some plan for improving the signal strength within region as well as outside region.

Increasing the number of base stations can control heavy cellular traffic and so can reduce the call drop frequency.

5.2.6 Multimedia (Value Added Services)

5.2.6.1 Findings

Value Added Services (VAS) are additional services other than the basic services. Customer satisfaction has positive association with the value added services. In this part of survey the customer satisfaction has been assessed against some parameters related to VAS like: the number of value added services provided by their service provider, the happiness level of using VAS, any problem while making use of multimedia services.

Now-a-days mobile phones are not only limited to voice communication but they are extensively used by today’s youth as media player also. The effective availability & awareness of VAS facilities affects the customer perception towards the service satisfaction. The researcher has analyzed the effect of such various Value Added Services known to customer against overall service satisfaction.

86% users use SMS, 46% users use roaming & 46% users make the use of call waiting feature provided by service provider. The number of users of using dial-in service, ticket booking & clip download are below 10%. (Reference : Table No. 4.2.1.21)
5.2.6.2 45% users face the Network coverage & Bandwidth problem while using the multimedia services. 76% users have not experienced any problem while availing the multimedia services. (Reference: Table No. 4.2.6.3)

5.2.6.3 Around 17% users use multimedia facility frequently. 23% users use it occasionally. 60% users either never use it facility or use it very rarely. (Reference: Table No. 4.2.6.1)

5.2.6.4 Cross tabulation of value Added Service Satisfaction & Network connection shows that there is positive association between Value Added Services & Network Connection. 60% users are satisfied with VAS if the network connectivity is good. (Reference: Table No. 4.3.5.3)

5.2.6.5 Value Added Service satisfaction has positive association with Overall service satisfaction. (Reference: Table No. 4.3.5.1 and Chart 4.3.5.1)

5.2.6.6 Large number of users avail the offered multimedia facilities. Some use them very rarely, some occasionally, & some user uses them very frequently. The frequency of using the multimedia facilities does not have any association with overall service satisfaction. (Reference: Table No. 4.3.5.5)

5.2.6.B Conclusion

Value Added Services have become one of the powerful ways for service providers to attract more & more customers. Earlier except incoming and outgoing, every other service was considered as a Value Added service. But now every one frequently uses some Value Added...
services like SMS, call waiting, ring-tone downloading, and gaming. Considering the importance of value added service the researcher has analyzed its effect on the overall service satisfaction. It is observed that value added service has positive association with overall service satisfaction. Since maximum numbers of users are availing these value added services, VAS can provide the service provider a very good source for revenue generation. How frequently a user uses various VAS doesn’t make any effect on the overall service satisfaction. But to utilize various value added services it is necessary that the network connectivity should be very good. Value Added service satisfaction has positive association with network connectivity rating. Network Coverage and Bandwidth problem are two common problems which user faces frequently while using the multimedia facilities.

5.2.6.C Suggestions

- Value Added Service is an important service from the growth point of view of service providers. Operators must provide the desired value added services to customer but with good network connectivity & better bandwidth.

5.2.7 Findings of Main Objective

The main objective of study was to get the association between the customer satisfaction and service quality parameters. The researcher has individually tested the association of five service quality parameters under study with the overall service satisfaction. In section 4.3.1 to 4.3.5 the hypothesis testing is conducted for Network Coverage, Billing Service, Customer care, Call Drop and Value Added Services. Observed findings with respect to specified objective are briefly summarized as given below:
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- There is a positive association of Network Coverage with Customer Satisfaction,
- There is a positive association between the Billing Services of mobile & Customer Satisfaction,
- There is a positive association between the Customer Care of mobile services & Customer Satisfaction,
- There is a negative association of call drop with Customer Satisfaction, and
- There is a positive association between the Value Added services provided by service provider of mobile services & Customer Satisfaction.

This proves that since out of five service parameters four parameters are positively associated with service satisfaction and so we can say that:

“There is a positive association between service quality parameters with Overall Customer satisfaction.”

5.3 CUSTOMER SATISFACTION INDEX

5.3.A Findings

Customer Satisfaction index is a way of measuring the customer satisfaction for service industry. The researcher has designed a service metrics using various service parameters under study. (Reference: Table No. 4.4.1.2)

- The overall service satisfaction rating as given by customer has come as 77.7%
- Value Added Service rating is 78%
- Rating given by customer for Network Service is 74.5%
Rating to Network Connectivity is 73%
Billing charge rating is 65.8%
Billing service is rated as 67.4%
Rating to After Sales service is 66.7%
Rating to Activation time is 79.3%
Rating to Call Drop Frequency is 83.5%
Satisfaction rating with Call drop within region 73.2%
Satisfaction rating with Call Drop outside region is 67.8%

Network service & Value Added Services are highly rated areas showing satisfactory performance in their respective areas compared to billing services & customer care.

Customers face higher call drop outside region and so they have given lower rating to Call drop outside region compared to within region.

Customer satisfaction Index is calculated with multiple regression analysis model. Here overall customer satisfaction is considered as dependent variable and network service satisfaction, customer-care satisfaction, billing service satisfaction, Call drop & VAS satisfaction are considered as independent variables.

0.947 value of R square indicates that about 94% of the variance in overall satisfaction index is explained by independent variables on dependent one. (Reference : Table No. 4.4.2.1)

Regression model shows that higher value of VAS, Network Service, Network Connectivity increases the dependent variable i.e. Customer Satisfaction value. (Reference : Table No. 4.4.2.2)
5.3.B Conclusion
Researcher has prepared the quality metrics using basic service quality parameters considered under study. The ratings as given by customer shows that, Service providers have to do a lot to satisfy the customer and to meet the benchmarks as set by TRAI. The metric indicates that customer is not very happy with Billing services, customer care services and so the customer has rated them as lowest. Other areas where improvement is required for increasing the satisfaction level are: Network service with better connectivity & reduced number of call drops, and Value Added Services. Billing services in terms of billing charges and customer care including activation time and other after sales services needs to be improved by the operator to raise the overall satisfaction level among customer.

5.3.C Suggestions
- To improve the service quality every service provider has to improve their billing services covering the billing charges including tariff for roaming & other billing services like timely billing updates.

- Customer care service needs to be improved by service provider in terms of service activation and new scheme awareness on
timely basis. Customer care can be improved by resolving customer complaints regarding the receipt of unwanted messages and regarding any fault/complaint in service by responding to them and resolving them immediately.

- Service satisfaction can be improved by introducing the uniform roaming charges.

- Service providers must incorporate the voice of customers in terms of service parameters to increase the service satisfaction level from customer perception.

- Service provider must have some mechanism to assess and reduce the number of call drops outside region.

### 5.4 CUSTOMER SATISFACTION INDEX AGAINST TRAI BENCHMARKS

**How satisfied is the customer with mobile services in & around Pune & Pimpri Chinchwad Area?**

(Reference: Table no. 4.4.3.1 & Chart 4.4.3.1)

- The overall satisfaction index for mobile services in Pune & Pimpri-chinchwad area is calculated as 77%. Which is far below than the benchmark value 95% as set by the Telecom Regulatory Authority of India.

- The network service satisfaction for mobile services is calculated as 73.77% and the desired level for satisfaction as per the standard benchmark is 95%.
Chapter 5: Findings, Conclusions, Suggestions & Future Direction

5.5 SERVICE QUALITY ANALYSIS - PROVIDERS

5.5.A Findings & suggestions

Data was gathered through customers belonging to 6 service providers: Idea, Airtel, Reliance, Tata Indicom, BSNL & HutchVoda. Following observations emerge through the study:

- Idea has scored the highest ratings in Good & very Good Service ratings as rated by customers in Pune & Pimpri-Chinchwad geographical area. 81% Idea customers (142 out of total 173 Idea users), 77% Airtel customers (144 Airtel users against total 187 Airtel users), 73% HutchVoda customers (34 out of 46 Voda users), 72% Reliance customers (40 out of 54), 58% Tata Indicom (19 out of 33) and 53% BSNL customers (40 out of 75) have rated their service provider’s service as Good and Very Good. (Reference : Table No. 4.4.1.1)

- With Reference to chart no. 4.4.3.2 Idea has topped in the overall satisfaction score with Airtel next to it. BSNL got the lowest...
satisfaction score. The overall satisfaction score of Idea is 81%, AirTel is 79%, Reliance & Hutch each 77%, Tata 73% and BSNL is 71%. (Reference : Chart 4.4.3.2)

- **Table 4.4.1.3** gives the service provider-wise quality metrics. Here if we compare between the lowest rating and the highest ratings of billing charges, billing services and after sales service ratings, it shows that all the service providers are having almost similar rating with a small difference ranging between 60 to 69%. Similarly the activation time for all service providers also lies between 74% (Idea) & 85% (Reliance).

- BSNL got the lowest ratings in various service areas. But billing services of BSNL has got the highest rating and it is 69.3%. BSNL has scored 72% in VAS, 66% in network service, 65% network Connectivity, 79.5% call drop frequency 79.5%, call drop within region 69% and outside region is 67.2%. Activation time of BSNL (76.5%) is better than Idea, which is rated as 74.3% only. But Idea has scored highest rating in VAS 80.8%, Network service 78.8%, and network connectivity 77.3%. (Reference : Table No. 4.4.1.3)

- Idea and AirTel customers are happy with Value Added Services, Network Services and Network connectivity compared to other service providers. But Hutch and Reliance satisfaction ratings are also very close to Idea & AirTel in these service areas.

Researcher recommends that every service provider has to improve their service(s) in customer care, Billing, Network Connectivity and Value Added Services to meet the customer expectation.
5.6 SUMMARY & CONCLUSION OF THE STUDY

This part of study summarizes the outcome for the whole process of research done on mobile service satisfaction from customer perception. Issues and points, which are summarized and concluded here, have brought from the findings of the research study.

Research work has used five basic service quality parameters to measure the mobile service quality in terms of customer satisfaction. The research journey was started with the formulation of topic after due investigation & discussion with service users and service providers. The information was gathered through secondary data to get the basic service parameters for study. Based on above, questionnaire was designed for mobile users. Questionnaire was divided in to 6 parts: General part, Network Service, Billing service questions, Customer care, Call Drop and Value Added Services. Voice of customer was gathered directly by interviewing the mobile service users and collecting the filled-up questionnaire. Pune & Pimpri-Chinchwad area was selected as the geographical location for the study.

A pilot survey was done to get the sample size. With the gathered data first factor analysis was done to extract the important variables. Questionnaire was having several variables, which were reduced to five main factors. The collected data were evaluated using SPSS and excel software. Hypothesis testing was done using Chi-Square testing.

Weights were assigned to positive & negative questions on 5 point scale rating. Service metrics was designed after calculating the average score as assigned by the customer for various parameters. Using Multiple Regression Analysis the overall satisfaction Index was calculated. The evaluated data were represented in the form of tables, charts and
figures. Summarized result of the data analysis of the survey are highlighted below:

5.6.1 Service quality is associated with customer satisfaction.

5.6.2 Customer satisfaction is affected by service equality parameters like: Network service satisfaction, Billing service satisfaction, After sales service satisfaction, poor rate of call drop and Value Added service satisfaction.

5.6.3 Customer perception plays very important role in service satisfaction and should be taken in to consideration by the service provider from time to time to raise the service level satisfaction among customer.

5.6.4 Customer satisfaction with reference to the mobile services needs to be measured in terms of customer expectations & customer perception, which changes from person to person.

After due analysis and survey the researcher has suggested an expected service model in order to increase the customer satisfaction level. This model shows a way to improve the service satisfaction level among customers.

This suggested model shows that every service provider must incorporate the user perception & user expectations in his decision making in order to deliver the quality service. Perceptions are related to expectations, which are dynamic, and change over time. Need is for the service provider to understand the user expectation & perception related to basic service quality parameters.
This will help in increasing the overall customer satisfaction level with reference to service quality.

5.6.5 The researcher has considered the service quality parameters belonging to five basic service areas during the study. Through analysis it is observed that there is a positive association between the customer satisfaction and service quality parameters like Network Service, Customer Care, Billing Service, Value Added Services.
5.6.6 The service quality metrics was designed indicating the major pain areas where service providers have to take the real efforts in order to increase the overall service satisfaction level from customer expectation and perception point of view. It is observed that the customer demands 100% network coverage & connectivity, better customer care, reduced & uniform call charges, no call drop and better value added services. This indicates that the overall customer satisfaction level can be increased significantly if service providers could improve their services in these areas as per customer demands.

5.6.7 The huge difference between the observed value and set benchmark value indicates that there exists a big gap between the desired service and delivered service.

5.6.8 In the overall satisfaction category none of the service provider could cross the set benchmark standard value.

5.6.9 No cellular operator could come closer to the set benchmark for customer care. After sales service of Tata indicom is good compared to other service providers. Improvement in Customer care service is the prime need of service providers. Customer care service can be improved by introducing an efficient, well-educated and well-behaved customer care representative. Customer care representative must be in a position to resolve the customer complaints in timely manner.

5.6.10 The worst affected service area is billing services where the expected satisfaction level is 90% but the actual observed billing
service satisfaction level is only 66%. Customers belonging to various service providers demand for the reduced tariff and roaming charges.

5.6.11 In **Network service area** like other service category there exist a big gap between the perceived service and expected service. Expected satisfaction level for network service category is 95% but the observed satisfaction value is only 73.77%. Network Service satisfaction requires better network connectivity. Service provider can provide the better connectivity by increasing the number of base stations where the subscriber experiences weak signal.

5.6.12 Service satisfaction is negatively associated with **Call Drop**. Increase in the number of base station and bandwidth of signal will help in getting the better network connectivity and so call drop rate will be low.

5.6.13 On **Value Added Services**, service providers have to work hard to satisfy the user in order to meet the set benchmark as 95%.

5.6.14 Service satisfaction and service quality is the need for today’s service industry in terms of their increase in revenue. By improving the service satisfaction on different service parameters the overall service satisfaction can be increased to meet the set benchmarks.
5.7 FUTURE TRENDS TO IMPROVE CUSTOMER SATISFACTION OF MOBILE SERVICES

The rapid change in technology and e-revolution has changed the user's perception towards the service quality. Service users are more demanding now in terms of service quality. In this competitive environment it has become a necessity for every service provider to provide the good service quality to retain their customer as well as to attract more number of users.

The service provider must understand voice of Customer. Government authorities should made it compulsory for every service provider to listen to the customer & should incorporate the Voice of Customer before bringing their service in to market.

Study establishes a new dimension for different types of service industries to understand the customer perception along with customer expectations. This will motivate every service Industry to incorporate the Voice of Customer in order to enhance the customer satisfaction.

5.8 LIMITATIONS OF THE STUDY

- Study is limited to Pune & Pimpri-Chinchwad geographical location. Therefore there might be some limitations in the data collection and so may lead to some variations in result with reference to different geographical locations.

- Since this study is for population, which could be of infinite in size and so the researcher has taken a sample population through the pilot survey and through the past surveys in similar direction.
There exists several service quality parameters but the researcher has taken five basic service quality parameters from customer perception point of view, in to consideration during the study.

It is important to note that mobile service satisfaction result may vary from time to time. Since service providers are bringing out new schemes and putting their efforts from time to time to satisfy their customers. This study has gathered the data during the time period 2007-2008 (March 2007 to February 2008). Therefore similar research on some other time period, in same geographical location may produce some different result.

5.9 FUTURE RESEARCH LEADS

The study has succeeded in designing a quality metrics, which will help the service organizations and government authorities in maintaining the service quality. Service satisfaction requires incorporating both the customer perception as well as the service provider’s perception. As per Servqual model to increase the service quality level the need is to reduce gaps between service provider and customer. Here the researcher has tried to bridge a gap between customer expected service and actually delivered service. This study has focused on customer perception. Incorporating the service provider’s perception in this direction could extend similar research.
5.10 REFERENCES


2. Relevant legislation, regulations and Telecom policy, & activities of the body www.trai.gov.in