MEASURING VALIDITY OF DETERMINANTS OF CONSUMER SUBSCRIPTION BEHAVIOR IN TELECOM SECTOR OF PAKISTAN

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ABSTRACT

Organizations are changing the way they do business due to the competitiveness and dynamism of the business environment. Measuring customer satisfaction is a major concern of any industry to excel. Hence key challenge for the telecom sector is how to retain and increase customer's subscription rate. Service quality is an important factor which has a significant extent to customer's attitude and customer's subscription behavior. This study was conducted to examine the relationship between service quality and subscription behavior mediating by customer's attitude. The relationship between service quality dimensions (tangibility, reliability, assurance, empathy, and responsiveness) along with two additional dimensions convenience and network aspects using modified SERVPERF was investigated by personally administrating a questionnaire to the sample of 400 customers drawn using convenience sampling. The data collected was analyzed using different statistical tools. The findings suggest that service quality, customer's attitude and customer's subscription behavior are positively related to each other. It also supports that customer's attitude toward services mediate the relationship between services quality and customer's subscription behavior.

INTRODUCTION

Study of consumer behavior is very important for marketer because it makes possible to know and forecast the consumer's buying behavior in market place. Consumer behavior is not only related with what is bought by the consumer but also why the consumer bought, from where he bought, consumer purchasing and consumption pattern of goods and services (Brent, 1975).

According to Anilkumar and Joseph (2012), attitude is defined in term of the group of feelings or emotions and intentions together. It is not necessary that attitude against any service or product is always positive or negative. It encompasses several feelings and desires for concerned products or services. Basically it is long term evaluation which builds up the strong foundation for structuring the motivation, emotions, consumer awareness to its society and his perceptions comprehensively. Customer's mood, feelings and emotions may be impacted by attitude towards any product or service. Its loyalty and belongingness proves the strong belief of customer for any product or service which is the result of direct experience only.

It is necessary for the telecommunication companies to examine the intensity of customer's sensitivity and intention towards Service Quality to ensure service excellence. With the help of such information, telecommunication companies can emphasize on objectives and procedures of service quality to survive in market competition.

In past a lot of research has been conducted by several authors in this field (like Ahmad & Qazi, 2011; Khan, 2010; Ahmad et al., 2010) but the main emphasis of these researchers was only on the five dimensions of service quality which were described by the Parasuraman, Zeithmal and Berry (1988) in their SERVQUAL model.

The purpose of this study is to measure Pakistan Telecommunication sector clients' subscription behavior. Telecommunication market of Pakistan is perceived as the largest target market section in developing economies. All over the world there has been a lot of research conducted to determine the service quality intensity in relation with several other factors and variables but it is important to disclose that no research contribution is found is past literature.

REVIEW OF LITERATURE

In the early stages of service quality research, it was

common to measure customer's satisfaction to assess the service quality. At this point in time, it is more common to determine service quality as predecessor of customer's satisfaction (Cronin, Michael, Brady, Tomas and Hult, 2000). Early studies had very simple idea that the customer satisfaction result in positive financial benefits. However, now it is known that mere satisfaction does not guarantee continued service support. Therefore, recent research has shifted the focus of learning drivers of customer satisfaction to investigating the drivers of customer perceived attitude and behavior.

Quality as perceived by customers has drawn substantial attention in literature (Olshavsky, 1985; Jacobson and Aaker, 1987; Holbrook and Corfman, 1985). As soon as the customer has consumed the services customer perception is traditionally measured. Crosby, DeVito and Pearson (2003) mentioned that to understand quality, it is not mandatory that something is perceived in consumer mind upon first feeling. Phusavat and Kanchana (2008) explained the quality as a most important priority to achieve competitive advantage. In their research work, quality was given the higher weight 36.4 percent while service provided is given 20.4 percent , customer focus was given 12.9 percent and knowledge is given 12.5 percent weight. The rest of 9.8 percent weight was given to costs and 8.0 percent to flexibility. According to Anderson and Olsen (2008), an important driver to create customer equity is customer service and should be given much important to attract and keep the right customers at profit.

Olatokun and Nwonne (2012) pointed out that service quality lies in the minds of consumers. According to Johnson and Sirikit (2002), service quality reflects customer's expectations about a product or service. According to Wal, Vander and Bond (2002), quality is the degree of a product or service to meet or exceed consumer expectations. Amstrong and Kotler (2009) declared that attitude is a person's favorable/unfavorable feelings, assessment and action trend towards an idea or object.

Solomon, Bamossy and Askegaard (2002) supported the above mentioned views and stated that attitude is long lasting ordinary assessment of people towards a specific problem. Schiffman and Kanuk (2004) described attitude within the framework of customer's behavior as a stable tendency to behave accordingly in a real situation, regarding a certain object or a group of objects. According to Peter (1994) an attitude is a specific organization of emotions, motivation, cognitional processes, perceptional and responding to surrounding environment of an individual. Anilkumar and Joseph (2012) found that the attitude of consumers is a continuous process to evaluate the use of objects, human behavior or issue. Attitude guides a person's

feelings and also influence on behavior.Consumer behavior does not change very quickly. It shows the belongingness to the customer over the years due to several factors. Customer's attitude is a sketch to determine the new information / objects. Ultimately, the customer's attitude, which is stock up in memory of customer after his experience in the purchase decision play a crucial role. From these findings, they concluded that the impact of customer behavior is nothing else but attitude.

Customer's subscription behavior can be defined as a regular or within specified time series of routines purchasing of products/services. According to a Harvard business school professor Theodore Levitt, consumer behavior study is the company's most important educational priority, because a company's basic purpose is to produce and retain consumer. Different marketing strategies are used to create the customers. The marketing strategies' quality is based on knowing, entertaining and influencing customers (Brent, 1975).

Furthermore, Lovelock and Wirtz (2007) developed a model for service consumption which consists of three stages. First, the pre-purchase stage is a constituent of three components. First, the perception of need and the search for information that accordingly clarifies the need. Second, exploring the solution, the suppliers, and alternative service products which are identified by the consumer and third, the evaluation of the alternatives and the suppliers for a decision on purchasing the service or product. The second stage is the encounter stage, the moments of interface between a customer and a supplier. This stage involves a request from a supplier that has been chosen by the customer to supply the service or the product, or initiate self-service for which the payment may be straightforward or billed later. The third stage is an evaluation of the performance for the service or product encountered and its effect on future intentions. This is the stage in which satisfaction or dissatisfaction will occur and the loyalty decision will be made by the customer. In the process of purchasing or subscribing to a mobile telephony service, the customer assesses the mobile service based on experience of use and the rating is done in accordance to the mobile service attributes. As discussed by Khan (2010) the list of indicators for the cellular services quality are service retain- ability, network access, integrity and service access as identified by global system for mobile communication (GSM) association (Sutherland, 2007). Network aspect can be defined as customer perception about network service providers, such as conversation, voice quality, and network coverage and dropped calls. The final dimensional quality of service is convenient, we are referring to is how much the convenience of our customers find and access the ISP, and how to balance the

charging or paying bills. The following hypotheses are developed based on the above mentioned literature.

Hypotheses

Hypothesis 1. Services Quality (SQ) has significant impact on Customer's Subscription Behavior (CSB) in telecom services.

Hypothesis 2. Services Quality (SQ) has significant impact on Customer's Attitude (CA) towards services in telecom services.

Hypothesis 3. Customer's Attitude (CA) towards services has significant impact on Customer's Subscription Behavior (CSB) in telecom services.

Hypothesis 4. Services Quality (SQ) has significant impact on Customer Subscription Behavior (CSB) mediated by Customer's Attitude (CA) towards telecom services.

METHODOLOGY

The study is causal as it tests developed hypotheses based on earlier literature between service quality, customer attitude and customer subscription behavior. The scope of study is limited to the federal capital of Pakistan. The respondents are customers of telecom companies operating in Pakistan. The data was collected by personally administering questionnaire to a sample of 480 respondents drawn from a population of approximately 3 million using convenience sampling technique. 384 out of 520 were received. The response rate was 73%.

Research Instrumentation

Service quality elements tangibility and empathy items are adopted from Chadha and Kapoor (2009),

reliability, assurance and responsiveness items are adopted from Loke, Taiwo, Salim and Downe (2011),network aspects and convenience are adopted from Negi, (2009),Consumer attitude items are adopted from Kuo and Yen (2009) and Consumer subscription behavior items are adopted from Cronin, Michael, Brady, Tomas and Hult (2000).

RESULTS

The data was analyzed using different statistical tools in order to examine the assumed relationships between the service quality, attitude and subscription behavior. The following table 1 shows the mean, standard deviation and the correlation between the three variables of the study.

TABLE 1
Descriptive Statistics and Correlation

	Mean	S. D	SQ	CAA	CSB
SQ	3.5029	.6101	1		
CAA	3.6753	.8057	.7034	1	
CSB	3.6078	.9659	.6492	.7346	1

**. Correlation is significant at the 0.01 level (2-tailed).

Descriptive analysis of the study indicates CAA has high mean which is 3.675 and standard deviation is .8057. CSB have maximum standard deviation as 9.65 and mean is 3.607 whereas SQ have mean of 3.50 and standard deviation .6101 .Correlation indicates about to one to one relationship between variables. Result of correlation analysis indicates SQ have significant relationship with CAA (r=.7034) and CSB(r=.6492) whereas CAA and CSB relationship is also significant at(r=.7346).

Confirmatory factor analysis was also done to test measurement model. The main purpose of CFA is to test the data fitness to a hypothetical model to measure its construct. The model based on theory and previous researches.

| Sr. #	Variable	Source
1	Service Quality	Chadha and Kapoor (2009), Effect of Switching Cost, Service Quality and Customer Satisfaction on Customer Loyalty of Cellular Service Providers in Indian Market, S. K. The Icfai University. Journal of Marketing Management, Vol. VIII, No. 1
	i. Tangibility	
	ii. Empathy	
	iii. Reliability	Loke, Taiwo, Salim and Downe (2011), Service Quality and Customer Satisfaction in a Telecommunication Service Provider, International Conference on Financial Management and Economics. IPEDR vol.11
	iv. Assurance	
	v. Responsiveness	
	vi. Network Aspects	Negi, (2009), User's perceived Service Quality of mobile communications: experience from Ethiopia, International Journal

	vii. Convenience	of Quality and Reliability Management, Vol. 26
2	Consumer's Attitude	Kuo and Yen (2009), Towards an understanding of the behavioral intention to use 3G mobile value-added services", Computers in Human Behavior 25
3	Consumer's Subscription Behavior	Cronin, Michael, Brady, Tomas and Hult (2000), Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments Behavioral Intentions, Journal of Retailing Vol. 76, No. 2

Items	Variable	Estimate > 0.3	P-Value
Services provider's physical facilities are visually appealing. (e.g., ambience of outlet).	SQ-Tangibility	0.77	0.000
Services provider's employees appear neat and clean.	SQ-Tangibility	0.71	0.000
Materials associated with service (such as pamphlets, etc.), are visually appealing.	SQ-Tangibility	0.71	0.000
When the service provider promises to do something by a certain time, services are delivered as promised.	SQ-Reliability	0.58	0.000
Whenever I face any problem, the service provider staff is sympathetic and supportive.	SQ-Reliability	0.68	0.000
The service provider staff is reliable.	SQ-Reliability	0.75	0.000
The service provider staff keeps the transaction records accurately.	SQ-Reliability	0.57	0.000
The service provider staff tells the customer exactly when services will be performed.	SQ-Responsiveness	0.59	0.000
I receive prompt service from the service provider staff.	SQ-Responsiveness	0.59	0.000
Service provider staff is always willing to help the customers.	SQ-Responsiveness	0.72	0.000
Service provider staff does not appear to be too busy in responding customer requests.	SQ-Responsiveness	0.37	0.000
I can trust the service provider staff.	SQ- Assurance	0.68	0.000
I feel safe when performing transaction with the service provider staff.	SQ- Assurance	0.32	0.000
The service provider's staff is polite.	SQ- Assurance	0.91	0.000
Service provider's staff has enough knowledge to answer customer's questions.	SQ- Assurance	0.58	0.000
Services provider has employees who give you individual attention.	SQ- Empathy	0.97	0.000
Employees of services provider understand your specific needs.	SQ- Empathy	0.59	0.000
Services provider employees have your best interests at heart.	SQ- Empathy	0.46	0.000
Service provider's network has excellent voice quality.	SQ- Network Aspects	0.77	0.000
Service provider has wider network coverage.	SQ- Network Aspects	0.85	0.000
Service provider's network support no call drops.	SQ- Network Aspects	0.74	0.000

Service provider has sufficient offices in different geographic areas (e.g. franchises, customer care centers etc) to solve customer's problems.	SQ- Convenience	0.85	0.000
Service provider has toll-free numbers, websites etc. for clarification of problems, knowing account status etc	SQ- Convenience	0.43	0.000
It is easy to get scratch cards/easy load from or pay bill to the service provider.	SQ- Convenience	0.40	0.000
I think using this company services is good idea.	Customer's Attitude	0.78	0.000
I think using this company service facilitates me to keep in touch with my friends and family is a good idea.	Customer's Attitude	0.82	0.000
I like the way in which this service operator provide its services.	Customer's Attitude	0.70	0.000
I will use this services provider services in future.	Customer Subscription Behavior	0.78	0.000
I would recommend this services operator to others.	Customer Subscription Behavior	0.93	0.000
If I had to select services provider over again, I will make the same choice.	Customer Subscription Behavior	0.75	0.000

The table mentioned above depicts strong factor loadings that are ≥ 0.3 for all items of service quality, customer's attitude and subscription behavior of customers and the p-values of all items are .000 and less than 0.05 which is showing that the results are highly significant. This confirms that no item is excluded from the instrument so all items of service quality, customer's attitude and subscription behavior are valid and included in the instrument.

FIGURE 1
Estimated Structure Model
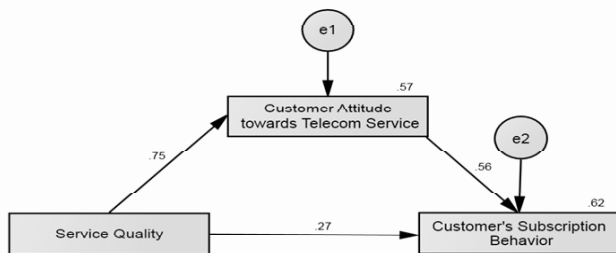
The figure 1 shows the structure model shows the relationship among service quality and customer's subscription behavior mediated by customer attitude towards telecom services. The structural equation model not only measures the direct impact of the service quality on customer subscription behavior but also it checks the mediating effects of the customer attitude towards telecom services on customer's subscription behavior.

TABLE 2
Index of fit of the Model

Goodness of Fit measures	Obtained Values	Suggested min/max Values (Hair et al., 1995)
Chi Square	6.019	
Df	2	
p-value	0.049	≤ 0.05
GFI	0.99	≥0.9
AGFI	0.97	≥0.8
CFI	0.99	≥0.9
RMSEA	0.07	≤0.05
Normed chi-square (chi-square/Df)	3.01	≤3.0

The results of the measures shown in table 2 clearly prove the desired fitness of the model (Chi-square/Df = 3 & p-value ≤ 0.05). The recommended values as discussed by Hair, Anderson, Tatham and Black (1995); McAulay, Zeitz and Blau (2006); Roh, Ahn and Han (2005) have been achieved. To test the model the study used Chi-square and GFI which are called absolute fit measures; CFI is an incremental fit measure; and Normed Chi-square and AGFI are parsimonious fit measures (Keramati et al., 2010) all these value indicate the best fit of our model on recommended level.

TABLE 3
Hypotheses testing based on regression weights

| Variables	Est-imates	S.E.	P	Results	Hypothesis Support
CSB<--SQ	0.267	.074	***	Accepted	Hypothesis1 is supported
CA <--SQ	0.752	1.0		Accepted	Hypothesis2 is supported
CSB<--CA	0.565	.056	***	Accepted	Hypothesis3 is supported

The study analyzes the relationship between service quality and customer subscription behavior. The beta value between these variables is 0.27 which shows that if there is one degree change in service quality, it would result in about 27% change in customer subscription behavior. The analysis highlights that the relationship between service quality and customer subscription behavior is highly significant ($p < 0.05$). Therefore, we can accept Hypothesis 1 i.e., Services quality has significant impact on customer's subscription behavior in telecom services.

The direct relation of service quality with customer subscription behavior was significant; the next step is to check the effect of service quality on customer attitude. The regression weights between service quality and customer attitude are 0.75. This shows that one degree change in service quality would bring about 75% positive changes in customer attitude. This analysis reveals that the relationship between service quality and customer attitude is statistically significant as $p = 0.000$ ($p <0.05$). Hence, Hypothesis 2 i.e. services quality has significant impact on customer attitude towards telecom services is accepted.

Similarly, the regression weight between customer attitude and customer subscription behavior is 0.56. This shows that one degree change in customer attitude would bring about 75% positive changes in customer subscription behavior. The relation between customer attitude and customer subscription behavior is also significant as $p = 0.000$ ($p<0.05$). The study concludes that customer attitude has a positive impact on customer subscription behavior. Hence, Hypothesis 3 i.e. attitude towards services has significant impact on customer's subscription behavior in telecom services is endorsed.

Lastly, this study discovers the mediating effect of customer attitude on customer subscription behavior. Here, the study analyzes mediation between service quality and subscription behavior using simple mediation process (Preacher and Hayes 2004).

FIGURE 2
Model with estimate regression paths

a=.9289   CCA   b=.6595

SQ   CSB

c= .1.0277) (c'=.4151)   (c= 1.0277)
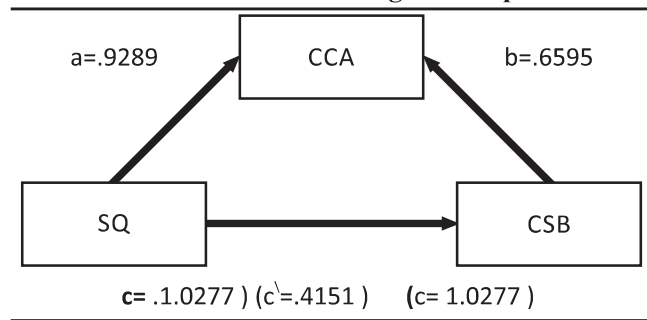
According to Preacher and Hayes (2004) simple regression analysis is conducted, path c of service quality and customer subscription behavior relationship is significant as $\beta = 1.0277$, standard error=.0615 and t is according to prescribed rule higher than 2 and this step t is 16.703. Service quality and customer attitude relationship beta is .9289, standard error is .0480 and t =19.365 and p is at significant level.CAA and CSB relationship is also significant at .0000 level were as beta=.6595, standard error=.0563 ,t= 11.71.Path c\ beta is .4151,standard error=.0743,t =5.584 all the results are according to prescribed rule. Result of analysis also indicates as c\ is significant so according to sobel (1982) this study have partial mediation. Direct effect is .4151 and indirect effect is .6126 hence total effects is 1.0277, normality is 10.01 of the study.

TABLE 4
Regression Analysis

Structural Path	β	S.E	t	p	Sig/Insig.
SQ-->CSB	1.0277	.0615	16.703	.0000	Sig.
SQ-->CAA	.9289	.0480	19.365	.0000	Sig.
CAA-->CSB	.6595	.0563	11.715	.0000	Sig.
SQ-->CAA-->CSB	.4151	.0743	5.5847	.0000	Sig.

TABLE 4.1
Indirect, Direct and Total Effect

Structural Path	Direct Effect	In-direct Effect	Total Effect	Z Value	Sig.
SQ-->CSB	.4151		1.0277	10.01	.0000
SQ-->CAA-->CSB		.6126			

Number of bootstrap samples = 1000, Level of confidence = 95%.

Beta value between service quality and customer attitude is 0.75 and beta value between customer attitude and customer subscription behavior is calculated as 0.56. These regression weights are higher than regression

weights of all other relationships of our structural model. The relationships are evident from the analysis that 75% change in customer attitude would be due to one degree change in service quality and 56% positive increase in customer subscription behavior would be due to one degree change in customer attitude. The p-values for both relations are 0.000 (p<0.5) which shows relationships between service quality and customer attitude and between customer attitude and customer subscription behavior are statistically highly significant. Hence, we accept H4 which states that services quality has significant impact on customer subscription behavior mediated by attitude towards telecom services.

CONCLUSION AND FUTURE DIRECTION

Telecommunication companies needed to investigate degree of customers' sensitivity and perceptions toward service quality for improve the overall subscription satisfaction. Telecommunication service provider companies would then able to strategically focus service quality objectives and procedures to fit the competitive market with sufficient information at hand.

The findings of this study provide insight into relationship between service quality, customer attitude and customer subscription behavior in the context of Pakistan telecom industry. As results predict, strong disparities were found regarding service quality, customer attitude and customer subscription behavior with respect to demographics variables e.g. gender, age groups, profession and income level.

On SERVPERF basis this study can be successfully applied what has been extracted from the literature of service quality of telecom/cellular sector with evidence, providing a base to understand the dynamic relationships among service quality, customer's attitude and customer's subscription Behavior. Other researchers should further scrutinize these dimensions and relationship with respect to telecom sector of Pakistan with additional samples before generalizations can be made. Furthermore, additional research is needed to find out whether some other factors/dimension in telecom sector of Pakistan should be included or not.

For future researches, it is suggested that the variables that affect service quality of Internet user on cell phone should be discussed. The new customer attitude towards the new technologies like 3rd Generation (3G) technology should be explored. This study is conducted on the basis of selected samples only with some selected group of mobile users; in the follow-up studies scope can be extend to other customer groups. Due to time constraint, convenient sampling method was adopted. So, in future studies can collect random sampling technique to collect the data on wider scale to reconfirm the projected model.

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