
Conceptualization of Service Quality with Special Focus on Telecom Sector

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The main objective of this paper is to study the existing conceptual models of service quality, the way they have been adopted for the use in telecom sector and to propose the multiple dimensions of telecom service quality. The paper summarises multiple definitions of service quality and conceptual models and dimensions of service quality. The review of past studies provides list of dimensions considered in empirical studies by researchers for different services of telecom sector. The study considers service quality as a multidimensional construct where the following dimensions have been proposed - provision of service, Network performance, Billing performance, Employee competency, Tariff plan perception, Value-added service perception, and complaint resolution. In future an empirical study can be performed to test the reliability and validity of these dimensions in Indian telecom sector to measure the service quality.

Key Words: SERVQUAL, Service quality, Telecom

INTRODUCTION

Indian telecommunication industry is one of the fastest growing in the world because of wireless revolution. It mentions that India has the second largest number of telephone subscribers in the world after china accounting for 12% of the world's total telephone subscribers (Indian Brand Equity Foundation, 2012).

The unprecedented growth in telecommunication technologies and markets has increased the variety of services and providers available to consumers. Competition has brought lowered the prices for advanced services, opening the market to millions of new consumers, who are becoming more sophisticated and demanding. Price is no longer the sole factor in purchasing decisions. Quality has emerged as the key. However the information about quality of service is hard to obtain, even if it is already available. Today's world of intensive competition requires firms to maintain the capability of high-quality service as sustainable competitive priority. Higher quality service providers will satisfy customers, leading them to become loyal customers. Thus the paper represents conceptualization of service quality and its dimensions used to measure service quality.

RESEARCH OBJECTIVES

The following are the research objectives of the study:

- To study the existing conceptual models of service quality adopted in telecom sector.

- To study the service quality concept and the conceptualized dimensions of service quality proposed by many researchers.
- To analyze the research studies which adopted SERVQUAL model and/or added other dimensions with SERVQUAL model to measure the service quality in telecom sector.
- To analyze the research studies which considered multiple dimensions to measure telecom service quality.
- To propose the multiple dimensions of service quality for telecom sector.

The paper discusses the different definitions of service quality and the models to measure service quality, related to telecom sector (SERVQUAL or modified and used SERVQUAL or considered completely a different set of dimensions to measure service quality). The study is concluded by extracting dimensions to measure service quality and explaining them in detail.

Service Quality concept

With the comparison of goods quality, Service quality is hard to be evaluated by customers. Overall service quality is derived by comparing expectations to perceptions of service received, where service quality focuses on process of delivery along with final outcome (Stylianou, 2006).

Grönroos (1983) suggested that service quality is fulfillment of expectations of customers; whereas Parasuraman et al (1985) explained it as a gap between expectation of service and perception of actual service experience, as mentioned by “differences between customer's expectations of services provider's performance and their evaluation of the services they received”. Parasuraman et al (1988) later gave the functional definition of service quality as “Global judgment or attitude, relating to the superiority of the service”. According to Kim (2009), “Bitner and Hubbert (1994) proposed a definition of service quality as the customer's overall impression of the relative

inferiority/superiority of the organization and its services”. Abidin (2008) researched that “Asubonteng et al. (1996) defined Service quality as the difference between customers expectations for service performance prior to the service encounter and their perceptions of the service received.

Bryson & Curry (2001) highlighted that service quality is to provide intangible things to please the consumers to give them some value. According to Gefan (2002), Service quality is the subjective comparison made by customers between the quality of the service that they want to receive and what they actually get, as mentioned by Abidin (2008).

Technically service quality is defined by Hannikainen et al (2002) as “the capability of a network to provide services and to fulfill user's expectations.” and by TRAI (2002) as “an indicator of performance of a network and of the degree to which the network conforms to the stipulated norms”.

Service quality is critical and dominant component in customer's evaluation process of any product (Zeithaml & Bitner, 2000). According to Cronin and Taylor (1994), “service quality is a form of attitude representing a long-run real evaluation”. Zeithaml (1988) defined service quality as 'the customer's assessment of the overall service excellence'. Ogwo & Igwe (2012) suggested that service quality is 'dependent on consumer's attitude, subjective and affective customer's perception on the service provider'.

Seth et al (2008) defined service quality considering both technical and functional aspect as “an indicator of customer's overall impression of services (concerning both functional and technical) delivered by an organization”.

To conclude, Service Quality is the overall perception of consumers towards the services they are experiencing in a service sector.

Conceptualization of Service Quality Dimensions

Lehtinen & Lehtinen (1982) discovered three dimensions of service quality named Physical quality, Corporate quality & Interactive quality. Physical quality referred to physical product and physical support; corporate quality referred to organization image, reputation and profile; interactive quality can be obtained from the interaction amongst customers or between personnel and customers of service organization. Lehtinen & Lehtinen (1991) further added two more dimensions in the previous study and they gave final five dimensions of service quality named Physical quality, Corporate quality, Interactive quality, Process quality and Output quality which was applicable for Lunch restaurants, Disco or Pub type of restaurants.

Grönroos (1984) referred to three generic dimensions of service quality: functional dimension, technical dimension and corporate image. The functional dimension answers the performance of the service; technical dimension is engaged to know what the customer gets; and corporate image is how the consumer perceives the service organization.

Edvardsson et al. (1989) expanded these two types of service quality and gave four aspects of quality named technical quality, functional quality, integrative quality and outcome quality where the technical quality refers to design of service system and personnel skills. Functional quality means manner of delivering the service. Integrative quality is related to how different parts of service system work together. Output quality is when actual service is delivered for promised service and which satisfies the expectations of customers.

Grönroos (1990) did further research for the determinants of service quality on the basis of his earlier model and referred to six determinants of perceived service quality named (a) Professionalism and skills, (b) Attitudes and behavior, (c) Accessibility and flexibility, (d) Reliability and

Trustworthiness, (e) Reputation and Credibility and (f) Recovery.

The previously mentioned research work gave the types of service quality perceived by customers, but Parasuraman et al. (1985; 1988) researched to address the issue of assessment carried out by customers for service quality.

Parasuraman et al (1985) developed GAP model - a service quality model based on gap analysis. They discussed seven major gaps in concept of service quality. According to them, service quality is the gap between expectations and performance for different dimensions of quality. They did focus group studies on service providers and customers and gave 10 determinants of service quality such as access (approachability and ease of contact), communication (informing and listening to customers), competence (possession of required skills and knowledge to perform the service), courtesy (manner and attitude of contact personnel), credibility (trustworthiness and honesty), reliability (consistency of performance and dependability), responsiveness (timeliness of service and willingness of employees), security (freedom from danger, risk or doubt), understanding (making an effort to understand the Customer's needs) and tangibles (physical evidence of service). To support the dimensions, Berry et al (1985) added that the service quality determinants for most of the consumer service industries are included in list.

Berry et al (1985) analyzed high degree of correlation between communication, competency, courtesy, credibility and security, so they created one broad dimension named Assurance, where on the other hand high degree of correlation between access and understanding, generated second broad dimension Empathy.

Later Parasuraman et al (1988) developed a SERVQUAL model. The service quality measurement instrument SERVQUAL used five dimensions Tangibles, Empathy, Assurance, Reliability, and Responsiveness, where Tangibles

means physical facilities, equipment and appearance of personnel; Empathy means caring, individualized attention; Assurance means knowledge and courtesy of employees & their ability to convey trust and confidence; Reliability means ability to perform the promised service dependably and accurately; Responsiveness means willingness to help customers and provide prompt service.

Johnston et al. (1990) carried similar research in ten service organizations of UK using empirical data which resulted in 12 determinants of service quality similar to ten determinants of Parasuraman et al. (1985). The determinants are Access, Appearance/aesthetics, Availability, Cleanliness/ tidiness, Comfort, Communication, Competence, Courtesy, Friendliness, Reliability, Responsiveness, and Security. The research was on the perception of management related to services instead of customer perception, so later Johnston & Silvestro (1990) added five more dimensions Attentiveness/helpfulness, Care, Commitment, Functionality, and Integrity with above mentioned 12 determinants for the study of retail banking. Johnston (1995) added another determinant named Flexibility with these 17 determinants.

Walker (1990) identified product reliability, a quality environment and delivery systems with good personnel service such as their attitude, knowledge and skills as key determinants of service quality.

Zeithaml et al (2006) mentioned that SERVQUAL model has been used in different cultures, context and countries to measure service quality in both commercial and public sector organization. Asubonteng, McCleary, and Swan (1996) suggested after literature study that the number of service quality dimensions varies industries-wise. Kettinger et al. (1994) studies Information system service quality using four dimensions except Tangibles. Opposite to the belief, Finn and Lamb (1991) found that the five dimensions are not sufficient in study of retail industry and they suggested that further refinement was needed.

SERVQUAL focuses primarily on the gap based scale to measure service quality whereas Cronin and Taylor (1992, 1994) developed SERVPERF to emphasize on performance only index and they took one factor measurement instrument instead of using five factors because they got less support in industries like banks, pest control, dry cleaning and fast food.

Later Sureshchandar, Rajendran, and Anantharaman (2003) identified five factors to measure service quality such as core service/ service product, human element of service delivery, systematization of service delivery: non-human element, tangibles of services and social responsibility.

Measurement of Service Quality in Telecom Sector

With the development of competitive market structure, innovative technologies, and interconnection of competitor networks in telecommunication industry, the complex challenge of maintaining high-quality service has aroused.

Some researchers measured telecom service quality depending upon the customer's overall and general evaluation of the experience they had with service providers and they didn't consider service quality as a multidimensional construct (Akroush et al., 2011; Aydin & Özer, 2005; Edward et al., 2010; Liu et al., 2011; Shin & Kim, 2008; Lai et al., 2009). Lee et al (2001) mentioned that mobile service providers should provide good quality of services to enhance customer commitment. Melody (2001) said that service providers have to meet the expectations and requirements of customers in terms of price and service quality.

SERVQUAL Adopted

Some researchers used and adopted the generic models like SERVQUAL to measure service quality for telecom services. Service quality dimensions proposed by Parasuraman et al (1988) has the broad application areas such as Telephone companies,

securities brokerage, insurance companies, banks and repair and maintenance. SERVQUAL has been widely used in telecommunication industries in different cultural context.

Leisen and Vance (2001) found that SERVQUAL is the best fitting model of service quality in US and Germany. They did the study for fixed line telephone services and found that service quality is important for overall customer satisfaction.

Johnson & Sirikit (2002) used SERVQUAL in Thai telecom market and Tangible was found to be most important factor of service quality from empirical investigation focusing mainly on fixed line and cellular mobile services.

Van der Wal et al. (2002) used SERVQUAL with some modification in South Africa's mobile telecommunication industry. Selvarasu et al (2006) used SERVQUAL to measure CDMA services in India and they found that Reliability, Assurance and Empathy influenced Airtel's service quality where as for Aircel tangibles and responsiveness were important.

Rahman (2006) investigated service quality for Indian cellular telecommunication Industry and found that Tangible dimension is extremely important for customers which is particularly employee's neat and professional appearance, where as empathy received lowest rating from the use of SERVQUAL dimensions.

SERVQUAL - with additional dimensions

Wang & Lo (2002) added one more dimension 'network quality' in SERVQUAL model to measure the service quality in china's cellular mobile services and they found that network quality and empathy are most important drivers of service quality and that each service quality dimensions has a significantly positive impact on customer satisfaction. Lai et al. (2007) also applied SERVQUAL model in china's mobile telecommunication market and they obtained service convenience as an additional important dimension of service quality.

Seth et al (2008) also adopted SERVQUAL model with some modification and added convenience and customer perceived network quality dimensions along for the study of cellular mobile services in Indian telecom sector and they found that 'Responsiveness' is the most important dimension to enhance service quality. Negi (2009) investigated to identify the role of service quality in overall satisfaction for the mobile subscribers of Ethiopian Telecommunication Corporation and added network quality, compliant handling and service convenience with SERVQUAL scale.

Service Quality - Multidimensional construct

Richters and Dvorak (1988) identified criteria for service quality especially for telecommunications industry named Availability, Reliability, Security, and Accuracy that customers use to judge the quality of communications functions. Noam (1991) testified the criteria cited by Richters and Dvorak (1988) adding Responsiveness and Courtesy along.

Ward and Mullee (1997) took dimensions named reliability, availability, security, assurance, simplicity, and flexibility to measure service quality and they argued from the perspective of customers that network quality cannot be separated from other quality dimensions in study of telecom services. Danaher and Gallagher (1997) researched for telecom sector of New Zealand and found that certain attributes such as friendliness, overall service quality and competency of personnel delivering the service influence the service quality strongly.

Woo and Fock (1999) investigated in Hong Kong mobile phone services sector to find the determinants of customer satisfaction with service quality. Through exploratory factor analysis followed by confirmatory factor analysis, they found four determinants named transmission quality and network coverage, pricing policy, staff competence, and customer service to measure customer satisfaction.

Kim et al (2004) revealed that service quality has positive impact on customer satisfaction for cellular mobile services and the issue of call quality impacts more on customer satisfaction. Barnhoorn (2006) included courteous and facilitating role of front-line personnel, ease of availability for cards and recharge services, availability of products and services at the company outlets, accurate information and facts about services, affordable prices of the packages, and customized services as salient dimensions of service quality for mobile phone users of South Africa.

According to Sutherland (2007), GSM association identified network access, service access, service integrity, and service retainability as the indicators of mobile phone service quality. Eshghi et al (2008) found thirty two attributes related to mobile telecommunication industry and derived six factors named relational quality, competitiveness, reliability, reputation, customer support and transmission quality through factor analysis. They were considered as service quality dimensions to test its effect on customer satisfaction and repurchase intention. The regression analysis results indicated that competitiveness and reliability had greatest effect on customer satisfaction whereas relational quality and reliability had highest effect on repurchase intention.

J.D. Power and Associates Survey (2009) investigated mobile user's satisfaction in UK and they included the dimensions such as coverage, call quality, promotions and offerings of incentives and rewards, prices of service, billing, customer, bundled services to measure service quality. Customer Satisfaction Index (2009) conducted a survey to get the satisfaction index of wireless phone users in USA and they included customer satisfaction, billing, brand image, call quality, cost of service and options for service plans as important dimensions of service quality in study. Akbar & Parvez (2009) proposed a conceptual framework and investigated the effect of perceived service quality, customer satisfaction and trust on customer loyalty for Telecom Company in Bangladesh with sample

size of 304 customers where the dimensions of Parasuraman et al. (1988) were taken to measure service quality. Lu et al (2009) developed hierarchical and multidimensional model to measure service quality which was composed of primary dimensions named interaction quality, environment quality and outcome quality where each had sub dimensions to measure it for mobile brokerage service users. Later Zhao et al. (2012) adopted the dimensions of service quality to assess its effect on customer satisfaction and continuance intention for mobile value-added services.

Santouridis and Trivellas (2010) suggested six quality dimensions including Quality of network, value-added services, mobile devices, customer service, pricing structure and billing system for the residential mobile phone users of Greece and the findings revealed that customer service, billing system and pricing structure have positive impact on customer satisfaction and customer loyalty in turn.

Paulrajan & Rajkumar (2011) studied the perception of consumers while selecting the service provider for cellular mobile telecom services in India. A comprehensive and integrated framework was developed to understand the relationship between dimensions like communication, call service, facilities, price, customer care and other service provider services. The study revealed that price and communication were most influential and preferential factors in selection of service providers and product quality and availability has significant impact on perception of customer in selecting service provider. Gil-lafuente and Luis-Bassa (2011) used the service dimensions for GSM service, which involves accuracy in billing, location of network, keeping records correctly, call time, call drop, voice clarity, interconnectivity, performing the service at the time designated, and wider coverage.

Nimako et al (2012) empirically validated SQ dimensions which are relevant to mobile services of Ghana and they found four relevant dimensions of

SQ which are Customer relations, Image, Tangibles and Real network quality.

Hosseini et al (2013) proposed and validated multidimensional measurement model of service quality for Iranian mobile phone subscribers, where value-added service, pricing plans and service convenience came out as most important dimensions out of seven dimensions for perceived service quality.

Previous Research studies on Service Quality for Telecom Services

The Table-1 given below provides the details of past research studies related to service quality of telecom sector. The dimensions considered for the measurement of service quality, the particular services (if any) to be measure for quality, and the location of study of selected telecom company or sector are concluded in table.

Table-1: Research summary on Service Quality for Telecom Services

Richters and Dvorak (1988)	Availability, Reliability, Security, and Accuracy	Quality of communication function	
Noam (1991)	Adopted Richters and Dvorak (1988) criteria	Responsiveness and Courtesy	
Ward and Mullee (1997)	reliability, availability, security, assurance, simplicity, and flexibility		
Danaher and Gallagher (1997)	friendliness, overall service quality and competency of personnel		New Zealand
Woo and Fock (1999)	transmission quality and network coverage, pricing policy, staff competence, and customer service	Mobile phone service	Hong Kong
Leisen and Vance (2001)	SERVQUAL	Fixed line telephone service	USA, Germany
Van der Wal et al. (2002)	SERVQUAL	Cellular mobile services	South Africa
Johnson & Sirikit (2002)	SERVQUAL	Fixed line and cellular mobile services	Thai
Wang & Lo (2002)	SERVQUAL Network quality	Cellular mobile service	China
Ranaweera and Neely (2003)	SERVPREF Price perception & indifference	Fixed line telephone service	
Kim et al (2004)	Call quality	Cellular Mobile services	
Selvarasu et al (2006)	SERVQUAL	CDMA services	India
Rahman (2006)	SERVQUAL	Cellular telecom	India
Barnhoorn (2006)	courteous and facilitating role of front-line personnel, ease of availability for cards and recharge services, availability of products and services at the company outlets, accurate information and facts about services, affordable prices of the packages, and customized services		South Africa
Arora et al (2007)	Problem Solving, Information and Records, Bells and Whistles, Network, Appearance, and Employee Attention	GSM mobile services	
Sutherland (2007)	network access, service access, service integrity, and service retainability	GSM Mobile phone service	
Lai et al. (2007)	SERVQUAL Service convenience	Mobile telecom	China

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Eshghi et al (2008)	relational quality, competitiveness, reliability, reputation, customer support and transmission quality	ETC Mobile services	Ethiopia
Seth et al (2008)	SERVQUAL Convenience customer perceived network quality	Cellular mobile service	India
Lu et al (2009)	interaction quality, environment quality and outcome quality	Mobile brokerage service users	
Negi (2009)	SERVQUAL network quality, compliant handling and service convenience	ETC Mobile service	Ethiopia
J.D. Power and Associates Survey (2009)	coverage, call quality, promotions and offerings of incentives and rewards, prices of service, billing, customer, bundled services	Mobile service	UK
Customer Satisfaction Index (2009)	billing, brand image, call quality, cost of service and options for service plans	Wireless phone service	USA
Akbar & Parvez (2009)	SERVQUAL Trust		Bangladesh
Santouridis and Trivellas (2010)	Quality of network, value-added services, mobile devices, customer service, pricing structure and billing system	Non business mobile phone users	Greece
Kothari et al (2011)	SERVQUAL, Convenience, network quality	Cellular mobile service	India
Jahanzeb et al (2011)	Communication Guarantee, Settlement Service, Value Added Service (VAS) and Technology Innovation	Cellular services	Pakistan
Paulrajan & Rajkumar (2011)	communication, call service, facilities, price, customer care and other service provider services	Cellular mobile telecom services	India
Gil-lafuente and Luis-Bassa (2011)	accuracy in billing, location of network, keeping records correctly, call time, call drop, voice clarity, interconnectivity, performing the service at the time designated, and wider coverage	GSM services	
Oyeniyi & Abiodun (2011)	SERVQUAL, Value offer, Trust	Telecom subscribers	Nigeria
Zhao et al. (2012)	Adopted Lu et al (2009)	Mobile value added services	
Nimako et al (2012)	Customer Relation, Tangibles, Image, Real Network Quality	Mobile services	Ghana
Chen & Cheng (2012)	Interactive Quality Core Quality	Mobile services	Taiwan
Hosseini et al (2013)	network quality, value-added services, pricing plans, employees competency, billing system, customer service and convenience	Mobile phone users	Iran
Lee (2013)	-	Mobile services	Korea

Dimensions Extracted

Reviewing the previous researches and the dimensions which have been used in past to measure service quality in telecom sector, the new mix of dimensions has been extracted.

The specific service quality attributes have been considered as the dimensions of overall service quality which are provision of service, Network performance, Billing performance, Employee competency, Tariff plan perception, Value-added service perception, and complaint resolution.

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Provision of service: Provision of service is available for customers before, during and after a purchase. It involves the easiness in process of activation or the ease of availability of recharge services or ease of availability of information which provides proper understanding related to tariff plans and charges. The studies in past considered some of these antecedents while measuring service quality, such as Ease of availability of recharge service (Barnhoorn, 2006), information (Arora et al, 2007), service access (Sutherland, 2007), service convenience (Lai et al., 2007; Seth et al, 2008; Negi, 2009; Kothari et al, 2011; Hosseini et al, 2013).

Network Performance: This attribute measure the performance of network of current service provider in terms of network quality, call quality, call drop, network area coverage, etc. Network quality (Wang & Lo, 2002; Arora et al, 2007; Sutherland, 2007; Seth et al, 2008; Lu et al, 2009; Negi, 2009; Santouridis and Trivellas, 2010; Kothari et al, 2011; Nimako et al, 2012; Hosseini et al, 2013), Transmission quality (Woo and Fock, 1999; Eshghi et al, 2008), network coverage (Woo and Fock, 1999; J.D. Power and Associates Survey, 2009; Gil-lafuente and Luis-Bassa, 2011), Call quality (Kim et al, 2004; J.D. Power and Associates Survey, 2009; Customer Satisfaction Index, 2009; Paulrajan & Rajkumar, 2011), call drop & voice clarity (Gil-lafuente and Luis-Bassa, 2011)

Billing Performance: For prepaid customers, the performance is dependent more upon recharge process or the availability of and information related to recharge service, and the charges levied upon the usage. For post-paid customers, the performance can be measured in terms of accuracy in preparing a bill, or the charges being deducted, proper clarity of billing amount and receiving the bill on time. J.D. Power and Associates Survey (2009), Customer Satisfaction Index (2009), Santouridis and Trivellas (2010), Hosseini et al (2013) have considered billing service while measuring service quality. Billing accuracy was considered in study of Gil-lafuente and Luis-Bassa (2011).

Employee Competency: The employee competency is important because of customer care service provided by them. If the customers are being treated in friendly manner with adequate knowledge so that their problems can be solved very easily, it can increase the customer perception towards the quality of service. The information on how to reach to customer care executive and the actual way to reach to customer care executives should be easy and hassle free.

Thus, the attribute describes the employee behavior in terms of their competency, friendliness, adequate knowledge and problem-solving ability and proper customer service support. The antecedents such as friendliness (Danaher and Gallagher, 1997; Barnhoorn, 2006), competency of personnel/ staff (Danaher and Gallagher, 1997; Woo and Fock, 1999; Arora et al, 2007; Hosseini et al, 2013), customer service (Woo and Fock, 1999; Eshghi et al, 2008; Santouridis and Trivellas, 2010; Paulrajan & Rajkumar, 2011; Nimako et al, 2012; Hosseini et al, 2013), problem solving (Arora et al, 2007) have been considered in previous research studies to measure service quality.

Tariff Perception: The attribute is related to the perception of customers for tariff plans and policies to test whether the price is reasonable, value for money or superior compared to others or not. Pricing policy (Woo and Fock, 1999; J.D. Power and Associates Survey, 2009; Santouridis and Trivellas, 2010; Hosseini et al, 2013), price perception (Ranaweera and Neely, 2003; Barnhoorn, 2006; Paulrajan & Rajkumar, 2011) have been considered for Tariff perception attribute.

Value-added Services (VAS) Perception: Value-added services are non-core services. In telecom sector, all the services beyond standard voice call services. Initially SMS, MMS, data access were value-added services but now a day they are considered to be core services as well. Caller tunes, Music Download, Location-based services, online gaming, live streaming, M-commerce services,

sports & infotainment services, missed call alerts, voice mail box, social networking, etc are considered value-added services these days. The service quality perception related to activation/ deactivation, charges, subscription process of value-added services should be considered.

The research on Customized services (Barnhoorn, 2006) in particular has taken place earlier and other studies (Santouridis and Trivellas, 2010; Jahanzeb et al, 2011; Hosseini et al, 2013) have considered value-added service as important factor of service quality.

Complaint Resolution: Complaint resolution is related to the mechanism of solving the problems and complaints of customers. It involves the ease of lodging a complaint, speed of processing it, informing customers about progress of processing. The antecedents named Complaint handling (Negi, 2009), settlement service (Jahanzeb et al, 2011) have been used in past.

CONCLUSION AND RECOMMENDATIONS

From the service quality concept, it can be concluded that Service Quality is the overall perception of consumers towards the services they are experiencing in a service sector. Reviewing the previous researches and the dimensions which have been used in past to measure service quality in telecom sector, the new mix of dimensions has been extracted. The specific service quality attributes have been considered as the dimensions of overall service quality which are provision of service, Network performance, Billing performance, Employee competency, Tariff plan perception, Value-added service perception, and complaint resolution.

The study reveals multiple dimensions to measure service quality in telecom sector. They have been extracted conceptually from the literature. It is recommended to identify the set of statements to measure each dimension of telecom service quality. In future, empirical study should be conducted to measure the effect of these conceptualized multiple

dimensions on overall service quality, and also to measure the reliability and validity of these dimensions together, with special focus on telecom services.

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