CHAPTER II
THE LITERATURE REVIEW

Introduction
This chapter presents the theoretical foundation based on the pertinent literature to the present research work by first reviewing the service quality concept, followed by criticism of SERVQUAL scale, service quality attributes and service quality attributes of telecommunication services. Afterwards, literature review related to customer value, and customer satisfaction is presented.

This is followed by review related to bivariate relationship between service quality and customer satisfaction. Next, review related to customer loyalty is presented. This is followed by review related to impact of service quality attributes on customer value, satisfaction, and loyalty. Finally this chapter will conclude with presentation of current research work to the services marketing literature.

Service Quality Concept
Services are described as something that can be bought and sold, but cannot be dropped on your feet. Various authors have defined services in different ways, but all contain a common theme of intangibility and simultaneous production and consumption.

Quinn, Baruch, and Paquette (1987) proposed definition for services as follows:
“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”.

Many authors (for example Gronroos, 1990, Bitran and Lojo, 1993, Parasuraman et. al., 1993 and 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.
4. The participation of consumer of service is essential to some extent.

To understand services completely all these four basic characteristics of services namely Intangibility, Heterogeneity, Simultaneous production and consumption, Perishability need to be considered by the consumers.

From customer point of view, the most flamboyant impression of service occurs in the moment of truth or popularly known as service encounter, when the customer directly interacts with the service firm. From the organization point of view, each moment of truth presents an opportunity
to prove its potential as a quality service provider and to increase customer loyalty. Moments of truth reflect the extent of service quality offered by the organizations for their customers, and add to the customer overall satisfaction about the quality of service. Every moment of truth involves an interaction between a customer and a service provider. Service encounter is a period of time during which customer directly interacts with a service (Shostack, 1985).

This interaction between service provider and customer need not be direct interpersonal interaction. Interaction may happen without any human interaction element. A service encounter occurs every time a customer interacts with the service firm. There are three general types of service encounters: remote encounter, phone encounters, and face-to-face service encounters. A customer may face any of these encounters individually or in combination in his/her interaction with service provider.

Remote encounters occur when customer interacts with the organization through internet website or with a mail order service through automated dial-in ordering. In remote encounters, the tangible evidence of the service and the quality of the technical processes and systems become the primary bases for judging quality of the services being provided by the service provider. Retail purchases, airline and railway ticketing, repair and maintenance troubleshooting are few examples of services available through internet.
In insurance and telecommunication organizations, the most type of service encounter between customer and the service provider occurs over the telephone, so here enters the phone encounter. In phone encounters, tone of voice, knowledge of employees, and efficiency and effectiveness on handling issues of customers becomes important criteria to evaluate service quality in these encounters.

A face to face service encounter is one that occurs between end consumer of service and employee of a service organization. In this type of service encounter, both verbal and non verbal behaviours are important determinants of service quality, as tangible attributes of service quality come into picture in interaction process. In this type of service encounter, the customers also play an important role in creating service quality for themselves through their own behaviours during interaction process.

As per the above discussion, to judge the quality of service it is imperative to have interaction between service providers and service consumers. In addition to product, place, price, and promotion, process, people, and service-scapes are also considered to evaluate the quality of services. Hartline and Jones (1996) found that many factors within service encounters can establish perceived value, whereas perceptions of quality and value may help in determining organizational effectiveness.
Perceived Service Quality

As we know that services are complex activities or group of activities, so quality of services will definitely be of complex nature. 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.

Quality has been defined differently by various authors. Some prominent definitions include ‘conformance to requirements’ (Crosby, 1990), ‘fitness for use’ or ‘one that satisfies the customer’. According to production philosophy of Japan, quality has been defined as ‘zero defects’ in the firm’s offerings. Though initial efforts in defining and measuring service quality emanated largely from the goods sector, a solid foundation for research work in the area was laid down in the mid-eighties by Parasuraman, Zeithaml and Berry (1985).

They were amongst the earliest researchers to emphatically point out that the concept of quality prevalent in the goods sector is not extendable to the
services sector. Being inherently and essentially intangible, heterogeneous, perishable and entailing simultaneity and inseparability of production and consumption, services require a distinct framework for quality explication and measurement.

As against the goods sector where tangible cues exist to enable consumers to evaluate product quality, quality in the service context is explicated in terms of parameters that largely come under the domain of ‘experience’ and ‘credence’ properties and are as such difficult to measure and evaluate (Parasuraman, Zeithaml and Berry, 1985).

One major contribution of Parasuraman, Zeithaml and Berry (1988) was to provide a terse definition of service quality. According to these authors service quality means relating the superiority of the service with the global judgement of a person about it and explicated it as involving evaluations of the outcome (i.e., what the customer actually receives from service) and process of service act (i.e., the manner in which service is delivered).

In line with the propositions put forward by Gronroos (1984) and Parasuraman, Zeithaml and Berry (1985, 1988) posited and operationalized service quality as a difference between consumer expectations of ‘what they want’ and their perceptions of ‘what they get.’ Based on this conceptualization and operationalization, they proposed a service quality measurement scale called ‘SERVQUAL’.
Quality has become a strategic tool in obtaining efficiency in operations and improved performance in business. This is true 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.

Parasuraman, Berry, and Zeithaml (1985) identified four 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 customer’s gap
Gap5---- customers’ expected service and customers’ perceived service performance gap

Authors in their empirical study came out with results that customers use service quality determinants as criteria in the evaluation of quality of the service being provided. They listed the service quality determinants in ten categories namely; access, communication, competence, courtesy, credibility,
reliability, responsiveness, security, tangibility, and understanding the customers.

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.

**Criticism of SERVQUAL**

Parasuraman, Berry, and Zeithaml (1988) developed SERVQUAL scale to measure the quality of service offered by various service organizations, but after 1988, many researchers across the world conducted different studies in different context to measure the reliability and validity of SERVQUAL. In
their studies, they found that SERVQUAL scale is not uniform in its applications. Researchers who criticized the SERVQUAL scale were Carman (1990), Babakus and Boller (1992), Cronin and Taylor (1992,1994), Teas (1993), Brown et al. (1993), Peter et al. (1993), and Van dyke et al. (1997,1999). Their criticism for SERVQUAL is given as under:

Lovelock (1994) extends and refines their proposed model to identify the total number of seven types of service gaps that can occur during the design and delivery of service offerings. According to Christopher Lovelock (1994), following seven gaps exist during design and delivery of service offering:

**Figure 3**

*Seven Gaps Exist During Design and Delivery of Service Offering*

1. **The Knowledge gap:** - Difference between what service providers believe about customers’ expectations and customers’ actual needs and expectations.

2. **The standards gap:** - Difference between management’s perceptions of customer expectations and the quality standards established for delivery of services.

3. **The delivery gap:** - Difference between specified standards of delivery and the service provider’s actual performance on these standards.

4. **The internal communications gap:** - Difference between what the company’s advertising and sales personnel think are the features of product, performance, and service quality level and what the company is actually able to deliver.

5. **The perceptions gap:** - Difference between what is, in fact, delivered and what customers perceive they have received.

6. **The interpretation gap:** - Difference between what a service provider’s communication efforts promise and what a customer thinks was promised by these communications.

7. **The service gap:** - Difference between what customers expect to receive and their perceptions of the service that is delivered.
<table>
<thead>
<tr>
<th>Study (Author &amp; Year)</th>
<th>Research Instrument</th>
<th>Reliability (Cronbach’s alpha values)</th>
<th>Factor Structure</th>
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</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 responsiveness and assurance dimensions loaded on a single factor</td>
</tr>
<tr>
<td>Finn and Lamb, 1991</td>
<td>Original 22 items</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 22 items</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 22 items</td>
<td>0.85 to 0.90</td>
<td>Unidimensional structure</td>
</tr>
<tr>
<td>Kettinger and Lee, 1994</td>
<td>Original 22 items</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 22 items</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 in 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.

Table 5

<table>
<thead>
<tr>
<th>Issue</th>
<th>Problem</th>
<th>Literature</th>
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<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>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</td>
<td>Multiple definitions of expectations</td>
<td>Teas, 1993, 1994</td>
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‘expectation’ construct result in a concept that is loosely defined and open to multiple interpretations. These various interpretations can result in serious measurement validity problems.

<table>
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<tr>
<th>Unstable dimensionality</th>
<th>A theoretical construction combined with the use of gap scores raise questions about the true factor structure of the service quality construct.</th>
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<tbody>
<tr>
<td></td>
<td>Carman, 1990; Brensinger and Lambert, 1990; Finn and Lamb, 1991; Parasuraman et al., 1991; Babakus and Boller, 1992; Cronin and Taylor, 1992</td>
</tr>
</tbody>
</table>


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.

**Service Quality Attributes**

Zeithaml in 1988 bring into being that customers organize information at different levels of abstraction varying from simple attributes of products (goods and services) to complex personal values. Perceived quality had been modelled as second order phenomenon, whereas quality had been considered as lower level attribute.

Attributes of quality can be divided into two main categories like; intrinsic attributes and extrinsic attributes (Olson and Jacoby, 1972; Olson, 1977). Intrinsic attributes comprise of physical composition of products like; size, shape, colour, flavour, taste, style, fitting etc. Intrinsic attributes of the products cannot be changed without changing nature of the products and essentially these intrinsic attributes are consumed simultaneously with the product (Zeithaml, 1988).

Extrinsic attributes are general in nature and are not related to the physical composition of the products. These attributes are taken as general indicators for the quality of the products like; price of product, brand name, advertising level etc. (Olson, 1977). Besides this, Zeithaml (1988) suggested that both intrinsic and extrinsic attributes of products are important to signal their quality, but the importance varies from one situation to other.
Situations, when extrinsic attributes are more important to consumers to assess quality:

- Difficulty in evaluation of quality of product.
- In case of unavailability of intrinsic attributes.
- Time constraints in evaluation of intrinsic attributes.

Situations, when intrinsic attributes are more important to consumers to assess quality:

- High predictive value of intrinsic attributes to assess quality
- In the information search step of consumer buying process.
- During consumption of the product.

Hartline and Jones in 1996 found that in the literature, many studies had been conducted to find the attributes of the tangible products (goods), but there are very less studies focusing on the issue of identifying attributes to judge the quality of intangible products (services).

Due to intangible nature of services, it is very difficult for the customers to assess the quality of service on the basis of intrinsic attributes; therefore customers prefer extrinsic attributes to infer service quality. Intrinsic attributes like; size, shape, colour, flavour, taste, style, fitting cannot help customers in assessing quality of service, because it is difficult to evaluate service before consumption.

As a result, extrinsic attributes like; price of product, brand name, advertising level, and word-of-mouth are very important to customers, as these act as indicators of good quality before actual consumption.
(Parasuraman, Zeithaml, and Berry, 1985, Zeithaml, 1988, and Hartline, and Jones, 1996).

Parasuraman, Zeithaml, and Berry (1988) in their study described about development of 22-item instrument in the assessment of service quality in four consumer service industries namely; banking, credit card, long distance telephone, and an appliance repair and maintenance. Authors found consistent attributes of perceived service quality across all the four service industries namely; tangibles, reliability, responsiveness, assurance and empathy.

Interaction between service consumer and service provider occurs in service delivery process, where consumers use equipment, physical facilities, communication material, and personnel as proxies for tangible attributes to judge the quality of service. Parasuraman, Zeithaml, and Berry (1988) refers equipment, physical facilities, communication material, personnel as “tangibles” and in their study concluded that good appearance of equipment, physical facilities, communication material, and personnel will lead to impact service quality judgement positively.

The “reliability” attribute is associated to the ability of the service provider to deliver the desired services dependably and precisely. The “responsiveness” attribute is associated to the willingness of the service provider to help the customers and provide service promptly. In the case when service provider shows promptness in the delivery of service, and shows helping attitude, consumer perceives that quality of service is good.
Customers are always facing difficulties in judging quality of service, if they have not experienced the service earlier. It is believed that level of customer trust plays vital role in the evaluation of quality of service made available by service provider. Trust is positively linked with the customer perception about the service quality.

The attribute termed “assurance” is linked with the ability of service provider to convey trust and confidence about quality of service to customers. Inability to provide personalized attention is found negatively related to the quality of service provided by service provider, and it was termed as “empathy”. Precise definition of each attribute of service quality is presented in the table below:

**Table 6**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibility</td>
<td>Physical facilities, equipment, appearance of personnel</td>
</tr>
<tr>
<td>Reliability</td>
<td>Ability to perform promised service dependably and precisely</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>Willingness to help customers and provide quick service</td>
</tr>
<tr>
<td>Assurance</td>
<td>Knowledge and courteous nature of employees and their ability to show trust and confidence</td>
</tr>
<tr>
<td>Empathy</td>
<td>Caring individualized attention the company provides to its customers</td>
</tr>
</tbody>
</table>
These above mentioned five service quality attributes got wide acceptance in the literature, although they suffer from mainly two constraints. First is that, they are general in nature and lack as specific attributes for consumers to judge quality of service offered to them by service providers (Hartline and Jones, 1996). Second weakness was that the attributes related to particular dimension vary over different service contexts (Babakus and Boller, 1992, Oliver, 1993, and Hartline and Jones, 1996).

These weaknesses in universal applicability of service quality attributes motivated worldwide researchers to examine more precisely intrinsic attributes of service quality. Crane and Lynch (1988) mentioned about relying of customers on referrals from others, experimental attributes, and employee attributes. Experimental attributes comprise of physical facilities, employee appearance, and dress. Whereas employee attributes comprise of competence, courtesy, interpersonal skills, and responsiveness.

Employee courtesy, errors in billing, and call provision characteristics had a major impact on perceived performance of customers and quality of residential telephone service (Bolton and Drew, 1991b). Darden and Babin in 1994 conducted study in retail store sector and concluded that discount pricing, store personnel, merchandize quality, and crowd had an impact on perceived quality of customers in retail stores.

Many researchers suggested that dimensions of service quality must depend on type of service under study. There are many services marketing
researchers, who conducted studies with respect to telecommunication services both in Indian and international contexts, and they modified the service quality dimensions to fit the telecommunication specific characteristics.

**Service Quality Attributes of Mobile Telecommunication Services**

Service quality has received a great deal of attention from both practitioners and academicians in the world. Lehtinen and Lehtinen (1982) conceptualized service quality as three dimensional construct namely: physical, interactive, and corporate. Service quality is the perception which results from comparison of expectations of customers and performance of service in actual part (Parasuraman, Zeithaml, and Berry, 1985).

In their further studies in this area, they pointed out that perceptions are not based only the outcomes of services, but it involve the service delivery process. Service quality comprises of attributes like; performance, features, conformance, reliability, durability, aesthetics, serviceability, and customers’ perceived quality (Garvin, 1988). SERVQUAL conceptualized as an instrument to measure the service quality consisting of the five dimensions namely; tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml, and Berry, 1988).
But over the years SERVQUAL was criticized by many researchers across the world like; Carman, 1990, Cronin and Taylor, 1992, Babakus and Boller, 1992, and Strandvik and Lijander, 1994.

The measurement of perceived service quality may remain a challenge for the researchers across the world. Past researches had suggested that dimensionality of service quality might depend upon type of service setup under study (Cronin and Taylor, 1992; Babakus and Boller, 1992).

Based on the above mentioned background, many studies had investigated different attributes, which help customers in determining service quality perceptions (Danaher and Gallagher, 1997; Woo and Fock, 1999; Johnson and Sirikit, 2002; Wang, Lo, and Yang, 2004; Moon-Koo Kim, Myeong-Cheol Park, and Dong-Heon Jeong, 2004, Olorunniwo, and Hsu, 2006; Lai et al., 2007; Abdolreza Eshghi, Sanjit Kumar Roy, and Shirshendu Ganguly, 2008).

A study in the New Zealand telecom services industry by Danaher and Gallagher (1997) conducted to conceptualize attributes required in personnel delivering the services to the consumers. Responses were collected from the respondents to find contributing factors of service quality in telecom services sector. The dimensions which emerged in their study were; friendliness, competency, clarity of voice, and time taken to respond. Authors found that compared to voice clarity and time taken to respond, competency and friendliness influence overall service quality.
The exploratory study conducted by Woo and Fock (1999) reported the different attributes of telecom service quality as perceived by the customers. The study was conducted in the Hong Kong mobile phone services sector. Four factors were obtained by conducting exploratory factor analysis with twenty attributes drawn from literature to assess mobile phone service quality. Authors mentioned four factors namely; customer service, pricing policy, transmission quality and network coverage, staff competence.

Johnson and Sirikit (2002) examined the applicability of SERVQUAL dimensions in Thai telecommunication industry. Data for the study were gathered from both landline and mobile users. The results suggested that the service quality concept in the Thai telecommunication industry is a multidimensional construct of service quality. Authors concluded the study that among five service quality dimensions, (tangibles, reliability, responsiveness, assurance, empathy) tangibles dimension emerged as most significant dimension.

Wang, Lo, and Yang (2004) conducted an empirical study in the China’s mobile communication market. They focused on measurement model of service quality based on SERVQUAL model, but with reasonable modifications to reflect industry specific attributes and culture of China. These modifications were based on focus group discussions and expert opinions. Network quality was created using two items resulted from focus group discussions and expert suggestions. Service quality scale was pilot tested with 80 respondents from China’s respondents.
Exploratory factor analysis of 22 items resulted into six factors namely; tangibles, reliability, responsiveness, assurance, empathy, and network quality. Consequently with the help of disaggregate approach, authors identified key drivers of service quality, customer value, and customer satisfaction and the effect of customer perceived sacrifice on customer value was emphasized.

They also checked for moderating effect of customer value on relationship between service quality attributes and customer satisfaction. Results of their study were indicating impact of service quality attributes and customer satisfaction on behavioural intentions statistically.

Moon-Koo Kim, Myeong-Cheol Park, and Dong-Heon Jeong (2004) conducted an empirical study in Korean mobile telecommunication services sector. The study was intended to investigate the effects of different features of service quality and switching barriers on customer satisfaction and customer loyalty. They proposed a structural model for their study and tested the model with structural equation modelling technique.

A sample of 350 respondents was collected by field survey approach of data collection in Korea. In the structural model, they found that service quality indicators like; customer support, call quality, value added services had positive and significant impact on customer satisfaction. Also results provided evidences of positive and significant effects of customer
satisfaction and switching behaviour on customer loyalty in Korean mobile telecommunication services sector.

Davis (2006) examined the loyalty phenomenon and to understand the role of logistics service in creating customer loyalty. This research also explored the loyalty phenomenon, which is conceptualized as a causal relationship between affective commitment and purchasing behaviour. The strength of this relationship is proposed to be moderated by calculative commitment, which involves the calculation of costs and benefits and the assessment of the investments made in the relationship, along with the availability of alternatives. Further, satisfaction influences the loyalty relationship differently. This research contends that satisfaction has a linear relationship to affective commitment, but its relationship to purchase behaviour is nonlinear, being more significant at the extremes.

Olorunniwo, and Hsu (2006) constructed to examine about the possibility that the typology of a service measurement scale may find the nature of service quality construct. Study was conducted in retail banking sector with primary data of 317 respondents from United States Metropolitan area. Confirmatory factor analysis resulted into five dimensions contributing to service quality (responsiveness, tangibility, reliability, knowledge, and accessibility). Results showed that satisfaction mediates the impact of service quality on behavioural intentions.
SERVQUAL instrument is a valid and reliable means for measurement of service quality (Lai, et al., 2007). Authors conducted an empirical study in China’s mobile communication industry in 2007. Study was intended to test the applicability of SERVQUAL scale. Exploratory factor analysis and confirmatory factor analysis results proved SERVQUAL scale as valid and reliable instrument to measure service quality. In their study, authors identified one more dimension to Five dimensional SERVQUAL construct, and the six dimensions were; tangibles, reliability, responsiveness, assurance, empathy, and service convenience.

Eshghi, Roy, and Ganguly (2008) conducted an empirical study in Indian mobile telecommunication services sector and concluded that reputation is intertwined with the perceived service quality and customer satisfaction, and with the help of public relation campaigns and innovative communication strategies, positive corporate reputation can be build and maintained, which ultimately help to increase customer satisfaction. The main objective of the research was to identify the underlying factors of service quality that determine customer satisfaction, repurchase intention and recommendation of mobile service to others.

Primary data for the study were collected in Indian cities namely Delhi, Kolkata, Mumbai, and Hyderabad. 32 variables related to service quality were considered for the study, which were identified from the past literature. Exploratory factor analysis and multiple regression analysis were used to derive the conclusions. Based on values of beta coefficients hierarchy of
factors was framed. In their analysis relational quality, competitiveness, reliability, reputation and transmission quality factors emerged as significant predictors of customer satisfaction. In hierarchy of factors competitiveness, relational quality, and reliability were more important than rest factors.

Saleeby (2008) surveyed 7 different restaurants in Lebanon and the correlation between perceived quality of service and customer loyalty was calculated using the Pearson r coefficient. The findings show a strong positive correlation ($r = 0.671$) between customer loyalty and service quality. Further analysis revealed that the SERVQUAL components of Assurance and Responsiveness are more highly correlated with customer loyalty than the other components.

Leu (2009) found a statistical difference between the perceptions of service quality between the organizational employees and customers surveyed on all four dimensions of service quality as measured by the e-SERVQUAL instrument. The results also confirmed a relationship between service quality and consumer loyalty. But author did not find any relationship between quality perception and consumer satisfaction.

**Summary**

Early conceptualizations of service quality are based on the disconfirmation concept in the literature of physical goods. 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 dimensions; Parasuraman, Zeithaml, and Berry in 1985, proposed ten dimensions; Parasuraman, Zeithaml, and Berry in 1988, proposed five dimensions Rust and Oliver in 1994 proposed three dimensions; Kettinger and Lee in 1994 proposed four dimensions; Avkiran in 1994 proposed six dimensions; Stafford in 1996 proposed seven dimensions; Bahia and Nantel in 2000 proposed six dimensions; Sureshchandar, Chandrasekharan, and Anantharaman in 2002 proposed five dimensions of service quality.

Till today the conceptualization and measurement of service quality perceptions have been the most controversial topics in the literature of services marketing including SERVQUAL measure of service quality.

A review of 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 telecommunication services, then customer value as one of the constructs, which is closely related to service quality requires to be elaborated.

**Customer Value**

In the twenty first century, key to successful business strategy is designing and delivering superior customer value. Consumers are constantly searching for and demanding value in goods and services offered to them in the marketplace. In the today’s marketplace and marketspace, value governs the show. Customers will not pay more than the worth of goods and services.

In a value conscious environment, sellers must focus mainly on value of their offerings to win the battle of competition successfully. Sellers can focus on one of the three ways in delivering value to the customers like; operational efficiency, product leadership or customer intimacy. Gutman (1982) showed that value has been working as a powerful force in governing individuals in all aspects of their lives and developed a model of value named as “Means-End Model”.
This model attempts to explain selection of good or service facilitates the achievement of desired end states. In the model, means are related to products or activities in which customers engage, and ends are states of value in terms of happiness; security; accomplishment. Different levels of products and their end states are displayed in the model as in figure below:

**Figure 4**

**A Value Hierarchy**

- **Desired End States**
  Describes the goals of individual or organization

- **Consequences**
  Describes the end user and product interaction

- **Attributes**
  Describes the good or service

In the model three levels of value are mentioned, in which ‘Attributes’ are at first level, ‘Consequences’ are at middle level, and ‘Desired end states’ are at top level of hierarchy. Attributes are related to physical properties of the products; consequences means all desired and undesired outcomes and finally desired end states are purpose, goals or core values of users (Woodruff and Gardial, 1996).

Based on the above description, it can be concluded that means-end theory suggests that there is a hierarchical organization of consumer perception and product knowledge (Gutman, 1982). This hierarchical organization ranges from attributes to consumption consequences to personal values (Attribute → Consequences → Values).

Reynolds and Gutman (1988) applied laddering technique for personal interview to determine the chain of Attribute → Consequences → Values. With the laddering technique, respondents are asked to name distinctive product features and to give reason why these features are imperative to them. After this, again those respondents are asked to provide justification for their answers.

The process of further probing lasts only when those respondents were not bale to justify their answers. Then they applied qualitative technique (Content Analysis) to analyze the result. Hierarchical value maps were constructed by counting total number of concepts and total number of relationships among concepts. By using these hierarchical value maps, main
results of laddering technique are summarized in terms of hierarchy (Attribute → Consequences → Values) from bottom to top. Laddering and subsequent qualitative content analysis have generated a great concern of disagreement. The main disagreement refers to the implied assumption that consumers are able to express their cognitive structure (Gutman, 1997).

Cronin et al., (1997) concluded in their study that practitioners have recognized that their customers are more and more searching for and demanding value in goods and services. Similarly, role of value in consumer decision-making process has started gaining prominence in academic literature and has been introduced as important construct in consumer decision-making model (Zeithaml, 1988; Heskett et al., 1990; Bolton and Drew, 1991a; Dodds et al., 1991). The focus of earlier consumer decision-making models was only on relationship between service quality and purchase intentions (Parasuraman et al., 1985, 1988, 1994; Babakus and Boller, 1992; Cronin and Taylor, 1992; Zeithaml, 1996).

In their studies, these authors introduced the construct of value as an important construct in consumer decision-making models to increase the understanding of relative importance of service quality and price in the prediction of consumer buying decisions. It is well known fact that in reality consumers do not always buy the highest quality service and they do not always buy the lowest cost service (Cronin et al., 1997). Zeithaml (1988) in an exploratory study collected the responses of consumers and derived four definitions of value as under:
1. Value is low price,
2. Value is whatever I want in a product,
3. Value is the quality I get for the price I pay, and
4. Value is what I get for what I pay

Based on these definitions, author suggested treating value as trade-off between the relevant gets and gives. Specifically, perceived value had been defined as overall consumers’ assessment of the utility of a product based on perceptions of what is received versus what is given up. These perceptions about reception and given up about the services vary from consumer to consumer in terms of various parameters like; quality, volume, convenience, spending of money, time, effort etc.

If perceived value is analogous to the concept of perceived product value, then Zeithaml (1988) suggests that service value can be considered to involve a trade-off between consumers’ evaluation of the benefits of using a particular service and cost incurred to get that service. Customers’ assessment of value of the service depends upon the monetary and non-monetary costs associated in getting these services and their frame of references (Zeithaml, 1988).

Bolton and Drew (1991) studied that customers’ characteristics and their tastes, monetary and non-monetary costs associated with getting services are not uniform. Because of these differences, authors concluded that assessment of service value differ from customer to customer. Anderson, Jain, and Chintaguta (1993) defined value in business market as the perceived worth in
monetary terms of the set of technical, economic, social, and service benefits received by the customer in exchange for the price paid for the products by taking into consideration the availability of products. Gale (1994) defined customer value as market perceived quality adjusted for the relative price of a good or service. Customer value is the value added that found by the customer’s experience after the customer has used a salient good or service produced by the supplier of products (Goodstein, 1996).

Woodruff (1997) attempted to consolidate the various views expressed by various researchers about the customer value, and identified few similarities as under:

- Customer value is linked through the use to some product
- Customer value is not determined by seller objectively, it is rather determined with the help of customer perception.
- Customer perception involves trade-off between give and get components.

Author also identified the differences in defining the constructs in terms of benefits, quality, worth, utility, time of purchase, during or after use of products. By taking into consideration all the matter, Woodruff (1997) defined customer value as a customer’s perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate or block achieving the customer’s goals and purposes in those situations.
He showed that this definition of customer value incorporates both desired and received value and stresses that value stems from customers' learned perceptions, preferences, and evaluations. Also this associates together with the goods or services with use situations and related consequences experienced by goal-oriented customers. Woodruff’s definition of customer value was anchored in a conceptual framework provided by a means-end model by Gutman (1982). Originally means-end model was intended to illustrate how customers classify information about goods or services in memory. Customer value plays an important role in understanding consumer behaviour (Parasuraman, 1997).

Perceived value can be assessed with the help of various methods and techniques (Anderson et al., 1993). Scaling is one of the technique can be used to assess perceived value. Scaling technique operationalized perceived value using a single item scale to capture consumers' overall value judgement on a statement. Later, Kotler (2000) argued that the concept of customer value is multidimensional. Therefore single item scale does not capture all dimensions of customer value construct.

These shortcomings about the dimensions of customer value construct motivated many researchers to work on dimensions of perceived value construct. Grewal et al., (1998) conceptualized perceived value construct as consisting of two dimensions namely; perceived acquisition value and perceived transaction value. They defined perceived acquisition value as the perceived net gains linked with the goods or services acquired.
It means that the perceived acquisition value of a good or service will be positively influenced by the benefits buyers believe they are getting by acquiring and negatively influenced by the cost incurred to acquire that good or service. They also defined perceived transaction value as the perception of psychological pleasure obtained from taking benefit of the financial terms of the price deal.

Perceived value is not only influential at the pre-purchase phase, but it also influences customer satisfaction, intention to recommend, and repurchase behaviour of the consumers (Parasuraman and Grewal, 2000). Because of above mentioned functions of perceived value, its importance has been increasing in consumer decision making process. Strategic thinking consists of concepts like value and value for money. Similarly, Cronin et al., (1997) also found in their study that consumer decision-making models with customer value explain more variance in purchase intentions as compared to those consumer decision-making models which include only service quality construct or cost factors.

**Summary**

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.

The results of past researches indicate that there is a relationship among perceived service quality, value, and customer satisfaction. The following is the explanation of the past literature and definitions on the concept of customer satisfaction.
Customer Satisfaction

Customer satisfaction has been the subject of much interest in the services marketing literature (Cardozo, 1965; Olshavsky and Miller, 1972; Oliver 1977, 1980, 1981, 1999; Churchill and Suprenant, 1982; Yi, 1989; Johnson and Fornell, 1991; Erevelles and Leavitt, 1992; Anderson and Fornell, 1994; Morgan et al., 1996; Danaher and Gallagher, 1997; Sharma et al., 1999; Woo and Fock, 1999; Mcquitty et al., 2000; Gerpott et al., 2000; Johnson et al., 2001; Johnson and Sirikit, 2002; Athanassopoulos and Iliakopoulos, 2003; Anderson et al., 2004; Kim et al., 2004; Wang et al., 2004; Aydin and Ozer, 2005; Gupta and Zeithaml, 2006; Zeithaml et al., 2006; Turel and Serenko, 2006; Lai et al., 2007; Abdolreza Shih, Sanjit Kumar Roy, and Shirshendu Ganguly, 2008), because of its potential impact on customer loyalty and customer retention (Oliver, 1980; Fornell, 1992; Cronin and Taylor, 1992; Anderson and Sullivan, 1993; Rust, Roland, and Zahorik, 1993; Anderson and Fornell, 1994; Bolton and Drew, 1994; Patterson and Richard, 1997; Cronin, Brady, and Hult, 2000; Lien and Chiao, 2001, Mittal and Kamakura, 2001; Caruana, 2002).

Expectations

Customer expectation model explains that feelings of satisfaction arise when customers compare their prior expectations with the perception of actual performance of good or service. The discrepancies arise when there is mismatch between actual performance results and prior expectations which result into disconfirmation.
Customer expectations have been investigated extensively in customer satisfaction/dissatisfaction and service quality literature. In satisfaction literature, expectations are viewed as anticipated performance made by customer about the levels of performance during a transaction process. The expectations consist of probability of occurrence of an event plus an evaluation of goodness or badness of the event (Churchill and Suprenant, 1982; Tse and Wilton, 1988). But researchers like; Bearden and Teal (1983), and Wesbrook (1987) argue that expectations are mainly perceptions of probability of occurrence of some event.

In service quality literature, expectations are conceptualized as normative expectations, which are alike to ideal standard in customer satisfaction/dissatisfaction literature (Zeithaml et al., 1991). Ideal expectations may be defined as ‘wished’ for level of performance (Miller, 1977). Swan and Trawick (1980) defined desired expectations as the level at which the consumer wanted the good or service to perform.

**Disconfirmation**

Evaluation of satisfaction judgement based on the comparison of consumers’ expectations and perceived performances conceptualized disconfirmation concept. Positive disconfirmation, negative disconfirmation, and zero disconfirmation are three states of disconfirmation. State of positive disconfirmation occurs when the performance of good or service is greater than the expectation. In negative disconfirmation state, performance of good or service is less than the expectation. Zero disconfirmation is the state when
expectation is met to the performance of good or service, also called the state of no disconfirmation.

The concept of disconfirmation is based upon Helson’s Adaption theory (1948). According to this theory, two people may perceive the same object in a different way based on their past experience that has caused a change in their neutral reference point.

Oliver and Sarbo (1988) stated that beginning with the early work by Cardozo (1965), the field of customer satisfaction matured into respectable research stream exemplified by variations on the expectancy disconfirmation model (Oliver, 1980; Churchill and Suprenant, 1982; Woodruff, Cadotte, and Jenkins, 1983). Other perspectives including equity (Huppertz, Arenson, and Evans, 1978) and attribution (Folkes, 1984) models extending satisfaction to the redress process (Day, 1980). Five process theories have been proposed such as:

1. Expectancy Disconfirmation Theory
2. Assimilation Theory
3. Equity Theory
4. Attribution Theory
5. Performance Theory

*Expectancy Disconfirmation Theory* is derived from two disciplines; organization behaviour (Ilgen, 1971), and social psychology (Weaver and Brickman, 1974). This theory consists of two processes. In first process,
expectations are formed and the second process is related with the disconfirmation of expectations through performance comparison. Consumers are supposed to form expectations about the performance of products prior to consumption (Oliver, 1980). Successive purchase and usage reveal actual performance levels that are compared to expectation levels. If the performance level of good or service is better than the expected level, the result is considered as positive disconfirmation. Result is considered as negative disconfirmation, if the performance level of good or service is worse than the expected level. Simple confirmation is the result if performance is as expected.

Assimilation theory provides basis for an expectation-oriented response tendency (Anderson, 1973). This theory assumes that individuals are unwilling to acknowledge discrepancies from previously held positions and therefore assimilate judgement towards their preliminary feelings for an object, which in concurrence with dissonance theory. So expectation predisposed persons would be predicted to act in response with satisfaction levels alike in emotional tone to their expectations.

In the context of customer satisfaction, Anderson (1973) propounded about this theory that product performance below expectations will be rated inferior than it is in reality, while product performance exceeds performance will be rated superior. In effect, consumers are thought to amplify ratings in the direction of the disconfirmation. Therefore, the disconfirmation influenced
consumers respond quite differently than the expectation influenced consumers.

*Equity theory* has received less attention in marketing literature (Huppertz et al., 1978). In their study, they suggested that consumers could illicit inputs and outputs for themselves and merchants and express their satisfactions or dissatisfaction with hypothetical situations. Later, Oliver and Desrabo (1988) propounded in their study that major variants of equity theory suggest that parties to an exchange will feel rightly treated, and satisfied if the ratio of their outputs to inputs is in positive sense. Satisfaction is thought to happen when the customer perceives his/her output to input ratio is proportionate to output to input ratio of another customer.

*Attribution theory* proposes that outcomes that can be construed as successes or failures bring forth causality inferences along the three dimensions such as: locus of causality; stability of the cause of the outcomes; controllability. Internally caused outcomes are ascribed to either ability or effort, and externally caused outcomes are ascribed to either task difficulty or luck. Later kinds of emotions were also included. Weiner et al., (1978) discussed locus of causality concept in the domain of successes. They concluded in their study that satisfactions scores are higher for ability and effort attributions as compared to the attribution to the task difficulty and luck.

Furthermore they showed that satisfaction describes internal locus attributions more regularly. Later, Folkes (1984) and Richin (1985) proposed
relationship between external attributions and satisfaction. In particular, Folkes (1984) showed that major attribution dimension for satisfaction is locus of causality. Therefore in domain of product success, satisfaction should be more evident for internal than the external attributions.

*Performance theory* focused on the fact that does performance able to overcome the tendencies of psychological response. Evidence for the performance effect can be found in survey approaches and experimental approaches to the study of good or service satisfaction (Wesbrook, 1981; Churchill and Suprenant, 1982).

Satisfaction is one of the most fundamental concepts in marketing domain. The traditional concept of satisfaction considers it as a rational concept, comparing expectations and perceived performances (Oliver, 1980). If the perceived performance is matched with expectations, customers are satisfied. If the perceived performances exceed the expectations, customers are delighted or highly satisfied. If the perceived performances fall short of the expectations, customers are dissatisfied. This concept has been supported by empirical evidence by Anderson and Fornell, (1994).

In recent past, there has been increased interest in the role of emotion in satisfaction. Some researchers argued that consumer emotions serve as independent variables, and cognitive satisfaction assessments serve as dependent variable. In contrast, other researchers treated these emotions as
dependent variables influenced by cognitive satisfaction judgements. Rust and Oliver, (1997) investigated consumer emotion as dependent variable.

Fournier and Mick (1999) propounded a contingency concept to guide future thinking and research on satisfaction. In their study, authors suggested that experience of satisfaction is the best thought mixture of cognition and emotion based upon context of consumption. Carroll (2004) supported this contingency concept with empirical evidence and suggested that satisfaction experience is mixture of cognition and emotion, and it can be operationalized as purely cognitive or purely emotional.

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):

- Customer satisfaction has been characteristically conceptualized as either completely emotional or completely rational.
- The response pertains to a particular focus.
- The response occurs at a particular time.

Customer satisfaction research has developed around two broad types of evaluations such as transaction specific satisfaction, and cumulative satisfaction (Johnson et al., 2001). Transaction specific satisfaction is a result of post purchase assessment of good or service (Oliver, 1993). Cumulative satisfaction concept is based on psychological approach, and it defines customer satisfaction as overall experience to date with a good or
service provider (Johnson et al., 2001). Based on extant body of literature on customer satisfaction, it can be concluded that customer satisfaction is post consumption judgement of the customers about the good or service consumed.

Summary

Customer satisfaction model explains that feelings of satisfaction arise when customers compare their perception of actual performance of good or service with their prior expectations. The discrepancies between prior expectations about the goods or services and actual performance of goods or services generate disconfirmations. 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.

After describing service quality and customer satisfaction measurement, it is imperative to review the literature on relationship between service quality and customer satisfaction.
**Service Quality and Customer Satisfaction Relationship**

Perceived service quality and customer satisfaction had commonly been conceptualized to be different, but interrelated constructs. The relationship between perceived service quality and customer satisfaction is still an ambiguity, whether perceived service quality is a predecessor of customer satisfaction or customer satisfaction is a predecessor of service quality.

Perceived service quality is a global assessment, or attitude, relating to the superiority of the service, whereas satisfaction is related to a specific transaction (Parasuraman et al., 1988). They conceptualized perceived service quality as long-run overall evaluation and customer satisfaction as transaction specific evaluation. Bitner (1990) argued that customer satisfaction is an antecedent of service quality. Later, Bolton and Drew (1991b) supported the argument that customer satisfaction is an antecedent of service quality. Based on concept that service quality is a long run evaluation of service, Lee et al., (2000) posited that incidents of satisfaction over time result in service quality perceptions.

In comparison to above arguments, some other researchers argued and empirically supported that perceived service quality is an antecedent of customer satisfaction. Cronin and Taylor, (1992) conducted an empirical study under the hypothesis that customer satisfaction would be an antecedent for perceived service quality. To test the causal relationship among customer satisfaction, service quality, and purchase intention, they used structural analysis approach.
In the structural analysis results, path coefficients for Service Quality → Customer Satisfaction → Purchase Intention were found significant, whereas path coefficients for Customer Satisfaction → Service Quality → Purchase Intention were found insignificant. Based on the results of their study, authors concluded that perceived service quality is an antecedent of customer satisfaction. Spreng and Mackoy (1996) tested the hypothesis framed on the basis of the past study conducted by Oliver (1993) that service quality influences customer satisfaction.

The results of the study supported the arguments made by Oliver, (1993). Fornell et al., (1996) developed ASCI as a new type of market based performance measure for firms, industries, economic sectors, and national economies. This measure consists of a set of equations that link perceived quality, customer expectations, perceived value to customer satisfaction.

In the results, it was found that perceived quality had greater impact on customer satisfaction as compared to perceived value. The results were consistent across all the firms, industries, economic sectors, and national economies. Lee et al., (2000), conducted an empirical study across three service settings (Entertainment Park; Investment Consulting firm; Aerobic School). In their study, they modelled service quality as an antecedent to customer satisfaction based on the fact that customers can evaluate the object only after they interpret the object. These results provided empirical evidence to the fact the service quality leads to customer satisfaction. The findings of
this study are consistent with results of past studies conducted by Cronin and Taylor, (1992); Oliver, (1993); Spreng and Mackoy, (1996).

Fehl (2006) investigated the subject of service quality and its relationship to customer satisfaction in the context of industrial business-to-business technical field service. A modified SERVQUAL scale was utilized to ascertain the functional dimensions of service quality specific to the industry and service context under study. Factor analysis was employed to determine the relevant functional quality dimensions as well as to establish the applicability of the outcome quality construct in field service. Structural equation modeling was utilized to evaluate the suitability of two alternative field service quality models. The results suggest that the outcome quality dimension should be included along with functional quality as factors of the higher order latent construct “Field Service Quality”. The study also examined the overall service quality and customer satisfaction relationship as part of a larger field service quality model. Statistical analysis confirmed that these two variables are distinct, though highly correlated constructs. Nominal variables such as service market segment, and service payment type were examined for their influence on levels of overall service quality and customer satisfaction.

Jeon (2008) found six attributes of mobile internet service were identified; ubiquity, localization, personalization, reachability, convenience, and instant connectivity. Based on the results of this study, among attributes of mobile internet service, three attributes -- ubiquity, reachability, and instant
connectivity – were found to have significant effects on mobile internet service quality. In addition, mobile internet service quality also had a direct effect on continuance intention. Mobile internet risk did not affect mobile internet service quality, and also did not affect mobile internet service satisfaction and continuance intention, respectively.

**Summary**

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.

The focus of current research is to study the impact of service quality attributes on customer value, satisfaction, and loyalty. Now it is important to review the literature on customer loyalty construct.

**Customer Loyalty**

Customer loyalty is all about attracting the right customers, getting them to purchase, purchase often, purchase in large quantities, and bring in more customers. It expresses the behavioural intention related to goods or services. 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 cannot 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.

**Summary**

The concept and the measurement of customer loyalty can be classified into two three phases. First, customer loyalty was simply defined as customer behaviour. Second, researchers argued that measurement of customer loyalty is not only specific to behaviour, but also considers attitude of customer. Third, researchers measured customer loyalty by incorporating behavioural, attitudinal, and cognitive attributes simultaneously.

Customers become loyal to the service organization based on their prior knowledge or beliefs. Then, after they have experience with the service
organizations, a favourable attitude may be formed, and finally the customers are willing to patronage the same service organization again. Loyal customers can tell affirmative things to other people about the service provided by service organization.

In addition, the customers are keen to persist to get the service at the service provider even if the price of the service charge is getting amplified. Customers will also have strong preference on this service provider in the sense that the service provider is the first preference of their mind when they require service.

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

Bolton and Drew (1991b) developed a model of how customers with past experiences and expectations gauge performance levels of service offered, overall service quality, and customer value. The study was conducted for local telephone service users. With the help of this model, residential customers assess the provided service.

The results indicated that those residential customers’ assessment of overall service quality, and customer value is a primary function of disconfirmation arisen from discrepancies between expected and perceived performance levels of service. Further direct impact of perceived performance levels on overall service quality assessment and customer value was also determined.
Cronin and Taylor (1992) developed a model to criticize the SERVQUAL model of service quality. In their model, they criticized the conceptualization and measurement aspects of service quality.

The study intended to examine: (i) the significance of the linkages between service quality and customer satisfaction, and (ii) the impact of service quality and customer satisfaction on purchase intentions. They concluded that service quality is an antecedent of customer satisfaction, customer satisfaction has a significant impact on purchase intention and service quality has also a significant impact on purchase intention but this impact is less as compared to impact due to customer satisfaction.

Boulding et al., (1993) developed a service quality model and named it as behavioural process model of service quality. Authors proposed and estimated a process model of service quality that traces the way customers form and update their perceptions of service quality. Also this model identifies the consequences of these perceptions on individual level behavioural intention.

Perceptions of the dimensions of service quality are viewed as the function of a customer’s past expectations of what will and what should become obvious during a service encounter as well as the customer’s latest contact with the system of service delivery. These perceptions of service quality dimensions form basis for individual’s perception of overall service quality. Consumers’ intended behaviours are predicted on this basis. Findings from the tested
model indicated that the two different types of expectations have contradictory effects on perceived service quality and that perceived service quality positively affect behavioural intentions. In their results, reliability was found as the key driver of overall service quality.

Hartline and Jones (1996) propounded a model (Service quality attributes → Service Value → Consumers’ behavioural intentions) to examine the process of delivery of service quality and value, their effect on consumers’ behavioural intentions. Their model was consistent with the models proposed by Bolton and Drew, (1991b), and Boulding et al., (1993). The study was conducted in context of hotel services.

The objectives of their study were: (i) For hotel services, what are the specific employee performance attributes that increase overall perceptions of service quality and value; (ii) For hotel services, what are specific attributes that increase word of mouth intentions. For the first objective, results revealed that performance of front desk, housekeeping, and parking employees have significant impact on overall service quality. In particular, performance of front desk employees had the strongest impact. The performance of front desk, and room service employees had a significant impact on overall value.

However, service quality had larger impact on overall value as compared to performance of front desk and room service employees. Impact of performance of bell service employees on service quality or value was not
found significant in the findings of the study. For the second objective of the study, results showed that both overall service quality and value increase consumers’ word of mouth intentions and the impact of overall service quality was quite less as compared to impact of overall value.

The only employee attribute having a direct impact on word of mouth intentions was the performance of housekeeping employee. The effect of overall value was quite larger than the effect of performance of housekeeping employee. Finally, authors concluded that the performance of front desk employees has the greatest impact on consumers’ word of mouth intentions. Overall service quality and value were found mediating variables between employees performance attributes and consumers’ word of mouth intentions.

Mittal, Ross, and Baldasare (1998) proposed a model to examine the relationship among attribute level performances, overall satisfaction, and repurchase intentions. Among these constructs, they examined asymmetric and non-linear relationship. The study was conducted both for good and service contexts. Primary data was collected with the help of field survey method in health care and automobile sectors.

Empirical findings revealed that a negative performance on an attribute has a larger impact on overall satisfaction and repurchase intentions than positive performance has on the same attribute and overall satisfaction displayed declining feeling to attribute level performance. In the study it was also
found that attribute performance has both direct and indirect impact (through satisfaction) on repurchase intentions.

Cronin, Brady, and Hult (2000) conducted an empirical study to judge whether their proposed model yields a better fit to the data and accounts for a larger share of variance in behavioural intentions than the other competing models. In addition, they also investigated the indirect impact of service quality and service value on behavioural intentions. In the model, they included five constructs such as: Sacrifice; Service Quality; Service value; Customer Satisfaction; Behavioural Intention. The proposed model was as under:
Empirical findings revealed that their research model fits well in the data and outperforms the competing models proposed by other researchers. The results showed that service quality has a significant impact on service value, whereas sacrifice has no significant impact on service value. For customer satisfaction, both service quality and service value were found significant predictors.

In addition, evidences for direct impact of service quality on behavioural intentions; service value on behavioural intentions; customer satisfaction on behavioural intentions were found in the study. Authors found indirect impact of service quality on behavioural intentions through service value, and
customer satisfaction. Findings also supported the indirect impact of service value on behavioural intentions through customer satisfaction.

Based upon their study, they suggested conducting further studies based on same type of composite model with addition of some more decision making variables like tangible quality of services and expectations.

There have been numerous numbers of studies that focused on the issues of service quality and customer satisfaction, but studies on the relationship among service quality, value, customer satisfaction; customer loyalty in mobile telecommunication sector has been remained limited.

Athanassopoulos (2000) conducted an empirical research titled ‘customer satisfaction cues to support market segmentation and explain switching behaviour’ in the context of Greece. Study was based on primary data collected from customers of banks in Athens. The sample size for the study was 1800 respondents. Out of these 1800 respondents, 1200 respondents were individual customers and 600 were business customers.

The model for the study was tested with the data collected. In the results of the study, it was found that customer satisfaction is a function of service quality (staff service and corporate reputation), price, convenience, and innovativeness. Subsequently customer satisfaction was found to affect switching behaviour of the customers.
Gerpott et al., (2000) concluded that customer retention, customer loyalty and customer satisfaction are essential goals for the mobile telecommunications operators in Germany. Authors used structural equation modeling approach to analyze the data. In their findings, they showed that network quality, assessment of price and personal benefits had positive and significant effect on customer satisfaction. In case of customer retention, factors like mobile service price, personal service benefit perceptions and number portability were found to have the strongest effects.

Johnson and Sirikit (2002) conducted an empirical study in Thailand. The study was focused on both landline and mobile users of telecommunication industry in Thailand. Authors used the ‘SERVQUAL’ scale based on five service quality dimensions namely; reliability, responsiveness, assurance, empathy and tangibles. In the findings tangible dimension emerged as the most important factor. They could not find significant relationship between the service quality ratings and behavioural intentions of the customers.

Caruana (2002) conducted an empirical study in retail banking context and proposed a model exhibiting the mediating role of customer satisfaction in the effect of service quality on service loyalty.
The study was conducted among retail banking customers in Malta. Results of the study confirmed hypothesized relationships among the service quality, customer satisfaction, and service loyalty depicted in the research model.

This research work contributes to the body of knowledge by providing evidences for the argument that customer satisfaction performs mediating role in the relationship between service quality and service loyalty.

Authors suggested that other elements like; transaction satisfaction, value, corporate reputation can also contribute to satisfaction. This is consistent with ‘Service Profit Chain’ model suggested by Heskett et al., (1997).
Service Profit Chain model by Heskett et al., (1997) proposed links between profitability, customer loyalty, and employee satisfaction, loyalty, and productivity. The links in the chain as follows: (i) Profit and growth are stimulated primarily by customer loyalty, (ii) Customer loyalty is direct result of customer satisfaction, (iii) Customer satisfaction is largely influenced by the value of services provided to customers, (iv) Satisfied, loyal, and productive employees create value, (v) Employee's satisfaction, in turn, primarily from high quality support services and policies that enable employees to deliver desired results to customers.

Athanassopoulos and Iliakopoulos' (2003) conducted a study in Europe. Data were collected from of the residential customers. Study was intended to measure the performance of a European telecommunication company. Empirical findings of the study proposed that customer perceived performance (i.e., satisfaction, recommendation to others, relationship and value for money) were affected by product performance (satisfaction, directory enquiries, branch network, billing and corporate image).

Kim et al., (2004) proposed a structural model to examine the effect of diverse service features and switching barriers on customer satisfaction and loyalty. Focus of the study was the Korean mobile telecommunication services sector. Primary data were collected for the research through survey. Proposed structural model was tested with the help of Structural Equation Modeling technique. Empirical findings showed that call quality, value added
services and customer support had positive and significant impact on customer satisfaction. Further, they concluded that customer satisfaction and switching barrier had a significant and positive impact on customer loyalty.

Wang et al., (2004) conducted an empirical study in Chinese mobile telecommunication services sector. Data were collected from consumers using mobile telecommunication services. In their research, they examined the impact of quality-related factors on customer value and customer satisfaction. Authors used the ‘SERVQUAL’ (Parasuraman et al., 1988) scale to measure service quality. In addition, they added "network quality" as another antecedent of customers' perceived service quality.

To test the integral model, they employed Structural equation modeling technique. Based on the Structural equation modeling results, they concluded that all the dimensions of service quality had a significant and positive effect on customer satisfaction. Lastly, moderating effect of customer perceived value was found on the service quality and customer satisfaction link.

Aydin and Ozer (2005) conducted an empirical study to examine the impact of service quality, perceived value, customer expectations and complaint handling on customer satisfaction. The study was conducted in Turkish context. Primary data were collected from the Turkish mobile telephone users. To test the structural model, authors used Structural equation modeling technique. Structural equation modeling results confirmed that service quality, customer expectations and complaint handling had a significant and
positive impact on customer satisfaction. Authors concluded that among all constructs, service quality construct had the strongest effect as compared to all other constructs.

Trasorras (2008) suggested based on the findings of study that value driven loyalty is a major component in customer repurchase intent. This combination, more so than any other in this study, proved to be the most powerful drivers in the customers’ decision to remain a customer. The variables of service, quality, image, and price (SQIP) proved to be powerful drivers behind assessing value and developing loyalty in the customer. The correlation between each of these and customer retention were revealed to be very significant in this research.

Chadha and Kapoor (2009) attempted to examine the effect of switching cost, service quality and customer satisfaction on customer loyalty in the Indian mobile telecommunication services. Primary data was collected from users of GSM services in two cities (Ludhiana and Chandigarh) in India using convenience sampling method. Sample size = 220 out of 300.

The data was analyzed by regression analysis ($R^2 = 0.670$). The study shows that the switching cost (beta value = 0.161), service quality (beta value = 0.266) and customer satisfaction have positive association with customer loyalty. However, the customer satisfaction (beta value = 0.393) was found to be the best predictor of customer loyalty.
Santouridis and Trivellas (2010) investigated the crucial factors that lead to customer loyalty in the mobile telephony sector in Greece, namely service quality and customer satisfaction. Furthermore, the mediation effect of customer satisfaction on the service quality and customer loyalty relationship was also examined. Field research was conducted. Sample size = 205. The questionnaire was formed by a synthesis of existing constructs in relevant literature.

The main research target sample consisted of residential non-business mobile phone users in Greece. Reliability tests and statistical analyses were performed to both confirm scale validity and reliability and answer the research questions. **Customer service (0.262), pricing structure (0.232) and billing system (0.148)** are the service quality dimensions that have the more significant positive influence on customer satisfaction, which in turn has a significant positive impact on customer loyalty. The mediation role of customer satisfaction on the service quality and customer loyalty relationship has also been confirmed.
Summary

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 are a very few researches, which have investigated the effect of service quality attributes on perceived customer value, satisfaction, and loyalty especially in Indian mobile telecommunication service sector.
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.