SYNOPSIS OF THE THESIS

TITLE: CONSUMER BEHAVIOR WITH RESPECT TO
SERVICE EXPECTATIONS AND PERCEPTION OF QUALITY
FOR CELLULAR SERVICES

SUBMITTED BY: NEETA ACHARYA
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DOCTOR OF PHILOSOPHY

UNDER THE GUIDANCE OF:
DR. GULNAR SHARMA
JANKIDEVI BAJAJ INSTITUTE OF MANAGEMENT STUDIES
S.N.D.T, WOMEN’S UNIVERSITY
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Synopsis

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Name: Neeta Acharya

Name of Guide: Dr Gulnar Sharma

Designation of the Guide: Director, Jankidevi Bajaj Institute of Management Studies, S.N.D.T Women’s University, Juhu, Mumbai, India

Registration No. :

RRC-26/2005-2006/21 dated April 25, 2005 vide Resolution No.2/

Acad/RRC.Mgt.Studies/2012-13 dated February 5th 2013

Signature of the Candidate: _________________________________

Signature of the Guide: _________________________________
Declaration

I hereby declare that this submission of Synopsis of thesis work on “Consumer behavior with respect to Service Expectations and Perception of Quality for Cellular Services” is my own work & that to the best of my knowledge & belief, it contains no material previously published or written by another person nor material which has been accepted for award of any other Degree or Diploma of the University or other Institute of higher learning, except where due acknowledgement has been made in the text.

Sign:______________________________

Name: Neeta Acharya

Date:
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Chapter I - Introduction

1.1. Introduction to Indian Cellular Mobile Service (Mobile phone service) sector

The telecommunications industry in India was liberalized in the early 1990s, paving the way for a significant influx of investments in the industry. Over the last decade, this industry has experienced an exponential growth in subscriber base especially in cellular mobile service (mobile phone service) sector causing the cellular mobile service sector to dominate in overall telecommunications industry.

Liberalization has led to increasing competition and rapid technological advancements. This dynamic competitive environment has resulted in increased attention being paid to customer acquisition activities. On the other hand, customers are becoming more knowledgeable due to the heightened marketing activities prevalent in this industry (advertising, sales promotion, new schemes etc) and this has resulted in increasing demands of the customers for better service and more sophisticated value added services.

In such a dynamic environment, though cellular mobile service providers have felt the need to become increasingly competitive and market oriented, they have not seemed to have got it right and the sector is still plagued with problems of ineffective customer service, and customer churn. The consequent revenue leakages, has put pressure on the profitability of the cellular mobile service providers.

With ever increasing competition as more new entrants are expected to enter the fray, it is very important that cellular mobile service providers get their act right. Hence the quality of service provided will be a critical factor.
1.2. Facts about Indian Cellular Mobile Service Sector (Mobile phone connections)

1. The Indian Cellular Mobile Service Sector is the world's fastest growing market. It has grown 20 times in just ten years.

2. With 886.3 Million mobile phone connections (and only 28.89 million fixed line subscribers as of December 2013), mobile phone connections has dwarfed fixed line connections by 20:1

3. The overall tele-density in India is currently at 74.2%. At the current tele-density, mobile phone penetration stands at more than one phone per household.

4. It is also the second largest telecommunication network in the world in terms of number of wireless connections after China. Furthermore, projections indicate that the total number of subscribers in India will exceed the total subscriber count in China in near future.

5. The high growth rate makes the industry extremely attractive to enter and hence competitively dynamic with 15 players at last count and many more to come.

6. The cellular mobile service sector in India is predominantly prepaid (>96%)

7. The churn rate of cellular mobile users (subscribers moving from one cellular operator to other cellular operators) in India is around 6% per month, which is one of the highest in the world.

8. The reduction of tariffs had also brought down the Average Revenue Per User (ARPU) of the cellular mobile service operators. As per Telecom Regulatory Authority of India (TRAI) report of June 2010, the ARPU has been declining consistently from Rs.185 in June 09 to Rs.131 in March 2010 to 122 in June 2010. Though now cellular service providers seem to have improved the ARPU to some extent, the control of churn and holding on to the current customers, is important in a highly dynamic market.

9. While the Indian cellular mobile service sector (mobile phone service) is poised to grow at an increasing rate, the cellular mobile service providers need
to either maintain or increase customer satisfaction. According to Voice and Data mobile user’s satisfaction survey 2008, there was a significant drop in the overall satisfaction of all major service providers against the benchmark set by TRAI. Declining quality of service stemming from poor network availability and lack of customer care are the causes of customer dissatisfaction. Though companies are trying harder to meet with TRAI benchmarks, the sector being highly dynamic, continuous efforts in improving service quality are necessary.

1.3 Need for study in Indian Cellular Mobile Service sector

The Indian cellular mobile service (mobile phone service) providers face a number of significant challenges. First, retaining existing customers in a predominantly pre-paid and high churn market has become increasingly difficult and costly. Secondly, new customer acquisition is becoming more elusive than ever with potential customers having more options to choose from as cellular mobile service providers offer attractive deals to lure prospects. Thirdly, as cellular mobile service providers have had to incur additional expense in keeping existing customers and acquiring new ones, their average revenue per user (ARPU) is low, leading to deterioration of their financial performance. In light of these challenges, Indian cellular mobile service providers may want to make service quality, as a route to customer satisfaction, a strategic priority.

Research evidence suggests that service quality and customer satisfaction has a direct effect on the financial performance of a company (Smith and Wright, 2004; Ittner and Larcker, 1998). Moreover, customers satisfied with service quality, have a higher propensity to stay with their existing service provider than the less satisfied ones (Cronin et al., 2000) and are more likely to recommend the service provider to others, leading to improved bottom line for the company (Reichheld, 2003; 2006). Therefore, it is imperative that Indian cellular mobile service providers gain a better understanding of the relationship between the service
related factors, and repurchase intentions and recommendation of services to others.

Despite the importance of service quality, most of the cellular service providers in India focus primarily on expanding their subscriber base and tend to overlook investing in service quality. In the context of intensifying competition in this sector, service quality is imperative to achieve competitive advantage. The proven positive relationship of service quality with customer satisfaction (Danaher and Mattsson, 1994; Leisen and Vance, 2001), customer loyalty and retention (Ranaweera and Neely, 2003), profitability (Thompson, DeSouza and Gale, 1985; Bloemer, Ruyter and Wetzels, 1999) and competitive advantage (Hampton, 1993) provides a base to explore the subject of service quality in the cellular mobile services context and effect on behavioral intentions.
Chapter II - Review of Literature

2.1. Background to Literature review

(Preliminary data collection through secondary sources)

Having identified the broad area of research interest, namely, “Service Quality of cellular mobile services and the Behavioral Consequences (Consumer behavior)”, a need was felt to gather preliminary data through secondary data sources to understand the research area in greater detail. This was done through a comprehensive literature review of “Service Quality” and “Behavioral Intentions”. In the course of literature review another concept of “Switching Costs” was also considered. The review was also conducted to gather research papers across the world in service quality with specific reference to the cellular mobile service sector and also in the Indian context.

2.2. Methodology and Database used for Literature review:

The literature review was conducted using online library databases like EBSCO and EMERALD which have a comprehensive list of articles from refereed journals in the form of abstracts and full texts. Also magazines, Newspaper articles, research methodology books were referred.

The literature review was conducted initially in July 2005 and then from December 2009 to February 2010 (and updated at regular intervals till May 2013). The literature review initially led this researcher to a shortlist of 1873 papers. After going through the abstracts of all 1873 papers, 108 papers were chosen for detailed study. The choice of these 108 papers were based on relevance to the subject of research study, popularity based on number of times cited, with special selection of all research papers in cellular service context. Of these 108 papers, 38 papers were in the area of service quality in cellular mobile services sector, with 8 papers available in the Indian context. By May 2013, another 15 cellular service papers were studied.
This helped in a comprehensive understanding of all variables/concepts/constructs – dependent, independent, their interrelationships and measurements. The review also helped in developing the theoretical framework for research, understanding current research findings in the area of service quality of cellular mobile services, both abroad and in India, so as to identify gaps in research, which then enabled formulation of objectives and scope for this research thesis.

2.3 Literature review

Service Quality

Service quality has been described as a form of attitude, related but not equivalent to satisfaction, which results from the comparison of expectations with performance. Perceived quality that a consumer perceives in a service is a function of the magnitude and direction of the gap between expected service and perceived service. Perceived Service quality is a global judgement or attitude in relation to the superiority of service. (Parasuraman, Zeithaml and Berry, 1988)

Service Quality dimensions

Gronroos (1982, 1984) stated that dimensions of service quality consists of technical quality (core service) and functional quality (service delivery process). Parasuraman, Zeithaml and Berry (1985), created a service quality model and defined five service quality dimensions of reliability, responsiveness, assurance, empathy and tangibles.

Service Quality measurement

Parasuraman, Zeithaml and Berry (1988) created the most popular scale for service quality measurement – SERVQUAL, which was revised in 1988, 1991, 1993 & finally in 1994. SERVQUAL is a 22-item scale on five dimensions: reliability, responsiveness, assurance, empathy and tangibles, involves subtracting customers' expectation scores from their perception scores (gap scores) on the 22 items.
Cronin and Taylor (1992) felt that service quality should be measured through perception approach only and they created the instrument SERVPERF. Parasuraman et al (1994) defended their logic vis-à-vis Cronin and Taylor (1992) and emphasized measuring service quality as disconfirmation is valid and better as it allows service providers to identify gaps.

Over the years while both instruments are being used to measure service quality, SERVQUAL is the more popular instrument.

**Servqual adaptation necessary**

While SERVQUAL can be used in its present form to assess and compare service quality across a wide variety industries, appropriate adaptation of the instrument may be desirable when only a single service is investigated (Parasuraman, Zeithaml and Berry, 1988).

**SERVQUAL (1994)**

Parasuraman, Zeithaml and Berry (1994) conducted a study to compare 3 alternative service-quality measurement formats on psychometric and diagnostic parameters. Parasuraman, Zeithaml and Berry (1994) study proved that the measures in all three questionnaire formats possess convergent and predictive validity. Also that the direct measure is superior to the difference-score measure.

Parasuraman, Zeithaml and Berry (1994) study concluded that, despite the three-column format questionnaire's superior diagnostic value, administering it in its entirety may pose practical difficulties, particularly in telephone surveys or when the list of 22 generic items is supplemented with more context-specific items (Parasuraman et al., 1991).

**Switching Costs**

“Switching costs” can be defined as the costs involved in changing from one service provider to another (Porter, 1980). In addition to objectively measurable monetary costs, switching costs may also pertain to time and psychological effort.
involved in facing the uncertainty of dealing with a new service provider (Dick and Basu, 1994; Guiltinan, 1989).

Burham, Frels and Mahajan (2003) group service switching costs under three broad headings. Informational switching costs primarily involve the expenditure of time and money and consist of evaluation costs, learning and set-up costs. Contractual switching costs involve the loss of financially quantifiable resources and consist of benefit loss and financial monetary loss. Finally, relational switching costs involve psychological or emotional discomfort due to the loss of identity and breaking of bonds and consist of personal relationship loss costs and brand relationship costs.

**Brand Loyalty and Behavioral Intentions**

Day (1969) argued that “there is more to brand loyalty than just consistent buying of the same brand-Attitudes for instance”. Building on this work, other researchers provided a conceptualization of brand loyalty that incorporated both a behavioral and an attitudinal component (Jacoby, 1969, 1971; Dick and Basu, 1994).

The behavioral intentions battery developed by Zeithaml et al. (1996) with regards to services loyalty, operationalised customer loyalty to consist of repurchase intentions, positive word of mouth, less price sensitivity and less likelihood to complain.

**Cellular Mobile Services - Some International Studies:**

Van der wal, Pampalis and Bond (2002) conducted a study with 583 customers in South Africa and established the reliability of SERVQUAL.

Johnson and Sirikit (2002) conducted their study on 484 consumers, both landline and mobile users of Thailand telecommunication industry using the SERVQUAL (Parasuraman, Zeithaml and Berry, 1988), where SERVQUAL reliability was confirmed, but the authors called for SERVQUAL adaptation. Their study found that the telecommunication industry received strong ratings on tangible
dimension of service quality, and lower ratings on empathy dimension. Results did not find support for the proposed link between service quality ratings and behavior intentions.

A study was done by Negi (2009) among 227 mobile users in Addis Ababa, Ethiopia using modified SERVQUAL (Parasuraman, Zeithaml and Berry, 1988) instrument with additional dimensions related to network quality, complaint handling, and service convenience. The study revealed that three dimensions (reliability, empathy and network quality) significantly contributed to overall service quality, with reliability being the highest. Lai et al (2007) study with 137 customers in China using exploratory and confirmatory factor analysis, established validity and reliability of SERVQUAL with service convenience as an added factor to SERVQUAL.

Research in Indian Cellular Mobile Service Sector:

In an exploratory study of residential and business customers of cellular mobile services in India, Seth, Momaya and Gupta (2005) found most of the customers were dissatisfied with customer care services-the poor complaint redressal mechanism and billing performance of their service provider, hidden costs as also unfulfilled promises and poor after sales service. Younger customers (within the age group 18-35 yrs) who were dissatisfied were more ready to switch as compared to older customers (above 40 yrs). Despite customer dissatisfaction, some of the customers were reluctant to change their current service provider owing to the following reasons- confusion regarding the service offerings and complex tariff plans provided by other competitors, the cost and energy involved in informing so many people about change in their number and locked in contract.

Rahman (2006) used SERVQUAL (Parasuraman, Zeithaml and Berry, 1988), to study 1008 respondents in Delhi of four cellular service providers (Airtel, BSNL, Hutch and Idea). Results show that the Indian cellular telecommunication industry received strong ratings on the tangibles dimensions, particularly the employees’ neat and professional appearance, and low ratings on empathy dimension,
particularly service providers’ interest differences. Airtel holds an advantage over others in the area of perceived tangibles, reliability, responsiveness, and empathy. Hutch holds an advantage over others in the area of assurance. To the customers, the most important dimension was reliability. The second most important dimension was empathy, followed by responsiveness, assurance. Finally, the least important dimension was tangibles. The largest discrepancies were found along “reliability” dimension. This is alarming since it was identified as the most important dimension.

Krishnan and Kothari (2008) studied 500 consumers of five mobile operator providers in Rajasthan to analyze the antecedents of customer relationships in the telecommunication sector. Variety of service and customer services, tested significant for the desired relationship features. Other variables such as price, accuracy in billing, information, employee behavior and advertisements were not significant.

**Seth, Momaya and Gupta (2008)** presented their study of 230 cellular mobile service customers in Jan-March 2005 using exploratory qualitative study to better understand the key dimensions of service quality that are important to cellular mobile users. In addition to SERVQUAL (Parasuraman, Zeithaml and Berry, 1988), dimensions, **2 additional dimensions- convenience and network quality were added.** Perceived service quality is influenced by all the seven dimensions with responsiveness as the most important dimension, followed by reliability, network quality, assurance, convenience, empathy in that order and tangibles appearing to be the least important. Results showed that customers seemed to be dissatisfied with the quality of services delivered.

Eshghi, Roy and Ganguli (2008) studied 255 mobile phone users in four cities of India viz. Delhi, Kolkata, Mumbai and Hyderabad. Factor analysis resulted in factors - transmission quality, reputation, support features, reliability, competitiveness and relational quality. The study looked at relationship between service quality factors on one hand and customer satisfaction, recommendations as well as repeat purchase intentions on the other. Regression analysis revealed
that competitiveness and reliability had the greater impact on customer satisfaction than the other factors while support factors is not significant. Market reputation and support features are not significant whereas the other four factors are highly significant and impacts "recommendation of services to others" positively. "Support features" is not significant, whereas other five factors impact the repurchase intention positively and significantly. Transmission quality had the least impact on repeat purchase intentions whereas relational quality and reliability had the highest impact on repeat purchase intentions of customers.

Ganguli’s (2008) paper based on same study on 255 respondents from Delhi, Mumbai, Kolkata and Hyderabad. showed that except the dimensions of market reputation and customer convenience (at 5% level of significance), the rest of the five dimensions are significantly differentiating between the satisfied and unsatisfied customers - network quality, process quality, service competitiveness, reliability, support services. With an increase in age, the satisfaction level increases. Female customers are more satisfied than the male customers. Also, with more amount of time spent on a particular network, customers become more satisfied. The customer group of students, housewives and retired persons are less satisfied than service people or business people, prepaid customers are more satisfied than the postpaid ones. As the amount of cellular phone usage (in rupees) per month increases for customers, the chance of customers being dissatisfied is more.

The study by Chadha and Kapoor (2009) on 250 prepaid GSM customers of cellular mobile services in Ludhiana and Chandigarh, adopted SERVQUAL (Parasuraman, Zeithaml and Berry, 1988), instrument and additional dimensions namely, customer perceived network quality, pricing structure, convenience, and value added services. The study looked at 3 factors - perceived service quality, switching costs, customer satisfaction and its impact on customer loyalty and found positive associations in all the three relationships and also that customer satisfaction is the most significant predictor of customer loyalty (customer retention).
Nakhleh (2012) conducted a convenience sampling study of students of M S University, Vadodra, found that while there is a medium relationship between each of the three variables of service quality, price, customer trust with customer loyalty (customer retention). The relationship between each of the variables - brand image, value offered and customer satisfaction to customer loyalty (customer retention) is low.
Chapter III - Gap Analysis, Problem Definition and Scope

3.1 Gaps and Limitations of Service Quality Studies (in Cellular Mobile Services) conducted to date

1. There are few studies in service quality of cellular mobile services (38 until May 2010 research papers only).

2. While the links between service quality and Customer satisfaction are well established in the current literature domain, however the links between Service Quality and behavioral intentions are not conclusively established and show conflicting results.

3. There has been no study that has been comprehensive in terms of study of service quality and its impact on all dimensions of behavioral intentions (word of mouth, repurchase intentions, price increase tolerance, external and internal response to complaints) as well as study of switching costs. Some studies had studied only some dimensions of behavioral intentions (namely repurchase intentions and word of mouth).

4. The study of demographic variables (or segmental analysis) and its impact on various constructs have not been fully examined.

5. Additionally, there have been only 8 papers in the Indian context. There has been no Indian study which has been comprehensive enough in study of Service quality and its impact on all dimensions of behavioral intentions. Only limited study (Chadha and Kapoor, 2009) on 250 respondents is available for study of the impact of switching costs on behavioral intentions dimension of customer retention only. Study on behavioral intention dimension of price increase tolerance has not been taken up in the Indian context on cellular mobile services.
6. The effect of demographic differences (segmental analysis) and its impact on various variables has not been studied (except by Ganguli, 2008; but with very small sample size).

7. The literature review reveals the culture specificity of various studies. Hence it is felt that the studies that have been conducted in other countries need to be validated through studies in the Indian context.

8. Most research papers in service quality of cellular mobile services used the original SERVQUAL (Parasuraman, Zeithaml and Berry, 1988), other studies adapted the SERVQUAL and added dimensions. However, there is no sizeable study in India or abroad, that has all the ten dimensions that have been used in this thesis study to evaluate the service quality of cellular mobile services.

9. There is no study in cellular mobile services on impact of churn (number of service providers used/subscribed to date), source of information (references vs. others) and duration of relationship with current service provider, on behavioral intentions.

3.2. Need for this study / thesis

Owing to these gaps, a need was felt by this researcher to conduct a comprehensive study involving the service quality construct/variable and its impact on all dimensions of dependent variable behavioral intentions (word of mouth, repurchase intentions, price increase tolerance, external response to complaints and internal response to complaints) as also the effect of switching costs on dependent variable (behavioral intentions dimensions of customer retention and price increase tolerance). Besides this, the researcher felt interested to study impact of customer type and customer demographics. This study was especially important since the studies that were conducted in other countries needed to be validated through studies in the Indian context.
3.3. Significance and Implications of this study

This study would help both academicians and corporate alike.

To Academicians

1. The study would identify factors/dimensions of service quality contributing to overall service quality perceptions.
2. The study would identify which service quality dimensions/factors contribute to each of the five dimensions of behavioral intentions.
3. The study would identify the effect of switching cost on behavioral intentions of customer retention and price increase tolerance.
4. The study would also look at factors such as churn (switching), sources of information (referral switchers versus others), years (duration of relationship) with current service provider, and impact on behavioral intentions.
5. The study would contribute to an understanding on how demographics can affect churn (switching) behavior.

Corporate

1. This study can be used by cellular mobile service provider companies to understand where do the cellular mobile service provider companies stand today as far as their performance on service quality factors/dimensions, overall service quality, as also the standing of the sector on the behavioral intentions dimensions.
2. This study helps cellular mobile service provider companies to understand which service quality dimensions to focus on, so as to get higher overall service quality ratings.
3. Cellular service providers will know what service quality factors should be concentrated on for favorable behavioral intentions depending on which
dimension of behavioral intentions (word of mouth, repurchase intentions, price increase tolerance etc) is the goal desired.

4. Impact of different customer type on behavioral intentions, will help formulate differentiated strategies and/ or taking corrective action. Service providers will be able to know whether long term relationships really do significantly contribute to favorable behavioral consequences and whether customer retention is a good policy for companies to follow.

5. Demographic analysis of churn will help in companies choose to focus on right customer segments.
3.4. Theoretical framework (Model) for study of Service Quality of Cellular Mobile Service

(Perceived Service Quality vis-à-vis Desired Service expectations) (Ten dimensions)
- Reliability (Relb)
- Responsiveness (Resp)
- Empathy (Emp)
- Assurance (Ass)
- Tangibles (Tang)
- Network Quality (NQ)
- Convenience (Conv)
- Complaint Handling (CH)
- Value Added Services (VAS)
- Price Competitiveness (PC)

Overall Service Quality (OSQ)
- Behavioral Intentions (BI) – 5 dimensions
  - Word of Mouth (WOM)
  - Repurchase intentions (RI)
  - Price Increase Tolerance (PIT)
  - External response to complaints (ER)
  - Internal Response to Complaints (IR)

Customer Types
- Stayers vs Switchers
- Referral customers Vs Other customers
- Years with Service Providers
- Number of prior churn

Switching Cost (SC)

Demographics
- Prepaid Vs Post paid
- Gender
- Age
- Occupation
- Education
- Average Bill size
3.4. Theoretical framework (Model) for study of Service Quality of Cellular Mobile Service (contd)

- Note that for the Cellular mobile service sector, five dimensions have been added (Network Quality, Convenience, Complaint Handling, Value Added Services and Price Competitiveness) to SERVQUAL’s (Parasuraman, Zeithaml and Berry, 1994) five dimensions (Reliability, Responsiveness, Empathy, Assurance, Tangibles) making for ten dimensions in all (Reasons explained in research methodology chapter)

- OSQ – Overall Service Quality

- BI – Behavioral Intentions defined by five dimensions of Repurchase intention (RI), Word of mouth (WOM), Price Increase Tolerance (PIT), External Response to complaints (ER), Internal Response to complaints (IR).

- Switching Cost (SC) affects BI dimensions of repurchase intention and price increase tolerance (PIT)

- Direct score format has been chosen (as opposed to computed difference score format) (reasons explained in Research Methodology chapter)

3.5. Aim of the Research Study:

To find out the impact of service quality on behavioral intentions of customers and conduct churn analysis.

3.6. Objectives of the Research Study:

1. To study factors/dimensions of service quality significantly contributing to overall service quality perceptions

2. To study service quality dimensions/factors significantly contributing to each of the behavioral intentions dimensions (word of mouth, repurchase intentions, price increase tolerance, external response to complaints and internal response to complaints).

3. To study relationship between switching costs and behavioral intentions dimensions of repurchase intentions and price increase tolerance.

4. To study effect of prior churn (number of service providers used/subscribed to date), referrals, duration with current service provider and behavioral intentions dimensions.
5. To study effect of demographic differences on churn behavior.

3.7. Constructs /Variables under study

The following constructs (variables) were studied

a) Independent Variables or Predictor variables:

1) Ten individual service quality dimensions/ factors of Network Quality, Reliability, Responsiveness, Empathy, Assurance, Tangibles, Convenience, Complaint Handling, Value Added Services and Price Competitiveness.

2) Switching Costs

b) Dependent Variables or Criterion variables:

1) Overall Service Quality perceptions (OSQ)

Five behavioral dimensions of

2) Word of mouth (WOM),

3) Repurchase Intentions (RI)

4) Price Increase Tolerance (PIT)

5) External Response to Complaints (ER)

6) Internal Response to Complaints (IR).

3.8. Hypotheses formulated: The list of alternate hypotheses formulated is presented along with the data analysis results.
Chapter IV- Research Methodology

For the Primary Data Collection, the following methodology was followed

4.1. Type and Nature of Study:

Descriptive and Inferential Study

The literature review led to clear definition of the problem of study, identification of constructs (variables) as also hypothesis needed to be tested, hence a quantitative or descriptive study and inferential (hypothesis testing) study was chosen.

Type of investigation:

The type of investigation was correlational studies to establish associations between various variables under study (independent, dependent) and inferential study to test and substantiate hypotheses.

Since it was a field study and a correlational study, the study setting was non-contrived and it was conducted in the natural environment with no interference by the researcher. Also, it was a one shot or cross-sectional study.

4.2. Sampling unit, Geographic area and Time of study:

Respondents were individual customers of cellular mobile services (mobile phone service) in the age group of 15 years to > 65 years in the city of Mumbai and included both prepaid and postpaid users.

The rationale for using Mumbai as the data collection centre was that the city is representative of an urban metropolitan culture that is universal and cosmopolitan in nature and has relatively low cultural bias. Mumbai is the financial capital of India and one of the major metros. Since metros are the first ones to receive newly launched services (e.g 3G and MNP), are highly competitive and dynamic market, study done on cellular mobile service quality in Mumbai will reveal rich insights.
Moreover, no such research of cellular mobile service quality in Mumbai exists in current literature domain.

4.3. Operational Definitions and Tools used

For the purpose of study, popular definitions and tools were used.

1) “Overall Service Quality” (OSQ) – as defined by Parasuraman, Zeithaml, and Berry (1988) was used and measured through a single item measure.

For service quality dimensions/factors, SERVQUAL scale (Parasuraman, Zeithaml, and Berry, 1994) which measures perceived service quality on five dimensions of reliability, responsiveness, empathy, assurance and tangibles through 22 items scale has been used. The SERVQUAL scale was used as it was found to be most popular and also reliable and validated for cellular mobile service sector (as indicated in the literature review of cellular mobile service papers). Also literature review showed that SERVQUAL needs to be adapted for study of specific industry. Hence, for this study, apart from SERVQUAL five dimensions, five additional dimensions of network quality, convenience, complaint handling, value added services and price competitiveness were added which was compiled from other researches in cellular mobile service quality area. (Seth, Momaya and Gupta, 2008; Negi, 2009; Chadha and Kapoor, 2009). The number of total items in the adapted SERVQUAL scale became 42.

The direct score format (as opposed to computed difference score) was preferred as literature review showed that this format was also reliable and valid while reducing number of items (Parasuraman, Zeithaml and Berry, 1994- comparison of direct versus computed difference score format) and pilot study (details mentioned later in this chapter) made it necessary to use direct score format.

2) “Switching Cost” items (12 items) were based on instrument developed by Burham, Frels and Mahajan (2003) measuring the various dimensions of switching costs (attractiveness of alternatives, customer confusion, monetary, evaluation, set up, learning, uncertainty, benefit loss cost etc.). Inertia item was
based on definition by Huang and Yu (1999) and indifference item was based on definition by Lambert (1998). The overall switching cost score is an aggregate score of all switching cost items.

3) “Behavioral Intentions” (BI) - defined by Parasuraman, Zeithaml, and Berry (1996) through five dimensions of word of mouth, repurchase intentions, price increase tolerance, external response to complaints and internal response to complaints was measured through the 13 item behavioral intentions battery (Parasuraman, Zeithaml, and Berry, 1996) to which an additional item was added. The overall behavioral intentions score was an aggregate of all dimension scores, after converting the negative items.

Additional operational definitions defined by this researcher

4) “Churn” has been defined as number of service providers that the respondent has subscribed/used till date.

5) “Stayers” are defined as those respondents who have subscribed /used only one service provider to date. “Switchers” are those respondents who have subscribed / used more than one service provider to date.

6) “Referral Switchers” are those respondents who are subscribing/using the current service provider based on references.

7) “Years with Service provider” - is the number of years the respondent has been with current service provider.

4.4. Scales Used

1) The SERVQUAL scale as also the Switching Cost item scale and Behavioral Intentions battery are interval scaled. The SERVQUAL scale (Parasuraman, Zeithaml, Berry, 1994) is a 9 point rating scale ranging from one for lowest/poorest performance to 9 for highest/best performance. Switching costs uses a Likert 9 point scale for 1 strongly disagree and 9 for strongly agree. The behavioral Intentions battery uses 7 point rating of 1 extremely unlikely and 7
extremely likely. As research shows that 7 point or 9 point scale does not make a difference to reliability of ratings (Sekaran, 2006 Pg.199), the same scale points have been retained as in original scale.

2) The Importance of Service Factors was measured on a fixed or constant sum scale, which is an ordinal scale.

3) Other items like number of service providers used till date (indicating churn); sources of information for choosing current service provider (referrals V/s others); years with current service provider; reasons for switching as well as demographic variables were nominal scale.

4.5. Data Collection Methods:

A structured self administered questionnaire using popular scales (SERVQUAL, switching cost, behavioral intentions battery) was used for collecting data from respondents to study service quality, switching costs and behavioral intentions. To SERVQUAL five additional dimensions borrowed from other authors (Seth, Momaya and Gupta, 2008; Negi, 2009; Chadha and Kapoor, 2009) was used to create adapted SERVQUAL. The structured questionnaire had additional questions (nominal scale) for items such as Churn, sources of information (referrals versus others), years with current service provider reasons for switching as well as demographic variables.

4.6 Reliability of Scale:

Since the questionnaire had popular scales the validity of the scales (content validity, criterion related validity – both concurrent and predictive validity; construct validity – convergent and discriminant validity) was already established earlier by the original authors. For internal consistency of measures, Cronbach’s coefficient alpha (Sekaran, 2006, Pg. 307) was used for multipoint scaled items.
4.7 Pretesting of the Structured Questionnaire:

The structured questionnaire had originally 170 items (mostly owing to studying desired expectations and perceived performance separately – based on computed difference format). In the pretest conducted on 50 respondents, the following important insights emerged.

1) The 170 items took 40 minutes to answer. An analysis of the answers revealed that most respondents blindly ticked 9 on the desired expectations score. Also they conveyed their boredom / tiredness. Some mentioned the obvious nature of expectation score and still others refused to fill the questionnaire or this part of the questionnaire owing to the lengthy nature.

2) The pretesting resulted in changing from computed difference score format to direct score format as literature review showed that direct score format is also reliable and valid (Parasuraman, Zeithaml and Berry, 1994). The structured questionnaire was re-administered to another 50 respondents. This new questionnaire took 20 minutes to complete and respondents found it to be interesting to answer. Thus, the direct score format was retained.

Cronbach alpha for the 3 scales indicated high reliability (above 0.80 for most items). Pretested Cronbach for SQ dimensions = 0.8169 to 0.9016, switching cost = 0.7954, Individual BI = 0.6901 to 1.00.

4.8. Sampling Design and Sample Size:

The data was collected from the city of Mumbai among customers of cellular mobile services in the months of August to November 2010. To cover the demographic variables in the population (type of service – prepaid v/s post paid, age, gender, education, occupation, and average bill per month) larger sample size was desirable. Hence nearly 1000 respondents were chosen as sample size (Sekaran, 2006 Pg. 293 - for decision on sample size).
**Sampling procedure**  Purposive sampling was used as willingness of the respondent was a key factor in collecting data.

The study sought to have a 95% confidence (conventionally accepted level for business and social research) and hence significance level of $p \leq 0.05$.

**Handling Blank Responses:**

From the 1000 respondents, only 963 completed questionnaires were kept. The remaining were left out as > 25% of the items had been left unanswered.

**4.9. Data Analytic Techniques used**

The data was analyzed using various relevant statistical tools like “t” test, “F” test (ANOVA), Multiple regression analysis, chi-square and Pearson Correlation Matrix.
Chapter V - Data Analysis and Results

5.1. Descriptive statistics

Of the 959 respondents, 55% were prepaid and 45% were post paid. The sample had 62% Males and 38% Females. 38% of the respondents were in the age group of 20 to <30 years; and 23% were in the age group of 30 to <40 years. 38% were graduates and 23% were Post-graduates.

1) Perceived Performance ratings for Overall Service quality, Perceived value, Overall Customer Satisfaction: On a scale of 1 to 9, the research findings revealed the following means (averages)

- Overall Service Quality (OSQ) – 6.3042
- Network Quality (NQ) – 5.93
- Reliability – 6.17
- Responsiveness – 5.86
- Assurance – 6.12
- Empathy - 5.73
- Tangibles – 6.31
- Complaint Handling – 5.54
- Convenience – 6.34
- Value Added Services (VAS) – 6.01
- Price Competitiveness – 5.96

2) Importance of Service factors (based on rankings on constant sum scale) reveals that Network Quality is most important factor for respondents followed by Price Competitiveness, Reliability, Complaint Handling, Convenience, Value Added services, Responsiveness, Assurance, Tangibles and Empathy, in that order
3) **Switching Costs**: On a scale of 1 to 9, the switching costs means (averages) were as follows: Overall Switching Cost mean - 5.4727

Various switching costs item means ranged from 4.31 for learning costs to highest 7.17 for concern due to lack of number of portability and 6.28 for convenience and comfort of remaining with current service provider. Means of some other switching cost items were 5.80 for all services offering seen as same; 5.69 for fear that new operating services may not work and 5.69 for the time & efforts involved in gathering information.

4) **Behavioral Intentions**: on a scale of 1 to 7, the following means (averages) emerged

Overall Behavioral Intentions (BI) mean – 4.2090
Word Of Mouth (WOM) – 4.4030
Repurchase Intentions (CR) – 4.5595
Price Increase Tolerance (PIT) – 3.6745
External Response to Complaints (ER) - 4.3344
Internal Response to Complaints (IR) – 5.3963

5.2 Hypotheses formulated

H1A At least one of the Service Quality dimensions significantly explains variance in Overall service Quality (OSQ)

H2A At least one of the Service Quality dimensions significantly explains each behavioral dimension

H3A Higher the switching costs, higher is the repurchase intentions (RI) and price increase tolerance (PIT)

H4A There are significant mean differences between customer types on behavioral intentions

H5A There is a relationship between demographics and churn behavior
Hypothesis testing, Tests used and Results:

Of the 26 alternate hypotheses (including the sub-hypotheses) formulated, 21 alternate hypotheses were substantiated / accepted

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<tr>
<th>H1- Overall Service Quality</th>
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<th>H2-Behavioral Intentions Dimensions</th>
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<td>H2.1</td>
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<tr>
<th>H3-Switching Cost and its effect on Behavioral Intentions Dimensions</th>
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<td>H3.1</td>
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### H4-Customer type differences and effect on behavioral intentions

#### Stayers versus Switchers

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<tr>
<th>No</th>
<th>Hypothesis</th>
<th>Tests Used</th>
<th>Results</th>
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<tbody>
<tr>
<td>H4.1</td>
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<tr>
<td></td>
<td>Word of Mouth (WOM)</td>
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<tr>
<td>H4.2</td>
<td>There are significant mean differences between Stayers and Switchers on</td>
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<td>Repurchase Intentions (RI)</td>
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<td>H4.3</td>
<td>There are significant mean differences between Stayers and Switchers on</td>
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<td></td>
<td>Price Increase Tolerance (PIT)</td>
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#### Referral switchers versus others

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<td>H4.4</td>
<td>There are significant mean differences between Referral switchers and other</td>
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<td></td>
<td>switchers on Word of Mouth (WOM)</td>
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<tr>
<td>H4.5</td>
<td>There are significant mean differences between Referral switchers and other</td>
<td>t test</td>
<td>Not Substantiated</td>
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<td>switchers on Repurchase Intentions (RI)</td>
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<td>H4.6</td>
<td>There are significant mean differences between Referral switchers and other</td>
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<td>switchers on Price Increase Tolerance (PIT)</td>
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#### Years with current service provider

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<td>H4.7</td>
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<td>service provider’ on Word of Mouth (WOM)</td>
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<td>H4.8</td>
<td>There are significant mean differences between groups of ‘years with current</td>
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<tr>
<td>No</td>
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<tr>
<td>H4.9</td>
<td>There are significant mean differences between groups of ‘years with current service provider’ on Price Increase Tolerance (PIT)</td>
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**Prior churn**

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<td>H4.10</td>
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<td>H4.12</td>
<td>There are significant mean differences between groups displaying different prior churn behavior on Price Increase Tolerance (PIT)</td>
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**H5-Demographic analysis of Churn number**

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<td>H5.2</td>
<td>There is a relationship between different age group and churn behavior</td>
<td>Chi-square</td>
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<td>H5.3</td>
<td>There is a relationship between gender and churn behavior</td>
<td>Chi-square</td>
<td>Accepted</td>
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<tr>
<td>H5.4</td>
<td>There is a relationship between Education groups and their churn behavior</td>
<td>Chi-square</td>
<td>Accepted</td>
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<td>H5.5</td>
<td>There is a relationship between Occupation groups and their churn behavior</td>
<td>Chi-square</td>
<td>Accepted</td>
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<tr>
<td>H5.6</td>
<td>There is a relationship between groups of average bill per month and their churn behavior</td>
<td>Chi-square</td>
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Chapter VI - Interpretation of findings

6.1. Interpretation of Descriptive Statistics

1. The analysis of descriptive statistics reveals that on a scale of 1 to 9, the Overall Service Quality (OSQ) of cellular mobile services is just above average (>6) but nowhere near excellence. The ratings on Network Quality, Responsiveness, Empathy, Complaint Handling and Price Competitiveness are lower (<6). The cellular mobile services industry has highest ratings for Convenience, Tangibles, Reliability, Assurance and Value Added Services in that order while having lowest ratings for Complaint Handling, Empathy, Responsiveness, Network Quality and Price Competitiveness in that order.

2. The importance of Service factors shows Network Quality, Price Competitiveness, Reliability and Complaint Handling as the most important factors to the customers, in that order. In 2nd tier -Responsiveness, Convenience and Value Added Services while in 3rd tier - Assurances, Tangibles and Empathy in that order are important.

Network Quality is nearly twice as important as Price Competitiveness.

Comparing the rankings of importance of service quality factors with the perceived performance ratings, it is clear that service providers are not getting good ratings on factors truly important to the customers, namely Network Quality (rank 1), Price Competitiveness (rank 2) and Complaint Handling (Rank 4).

3. The analysis of the switching costs show that though the biggest switching Cost factor was number portability issues, there are still other switching costs factors which exert influence on this industry especially convenience and comfort, sameness of offerings, fear of new operator’s services not working, time and effort involved in gathering and comparing information of cellular mobile service providers.
4. The analysis of Behavioral Intentions, on a rating scale of 1 to 7, reveals slightly above average Word of Mouth (WOM) and Repurchase Intentions (CR) but way below the ideal rating of 7. The mean of Internal Response to complaints (IR) is higher than External Response to complaints (ER). This means that Indian customers complain more to the service provider than to outsiders, though external response is fairly high compared to ideal rating of 1. Price Increase Tolerance (PIT) is lesser than average indicating price sensitivity.

6.2. Interpretation of Findings-Hypothesis testing

**Ten Service quality (SQ) factors Overall Service Quality (OSQ)**

Pearson correlation indicates correlations between each pair of Service Quality factors is <.70 i.e. much <0.85, which means each factor is proven to be a different and distinct construct (Campbell and Fiske, 1959 for discriminant validity). Hence it can be interpreted that each of these ten SQ dimensions/factors (five of SERVQUAL and five added for cellular service industries) is essential to evaluate OSQ in cellular mobile service industry.

We find through Pearson correlation that, the degree of positive associations between perceived performance ratings of each of the ten Service Quality (SQ) factors, and the ratings of Overall Service Quality (OSQ) is positive and average to high as the correlations are in range of 0.512 to 0.624 for Overall Service Quality (OSQ),

1. Service quality dimensions/factors together explains 55.8% of variance in OSQ, indicating the importance of these SQ dimensions.

2. Of the ten SQ factors, significant contributors to explaining variance in OSQ ratings are eight factors, excluding Reliability and Assurance. For OSQ, of the eight factors that are significant, Empathy, Network Quality, Convenience, Price Competitiveness, followed by Responsiveness, Value Added Services, Complaint Handling, and Tangibles are important in that order.
Behavioral Intentions (BI)

3. Service Quality (SQ) factors explain 26.6% variance in Word of Mouth (WOM), 24.6% variance in Repurchase Intentions (RI), 6.4% variance in Price Increase Tolerance (PIT), 3.1% variance in External Response to Complaints (ER), and 5.3% variance in Internal Response to Complaints (IR).

4. Of the ten Service Quality (SQ) factors/ dimensions, SQ factors important for Word of Mouth (WOM) differ from those for Repurchase Intentions (RI), Price Increase Tolerance (PIT), External Response to Complaints (ER), and Internal Response to Complaints (IR).

Complaint handling, Network Quality, Reliability, and Responsiveness are significant in that order for explaining the variance in Word of Mouth (WOM); for Repurchase intentions (RI), factors significant in explaining variance are Network Quality, Responsiveness, Empathy, and Reliability; for Price Increase Tolerance (PIT), Network Quality, Complaint handling are important. Factors contributing significantly to External Response to Complaints (ER) are Value added services, Complaint handling and Responsiveness. Network quality and Value added services significantly contribute to increased Internal Response to Complaints (IR).

Switching Costs

5. The research reiterates the importance of switching cost in cellular mobile service and its effect on Repurchase Intentions (RI) and Price Increase Tolerance (PIT) as even less satisfied customers experiencing higher switching cost get retained and have higher Price Increase Tolerance.

Stayers (who have subscribed/used only one service provider to date), Switchers, Referral switchers

6. There are significant mean differences between Stayers and Switchers on Repurchase Intentions (RI) and Price Increase Tolerance (PIT). Stayers have higher Repurchase intentions (RI) and Price increase tolerance (PIT). The
findings state that there are no significant mean differences between Stayers and Switchers on Overall Word of mouth (WOM)

7. There are no significant mean differences between Referral Switchers and other Switchers on Word of mouth (WOM), Repurchase intentions (RI) Price increase tolerance (PIT) Internal Response to complaints (IR) and external Response to complaints (ER). Thus the source of customer acquisition (referral customers vs others) does not help in behavioral intentions conducive to the corporate.

**Years with current service provider**

8. It is interesting to note that the number of years with current service provider affects Word of mouth (WOM), Repurchase intentions (RI) Price increase tolerance (PIT). Word of mouth (WOM) increases longer a customer is with the service provider, Repurchase intentions (RI) is again higher once the customer is with a service provider for 2 years or more; Price Increase Tolerance (PIT) progressively increases with number of years with service provider.

9. **Churn (number of service providers subscribed / used to date)**

10. Findings reveal that prior churn does affect Repurchase Intentions (RI) and Price Increase Tolerance (PIT). Findings indicate that if customer has subscribed to 3 or 4 service providers, chances of his repurchase intentions are lesser than if he has not changed at all. So also price increase tolerance is higher with lesser churn. However, the links between number of churn and WOM differences cannot be substantiated and hence the interpretation is that churn does not affect Word of mouth (WOM).

11. Findings indicate that demographics does impact churn. Women churn (switch) less than men. Older customers switch lesser. Higher the education, more the churn. Analysis reveals that occupation affects churn—Homemakers and Retired mostly do not churn. Students and Business class churn more.
Students have fairly large percentage of customers who have subscribed to two or three service providers (56%). Business class have many who have subscribed to two or three service providers to date (53%) and some have subscribed to four service providers to date (9%). In Service class, only 48% have subscribed to two or three subscribers to date. Customers with larger average bill per month tend to churn more. However, proportion of churn is not dependant on user mode (Post paid versus Prepaid).
Chapter VII - Conclusions and Recommendations

7.1 Conclusions

1. Since all the perceived performance scores are far below the excellence level of 9, we conclude that the Indian cellular mobile service industry is not fully satisfying its customers.

2. We conclude that the Indian cellular mobile service industry is scoring on factors less important to customers (where it is getting higher (>6) ratings on a scale of 1 to 9) like Convenience, Tangibles, Assurance, Value Added Services while on the four most important factors namely Network Quality, Price Competitiveness, Reliability and Complaint Handling which form the first tier in importance to customers, the industry is getting <6 ratings (on a scale of 1 to 9) except for Reliability where the Indian cellular mobile service industry is on the right track.

3. The Indian mobile cellular service industry, though is seeing above average Word of Mouth (WOM) and Repurchase Intentions (CR) (>4 on a scale of 1 to 7), it is way below maximum score of 7. Price Increase Tolerance (PIT) is lower than average (<4 on a scale of 1 to 7) indicating price sensitivity is high. Though Indian customers use Internal Response to Complaints (IR) quite effectively, their External Response to Complaints (ER) is also high and far from ideal and hence a cause of concern.

4. Indian Cellular mobile service customers have a number of switching cost barriers which will continue to exert influence on customers’ behavior.

5. This research has found that to evaluate the service quality of cellular mobile service, cellular service providers need to consider the additional five factors of Network Quality, Value Added Services, Convenience, Complaint handling and Price Competitiveness along with SERVQUAL five dimensions of Reliability, Responsiveness, Empathy, Assurance and Tangibles.
6. Eight factors of empathy, network quality, convenience, price competitiveness, responsiveness, value added services, complaint handling and tangibles in this order explain variance in overall service quality perceptions to a large extent and service providers can use this information to increase the service quality ratings. The importance of Network Quality over Price Competitiveness is established.

7. Service Quality (SQ) factors explaining variance differ depending on behavioral intention dimension.

For word of mouth (WOM), factors are Complaint handling, network quality, reliability and responsiveness are significant predictors in that order.

For repurchase intentions (RI), network quality, responsiveness, empathy, reliability are important in explaining variance.

Price increase tolerance (PIT) predictors are network quality and complaint handling;

For external response to complaints (ER), value added services, complaint handling and responsiveness are significant predictors.

For internal response to complaints (IR) it is network quality and value added services that are significant predictors.

8. Switching costs continue to exert influence on behavioral intentions of Repurchase Intentions (RI) and Price Increase Tolerance (PIT).

9. While Stayers’ Word of mouth is same as switchers, they have higher Repurchase Intentions (RI) and Price Increase tolerance (PIT).

One cannot differentiate referral switchers from others on behavioral dimensions of), Word of Mouth (WOM), Repurchase Intentions (CR), Price Increase Tolerance (PIT).
The findings prove the importance of customer retention as a policy v/s customer acquisition, as longer the relationship, greater is the Word of Mouth (WOM), Repurchase Intentions (RI), Price Increase Tolerance (PIT).

This is further reconfirmed through the churn analysis which indicates that customers who switch more number of service providers exhibit lesser Repurchase Intentions (RI) and lesser Price Increase Tolerance (PIT) though churn does not affect Word of Mouth (WOM).

10. Demographic analysis of churn indicates interesting findings-women and older customers are easier to retain while more educated customers and customers with higher average bill per month churn more and hence need more efforts to retain. Homemakers and Retired customers churn less while Business class customers and Students have higher propensity to churn.

7.2. Recommendations:

1. It is recommended that Indian Cellular mobile service providers should concentrate on improving their perceived performance ratings, currently far below excellence, in order of their importance to customers (Network Quality, Price Competitiveness, Reliability, Complaint Handling in first tier followed by Responsiveness, Convenience and Value Added Services in 2nd tier and then the 3rd tier factors of Assurance, Tangibles and Empathy should be considered.

2. It is recommended to academicians and corporate alike to use this modified SERVQUAL scale with ten dimensions while conducting research on service quality of cellular mobile service as these factors explain effectively variance in service quality of cellular service.

3. Cellular mobile service providers should concentrate twice as much on Network Quality as over Price Competitiveness.

4. Since Word of Mouth (WOM) and Repurchase Intentions (CR) though >4, is way below maximum level of 7, Indian cellular mobile service providers should use offensive marketing strategies to create Word of Mouth (WOM)
and Repurchase Intentions (RI) and Price Increase Tolerance (PIT) by concentrating on the right service quality factors. The Indian cellular mobile service providers should increase the confidence of the customers to use the Internal Response to Complaints (IR) so completely that they will automatically reduce their usage of External Response to Complaints (ER).

5. Since from Cellular Service provider companies’ point of view, Repurchase Intentions (RI) is first most important, Network Quality, Responsiveness, empathy and reliability needs to be concentrated on; followed by complaint handling as dimension for Word of Mouth (WOM), and Price Increase Tolerance (PIT). This will ensure reduced External Response to Complaints (ER) while increased Value Added Services and Network Quality performance ratings will ensure that customer will have increased confidence to use Internal Response to Complaints (IR) mechanism better.

6. Cellular service providers should conduct a segmental analysis and concentrate on customers with higher switching costs as such customers have higher Repurchase Intentions (RI) and Price Increase Tolerance (PIT).

7. Cellular service providers should clearly have different strategies for Stayers and Switchers as, though Stayers do not help companies with more Word of Mouth (WOM), they are better customers due to their higher Repurchase Intentions (RI) and Price Increase Tolerance (PIT). Switchers on the other hand, need to be viewed with caution, as more the number of service providers used/subscribed to date i.e. more the churn, lesser the Repurchase Intentions (RI) and Price Increase Tolerance (PIT).

8. Cellular service providers should concentrate on getting more women customers as they churn less than men and also go after older customers(30 to 40 years age group and 40 to 50 years and above age group, rather than 20 to 30 years or less than 20 year old customers) since as age increases, churn reduces.

Also, cellular service providers need to be extra careful in their dealings with educated customers and customers with bigger average size of bill per month, as churn is likely to be higher.
Contrary to popular belief, since, type of service (prepaid or postpaid) does not affect churn, cellular service providers need not clamor for/spend energies on converting Prepaid users to Postpaid.

As Homemakers and Retired customers churn less, they are better customers followed by Service class customers, unlike Business class customers and Students who have higher propensity to churn. Hence, cellular mobile service providers should concentrate their energies accordingly.

9. Long term relationship with customers should be the sought after strategy as clearly, longer the duration of relationship, higher is the Word of Mouth (WOM), Repurchase Intentions (CR), Price Increase Tolerance (PIT). Hence, companies should concentrate on customer retention in a big way rather than on customer acquisition.

10. The mode of customer acquisition (Referral customers vs others) is inconsequential to behavioral intentions and hence no segmentation or differentiated strategies is necessary

7.3. Limitations

1. The study was conducted in Mumbai only. A National level study will reveal regional differences

2. Rural customers’ perceptions, needs and behavior has been completely ignored in this study.

3. The study was conducted in highly dynamic industry with ever changing scenario – eg. 3G Services, Number portability.

4. The study was cross sectional and carried out in the months of August to November 2010.

5. Segmental differences on all variables have not been studied as it would have widened the scope beyond manageable proportions.

6. Using the direct score format (instead of the computed difference score format) has its advantages but also its inherent diagnostic limitations.
7.4. Future Research Potential

1. National level studies, rural studies and cross cultural studies are areas of potential research.

2. Segmental analysis of OSQ and behavioral intentions dimensions can be undertaken at next level of research to get richer insights.

3. Since the industry is highly dynamic, longitudinal studies mapping changes in customers’ perceptions and expectations over time is recommended.

4. With 4G services and number portability introduced, this industry has become even more dynamic and a great area for research possibilities of churn analysis and service quality of 4G services.

5. A study using the computed difference score format, revealing zone of tolerance (ZOT), Measure of Service Superiority (MSS) and Measure of Service Adequacy (MSA) would be highly recommended.

6. Company wise (service provider wise) research can also be conducted and used to advise each company on their strategies.
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Declaration

This is to certify that the synopsis of the thesis titled “Consumer Behavior with respect to Service expectations and Perception of Quality for Cellular Services” submitted by Neeta Acharya for the award of Ph.D. degree to Jankidevi Bajaj Institute of Management Studies of S.N.D.T. Women’s University, embodies original work under my supervision. The content of the synopsis in full or in parts, has not been submitted to any other Institute or University, for any other degree or diploma.

Signature of candidate                                                          Signature of guide

(Neeta Sunil Acharya)                                                          (Dr. Gulnar Sharma)

Date :