

A STUDY ON CUSTOMER SATISFACTION TOWARDS DIGITIZATION OF MOBILE TELECOMMUNICATION SERVICES IN DELHI

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The main aim of this exploratory study is to explore various dimensions of service quality in the services provided by mobile telecommunication industry, to determine the significant relationship between the service quality dimensions and the customer satisfaction and also to determine the relationship between customer satisfaction and loyalty towards digitization of mobile telecom services. The responses obtained from the respondents using services offered by the mobile telecom companies in Delhi are analyzed using various statistical techniques.

Key words: Customer Loyalty, Customer Satisfaction, Mobile Telecom Companies, Service Quality, SERVQUAL.

INTRODUCTION

Service organizations contribute a sufficiently large portion of the world economy and even a larger portion of Indian economy. This has led to an ultimate shift in understanding the chunk of marketing. The telecom services have been renowned the world-over as a significant instrument for socio-economic advancement for a country. It is one of the chief support services required for fast progression and upgrading of various segments of the economy. India's telecommunication network is the second leading network in the world based on the total figure of telephone consumers (both landline as well as mobile phone). It has one of the lowermost call charges in the world supported by the mega telephone networks and hyper-competition among them. The total telephone subscribers as on 31st December 2014 (including wireless and wireline) was 970.97 million out of which 572.29 million were urban telephone subscribers and 398.68 million were rural telephone subscribers. The total number of broadband subscribers as on 31st December 2014 were 85.74 million. It has the world's third-largest Internet user-

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base. According to a survey done by Internet and Mobile Association of India (IAMAI), the consumers using Internet in the country at the end of June, 2014 were raised at 243 million. As on 31st December, 2014, the private access service providers held 91.01% market share of the wireless subscribers whereas BSNL and MTNL, the two PSUs access service providers, held only 8.99% market share. The next stage of the mobile uprising is in full swing. The winners will be the companies who can create trusted services and business models without punishingly high costs or slow deployment times.

CUSTOMER SATISFACTION

“Sustaining an audience is hard,” Bruce Springsteen once said. Customer satisfaction is the point of satisfaction delivered by the goods or services of a company as evaluated by the number of replication of customers. It is well understood that companies must constantly did efforts to deliver customers with superior service, to each area of the business having flawless policies, rules, and supporting mechanisms to safeguard regularity during each interaction. Though, few companies can provide services regularly from corner to corner for customer journeys, even in meeting basic necessities. In a survey of nearly 200 high-ranking marketing managers, 71 percent of them responded that they found a customer satisfaction metric very beneficial in managing and monitoring their businesses. According to *Oliver (1997)*, customer satisfaction is the consumer's fulfilment response. Moreover, fulfilment is not necessarily limited to the case of met needs. *Kim, Park and Jeong (2004)* emphasized that customer satisfaction in telecom industry is determined by factors like voice call quality, wireless coverage, and the customer complaint process. It is found that “the most significant predictors of customer satisfaction are: competitiveness, relational quality, reliability, reputation, support features, and transmission quality”; *Eshghi, Kumar, & Gangui (2008)*. *Wicks & Roethlein (2009)* said that if the level of quality of services offered among customers is high, it will lead to the increase in loyalty towards the service provider.

REVIEW OF LITERATURE

Sw36an, Trawick, and Carroll (1982): They proposed an evaluative or cognitive opinion which analyses whether the product represents a satisfactory or poor result for its end users.

Parasuraman, Zeithaml and Berry (1988): They concluded service quality as the overall presumption of the customers about the excellence quality of services offered by

the service provider or it is the finding of gap between the desire or the expectation of customer and the actual quality of services offered by the retailer or the service provider to the customer. They further concluded that the desire or the expectation of the customers about the quality of services offered and the perception about the services offered are the parts of the definition of service quality.

Churchill and Surprenant (1995): They analyzed the responses given by the consumer in a proposed way for the procurement and usage of a product which derived from the assessment of the rewards and cost of purchase relative to those expectations.

Keaveney (1995): He found that customer satisfaction with the service, the overall quality of service perceived by the customer, perceived costs, and attitude towards behavior when a customer thinks about switching service providers, are predominant variables that impact service switching decisions of consumers.

Oliver (1997): He suggested that satisfaction is the user's fulfilment reaction. Moreover, fulfilment is not necessarily limited to the case of met needs. Over-fulfilment can be nourishing if it delivers supplementary astonishing pleasure; and under-fulfilment can be nourishing if it provides more pleasure than one anticipates in a given situation.

John (1998): He concluded that the balance between choice and perceived control depends upon the relative competences of customer and service provider (that is to make the choice or to exert control).

Wallsten (1999): He observed that the competition in mobile services, expressed by the number of mobile operators not owned by the incumbent, increases the percentage of subscribers to fixed line networks. Furthermore, the privatization of the mandatory operator is beneficial only when combined with self-regulated and autonomous regulation.

Gruber (2000): He found a complementary effect of mobiles and fixed telecommunications services in the study conducted for Central and Eastern European countries.

Gruber and Verboven (2001a): They estimated a logistic diffusion model with panel data to explain the growth of mobile industry across the European Union. They emphasized the significance of government instruction and technological advancement

for the progress of the industry. In precise, the rise in the subscribers' base was determined by the upsurge in the capacity and in the superiority of services through the shift from analogue to digital technology. Moreover, the diffusion of mobile services is amplified by the market rivalry in terms of at least two competitors in the market. They also argue that high level subscription to fixed line telephones has a negative influence on the diffusion of mobile telephones.

Gruber and Verboven (2001b): They measured the impact of government policy on the diffusion of mobile telephones in 140 countries worldwide. They find a significant impact of the competitive market structure, the effectiveness of licensing and standardization. They also suggested the presence of defensive behavior in successive market entries. Moreover, the existence of an incumbent-owned cellular operator has adverse impact on the diffusion of mobiles while its privatization influences the diffusion positively.

Wisniewski and Wisniewski (2001): They concluded service quality as one of the top priorities of firms at the present time because it gives the company a competitive advantage, helps sustain growth and increases efficiency.

Gebreab (2002): He examined the diffusion of mobile services in Africa using panel data and concludes that competition expressed by the number of operators has explanatory power for mobile connections.

Van-der-Wal, Pampallis and Bond (2002): They emphasized on the relationship between service quality, satisfaction and loyalty because research has shown a link among service quality and satisfaction.

Eshghi, Kumar, and Gangui (2008): They found that the most important predictors of customer satisfaction are: competitiveness, relational quality, reliability, reputation, support features, and transmission quality.

Ladhari (2008): He found the arguments for developing a modified scale as research suggests that the scale is more appropriate if it is country or context specific.

Wicks and Roethlein (2009): They found that if the level of quality of services offered among customers is high, it will lead to the increase in loyalty towards the service provider.

Gupta and Sharma (2009): They concluded that in order to retain customers and attract new customers, mobile service providers must provide “service with reasonable quality without any hidden price, the two most important determinants of consumer satisfaction”

Yuksel, Yuksel and Bilim (2010): They concluded that an increase in satisfaction is linked to an increase in repeat business and the willingness to recommend to other customers.

Alom, Khan, and Uddin (2010): They examined 60 university students in Bangladesh who were also mobile users, to recognize the element factors in choosing mobile service providers. Results of that study discovered two factors, brand image and perceived call rate, to have the most impact on the customers' selection decision of a mobile service provider in Bangladesh.

Wong (2010): He perceived that more loyalty, consequently retention, is detected in customers with ideal rate plans than those with non-ideal ones. This specifies that in order to decrease churn rates (i.e. loss of consumers), mobile service providers must seek effective customer retention strategies.

Bugel, Buunk, and Verhoef (2010): They observed commitment to companies, in The Netherlands, using the psychological investment model. The study examined the customer-company relationships in five sectors: the banking industry, health insurance, supermarkets, mobile telecom providers, and the automotive industry. The study recruited 300 respondents for each sector. With regard to satisfaction, the outcome of the study suggests that satisfaction plays a significant part in defining customer guarantee for service providers and there is a positive correlation between improving customer satisfaction and gaining customer loyalty.

Leelakulthanit and Hongcharn (2011): They explored the factors of customer satisfaction by interviewing 400 mobile phone users in Thailand. Their study revealed that promotional value, quality of customer service at shops and corporate image play the most important role in determining customer satisfaction.

Sadia, Tasneem, and Khan (2011): They observed customer loyalty in the telecommunication industry in Pakistan, using 146 cell phone users. They also concluded that satisfaction does not essentially lead to loyalty, while service quality was

found to be strongly and positively correlated with loyalty.

Rahman, Haque, and Ahmad (2011): They determined that network quality is one of the key issue in overall service quality. In addition to service quality, the study revealed that price plays a significant part in the choice criteria for mobile telephone operators in Malaysia.

Fazlzadeh (2011): They observed that customer satisfaction plays a significant mediating role in relationships from service quality, corporate image, and perceived value to loyalty.

Siddiqi (2011): He found that gender, age, and income differences determine customers' satisfaction, loyalty, and retention. For instance, women are found to be more reliable, more satisfied, and less expected than men to shift mobile phone services. The same results were observed for younger students, both mobile phone and credit card users. However, high income students were found to be less satisfied, less loyal, and more prone to shift both mobile phone and credit card services.

NEED OF STUDY

It is important to understand the needs of the customer and provide solutions in the form of products and services that actually meet those needs. It has been proposed that customer satisfaction of service value affect purchase intentions and behavior intentions. These behavioral intentions may be either positive, for example customer retention, loyalty intention, and word of mouth, or negative, customer defection or switching intention. When customers are spoilt for choice, the telecom companies need to create a competitive advantage as a way of differentiating themselves from each other.

RESEARCH GAP

Research Gap is basically the missing elements in the existing research. After reviewing the literature and discussions with the experts, the research gap was identified. Number of studies has been done to determine the factors affecting satisfaction of customers in various perspectives using the service quality model. As far as this study is concerned the research gap was identified as no study has been done yet to determine the factors affecting satisfaction of customers in digitized telecom service providers leading to the loyalty of customers using the SERVQUAL model. So by identifying the gaps the

researcher can know the factors affecting the satisfaction of customers using SERVQUAL and also the factors leading to the loyalty of customers towards the telecom service providers.

BROAD OBJECTIVES OF STUDY

The broad objectives of study are as follows:-

- (1) To explore the various services offered by mobile telecom industry in Delhi.
- (2) To establish a relationship between the service quality dimensions and satisfaction of customers towards digitization of mobile telecommunication services.
- (3) To establish a relationship between customer satisfaction and loyalty of customers towards services offered by mobile telecom industry.

HYPOTHESES OF STUDY

The following Hypotheses were formulated as follows:-

Here H_0 represents Null Hypothesis and H_A represents Alternative Hypothesis.

Hypothesis 1:-

H_01 : There is no significant relationship between service quality dimensions and customer satisfaction towards digitization of mobile telecom services.

H_{A1} : There is a significant relationship between service quality dimensions and customer satisfaction towards digitization of mobile telecom services.

Hypothesis 2:-

H_02 : There is no significant relationship between overall service quality and customer satisfaction towards digitization of mobile telecom services.

H_{A2} : There is significant relationship between overall service quality and customer satisfaction towards digitization of mobile telecom services.

Hypothesis 3:-

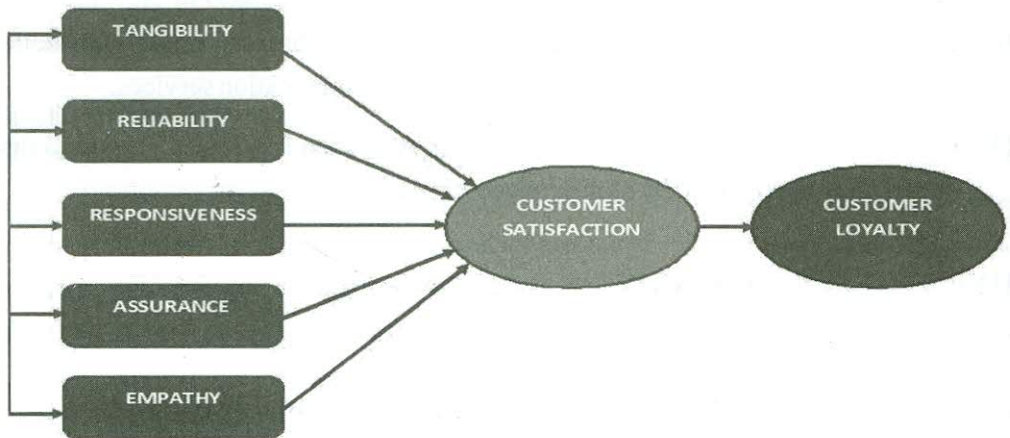
H_03 : There is no significant relationship between customer satisfaction and loyalty towards digitization of mobile telecom services.

H₃: There is significant relationship between customer satisfaction and loyalty towards digitization of mobile telecom services.

STUDY MODEL

On the basis of above objectives and hypothesis, the study model is given as under: -

Fig 1: Study Model



SIGNIFICANCE OF THE STUDY

The significance of the study lies in the fact that this study intends to focus on customers' behavioral intentions in order to deeply understand which factors affect customer intentions in using mobile telecommunications service. This study will provide the valuable information to the telecommunication service companies as well as it can be used by Ministry of Information and Communication Technology in India when they want to create a new policy.

RESEARCH METHODOLOGY

The research design is explorative in nature. In order to collate the responses, 7- point Likert's scale from strongly disagree to strongly agree is employed. The responses obtained from the respondents are analyzed using the SERVQUAL Model, Correlation and Regression analysis. This study is restricted to respondents utilizing mobile services provided by telecom industry in Delhi.

Data Collection Technique

Primary data were collected from 245 respondents using purposive probability sampling in Delhi area. Structured questionnaire was constructed to interview the respondents using mobile services provided by telecom industry in Delhi. The responses of the respondents are measured on Likert's seven point scale (ranging from strongly disagree to strongly agree).

Statistical Tools Used

In order to check the reliability of the questionnaire, cronbach's alpha was calculated. Cronbach's alpha is the most common measure of reliability. It is most commonly used in multiple Likert questions in a questionnaire that form a scale and to determine if the scale is reliable. KMO test is used to measure the sampling adequacy. Bartlett's test of sphericity is used to indicate the strength of relationship among variables. Servqual instrument is used to determine the gap scores between the expectation and perception of customers, as higher the gap score lesser the satisfaction. For hypothesis testing correlation and regression analysis was done.

About the Questionnaire

The questionnaire is divided into four parts consisting of 32 questions in all. The first part of the questionnaire consisting of issues related to the demographic profile of the respondent. It **comprised of** age, gender, educational background and frequency of use of the respondents. The second part of the questionnaire was concerned with the questions used to assess the expectations of customers in terms of service quality provided by **the mobile** telecom industry. Similarly third part of the questionnaire was concerned with the questions used to assess the perception of customers about service quality offered by the mobile telecom industry. The **last portion** of the questionnaire comprises questions related to the loyalty of the customers.

DATA ANALYSIS AND INTERPRETATION

Table 1: Reliability Analysis

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.812	0.794	26

In order to check the reliability of the questionnaire, the Cronbach's Alpha test was applied. The value of Cronbach's alpha is found to be 0.812. As the value of Cronbach's Alpha is more than 0.6, which considers the data to be reliable for hypothesis testing.

Validity Analysis

Table 2: KMO and Bartlett's test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.814
Bartlett's Test of Sphericity	Approx. Chi-Square	5982.24
	Df	529
	Sig.	0.000

From table 2, it is found that the value for Kaiser-Meyer-Olkin Measure of Sampling Adequacy was more than 0.6, and it is 0.814 also Bartlett's Test of Sphericity has significance value less than 0.05 at 5 % level of significance.

Gap Analysis

The difference between the Expectations and Perceptions of Customers is the GAP score which is then averaged. Respondents were advised to put a value between 1 and 7 against each statement twice; one for expectations and another for perceptions. Then the gap between gap score is calculated and averaged as given below:

Table 3: Designing SERVQUAL Instrument

EXPECTATIONS		PERCEPTIONS		GAP SCORE
Tangibles	E	Tangibles	P	E-P
E1 Mobile telecom service centres have modern looking equipment.	6.3	P1 Mobile telecom service centres have modern looking equipment.	5.7	0.6
E2 The physical facilities at mobile telecom service centres are visually appealing.	6.6	P2 The physical facilities at mobile telecom service centres are visually appealing.	4.2	2.4
E3 Employees at mobile telecom service centres are neat in appearance.	6.6	P3 Employees at mobile telecom service centres are neat in appearance.	4.8	1.8

E4 Materials associated with the services is visually appealing at mobile telecom service centres.	5.5	P4 Materials associated with the services is visually appealing at mobile telecom service centres.	4.4	1.1
Total	25.0		19.1	5.9
Average Gap Score of Tangibles [Total of Gap Score/4]				1.475
Reliability	E	Reliability	P	E-P
E5 When mobile telecom companies promise to do something by a certain time, they do so.	5.6	P5 When mobile telecom companies promise to do something by a certain time, they do so.	4.6	1.0
E6 When a customer has a problem; mobile telecom companies show a sincere interest in solving it.	5.9	P6 When a customer has a problem; mobile telecom companies show a sincere interest in solving it.	4.4	1.5
E7 Mobile telecom companies perform the services right the first time.	5.6	P7 Mobile telecom companies perform the services right the first time.	4.1	1.5
E8 Mobile telecom companies provide the service at the time they promise to do so.	6.3	P8 Mobile telecom companies provide the service at the time they promise to do so.	4.7	1.6
E9 Mobile telecom companies insist on error free records.	6.6	P9 Mobile telecom companies insist on error free records.	5.5	1.1
Total	30.0		23.3	6.7
Average Gap Score[Total of Gap Score/5]				1.34
Responsiveness	E	Responsiveness	P	E-P
E10 Employees of mobile telecom companies tell customers exactly when services will be performed.	6.6	P10 Employees of mobile telecom companies tell customers exactly when services will be performed.	5.0	1.6
E11 Employees of mobile telecom companies give prompt service to customers.	6.2	P11 Employees of mobile telecom companies give prompt service to customers.	5.1	1.1
E12 Employees of mobile telecom companies always willing to help customers.	6.2	P12 Employees of mobile telecom companies always willing to help customers.	5.1	1.1
E13 Employees of mobile telecom companies never be too busy to respond to customers' requests.	5.9	P13 Employees of mobile telecom companies never be too busy to respond to customers' requests.	3.8	2.1
Total	24.9		19.0	5.9

Average Gap Score (Total Of Gap Score/4)				1.475
Assurance	E	Assurance	P	E-P
E14 The behavior of employees in mobile telecom service centres/call centres instills confidence in customers.	5.9	P14 The behavior of employees in mobile telecom service centres/call centres instills confidence in customers.	4.2	1.7
E15 Customers of mobile telecom companies feel safe in transactions.	5.6	P15 Customers of mobile telecom companies feel safe in transactions.	4.5	1.1
E16 Employees of mobile telecom service centres/call centres are consistently courteous with customers.	5.6	P16 Employees of mobile telecom service centres/call centres are consistently courteous with customers.	4.2	1.4
E17 Employees of mobile telecom service centres/call centres have the knowledge to answer customers' questions.	6.2	P17 Employees of mobile telecom service centres/call centres have the knowledge to answer customers' questions.	4.5	1.7
Total	23.3		17.4	5.9
Average Gap Score(Total of Gap Score/4)				1.475
EMPATHY	E	EMPATHY	P	E-P
E18 Mobile telecom service centres/call centres give individual attention to customers.	6.6	P18 Mobile telecom service centres/call centres give individual attention to customers.	4.4	2.2
E19 Mobile telecom service centres/call centres have operating hours convenient to all their customers.	6.2	P19 Mobile telecom service centres/call centres have operating hours convenient to all their customers.	3.5	2.7
E20 Mobile telecom service centres/call centres have employees who give customers personal attention.	5.4	P20 Mobile telecom service centres/call centres have employees who give customers personal attention.	3.5	1.9
E21 Mobile telecom service centres/call centres have their customers' best interests at heart.	5.9	P21 Mobile telecom service centres/call centres have their customers' best interests at heart.	3.4	2.5
E22 The employees of mobile telecom service centres/call centres understand the specific needs of their customers.	6.3	P22 The employees of mobile telecom service centres/call centres understand the specific needs of their customers.	3.8	2.5
Total	30.4		18.6	11.8
Average Gap Scores (Total of Gap Score/5)				2.36

Gap scores for different categories as calculated in SERVQUAL Model is average to compute unweighted average score given below:

Table 4: Average Scores

Categories	Gap Scores
Average score for Tangibles	1.475
Average score for Reliability	1.34
Average score for Responsiveness	1.475
Average score for Assurance	1.475
Average score for Empathy	2.36
Total	8.125
Average (Total/5) Un-weighted score	1.625

This is the extension of the SERVQUAL score and is only required if weighted score is calculated. Putting weights against each of the five dimensions is critical because the amount of weight represents the relative significance of the dimensions to the customer. The questionnaire has a separate page asking each respondent to put relative weight against each dimensions. The points against each of the dimensions are totaled and averaged to normalize it. Total 100 points has been allocated among these dimensions as stated below that have been calculated considering respondents' viewpoint on it.

Table 5: Weighted Points

Dimensions	Points
The appearance of the mobile telecom service centres/call Centre's Physical Facilities, Equipment, Personnel, and Communication Materials (Tangibles).	15
The mobile telecom service centres/call Centre's ability to perform the promised service dependable and accurately (Reliability).	23
The mobile telecom service centres/call Centre's willingness to help customers and provide prompt service (Responsiveness).	21
The knowledge and courtesy of the mobile telecom service centres/call Centre's employees and their ability to convey trust and confidence (Assurance).	28
The caring, individual attention the mobile telecom service centres/call Centre's provides to its customers (Empathy)	13
TOTAL	100

Table 6: Calculation of weighted Scores

DIMENSIONS	Un-weighted score(step2)		Weights(step3)	=	Weighted
Tangibles	1.475	X	0.15	=	0.221
Reliability	1.34	X	0.23	=	0.308
Responsiveness	1.475	X	0.21	=	0.310
Assurance	1.475	X	0.28	=	0.413
Empathy	2.36	X	0.13	=	0.307
Total Weight Score					1.559

Finally, the score should be analyzed to find out the weak area where more attention is required. The gap score indicates the extent of gap in service quality. The higher is the gap score more is the dissatisfaction.

The dimension Empathy has highest average gap score 2.36. But after the adjustment with weights, the score is 0.307 which is not the greatest score anymore. This proves that the weight has a significant implication. Individually, the customers are somewhat dissatisfied in this Category, but they believe that it should have less weight at the time of calculating aggregated score. On the basis of weighted score, the dimension Assurance got the highest score (0.413). It means that the performance of the mobile telecom services in this category is not up to the mark. The mobile telecom companies should pay sufficient attention to all of the sub categories under this dimension to better the service.

HYPOTHESES TESTING

Table 7: Correlation between Service Quality Dimensions and Customer Satisfaction

Dimensions	Customer Satisfaction	Tangibility	Reliability	Responsiveness	Assurance
Tangibility	0.872	-	-	-	-
Reliability	0.729	0.631	-	-	-
Responsiveness	0.885	0.558	0.329	-	-
Assurance	0.821	0.609	0.704	0.662	-
Empathy	0.859	0.598	0.642	0.608	0.716

According to the **Table 7**, there is a significant positive relationship between the five

dimensions of service quality and customer satisfaction, the highest correlation is between Responsiveness and customer satisfaction (0.885); followed by Tangibility (0.872), Empathy (0.859) and assurance (0.821) respectively. The weakest correlation is between reliability and customer satisfaction (0.729). Because the correlation was positive, service quality and customer satisfaction is positively related, which means the better service quality was the higher customer satisfaction. Accordingly, the most important service quality dimension that affects customer satisfaction is Responsiveness, which goes to prove that Responsiveness perceived as a dominant service quality followed by tangibility.

Thus, we can conclude that there is significant relationship between the service quality dimensions and the customer satisfaction. Thus in case of hypothesis 1, null hypothesis is rejected and the alternative hypothesis is accepted.

For hypothesis testing regression analysis is done as it is a statistical tool for the investigation of relationship between variables. The objective of researcher to use regression analysis to ascertain the causal effect of one variable on the other. Regression focuses on the relationship between dependent variable and one or more independent variable.

Table 8: Regression analysis - Overall Service quality and customer satisfaction

Model	Unstandardized Coefficients		Standardized	t	Sig.
	B	S.	E.Beta		
Constant	- 0.116	0.072		- 1.409	0.283
Tangibility	0.046	0.025	0.046	2.230	0.082*
Reliability	0.041	0.077	0.041	0.767	0.477
Responsiveness	0.168	0.139	0.157	1.128	0.021*
Assurance	0.139	0.050	0.137	3.004	0.033*
Empathy	0.723	0.147	0.732	4.707	0.013*
R	0.833				
R ²	0.694				
Adjusted R ²	0.671				

From Table 8, it is indicated that Empathy, Responsiveness, and Assurance dimension of service quality have a significant influence on customers' satisfaction at 95% confidence level. Tangible dimension is significant at 90% confidence interval. While

reliability dimension have no significant influence on customers' satisfaction. The significant service quality factors have been included for the establishment of the function. The established regression function is:

$$Z = - 0.116 + 0.046X_1 + 0.041X_2 + 0.168X_3 + 0.139X_4 + 0.723X_5$$

The regression results indicate all the service quality dimensions (tangibility, reliability, responsiveness, assurance and empathy) combined significantly influence the satisfaction of customers. The value of R^2 is 0.694 and indicates 69.4% of the variance in customer satisfaction can be predicted by the service quality offered by the mobile telecom companies.

Thus from the above regression analysis, it is clear that there is significant relationship between overall service quality and the customer satisfaction.

Table 9: Regression Analysis – Customer Satisfaction and Loyalty

Model	Unstandardized Coefficients		Standardized	t	Sig.
	B	S.	E.Beta		
Constant	2.152	0.446		6.013	0.000*
Satisfaction	0.541	0.208	0.919	3.989	0.003*
R	0.904				
R ²	0.818				
Adjusted R ²	0.784				

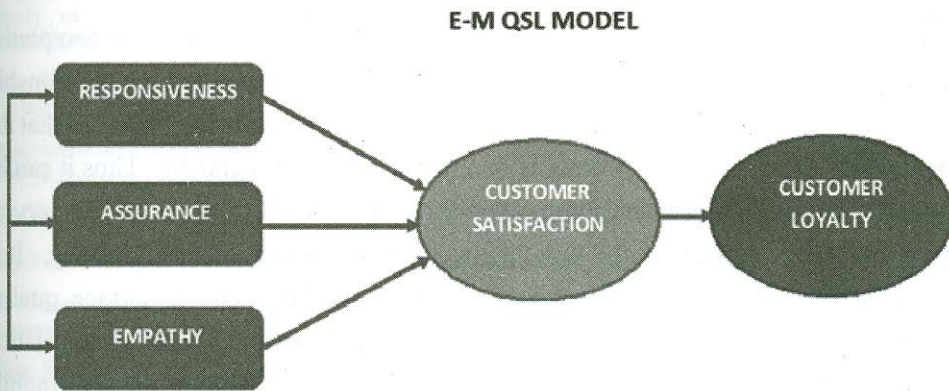
The **table 9** displays the relationship between customers satisfaction with their loyalty to the bank. In order to test the relationship, linear regression is used. The overall satisfaction of customers seems to have statistically significant and positive effect on their loyalty. The value of R^2 is 0.818 indicates 81.8 % of customer satisfaction is associated with their loyalty. This indicates customer satisfaction plays an important role in enhancing customer loyalty in mobile telecom companies of Delhi. Thus there is significant relationship between customer satisfaction and loyalty in the services offered by mobile telecom companies. The established regression function is:

$$Z = 2.152 + 0.541Y_1$$

E-M QSL MODEL

On the basis of above study, the model is developed as follows: -

Fig 2: E-M QSL Model



ASSUMPTIONS OF MODEL DEVELOPED

The main assumption of the developed model lies in the fact that the study models has covered only limited number of variables leading to satisfaction of customers towards digitized mobile telecom services provided by the telecom service providers. The satisfaction in terms of services varies from person to person. One person can be satisfied on one aspect and other may not on that. The other assumption for this E – M QSL model is that besides given factors, all other factors are assumed to be constant.

VALIDATION OF E – M QSL MODEL

In order to validate the model, the researchers validated the developed model by studying the impact of recommendations on a small patch of 30 customers visiting one of the leading mobile service provider store in Delhi. Few concrete recommendations were made to the store manager and he was asked to stringently apply these recommendations. The employees chosen for this study were the ones who had come with complaints and completely dissatisfied with the services offered by the leading telecom company. Data which was collected, after one month of implementation, was analysed statistically. The response scores were put in the respective regression equations. The comparison with their original scores clearly revealed that there was an

escalation in the scores. Also, the gap between the expectation and perception of customers was found to be comparatively less as that of the previous one. It was observed that E – M QSL model was found to be effective if applied wisely.

CONCLUSION

The objective of the study was to assess the service quality of mobile telecom companies and its impact on customer satisfaction as well as study also indicated the relationship that exists between customer satisfaction and their loyalty. It was being observed that the average scores of service quality dimensions were between 3.4 and 6.6. Thus it can be concluded that there is a need for improvements of service quality on all the five service quality dimensions, especially the dimensions of Responsiveness and Empathy. It is also concluded that there is a significant relationship between all service quality dimensions and the customer satisfaction. Further there is a strong positive correlation between the service quality dimensions and the customer satisfaction towards mobile telecom services of Delhi and NCR. It is also concluded that there is strong relationship between the customer satisfaction and the customer loyalty. The overall satisfaction of customers seems to have statistically significant and positive effect on their loyalty. The customer satisfaction is associated with their loyalty. This indicates customer satisfaction plays an important role in enhancing customer loyalty in mobile telecom companies of Delhi and NCR. Thus there is significant relationship between customer satisfaction and loyalty in mobile telecom services.

REFERENCES

- Alom K., Khan A., and Meshquat U. A. N. M.** (2010). Selection of Cellular Operators in Bangladesh: An Empirical Analysis. *International Journal of Mobile Marketing*, 5(2), 114-125.
- Bugel M., Buunk, A. and Verhoef, P.** (2010). A Comparison of Customer Commitment in Five Sectors Using The Psychological Investment Model. *Journal of Relationship Marketing*, 9, 2-29. <http://dx.doi.org/10.1080/15332660903551883>
- Churchill and Surprenant** (1995). The Benefits of Measuring Customer Satisfaction. *CMA Magazine*, 69(7), 32-37.
- Eshghi, A., Kumar, S., and Gangui, H.** (2008). Service Quality and Customer Satisfaction: An Empirical Investigation in Indian Mobile Telecommunications Services. *Marketing Management Journal*, fall, 119-144.
- Fazlzadeh, A., Khoshmaram, A., and Feyzipour, A.** (2011). How Quality, Value, Image, and Satisfaction Create Loyalty at an Iran Telecom. *International Journal of Business and Management*, 6(8), 271-279.
- Gebreab, F. A.** (2002). Getting Connected: Competition and Diffusion in African Mobile Telecommunications Markets. World Bank Policy Research, Working Paper 2863.
- Gruber, H.** (2000). Spectrum Limits and Competition in Mobile Markets: The Role of Licence Fees.

European Investment Bank.

Gruber, H., Verboven, F. (2001a). The Diffusion of Mobile Telecommunication Services in the European Union. *European Economic Review*, 45(3), 577-588.

Gruber, H. and Verboven, F. (2001b). The Evolution of Markets under Entry and Standards Regulation - The Case of Global Mobile Telecommunications. *International Journal of Industrial Organization*, 19(7), 1189-1212.

Gupta, D. & Sharma, A. (2009). Customer Loyalty and Approach of Service Providers: An Empirical Study of Mobile Airtime Industry in India. *Services Marketing Quarterly*, 30, 342-364. <http://dx.doi.org/10.1080/15332960903199091>

http://articles.economicstimes.indiatimes.com/2012-08-16/news/33232949_1_telecom-equipment-indian-ipr-telecom-market

http://www.mckinsey.com/insights/consumer_and_retail/the_three_cs_of_customer_satisfaction_consistency_consistency

<http://www.ndtv.com/india-news/india-to-have-243-million-internet-users-by-june-2014-report-549211>

<http://www.trai.gov.in/WriteReadData/WhatsNew/Documents/PR-TSD-Dec-14.pdf>

Keaveney, Susan M (1995). Customer Switching Behavior in the Service Industry: An Exploratory Study. *Journal of Marketing*, 59, April, 71-82

Kim, M., Park, M. & Jeong, D. (2004). The Effects of Customer Satisfaction and Switching Barrier on Customer Loyalty in Korean Mobile Telecommunication Services. *Telecommunications Policy*, 28(2), 145-59. <http://dx.doi.org/10.1016/j.telpol.2003.12.003>

Ladhari, R. (2008). Alternative Measures of Service Quality: A Review. *Managing Service Quality*, 18(1), 65-86.

Leelakulthanit, O. and Hongcharu, B. (2011). Factors That Impact Customers Satisfaction: Evidence from the Thailand Mobile Cellular Network Industry. *International Journal of Management and Marketing Research*, 4(2), 67-76.

Notification dated 29 May 1992 published in part II, section 3, sub-section (1) of the gazette of India, Government of India

Oliver, R. L. (1997). *Satisfaction: A Behavioral Perspective on the Consumer*. New York: Irwin/McGraw-Hill.

Parasuraman, A., Zeithaml, V.A., and Berry, L.L. (1988). SERVQUAL: A Multi-item Scale for Measuring Consumer Perceptions of the Service Quality. *Journal of Retailing*, 64(1), 12-40.

Farris, P.W.; Bendle, N.T.; Pfeifer, P.E. and Reibstein, D.J. (2013). *Marketing Metrics: The Definitive Guide to Measuring Marketing Performance*. 2nd ed. ISBN: 978-0137058297.

Rahman, S., Haque, A., and Ahmad, M. (2011). Choice Criteria for Mobile Telecom Operator: Empirical Investigation among Malaysian Customers. *International Management Review*, 7(1), 50-57.

Sadia, J., Tasneem, F., and Khan, M. (2011). An empirical analysis of customer loyalty in Pakistan's telecommunication industry. *Database Marketing & Customer Strategy Management*, 18(1), 5-15. <http://dx.doi.org/10.1057/dbm.2011.2>

Siddiqi, K. (2011). Individual Differences in Consumer Behavior. *Interdisciplinary Journal of Contemporary Research in Business*, 2(11), 475-485.

Swan, J.E.; Trawick, I.F.; and Carroll, A.B. (2001). Customer Satisfaction Measurement in the Private Bank Sector. *European Journal of Operational Research*, 130, 347-360.

Van-der-wal, R. W. E., Pampallis, A., and Bond, C. (2002). Service Quality in a Cellular Telecommunications Company: A South African Experience. *Managing Service Quality*, 12(5), 323-335.

Wallsten, S. J. (1999): An Empirical Analysis of Competition, Privatization, and Regulation in Africa and Latin America. World Bank, Working Paper.

Wicks, A., and Roethlein, C. (2009). A Satisfaction-Based Definition of Quality. *Journal of Business and*

Economic Studies, 15(1), 31-32.

Wisniewski, M. (2001). Using SERVQUAL to Assess Customer Satisfaction with Public Sector Services. *Managing Service Quality*, 11(6), 380-388.

Wong, Ken Kwong-Kay (2010). Fighting Churn with Rate Plan Right-Sizing Retention Strategy for the Wireless Telecommunications Industry. *The Service Industries Journal*, 30(13), 2261-2271. <http://dx.doi.org/10.1080/02642060903295669>

Yuksel, A., Yuksel, F., and Bilim, Y. (2010). Destination Attachment: Effects on Consumer Satisfaction and Cognitive, Affective and Cognitive Loyalty. *Tourism Management*, 31(2), 274-284.