SERVICE QUALITY DIMENSION: AS COMPONENT OF CRM- A STUDY WITH REFERENCE TO TELECOM INDUSTRY

ER. MOHINDER PRATAP SINGH DHILLON*

Introduction

Globalization, liberalization and privatization are the three most spoken words in today's world. These initiatives paved way for all-round reforms, especially in developing economies, like India. These countries realized that development of effective and efficient means of communications and information technology is important to push them onto the path of development. The growth of the telecom sector in India during post-liberalization has been phenomenal. This research aims to throw light on the factors that contributed to growth in the segment and presents an insight on the present status of the industry.

The telecommunication industry had experienced continuous growth, as well as rapid progress in policy and technology development, resulting in an increasingly competitive and networked world. It is true and encouraging that overall, the digital divide has been reduced and continues to shrink. ITU statistics show that over the last 10 years, the digital divide between the developing and the developed countries has been narrowing in terms of fixed telephone lines, mobile subscribers and Internet users. In contrast to the slow fixed line growth, phenomenal growth rates in the mobile sector particularly, have been able to reduce the gap that separates the developed from the developing countries from 27 in 1996, to 4 in 2006. The fixed line gap has been reduced from 11 to 4 during the same period.

* BE (MECH. ENGG.),ME (MECH. ENGG.) MBA
ADDL. SE PSPCL PATIALA, RESEARCH SCHOLAR, SCHOOL OF MANAGEMENT STUDIES, PUNJABI UNIVERSITY, PATIALA

Objectives of the study:

1. To study the service quality dimensions adopted by telecom industries.
2. To suggest managerial implications to Indian Telecom Industry with reference to service quality dimensions.

Research Methodology-

Sampling Technique The data has been collected on the basis of ***Stratified Random Sampling.*** *Five service providers from three different cities of each district shall be taken for study i.e. total of 105 from 7 no. companies*

Sample Size would be 700 i.e. 100 customers of each company taken under the studies.

Sample Unit It consist of all customer base as subscribers of telecom services of BSNL, Reliance Telecommunication ltd, Tata Teleservices ltd , Bharti Telecom ltd (AIRTEL), Idea ltd, Vodafone ltd. HFCL (Connect).

The tool used to collect data is structured questionnaires. The questions are framed for analysing the various components of CRM as Service quality dimension. Seven major telecom service provider in Punjab, BSNL, Reliance telecommunication ltd, Tata Teleservices ltd., Bharti Telecommunication ltd (AIRTEL), Idea ltd., Vodafone ltd., HFCL (Connect), Through ***random systematic sampling.***

Data Analysis-

Analysis of Service Quality Dimensions

In this section of analysis, dimensions of Service Quality i.e. *Credibility, Security, Access, Communication, Understanding the customers, Reliability, Responsiveness, Competence & Courtesy* were analyzed. In each further sub section each dimension was analyzed for demographic variables. The significant differences on response level among the customers categorized into gender and marital status for all dimensions were studied with Mann – Whitney U statistics test and customers categorized into education level, occupation level, family income & residential status were analyzed with Kruskal – Wallis Test.

Analysis of Service Quality Dimension Credibility

In this section, all 547 customers were analyzed for their perception regarding the credibility of their service provider. Four questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.9

Credibility	Very Poor	Poor	Can't Say	Good	Very Good
Is the Service Provider Trustworthy	2	1	161	197	186
Does it give consistent service every time	0	0	208	164	175
Does it delivers what it promise	5	1	160	193	188
Does it help you out in difficult times	3	2	185	172	185

The analysis of the above table showed that majority of the customers were in favor of the contents of the credibility they were asked but for the consistent service parameter majority of the customers i.e. 208 were found to be neutral.

The analysis of the below table showed, as all customers grouped according to different demographic category were thinking in same direction i.e. they feel it to be important on general on Credibility issue as on average the response level of all grouped customers were around 4.

Table: 3.10

		Average Response Level			
		CR1	**CR2**	**CR3**	**CR4**
Gender	*Male*	4.02	3.99	4.00	4.02
	Female	4.04	3.90	4.03	3.94
	MW p-Value	**0.864**	**0.211**	**0.676**	**0.266**
Marital Status	*Single*	4.14	4.02	4.02	3.81
	Married	4.01	3.92	4.02	4.01
	MW p-Value	**0.110**	**0.323**	**0.899**	**0.091**
	School Level	4.14	4.02	4.02	3.81
there were no	*Graduate*	4.01	3.92	4.02	4.01
significant effects	*Post Graduate*	3.98	3.93	4.07	3.94
of the	**KW p-Value**	**0.596**	**0.982**	**0.523**	**0.754**
demographic					

variables on any of the question asked on Credibility					
Education Level					
Occupation Level	*Student*	4.05	3.94	3.98	3.98
	Service	4.07	3.95	4.01	4.01
	Business	3.93	3.90	4.06	3.88
	Others	4.02	4.00	3.96	4.02
	KW p-Value	**0.223**	**0.335**	**0.291**	**0.371**
Family Income	*Low*	4.03	3.95	4.03	4.09
	Moderate	3.98	3.86	3.94	3.91
	High	4.07	3.99	4.08	3.97
	KW p-Value	**0.528**	**0.285**	**0.230**	**0.206**
Residential Status	*Urban*	4.07	4.03	4.00	4.01
	Semi Urban	4.01	3.89	4.01	3.94
	Rural	4.01	3.89	4.06	3.98
	KW p-Value	**0.673**	**0.203**	**0.794**	**0.799**

Analysis of Service Quality Dimension Security

In this section, all 547 customers were analyzed for their perception regarding the sense of security from their service provider. Four questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.11

Security	**Very Poor**	**Poor**	**Can't Say**	**Good**	**Very Good**
Is your money valuable	194	176	176	1	0
Does your confidentiality maintained	25	283	237	1	1
Doubt clearance	2	0	172	198	175
Advice for foreseen risk	1	1	260	285	0

The analysis of the above table showed on security issues, there was sensible proportion of customers available those were found neutral on all issues, but on issues like value of money &

confidentiality majority customers were believed it be poor service but on doubt clearance & advices they feel it to be among better services.

The analysis of the below table showed, male & female customers were thinking in same direction on each questions asked about security and similarly customers grouped according to occupation level & residential status were also believing in same directions on all questions. There were significant difference found among the married & single customers on issue of *advice for foreseen risk* and regarding *valuebility of money* customers grouped according to education level & income group were found to be significant.

Table: 3.12

		Average Response Level			
		SU1	**SU2**	**SU3**	**SU4**
Gender	*Male*	1.93	2.43	4.07	3.52
	Female	2.01	2.37	4.01	3.51
	MW p-Value	**.274**	**.323**	**.422**	**.889**
Marital Status	*Single*	1.87	2.31	4.03	3.35
	Married	1.99	2.41	4.04	3.55
	MW p-Value	**.173**	**.113**	**.905**	**.002**
Education Level	*School Level*	1.89	2.37	4.13	3.56
	Graduate	1.94	2.38	4.01	3.53
	Post Graduate	2.11	2.45	3.95	3.44
	KW p-Value	**.043**	**.279**	**.137**	**.075**
Occupation Level	*Student*	1.79	2.21	4.16	3.37
	Service	2.01	2.36	4.03	3.50
	Business	1.96	2.48	4.07	3.52
	Others	1.97	2.40	4.02	3.53
	KW p-Value	**.754**	**.316**	**.899**	**.585**
Family Income	*Low*	1.82	2.38	4.15	3.48
	Moderate	2.06	2.39	3.97	3.51
	High	1.99	2.41	4.03	3.54
	KW p-Value	**.030**	**.885**	**.189**	**.490**

Residential Status	*Urban*	1.98	2.38	3.99	3.52
	Semi Urban	2.01	2.39	4.06	3.35
	Rural	1.92	2.40	4.07	3.49
	KW p-Value	**.591**	**.504**	**.614**	**.732**

Analysis of Service Quality Dimension Access

In this section, all 547 customers were analyzed for their perception regarding the access to service provider. Two questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.13

Access	**Very Poor**	**Poor**	**Can't Say**	**Good**	**Very Good**
Easy approachable	0	0	208	164	175
24 hrs service	0	0	190	185	172

The analysis of the above table showed, majority of the customers believed service providers were better in giving them 24 hrs service & they were approachable along with sensible neutral customers also.

The analysis of the below table showed there were no significant effects of the demographic variables on any of the question asked on Access parameter of service quality, as all customers grouped according to different demographic category were thinking in same direction i.e. they feel it to be important on general on access issue as on average the response level of all grouped customers were around 4.

Table: 3.14

		Average Response Level	
		A1	**A2**
Gender	*Male*	3.99	4.04
	Female	3.90	3.95
	MW p-Value	**.211**	**.243**
Marital Status	*Single*	4.02	3.87
	Married	3.92	4.02
	MW p-Value	**.323**	**.121**

Education Level	*School Level*	3.93	3.96
	Graduate	3.94	3.99
	Post Graduate	3.95	4.03
	KW p-Value	**.982**	**.781**
Occupation Level	*Student*	4.11	3.74
	Service	3.87	4.02
	Business	3.90	3.93
	Others	4.00	4.02
	KW p-Value	**.335**	**.411**
Family Income	*Low*	3.95	4.09
	Moderate	3.86	3.93
	High	3.99	3.98
	KW p-Value	**.285**	**.224**
Residential Status	*Urban*	4.02	4.02
	Semi Urban	3.89	3.96
	Rural	3.89	3.99
	KW p-Value	**.203**	**.815**

Analysis of Service Quality Dimension Communication

In this section, all 547 customers were analyzed for their perception regarding the communication with service provider. Three questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.15

Communication	**Very Poor**	**Poor**	**Can't Say**	**Good**	**Very Good**
Use of technical language	0	0	180	167	200
Apprise you of new schemes	0	0	164	197	186
Disseminate the information	0	0	170	181	196

The analysis of the above table showed, on the issue of communication with customers from the service providers they were ranked on a better scale like technical language, new schemes & information providence with customers on behalf of service providers were satisfactory.

The following table analysis showed regarding technical language issues both male & female customers were found to be significant otherwise on rest of the issues they were thinking same way. Regarding other demographic variables grouping of customers there were no as such significance difference found among the response level of the grouped customers on any of the issue of communication.

Table: 3.16

		Average Response Level		
		CM1	**CM2**	**CM3**
Gender	*Male*	4.13	4.03	4.07
	Female	3.96	4.05	4.03
	MW p-Value	**0.021**	**0.850**	**0.485**
Marital Status	*Single*	4.04	4.16	3.95
	Married	4.04	4.02	4.07
	MW p-Value	**.936**	**.101**	**.187**
Education Level	*School Level*	4.06	3.99	4.09
	Graduate	3.98	4.07	4.00
	Post Graduate	4.09	4.07	4.07
	KW p-Value	**.438**	**.588**	**.506**
Occupation Level	*Student*	4.16	4.26	3.89
	Service	4.10	4.11	4.06
	Business	4.03	3.96	4.12
	Others	3.98	4.02	4.02
	KW p-Value	**.504**	**.413**	**.589**
Family Income	*Low*	4.14	4.06	4.10
	Moderate	4.01	3.98	3.99
	High	4.00	4.07	4.06

	KW p-Value	**.290**	**.501**	**.469**
Residential Status	*Urban*	4.08	4.08	4.08
	Semi Urban	4.09	4.02	4.05
	Rural	3.93	4.02	4.01
	KW p-Value	**.107**	**.673**	**.677**

Analysis of Service Quality Dimension Understanding the Customer

In this section, all 547 customers were analyzed for their perception regarding the understanding of their service provider towards them. Four questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.17

Understanding the Customer	**Very Poor**	**Poor**	**Can't Say**	**Good**	**Very Good**
Understand your like/dislike	28	169	150	200	0
Accommodate the schedule	170	192	183	1	1
Listens to advices	172	175	200	0	0
Encourage customer participations	0	0	174	170	203

The analysis of the above table showed, customers believed service providers were more hesitant in listening their advices for better services & also in accommodating their schedule while delivering services but on the other hand they feel the service providers always encourage them to participate. Regarding the liking/disliking of the customers there were mixed trends available.

The following table analysis showed regarding customers liking/disliking both male & female customers were found to be significant otherwise on rest of the issues they were thinking same way. Regarding other demographic variables grouping of customers there were no as such significance difference found among the response level of the grouped customers on any of the issue of understanding customer.

Table: 3.18

		Average Response Level			
		UC1	**UC2**	**UC3**	**UC4**
Gender	*Male*	3.09	2.04	2.06	3.98
	Female	2.84	1.96	2.05	4.01
	MW p-Value	**.003**	**.263**	**.868**	**.645**
Marital Status	*Single*	2.93	1.88	2.13	3.96
	Married	2.96	2.02	2.04	4.00
	MW p-Value	**.878**	**.134**	**.291**	**.628**
Education Level	*School Level*	2.90	1.96	2.02	3.97
	Graduate	2.99	2.00	2.12	3.96
	Post Graduate	2.97	2.03	1.99	4.07
	KW p-Value	**.652**	**.781**	**.247**	**.405**
Occupation Level	*Student*	2.89	1.74	2.26	3.68
	Service	3.05	2.04	2.05	3.95
	Business	2.94	1.93	2.03	4.02
	Others	2.90	2.02	2.05	4.03
	KW p-Value	**.369**	**.396**	**.720**	**.233**
Family Income	*Low*	2.97	2.10	2.11	3.95
	Moderate	2.85	1.93	2.03	4.02
	High	3.03	1.99	2.03	3.99
	KW p-Value	**.223**	**.211**	**.603**	**.758**
Residential Status	*Urban*	2.90	2.02	2.01	3.98
	Semi Urban	2.97	1.98	2.02	4.00
	Rural	3.01	1.99	2.14	3.99
	KW p-Value	**.559**	**.851**	**.269**	**.982**

Analysis of Service Quality Dimension Reliability

In this section, all 547 customers were analyzed for their perception regarding the reliability of their service provider towards them. Two questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.19

Reliability	Very Poor	Poor	Can't Say	Good	Very Good
Satisfied since first time	193	152	202	0	0
Work completed timely & accurately	0	0	200	178	169

The analysis of above table showed, majority of the customers believed that they were not satisfied on very first time from the service providers but overall they believed work completion is always on time & accurately.

The following showed there were significant difference found among the customers from low, moderate & high family income on the both issues of reliability i.e. satisfaction since first time & timely completion of work otherwise customers grouped according to other demographic variables does not showed any significant differences on both issues of reliability.

Table: 3.20

		Average Response Level	
		R1	**R2**
Gender	*Male*	2.04	2.00
	Female	2.04	2.00
	MW p-Value	**0.550**	**0.550**
Marital Status	*Single*	2.05	2.05
	Married	2.01	2.01
	MW p-Value	**.635**	**.635**
Education Level	*School Level*	1.98	1.98
	Graduate	1.98	1.98
	Post Graduate	2.11	2.11
	KW p-Value	**.310**	**.310**
Occupation Level	*Student*	2.11	2.11
	Service	1.93	1.93
	Business	2.07	2.07
	Others	2.04	2.04

	KW p-Value	**.424**	**.424**
Family Income	*Low*	2.04	2.04
	Moderate	2.13	2.13
	High	1.92	1.92
	KW p-Value	**.044**	**.044**
Residential Status	*Urban*	2.02	2.02
	Semi Urban	1.96	1.96
	Rural	2.08	2.08
	KW p-Value	**.442**	**.422**

Analysis of Service Quality Dimension Responsiveness

In this section, all 547 customers were analyzed for their perception regarding the responsiveness behavior of their service provider towards them. Four questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.21

Responsiveness	**Very Poor**	**Poor**	**Can't Say**	**Good**	**Very Good**
Resolves problem immediately	0	0	200	178	169
Customer service willing to listen	123	26	97	145	156
Customer service gives on spot solutions	0	0	174	185	186
Solution provided were backed with proper knowledge	0	0	174	193	180

The analysis of the above table showed, responsibilities taken by the service provider regarding resolving problems immediately, on spot solutions & solutions with proper knowledge were very much satisfactory but very mixed type of response were available from customers on issue regarding customers service willing to listen.

The below table analysis showed on issue immediate solution to problem customers from urban, Semi urban & rural area were found to be significant similarly regarding willingness of customer service to listen to advices from customers the categorized customers according to their occupation group were found to be significant and also on issue regarding on spot issues male & female customers were found to be significant different among response.

Table: 3.22

		Average Response Level			
		RS1	**RS2**	**RS3**	**RS4**
Gender	*Male*	3.94	3.47	4.12	4.02
	Female	3.95	3.55	3.95	4.00
	MW p-Value	**.880**	**0.402**	**.012**	**.810**
Marital Status	*Single*	4.09	2.04	4.13	4.03
	Married	3.91	3.81	4.00	4.01
	MW p-Value	**.070**	**.000**	**.171**	**.779**
Education Level	*School Level*	3.87	3.45	4.00	3.94
	Graduate	4.02	3.52	4.10	4.01
	Post Graduate	3.92	3.59	3.95	4.10
	KW p-Value	**.169**	**.566**	**.207**	**.177**
Occupation Level	*Student*	4.00	2.00	4.32	4.05
	Service	3.99	3.44	3.93	4.02
	Business	3.89	3.50	3.97	3.94
	Others	3.93	3.70	4.10	4.03
	KW p-Value	**.798**	**.00**	**.073**	**.763**
Family Income	*Low*	3.89	3.57	4.03	3.99
	Moderate	3.99	3.49	3.92	4.02
	High	3.94	3.50	4.11	4.01
	KW p-Value	**.483**	**.774**	**.065**	**.949**
Residential Status	*Urban*	3.00	3.49	4.06	4.00
	Semi Urban	4.00	3.57	3.97	4.03
	Rural	5.00	3.49	4.05	4.01
	KW p-Value	**.000**	**.782**	**.489**	**.923**

Analysis of Service Quality Dimension Competence

In this section, all 547 customers were analyzed for their perception regarding the reliability of their service provider towards them. Two questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.23

Competence	Very Poor	Poor	Can't Say	Good	Very Good
Solution provided without fumbling around	184	168	195	0	0
Instant solutions	0	0	208	164	175

The analysis of both table showed, the service providers provide instant solutions but they to tend to fumble most of the time while providing solutions and there were no significant differences found among the categorized customers on any of the issues.

Table: 3.24

		Average Response Level	
		CM	**CM2**
Gender	*Male*	2.12	3.99
	Female	1.99	3.90
	MW p-Value	**.077**	**.110**
Marital Status	*Single*	2.01	4.02
	Married	2.06	3.92
	MW p-Value	**.610**	**.323**
Education Level	*School Level*	1.99	3.93
	Graduate	2.10	3.94
	Post Graduate	2.06	3.95
	KW p-Value	**.421**	**.982**
Occupation Level	*Student*	2.16	4.11
	Service	2.09	3.87
	Business	2.05	3.90
	Others	2.01	4.00
	KW p-Value	**.748**	**.335**
Family Income	*Low*	2.11	3.95

	Moderate	2.07	3.86
	High	2.00	3.99
	KW p-Value	**.425**	**.285**
Residential Status	*Urban*	2.04	4.02
	Semi Urban	2.03	3.89
	Rural	2.08	3.89
	KW p-Value	**.858**	**.203**

Analysis of Service Quality Dimension Courtesy

In this section, all 547 customers were analyzed for their perception regarding the courtesy of service provider towards them. Three questions were asked to each customer and the following table gives the distribution of response available from them,

Table: 3.25

Courtesy	**Very Poor**	**Poor**	**Can't Say**	**Good**	**Very Good**
Politeness	0	0	192	173	182
Respects the customers	0	0	191	177	179
Helpful attitude	0	0	168	163	216

The analysis of both table showed, customers were very much satisfied regarding the courtesy showed by service providers towards them whether its politeness, respect or helpful attitude and there were no significant differences found among the categorized customers on any of the issues.

Table: 3.26

		Average Response Level		
		CU1	**CU2**	**CU3**
Gender	*Male*	4.02	3.99	4.06
	Female	3.95	3.97	4.11
	MW p-Value	**.278**	**.816**	**.482**
Marital Status	*Single*	4.13	4.04	4.16
	Married	3.95	3.96	4.07
	MW p-Value	**.057**	**.401**	**.343**

Education Level	*School Level*	3.96	4.04	4.14
	Graduate	3.98	3.95	4.09
	Post Graduate	4.01	3.93	4.01
	KW p-Value	**.889**	**.406**	**.321**
Occupation Level	*Student*	4.32	4.05	4.05
	Service	4.00	3.92	4.02
	Business	3.88	3.98	4.07
	Others	4.00	4.01	4.14
	KW p-Value	**.151**	**.725**	**.516**
Family Income	*Low*	4.02	4.02	4.04
	Moderate	3.98	3.95	4.08
	High	3.97	3.97	4.12
	KW p-Value	**.853**	**.749**	**.643**
Residential Status	*Urban*	3.94	3.91	4.02
	Semi Urban	4.03	3.95	4.11
	Rural	3.97	4.09	4.14
	KW p-Value	**.571**	**.096**	**.396**

Conclusion-

Telecom is high technology industry. Telecom equipment is highly complex to design and needs the expertise of both telecom and computing fields. With the advent of competition, tremendous innovation in services was made possible by improving the quality of -technology by the players.

Telecom industry is services industry, hence the good quality services to the customer and the customer relationship management is the key and competition has totally changed the definition of service in Indian telecom industry. The quality of service has improved by leaps and bounds.

All the activities are focused on tariff charges, launch of value added services to enhance usage and revenue, increase or decrease of various charges/tariff, instead of working towards

market expansion. The next revolution in the mobile industry can happen only when the telecom companies work towards market expansion rather than price/tariff changes. However, in the pursuit to beat each other, the focus of each operator is only on price/tariff changes instead of working collectively to acquire more new customers, who are confused due to the constant changes and delay in entry.

Service quality as network, coverage area, and transparency in billing, voice clarity, accessing speed, and reliability of service provider are major influence on satisfaction level of customer satisfaction.

References-

- BW Marketing whitebook, 2005, pg.54.
- C.M.Crawford, new product management, 5th edition. And R.S.Dolan , managing new product development process (Reading , Mass; Addision – Wisley,1993).
- Carlsson Jeanette and Arias Salvador, "Transforming Wireline Telecom",E-business, Feb. 2004, pg. 13.
- Carsten Fink, Aaditya Mattoo and Randeep Rathindran (2001), „Liberalizing Basic Telecommunications: The Asian Experience., World Bank Policy Research Working Paper 2718.
- Chich, W.H., Tang, T.W., & Chen, I.J. (2006). The Service Quality Perceptional Analysis of Mobile Phone User in Mainland Chine. [Online] Available: http://www.rdoffice.ndhu .edu.tw/exchange/TZW-paper.pdf (May 19, 2010).
- Chong, K. W. (2003). The Role of Pricing in Relationship Marketing - A Study of the Singapore Heavy Equipment Spare Parts Industry, PhD Dissertation, International Graduate School of Management, University of South Australia. Industrial Marketing Management, 26(1), 1-13.
- Crosby, Lawrence, A. and Nancy Stephens (1987), "Effects of Relationship Marketing and Satisfaction, Retention, and Prices in the Life Insurance Industry," Journal of Marketing Research, (November), pp. 404-411.
- Crosby, Lawrence, A., Kenneth R Teas, and Deboprah Gowles, (1993),"Relationship Quality in Services Selling – An interpersonal influence Perspective", Journal of Marketing, 52 (April), pp. 21-34.

- Culliton, J.W. (1948). The Management of Marketing Costs. Division of Research, Graduate School of Business Administration, Boston, MA: Harvard University.
- D.A.Aaker, R.Batra, and J.G.Myers, Advertising management, 4th edition (Englewood cliffs, NJ ; Prentice Hall,1992).
- David L. Kurtz, Kenneth L. Clow (2002). Services Marketing, John Wiley & Sons.
- David M. Szymanski and David H. Henard (2001) "Managers and academics to identify the antecedents to and outcomes of businesses"
- Deshmukh, Vrat and Seth (2004), "Service Quality Models: A Review", International Journal of Quality and Reliability Management, Vol.22, No.9, pp.913-949.