PhD Thesis
Tentative Proposal

An Empirical Analysis to Study the Impact of Service Quality Attributes on Customer Value, Satisfaction and Loyalty in Mobile Telecommunication Services in Dehradun

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# TABLE OF CONTENTS

1. Motivation for proposed research

2. Literature survey and identification of research gaps

3. The objectives of the study and proposed research hypotheses

4. Methodology and sources of data

5. Expected Contribution to the literature

6. List of references

7. The plan of research
1. THE MOTIVATION FOR THE PROPOSED RESEARCH

The present Indian economy has seen a vast change in the business operations as an aftermath of globalization and liberalization in the 21st century. Quality has become a strategic tool in obtaining efficiency in operations and improving performance in business, which holds good for both the goods and services sectors. However, the problem with management of service quality in service firms is that quality is not easily identifiable and measurable due to inherent characteristics of services which make them different from goods. In today’s market environment customers look for technology and support for remaining loyal to the goods and services offered by marketers. This calls for skilled and technically competent employees, proper maintenance of equipments, and supportive operative systems.

The mobile telecommunication services sector being a part of services industry has also shown sufficient maturity to accept these changes as required by the market, and as geared up itself with competent technology, human resources and operations to serve their customers and satisfy them.

In the context of customers, the need for excellent services always keeps on changing. With the passage of time, the level of service quality also varies. There is no guarantee that what is excellent service quality today is also applicable for tomorrow or day after tomorrow. Besides this, in the last two decades the use of technology in the delivery of services has also changed significantly. The use of latest world class innovative technology in terms of various value added services has also increased the war among service providers. To win the battle of global competition in the service industries
and to be able to exist, these service providers will need to bring into play new contemporary strategies in providing service that will satisfy the continuous demanding customers. Because of this reason services marketing and telecommunication marketing gaining prominence in marketing literature (Kotler, 2001). The interest in services marketing research on service quality and customer satisfaction has gained prominence due to a good number of researches which have been conducted by applying related theories and methods in the services industry like; banking, telecommunication, hospitality, travel and tourism etc. Researches are still divided into two schools of thought-i) Is it that service quality in terms of tangibility, reliability, responsiveness, assurance, empathy (Parasuraman et al., 1988) or ii) Is it that service performance is more important than service quality (Cronin and Taylor, 1992). Gronroos, (1990); Bitran and Lojo, (1993), Parasuraman et al., (1993); Zeithaml and Bitner, (1996) prescribed definitions for services and concluded that for most of the services, there are four basic characteristics that differentiate them from the goods are:

1. Services are of intangible nature; however degree of intangibility varies from service to service.
2. Services are produced and consumed simultaneously to some extent.
3. Services are activities or series of activities as compared to goods.

As a stepping stone to this notion of refining the theories, Cronin, Brady, and Hult (2000) conducted an empirical study to assess the effects of service quality, value, and customer satisfaction on behavioural intentions in the
context of different service industries. They suggested in their findings that there is need to include additional decision-making variables like tangibility aspect of service quality, customers’ expectations and quality of service environment. Also, suggested replication of similar study in another service setting. Caruana (2002) attempted to examine the model in which service quality is linked to service loyalty via customer satisfaction. After examining this model, he suggested the need to consider the role of customer value and reputation of the company in predicting loyalty. The present study will try to address the doubts raised by the researchers like Cronin, Brady, and Hult (2000), Caruana (2002) etc.

The telecommunications sector in India was liberalized in the early 1990s. Attack of private as well as foreign direct investment in the sector started afterwards. With taut margins and ephemeral customer loyalty, the mobile phone service providers are now operating in a highly competitive environment. Profitability of the service providers is being curbed by factors like; revenue leakage, customer churn and ineffective customer service. The Indian mobile phone operators are facing a number of significant challenges, because of changing dynamics.

- First, retaining existing customers mainly in a pre-paid and high churn market has become more difficult and costly.
- Second, new customer acquisition is becoming more elusive than ever as potential customers have more options to choose from and mobile phone operators offer attractive deals to lure prospect customers.
- Third, as mobile phone operators have had to incur additional cost in keeping existing customers and acquiring new ones, their average
revenue per user (ARPU) has declined, leading to worsening of their financial performance.

Source: http://www.trai.gov.in/trai/upload/PressRel

In light of above mentioned challenges, mobile telecommunication service providers need to make customer satisfaction a strategic priority. Past researches in service literature provide evidences that customer satisfaction has a direct effect on the financial performance of a company (Smith and Wright 2004; Ittner and Larcker, 1998). Moreover, satisfied customers 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). Thus, it is very important that Indian mobile phone operators gain a better understanding of the relationship between the performance of service quality attributes, customer value, satisfaction, and loyalty.

Definition of the terms

Customer satisfaction: An emotional response, that result from a cognitive process of evaluating the service received against the costs of obtaining service (Woodruff et al. 1991; Rust and Oliver 1994).

Customer loyalty: Customer loyalty means that the customer may come under environmental effect or marketing technique, which induce their possibly latent transformation behaviour, but they wouldn’t change their repeat purchase intention with preference commodity or service Oliver, Rust and Varki (1997). The concept of customer loyalty can be understood as a
combination of favourable attitude of customers and their repurchase behaviour (Kim et al. 2004).

**Customer value:** Customer value means that overall assessment of customer about the utility of service based upon what is received and what if given in exchange to service provider (Cronin, Brady and Hult, 2000).

**Service quality:** Service quality means the consumer’s perception of the way the service has been performed (Cronin and Taylor, 1992).

**Service quality attributes:** means the attributes of the service offered perceived by consumer.

**Mobile telecommunication services:** are the services offered for the public by the service providers. These services consist of both types of services namely; Code division Multiple Access (CDMA), and Global System for Mobile Communications (GSM).

### 2. LITERATURE SURVEY AND IDENTIFICATION OF RESEARCH GAPS

In order to understand and identify the research gap, review of literature has been conducted extensively with respect to service quality, service performance, customer satisfaction, customer loyalty, and customer value. This was done with the intention to determine the definitions pertaining to this research in creating the research gap emanating out of the study.

According to Quinn, Baruch, and Paquette (1987) services can be defined as “Most authorities consider the services sector to include all economic
activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provides added value in forms (such as convenience, amusement, timeliness, comfort, or health) that are essentially intangible concerns of its first purchaser”. Gronroos (1990) defined services as “An activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and or system of the service provider which are provided as solutions to customer problems (p.27).

Service quality is more difficult to measure as compared to measurement of quality of goods (Parasuraman, Berry, and Zeithaml, 1985). At the time of purchase in the case of goods, various tangible attributes like shape, size, colour, package etc. can be checked properly and quality can be assessed. But in the case of services, because of intangible nature, it is difficult to make assessment about their quality before their purchase. Therefore in case of services purchasing procedure various other tangible attributes like personnel of service providers, their equipments, and physical facilities etc. can be taken as measures of quality assessment.

Parasuraman, Berry, and Zeithaml (1985) identified five potential gaps within the service organizations that may lead to a final and major gap: the difference between expectations before delivery and perceptions of customers after delivery of services. Therefore they discovered five service quality gaps based on interviews with executives of service organizations. As per their proposed gap model, five gaps in service quality were as follows:

Gap1---- customers’ expectations and management perceptions gap
Gap2---- management perceptions about customers’ expectations and specifications of service quality gap

Gap3---- specifications of service quality and service delivery gap

Gap4---- service delivery and communication to external customers’ gap

Gap5---- customers’ expected service and customers’ perceived service performance gap

According to Lovelock (1994), in addition to the five gaps, two more gaps have been identified, which exists during design and delivery of service offering. The modified gaps as mentioned by Lovelock can be described as follows:

1. The Knowledge gap
2. The standards gap
3. The delivery gap
4. The internal communications gap
5. The perceptions gap
6. The interpretation gap
7. The service gap

Parasuraman, Berry, and Zeithaml (1988) developed instrument to measure customers’ perception of service quality in service organizations by taking all the above mentioned ten dimensions and was named as SERVQUAL. Further this instrument was purified and scaled down into five dimensions consisting of 22 items. With this 22 item scale of SERVQUAL researchers can measure the expectations and perceptions of customers about service quality in service set ups.
Perceived service quality was measured by the authors by taking the difference between expectations and perceptions scores in research and categories were made.

i) Expectations are not met, when the difference between expectation and perception scores is negative.

ii) Expectations are met, when the difference between expectation and perception scores is zero.

iii) Expectations are highly met, when the difference between expectation and perception scores is positive.

Reliability of SERVQUAL

<table>
<thead>
<tr>
<th>Study (Author &amp; Year)</th>
<th>Research Instrument</th>
<th>Reliability (Cronbach’s alpha values)</th>
<th>Factor Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carman, 1990</td>
<td>Four modified SERVQUALs using 12-21 of original items</td>
<td>Mean of 0.75</td>
<td>Five to Nine factors</td>
</tr>
<tr>
<td>Brensinger and Lambert, 1990</td>
<td>Original 22 items</td>
<td>0.64 to 0.88</td>
<td>Four factors</td>
</tr>
<tr>
<td>Parasuraman, Zeithaml, and Berry, 1991</td>
<td>Original 22 items</td>
<td>0.80 to 0.93</td>
<td>Five factors, but different from a priori model. Tangible dimension splits into two factors, while</td>
</tr>
</tbody>
</table>
responsiveness and assurance dimensions loaded on a single factor

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Type</th>
<th>N</th>
<th>Range</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finn and Lamb, 1991</td>
<td>Original</td>
<td>22</td>
<td>0.59 to 0.83</td>
<td>Poor fit for Five factor model</td>
</tr>
<tr>
<td>Babakus and Boller, 1992</td>
<td>Original</td>
<td>22</td>
<td>0.67 to 0.83</td>
<td>Five factor model not supported two factors</td>
</tr>
<tr>
<td>Cronin and Taylor, 1992</td>
<td>Original</td>
<td>22</td>
<td>0.85 to 0.90</td>
<td>Unidimensional structure</td>
</tr>
<tr>
<td>Kettinger and Lee, 1994</td>
<td>Original</td>
<td>22</td>
<td>Mean of 0.87</td>
<td>Four factor model, tangibles dimension dropped</td>
</tr>
<tr>
<td>Pitt, Watson, and Kavan, 1995</td>
<td>Original</td>
<td>22</td>
<td>0.62 to 0.87</td>
<td>Financial institution seven factor model with tangibles and empathy split into two; Consulting firm five factors, not matching the original; information systems service firm three factor model</td>
</tr>
</tbody>
</table>

Van Dyke, T.P., L.A. Kappelman, and V.R. Prybutok, (1999) summarised all the empirical and theoretical findings related to the critique of SEVQUAL instrument, and presented them in a tabled form by referencing various studies based on gap scores.

**Problems identified in the literature**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Problem</th>
<th>Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of gap score</td>
<td>Poor choice as a measure of a complex psychological construct.</td>
<td>Lord, 1958; Wall and Payne, 1973; Johns, 1981; Peter, Churchill, and Brown, 1993</td>
</tr>
<tr>
<td>Reliability</td>
<td>Cronbach’s alpha overestimates the reliability of different scores.</td>
<td>Lord, 1958; Wall and Payne, 1973; Johns, 1981; Prakash and Lounsbury, 1983; Peter, Churchill, and Brown, 1993</td>
</tr>
<tr>
<td>Discriminant validity</td>
<td>Given the high correlation between the difference score and the perception score, it is difficult to demonstrate that the difference score is measuring something unique from the perception components.</td>
<td>Cronin and Taylor, 1992; Peter, Churchill, and Brown, 1993</td>
</tr>
<tr>
<td>Topic</td>
<td>Description</td>
<td>Reference</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Spurious correlation</td>
<td>Correlations between the gap scores and other variable are artifacts of correlations with the components.</td>
<td>Peter, Churchill, and Brown, 1993</td>
</tr>
<tr>
<td>Variance restriction</td>
<td>Expectation scores are consistently higher than Perception scores. This leads to a systematic variance restriction, which is problematic for many types of statistical analysis.</td>
<td>Peter, Churchill, and Brown, 1993</td>
</tr>
<tr>
<td>Validity</td>
<td>The perception component of the perception minus expectation scores performs better as a predictor of perceived overall quality than the difference score itself.</td>
<td>Parasuraman et. al., 1988; Brensinger and Lambert, 1990; Cronin and Taylor, 1992, 1994; Babakus and Boller, 1992; Boulding et. al., 1993</td>
</tr>
<tr>
<td>Ambiguity of ‘expectation’ construct</td>
<td>Multiple definitions of expectations result in a concept that is loosely defined and open to multiple interpretations. These various interpretations can result in serious measurement validity problems.</td>
<td>Teas, 1993, 1994</td>
</tr>
</tbody>
</table>
Unstable dimensionality

A theoretical construction combined with the use of gap scores raise questions about the true factor structure of the service quality construct.

Carman, 1990; Brensinger and Lambert, 1990; Finn and Lamb, 1991; Parasuraman et. al., 1991; Babakus and Boller, 1992; Cronin and Taylor, 1992


In a more recent study, Sanjay K. Jain, and Garima Gupta (2004) supported the argument that overall service quality is determined by perception only rather than the difference between expectation and perception. They empirically tested superiority of perception based SERVPERF scale and Expectation and Perception difference score based SERVQUAL scale in Indian context with reference to fast food restaurants. They came out with the conclusion that SERVPERF scale is more convergent and discriminant valid explanation of the service construct possesses greater power to explain variations in the overall service quality scores, and are also more parsimonious data collection instrument.
The concept of service quality could not be well explained and understood without elaborating each attribute that make up the service quality.

2.1 Service Quality Attributes of Services

Gronroos (1983, 1984) defined service quality in terms of functional and technical quality. Later in 1988, Parasuraman, Zeithaml, and Berry proposed five dimensions (tangibles, reliability, responsiveness, assurance, empathy) of service quality ‘SERVQUAL’ based on their empirical research conducted in different service industries. In view of the fact that perception of service quality is based on multiple dimensions, but there is no general concurrence over nature or content of dimensions. Various researchers across the world proposed different numbers of dimensions in service quality construct based on their empirical studies in different service environments. Gronroos in 1983, proposed two (2) dimensions; Parasuraman, Zeithaml, and Berry in 1985, proposed ten (10) dimensions; Parasuraman, Zeithaml, and Berry in 1988, proposed five (5) dimensions Rust and Oliver in 1994 proposed three (3) dimensions; Kettinger and Lee in 1994 proposed four (4) dimensions; Avkiran in 1994 proposed six (6) dimensions; Stafford in 1996 proposed seven (7) dimensions; Bahia and Nantel in 2000 proposed six (6) dimensions; Sureshchandar, Chandrasekharan, and Anantharaman in 2002 proposed five (5) dimensions of service quality.

A review of past literature has shown conceptual and measurement problems with SERVQUAL scale. The issues of concern are use of gap score (difference between expectation and perception score); applicability of SERVQUAL measure to different service industries and countries; ambiguous
constructs; low validity and reliability; non-uniform dimensionality. Because of above mentioned issues SERVQUAL measure, applied in different service settings, produced sundry results.

After the description of perceived service quality, service quality attributes, and service quality attributes of mobile telecommunication services, then customer value as one of the constructs, which is closely related to service quality requires to be elaborated.

2.2 Customer Value

According to means-end model (Attribute → Consequences → Values) by Gutman, (1982) there was a hierarchical organization of consumer perception and product knowledge. The hierarchical organization starts with product attributes, which have consumption consequences, and then these consequences support one or more than one values in the life of persons. This model tried to explain how customers categorize the product knowledge in memory. Woodruff and Gardial, (1996) showed that means-end model can be adapted to capture the essence of customer value, and derived a conceptual framework for customer value. Based on this conceptual framework, later in 1997, Woodruff defined customer value as customer’s perceived performance for and evaluation of those attributes of goods and services, attribute performances, and consequences arising out from use that assist or block achieving the customer’s goals and purposes in use situations. Zeithaml, (1988) also defined value as customer’s overall assessment of utility of a product based on perceptions of what is received and what is given away. Perceived value is a trade-off between perceived quality and perceived psychological or monetary sacrifice (Dodds et al., 1991). Parasuraman,
(1997) suggested that conceptual definition by Woodruff, (1997) is broader than existing definitions that focus on give versus get type evaluations that occur during or after the use of good or service.

2.3 Customer Satisfaction

Oliver, (1981) introduced the expectancy-disconfirmation model to study customer satisfaction in retail and service industry. The discrepancies between prior expectations and actual product performance give birth to disconfirmation or confirmation. This concept has been reflected in the definition of satisfaction propounded by Tse and Wilton, (1988). They defined the satisfaction as the response of customers to the evaluation of the perceived discrepancy between prior expectations and actual product performance after consumption. While, Churchill and Suprenant, (1982) argued that customer satisfaction resulted from buying and consuming a particular good or service, which was made by a consumer to compare the expected return and the actual cost of purchase. In their study, they found that gap between prior expectations and actual product performance was not the main factor for customer satisfaction, but production performance was the deciding factor in determining customer satisfaction. A consumer compares the actual benefit and the cost level in the buying behaviour with the expected level of benefit. Feelings (positive or negative), and emotions occur after this process.

Satisfaction is one of the most elementary ideas of marketing, until now there is a little agreement regarding its core nature. The traditional concept of satisfaction considers it as rational, comparing expectations to actual product performance (Oliver, 1980). Later Anderson and Fornell, (1994) supported
this traditional concept of satisfaction with their empirical study. In recent time, satisfaction experience is considered as mixture of cognition and emotion in the consumption context (Fournier and Mick, 1999; Carroll, 2004). A review of existing literature indicates a broad discrepancy in defining satisfaction. In addition to variation in satisfaction definition, some common elements are also found by Giese and Cote, (2000). First, customer satisfaction has been characteristically conceptualized as either completely emotional or completely rational. Second, the response pertains to a particular focus (choice of good or service; purchase or consumption). Third, the response occurs at a particular time, which is generally limited in duration, and it varies from situation to situation.

2.3 Service Quality and Customer Satisfaction Relationship

Research on relationship between perceived service quality and customer satisfaction produced mix results. In some studies, customer satisfaction is found antecedent of service quality and in some other studied, perceived service quality is found antecedent of customer satisfaction. Based upon the argument propounded by Lee et al., (2000), in which consumers can evaluate an object only after they interpret the object, it can be concluded that service quality serves as antecedent of customer satisfaction.

2.4 Customer Loyalty

Dawes and Swailes, (1999) propounded that high customer loyalty is central to successful customer retention, and firms who compete on the basis of loyalty will win over the battle of competition. The conceptualization of customer loyalty construct has been developed steadily over the years. In the
earlier years, the focus of loyalty was brand loyalty with respect to tangible goods (Tucker, 1964; Day, 1969). Cunningham, (1956) defined brand loyalty as the proportion of purchases of a household dedicated to the brand it purchases most often. Brand loyalty in marketing consists of a consumer’s commitment to repurchase or otherwise continue using the brand and can be demonstrated by repeated buying of a good or service or other positive behaviours such as word of mouth advocacy (Dick, and Basu, 1994).

Tucker, (1964) stated that neither consideration should be given to what the subject thinks nor what goes on in his/her central nervous system, his/her behaviour represents the full statement of what brand loyalty is. Based on the past literature, it was found that initial research emphasized only on the behavioural dimension of loyalty. Jacoby, (1971) confirmed through extensive literature that past studies focused only on the behavioural outcomes and ignored the consideration that what went into the minds of consumers. He concluded that brand loyalty was simply measured in terms of outcome characteristics.

There is more to brand loyalty than just regular purchasing of same brand (Day, 1964). Based on findings of earlier studies, Jacoby, (1971) proposed a conceptualization of brand loyalty that incorporates both a behavioural and an attitudinal constituent. Later Jacoby and Chesnut, (1978) proposed definition for brand loyalty by incorporating both behavioural and attitudinal constituents. Brand loyalty is the extent of the faithfulness of consumers towards a particular brand, expressed through their repeat purchases, irrespective of the marketing pressure generated by the competitors. Brand loyalty is non random behavioural response expressed over time by some
decision making unit with regard to one or more brands out of a set of brands and is a function of psychological processes (Jacoby and Chesnut, 1978). Engel et al., (1982) defined brand loyalty as the preferential, attitudinal, and behavioural response toward one or more brands in a product category expressed over a period of time by a consumer. Loyalty may be defined as a favourable attitude towards a particular brand resulting in a consistent purchase of that brand over time, suggesting that loyalty is present when favourable attitudes are manifested in repeat purchase behaviour (Keller, 1993).

Gremler and Brown, (1996) found that past studies on customer loyalty focused largely good related brand loyalty, whereas research on customer loyalty to service firms has remained limited. The findings in the field of good related loyalty can not be generalized to service related loyalty because of following reasons:

- Service loyalty depends more on interpersonal relationships between firms and consumers as compared to loyalty of goods (Berry, 1983).
- Person to person interactions form an essential element in marketing of services (Suprenant and Solomon, 1987).
- The influence of perceived risk is larger in case of services, as customer loyalty may act as a barricade to customer switching behaviour (Zeithaml, 1981).
- Intangible attributes like reliability, and confidence may play a vital role in building or maintaining loyalty in the context of services (Dick and Basu, 1994).
Later Gremler and Brown, (1996) extended the concept of loyalty to services (intangible goods) and defined the service loyalty as the degree to which a customer exhibits repeat buying behaviour from a service organization, possesses a positive attitudinal temperament towards the organization, and considers only this organization when a need for this service exist.

**The Effect of Service Quality Attributes on Customer Value, Satisfaction, Loyalty**

Based on the past research in the context of customer satisfaction, positive relationship between service quality and customer satisfaction was found. In the literature, some researchers argued indirect effect of service quality, while others argued for direct effect. Based upon the customer value literature, it is suggested to lead directly to customer loyalty. In addition, the investigation of the model which is derived from the previous literature that examines the linkages among service quality attributes, value, satisfaction, and customer loyalty, shows that service quality attributes influence customer loyalty through customer value and satisfaction.

However, most the past researches on service quality attributes and customer loyalty relationship investigated whether there is direct or indirect impact of service quality attributes on customer loyalty, there is very little researches have investigated the effect of service quality attributes on perceived customer value, satisfaction, and loyalty especially in Indian mobile telecommunication service sector.
2.5 RESEARCH GAPS

Till date the research on service quality, customer value, customer satisfaction, and customer loyalty issues have dominated the services marketing literature, but a very few studies on mobile telecommunication services sector have been conducted to investigate the impact of the performance of service quality attributes on customer value, satisfaction, and loyalty into an integrated model.

The partial examination of simple bivariate relationships between any of the service constructs and behavioural intentions may not show their true relationship because of omitted variable bias, so integrated model needs to be developed (Cronin, Brady, and Hult, 2000). Besides this, attributes like tangible quality of service product and quality of service environment plays a vital role in serving as symbols of quality and value to the customers (Cronin, Brady, and Hult, 2000).

Caruana (2002) suggested that the role of customer value and reputation of an organization can be considered as new constructs to relate customer satisfaction with customer loyalty. Moreover, the findings need to be confirmed by further evidence from other regions given the difference in values and cultures among different regions (Wang, Lo, and Yang, 2004).

An investigation should be conducted on how the network quality (core service product quality) interacts with service quality to influence customer satisfaction (Lai et al., 2007).
Based on the literature review, it can be concluded that there is a need to investigate the impact of performance of service quality attributes on customer value, satisfaction, and loyalty. In addition, managing the performance of service quality attributes is very important in order to influence customer value, satisfaction, and loyalty.

3. THE OBJECTIVES OF THE STUDY AND PROPOSED RESEARCH HYPOTHESES

Although research on the service quality of telecommunication services based on customer perceptions has been conducted widely, no recent studies have been conducted which examine the effect of the service quality dimensions on customer value, satisfaction, and loyalty in an integrated model in Indian context. The current study attempts to examine the effect of service quality dimensions on customer value, satisfaction, and loyalty based on the research objectives which are presented as follows:

**Broad Objective**

Broad objective of the study is to examine the effect of service quality dimensions on customer value, customer satisfaction, and customer loyalty.

**Specific Objectives**

- To identify the service quality dimensions in the mobile telecommunications services sector.
• To analyse the specific dimensions of service quality that influence customer value, vis-à-vis, customer satisfaction.

• To analyse the specific predictors (service quality attributes, customer value, customer satisfaction) which influence customer loyalty.

• To analyse whether the attributes can correlate relationships among service quality attributes, customer value, customer satisfaction, and customer loyalty.

• To examine whether customer value plays mediating role in the relationships between service quality attributes and customer satisfaction.

• To examine whether customer satisfaction plays mediating role in the relationships between customer value and customer loyalty.

• To examine whether customer value / customer satisfaction play mediating role in the relationships between service quality attributes and customer loyalty.

3.1 Proposed Hypotheses of the Study

The following hypotheses are proposed to be developed with reference to literature review to test the relationships among the following:

- Relationship between service quality attributes and customer value
● Relationship between service quality attributes and customer satisfaction.
● Relationships among service quality attributes, customer value, and customer satisfaction.
● Relationship between customer value and customer satisfaction.
● Relationships among attributes of service quality, customer value, customer satisfaction, and customer loyalty.

4. METHODOLOGY AND THE SOURCES OF DATA

4.1 Research Design

To create a research design for the study appropriate measures and models are considered as per requirement of the research work. The focus of present research work is investigation of relationships among attributes of service quality, customer value, customer satisfaction, and customer loyalty in Indian mobile telecommunication services sector. Since present research work will be based on primary data, which is to be collected from mobile telecommunication services users with the help of structured questionnaire, a field based survey design will be used as data collection method.
4.2 Research Framework

Conceptual Research Framework of service quality attributes, customer value, customer satisfaction, and customer loyalty

Research framework for the present study is adopted from Heskett et al., (1997), Cronin, Brady, and Hult (2000), and Caruana, (2002) based on the constructs namely service quality attributes; customer value; customer satisfaction; and customer loyalty. It will include hypothesized relationships among above mentioned constructs, and statistically this model will be tested.
4.3 Sources of Data

Primary data will be collected with the help of structured questionnaire by employing field survey method.

4.4 Target Population for the Study

The population for this research consists of subjects, who have experience with mobile telecommunication services in the city of Dehradun.

4.5 Sample Size

- In case of exploratory factor analysis, more acceptable sample size would have a 10:1 ratio (Hair et al., 2008, P. 136).
- In Structural Equation Modeling as a rule of thumb, any number above 200 (critical sample size) is understood to provide sufficient statistical power for data analysis (Hoelter, 1983; Hoe, 2008).

4.6 Sampling Plan

Multistage sampling technique will be employed to collect the primary data from the respondents. Out of these circulated questionnaires, incomplete questionnaires will be kept out of study. Only completely filled questionnaires will be considered for the analysis.

4.7 Research Instrument

In the context of current study, structured questionnaire with closed-ended questions will be used and responses will be measured on 5 – point Likert’s scale. The survey instrument is a revised version of that originally developed
by Cronin, Brady and Hult (2000) for customer value, Turkyilmaz and Ozkan, (2007) and Fornell et al., (1996) for customer satisfaction, Caruana (2002) and Gremler and Brown (1996) for customer loyalty. The survey instrument for service quality attributes was developed based on a thorough literature review. As shown in table below, the variables included in the study have been extensively used in previous studies.

Table

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item of the Scale</th>
<th>Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Employees are efficient and competent [knowledgeable and skilful]</td>
<td>Cronin, Brady and Hult, 2000</td>
</tr>
<tr>
<td>2</td>
<td>Employees are easily approachable</td>
<td>Cronin, Brady and Hult, 2000</td>
</tr>
<tr>
<td>3</td>
<td>Employees are courteous, polite and respectful</td>
<td>Cronin, Brady and Hult, 2000</td>
</tr>
<tr>
<td>4</td>
<td>Employees listen to customers and are willing to help</td>
<td>Cronin, Brady and Hult, 2000</td>
</tr>
<tr>
<td>5</td>
<td>Employees are pleasant, friendly and caring</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>6</td>
<td>The company makes efforts to understand the specific needs of customers</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>7</td>
<td>The company provides individual and personal attention to the customers</td>
<td>Caruana, 2002; Johnson and Sirikit, 2002</td>
</tr>
<tr>
<td>8</td>
<td>The company performs any service right first time</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>9</td>
<td>All the records are maintained accurately by the cellular company</td>
<td>Wang and Lo 2002; Lai et al. 2007; Johnson and Sirikit, 2002</td>
</tr>
<tr>
<td>10</td>
<td>The company provides accurate and timely information</td>
<td>Ndubisi and Wah, 2005</td>
</tr>
<tr>
<td>11</td>
<td>The services provided the company is prompt [low waiting time and quick response]</td>
<td>Olorunniwo and Hsu, 2006</td>
</tr>
<tr>
<td>12</td>
<td>When there are problems, the service provider is sympathetic and reassuring</td>
<td>Lai et al. 2007</td>
</tr>
<tr>
<td>13</td>
<td>Complaint resolution or fault repair is fast</td>
<td>Athanassopoulos and Iliakopoulos, 2003</td>
</tr>
<tr>
<td>14</td>
<td>Employees in the offices are neat and clean</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>15</td>
<td>Physical facilities of offices are visually appealing</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>16</td>
<td>The operating hours are convenient for the customers</td>
<td>Wang and Lo, 2002</td>
</tr>
<tr>
<td>17</td>
<td>The advertisements and promotional campaigns of the company are effective</td>
<td>Aydin and Ozer, 2005</td>
</tr>
<tr>
<td>18</td>
<td>The network is up-to-date and low congestion problem [even in peak traffic hours]</td>
<td>Olorunniwo and Hsu, 2006</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Source</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>19</td>
<td>The cellular company provides service reliably, consistently and dependably</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>20</td>
<td>The cellular company is trustworthy and its employees are believable and honest</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>21</td>
<td>The company fulfils its promises</td>
<td>Caruana, 2002</td>
</tr>
<tr>
<td>22</td>
<td>The services provided by the company are competitive</td>
<td>Athanassopoulos and Iliakopoulos, 2003</td>
</tr>
<tr>
<td>23</td>
<td>The pricing of the services are reasonable and competitive</td>
<td>Host and Andersen, 2004</td>
</tr>
<tr>
<td>24</td>
<td>There is enough variety of pricing plans available</td>
<td>Kim et al. 2004</td>
</tr>
<tr>
<td>25</td>
<td>The range and variety of Value Added Services (SMS, Ring tones etc.) provided is comprehensive and competitive</td>
<td>Aydin and Ozer, 2005</td>
</tr>
<tr>
<td>26</td>
<td>The call quality (voice clarity) is good and call drops are minimal</td>
<td>Kim et al. 2004</td>
</tr>
<tr>
<td>27</td>
<td>The coverage area of the company is wide</td>
<td>Aydin and Ozer, 2005</td>
</tr>
<tr>
<td>28</td>
<td>The company has sufficient presence in different geographical areas through own offices or dealers, franchises</td>
<td>Aydin and Ozer, 2005</td>
</tr>
<tr>
<td>29</td>
<td>It is easy and convenient to take up a new cellular connection as well as get recharges and top-ups</td>
<td>Lai et al. 2007</td>
</tr>
</tbody>
</table>
### 4.8 Statistical Tools and Techniques

**Descriptive Statistics**

- Frequency; Mean; Standard deviation; Percentages for demographical and psychological variables.

**Inferential Statistics**

- Correlation Analysis, Exploratory Factor Analysis, Structural equation modelling.

**Exploratory Factor Analysis**

To organize the variables into factors.

**Structural Equation Modelling**

To test the structural model of study, and test the hypotheses of the study.

### 5. EXPECTED CONTRIBUTION TO THE LITERATURE

This research is designed to help both academicians and practitioners understand the extent to which service quality, customer value, and customer satisfaction relate to customer loyalty in a mobile telecommunication services sector. The assessment of the most important attributes in mobile telecommunication services set up can provide important cues, which may be used to review characteristics of the sector as experienced by customers.
These cues can be used to improve customer value and customer satisfaction, which will lead to improved customer loyalty. Finally, this study contributes to the service marketing literature by applying concept of service quality, customer value, customer satisfaction, and loyalty in a mobile telecommunication services setting in India, as one of developing country in Asia.

6. LIST OF REFERENCES


7. THE PLAN OF RESEARCH

- Second Stage Literature Review-----30-45 Days (Approx.)
- Structural Designing of Research Instrument (Questionnaire)---------
  15-20 Days (Approx.)
- Pilot Test of Questionnaire--------10-15 Days (Approx.)
- Modifications in the Questionnaire (if any)-----5-10 Days (Approx.)
- Primary Data Collection with the Help of Field Survey Method---------
  40-45 Days (Approx.)
- Data Cleaning------------15 Days
- Statistical Analysis to Achieve the Stated Objectives of the Study------
  --------------------------20-25 Days (Approx.)
- Interpretation of Findings and Discussion of Results-------15-20 Days
  (Approx.)
- Thesis Writing in a Prescribed Format------2 Months (Approx.)