CUSTOMERS' PERCEPTION ABOUT TOTAL QUALITY MANAGEMENT IN BANKING SECTOR: A COMPARATIVE STUDY IN PUNJAB REGION

Sandeep Tandon*, Anuradha Thakur**

**Associate Professor in Commerce in Directorate of Distance Education, University of Jammu, Jammu, India*

***Lecturer, Senior Secondary School, Pathankot, Punjab*

Abstract *Total Quality Management (TQM) is an integrative philosophy of management for continuously improving the quality of products and processes of an organization. Banks being a service oriented organization, cater to the customers belonging to all sections of society. Banks which are able to produce and provide world class quality to the customers can survive and compete. Furthermore, the Indian banking environment is at present engulfed in a very healthy and intense competition between public sector banks and private sector banks. In order to retain and enlarge a competitive edge in such a highly competitive market place, banks ought to offer various strategic programmes. One of the significant programmes is TQM. Present study seeks to assess the degree of perception of customers about TQM services offered by banks – SBI, PNB, Two public sector banks – and two private sector banks HDFC and ICICI in Pathankot city of Punjab state. Relationship has also been assessed between TQM implementation and different variables on which TQM is dependent. Six constructs were used to ascertain the nature of services offered by the banks and to know the perception of customers about TQM services offered by the banks. The data was analysed with the help of univariate and bivariate techniques. Reliability and validity of the variables were also checked. The study has revealed that customers' perception about TQM services is better in private sector banks as compared to public sector banks. Finally the study suggests an action plan to be adopted by public sector banks to improve their TQM services to be offered to their customers.*

Keywords: *TQM, Banks in India, Customer Perception*

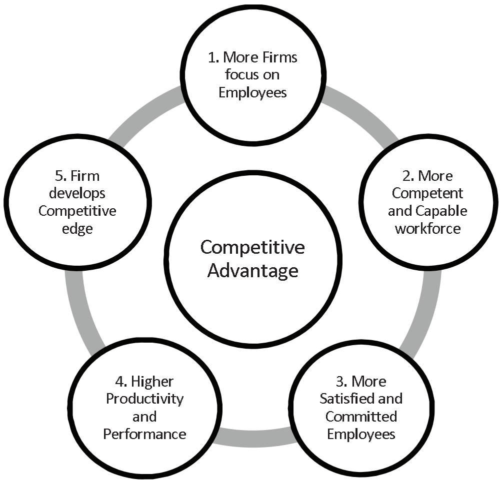
1. Relevant Concepts

1.1. Total Quality Management

Total Quality Management (TQM) is a management approach of an organization centered on quality, based on the participation of all its members and aiming at long term success through customer satisfaction and benefits to all members of the organization and to society (Dale 1999). TQM functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or completion of the products or services offered by an organization.

The concept of TQM was originally developed by an American, W. Edwards Deming after World War-II in 1950's for improving the production quality of goods and services. Learning the basics from Deming, Japanese companies extended and customized the integrated approach of TQM. The economic growth of Japanese industries in 1980's can be attributed to the successful application of TQM in Japan (Basu, 2004). To understand total quality, one must first understand the word quality. Quality means- specification, standards and other measures to customers while mentioning the quality of the product. This makes the point that quality can be defined and measured. The quality is in the eyes of the beholder. People deal with the issue of quality continually in their daily lives. We concern ourselves with quality while doing shopping, eating in a restaurant, and making a major purchase such as an automobile, a home, a television, or a personal computer. Perceived quality is a major factor by which people make distinctions in the market place. Whether we articulate them openly or keep them in the back of our minds. We all apply a number of criteria when making a purchase or availing a service. The extent to which a purchase meets these criteria determines its quality in our eyes (Mohanty R.P & Lakhe R.R. 2006).

Figure 1: Developing Competitive Advantage through HR Practices



The distinctive characteristics of total quality are: customer focus (internal and external), obsession with quality, use of the scientific approach in decision making and problem solving, long-term commitment, teamwork, employees involvement and empowerment, continual improvement process, bottom-up education and training, freedom through control, and unity of purpose. All deliberately aim at supporting the organizational strategy (Mohanty R.P. & Lakhe R.R., 2006).

2. Customers' Perception

Customers' perception is a measure of the customer satisfaction with the quality that is received.

Customers evaluate the quality of a service with regard to the element they actually experience in the course of the service delivery and on their perception of the outcome of service quality which is inseparable of production and consumption. The service quality can only be assessed against customer's subjective, nebulous expectation and past experiences. Services are produced and consumed simultaneously, therefore they cannot be stored, inventoried or inspected prior to delivery as manufactured goods. (Gronroos, 1990). In 1996, Bowensox divided service characteristics into three categories which are:- a) Physical facilities, processes and procedures b) employees behaviour and professional judgement and c) reliability (Bowensox, 1996). Johnson gave the most detailed list of service's characteristics which include, access, aesthetic, empathy, responsiveness, caring, tangible, comfort, reliability, communication, competence, courtesy, agility, adoptability, security, friendliness, honesty, responsiveness (Evans, 1999).

Among the service organization, the banking sector is one of the largest organization that caters to the needs of people belonging to all sections of society. Moreover, perceived service quality tends to play a significant role in high involvement (high interaction between customers and service providers) industries like banks (Angur et al., 1999). Banks traditionally have long term business relationships with customers. Many leading business magazines like Business today and Business India have of late, started ranking the banks on several criteria such as operational ratios, financial parameters, net profits, total assets advances and total deposits (Business India 1995, 1996, 1998 and Business Today 1999).

3. Literature Review

3.1. Indian Studies

(i). Sarovanan, R and. Rao, K.S.P (2006) in their study entitled "an analysis of total quality service dimensions in service sector – A case study" has analyzed various aspects of TQS (Total Quality Service) implementation in automobile service industries. The study has identified twelve dimensions which are top management commitment and leadership, Benchmarking, human resource management, technical system, information and analysis, service marketing, social responsibility, service culture, service scope, customer focus and satisfaction, employee satisfaction and continuous improvement. This survey instrument was developed with 118 items to validate the TQS dimensions empirically. A biraniate correlation analysis has been performed among the 12 initial dimensions the results have indicated that there is relationship among the TQS dimensions. Hence TQS has to be implemented in the organization with all the dimensions together considering them as a single group. Therefore the study depicted the successful implementation of TQS dimensions in the organization, which results in increasing sales, customers' satisfaction and profits.

3.2. Foreign Studies

(ii) Psychogios in his paper "Cross National Aspects of TQM" has explored special cross-cultural conditions of TQM which have been applied or rejected in several national business contexts. Paper focuses on relationship of TQM with culture and for this reason its need is to be seen and studied as a country – specific model. He used five dimensions of national culture that can influence management's attitude: power distance, individualism / collectivism, masculinity / femininity, uncertainty / avoidance and short and long term orientation. These five dimensions of national culture seem to determine the operation of various management practices like Human Resources Management (HRM), Business Process Reengineering (BPR) etc. The study concludes that survival of TQM depends to a large extent on national cultural factors.

(ii) Psychogios and Wilkinson in their study entitled "Exploring TQM awareness in the Greek National Business Context" developed the theoretical understanding of the application of total quality management in business environments that differ from those from where it emerged. This study is based on the results of seventy three (73) semi-structured interviews conducted with managers working in Greek public and private organizations. It was found that there are two antithetical business-cultural "forces" - Conservatism and Reformism, that seem to substantially affect the awareness and application of total quality management concepts. Both features create pressures in the system, either holding back or promoting TQM implementation. In this context, the tension between traditional business culture and modernization logic is the key to the evaluation of TQM.

(iii) Gare Jr (1999) in his study "Organisational Culture, TQM and business process reengineering" explored organizational culture by examining the relationship between total quality management (TQM) and culture. Specifically three elements of a culture related to quality management were studied viz customer focus, employee involvement and continuous improvement. Process reengineering is used as an alternative management initiative. A survey of 220 middle level professionals in 123 organizations was conducted to determine the extent to which there is a relationship between the presence of these cultural elements, and the presence of TQM. The responses were analysed by using factor analysis. The results of this study under score the importance of organizational culture and suggest that TQM provides a way to build a culture that supports improvement.

4. Research Design & Methodology

The present study is both exploratory and evaluative in nature. In order to make it more objective and scientific following steps were taken:-

4.1. Generation of Scale items

The questionnaire was designed after reviewing the existing literature and after having a discussion with the experts and interaction with the customers of the banks. After reviewing the existing literature (Suresh Chander, Chander Subharan, Anantharaman (2002), Psychogios (2007) Zeithaml, Parasuraman and Berry (1980), final questionnaire was framed comprising of six dimensions viz. comprising of 52 statements.

Managers' commitment and visionary leadership (9 statements), Technical System (9 statements), Customers focus (11 statements), Social ability (7 statements),
Service Quality management (14 statements), Continuous improvement (5 statements).

4.2. The Sample

The data was collected from 182 experienced and knowledgeable customers of four banks under study. Customers were personally contacted with the help of telephone directory and were briefed about the purpose of the study. Data was collected from customers of the banks situated in Pathankot City of Punjab. Two Public Sector banks viz. State Bank of India (SBI) and Punjab National Bank (PNB) were selected for the sample. In SBI, 45 customers were selected which comprised of 26% of the total sample.

43 customers were selected from PNB which contributed 24% of the total customers, two private sector banks were selected – Housing Development Finance Corporation (HDFC) and Industrial Credit and Investment Corporation of India (ICICI). In HDFC, 46 customers were selected which constituted of 24% of total customers and 48 customer were selected for ICICI which constituted 26% of total customers of the bank.

4.3. Scale Purification: Exploratory Factor Analysis

The multivariate data reduction technique of factor analysis has been used, with the help of 11.5 version of SPSS, which is most appropriate for the present study as it involves the examination of interrelationship among variables and reduces large number of dimensions into few manageable and meaningful sets (Stewart 1981). Univariate descriptive analysis has been used to analyses mean and standard deviation of each variable (Field 2000, p. 44-45). The study used principal component analysis with a varimax rotation (Kakati and Dhar 2000). Varimax rotation being the best rotation procedure minimizes the number of items with high loadings on one factor, thereby enhancing the interpretability of the factors (Malhotra, N 2002, P. 595). The test of appropriateness of factor analysis has been verified through KMO measures of sample adequacy, where the value between 0.5 to 0.7 are mediocre, 0.7 to 0.8 are good, 0.8 to 0.9 are great and above 0.9 super (Malhotra, N 2002 P. 455) which indicates the relevance for further analysis.

Besides factor analysis as explained in scale purification, the information obtained through self developed questionnaires has been processed and suitably analysed in order to bring out precise results with the help of appropriate statistical tools. The analysis of perception of customers about TQM's implementation has been carried out with the help of mean and standard deviation. Arithmetic mean has been used in order to know the value of each observation. Further, standard deviation has been analysed to work out the amount of variation in respondents' views (Beri 2005, P. 223). Multiple Regression has been computed to know to the nature of association or relationship between TQM's implementation (Dependent variable) and various independent variables like managers commitment and visionary leadership, technical system, customer focus, service quality management, social ability and continuous improvement. The degree of association between dependent and independent variables has been calculated through coefficient of determination (Boyd, Westfall & Stasch 1988, P. 579-581). **Convergent validity** has been worked out through positive correlation between statements of different dimensions. It involves the extent to which a measure correlates highly with other measures designed to measure the same construct (Cronin and Taylor, 1992). The scores obtained through Likert scale were classified into three groups "below average" (1-2), "average" (3) and "above average" (4-5) to make interpretation more lucid (Churchill 1988, pp. 325). The reliability and the internal consistency of the data collection has been judged through tests like the split half and Cronbach's alpha. It has been examined by dividing the respondents into two halves to examine if the variation in both the halves is within the range of sampling error (Tull and Hawkin 1993, pp. 316). Further Cronbach's alpha value has been analysed in order to examine the internal constituency and comparability, while the values of about 0.70 is generally considered as acceptable criterion for demonstrating internal consistency (Kennedy, Lassik and Godsby, 2002).

5. Research Objectives and Hypothesis

5.1. The Main Objectives of The Study Are

To assess the relationship between TQM implementation and their different variables on which TQM is dependent.

Hypothesis 1: Effective TQM implementation is dependent upon 6 variables. Viz-Management commitment, technical aspect, customers focus, social ability, service quality management and continuous improvement.

Objective 2: To make a comparative analysis of the degree of customers' perception of TQM services rendered by two public and two private sector banks.

Hypothesis 2: There is difference observed in customers' perception regarding TQM services rendered by Public and Private sector banks.

Objective 3: To determine the degree of perception of customers regarding the TQM services rendered by the banks taken up for study.

Hypothesis 3: Customers have high perception about TQM's implementation in banking sector.

Objective 4: To ascertain the extent of customers satisfaction regarding upgradation of TQM practices by banks in maintaining customer's loyalty.

Hypothesis 4: Continuous upgradation in TQM practices are needed to maintain customer's loyalty.

6. Data Purification

6.1. Managers Commitment and Visionary leadership

It consisted of nine general statements about managers' commitment and visionary leadership which was compressed under two factors namely Managers commitment (F_1) and Managers leadership (F_2). The KMO (Kaiser-Meyen-Olkin) values (0.84) and chi-square value (813.74) under Bartlet's Test of sphericity revealed the adequacy of the data for factor analysis. The total variance explained by these factors is 64.74%. The relevant computations are shown in Table 1

6.2. Technical System

This dimension initially consisted of nine statements which got reduced to eight after factor analysis. The statements got compressed to two factors namely- design quality management (F_3) and website design (F_4). The KMO value (0.79) and value of chi-square (837.91) under Bartlet's test of sphericity revealed the adequacy of the data for factor analysis. The total variance explained by the factors is 64.86%.

6.3. Customer Focus

This dimension originally consisted of eleven statements which got reduced to ten, under three factors, namely intensity of bank's performance (F5), customers feedback (F7). Here again KMO value (0.81) and chi-square value (645.98) revealed the adequacy of the data for factor analysis. The total variance explained by the factors is 65.63% (Table 1)

6.4. Social Ability

The dimension initially consisted of seven statements which got reduced to six, under two factors namely, ethical conduct (F7) and convenience of customers (F8). The KMO value (0.773) and chi-square value (303.25) under Bartlet's test of sphericity revealed the adequacy of the data for factor analysis. The total variance explained by the factors comes to 64.31% (Table 1)

6.5. Service Quality Management

The dimension originally consisted of fifteen statements which got reduced to fourteen statements under four factors namely, reliability (F9), tangibility (F10), Responsiveness (F11) and Assurance (F12) after factor analysis. The KMO values (185.5) and value of chi-square (1632.92) under Bartlet's test of sphericity revealed the adequacy of the data for factor analysis. The total variance explained by the factors comes to 73.77% (Table 1)

6.6. Continuous Improvement

This dimension consisted of six statements which get reduced to four statement under one factor namely continuous improvement (F14), after factor analysis. The KMO values (-0.833) and chi-square value (493.97) revealed the adequacy of the data for factor analysis. The total variance explained by the factor comes to 68.61% (Table 1)

7. Reliability Test

The reliability of the dimensions was assessed through cronbach's alpha, which measures the internal consistency of the scale. The relevant computations are shown in Table 5. As shown in the table, the alpha reliability for each dimension is high (above 0.7) indicating the internal consistency. Measurement of differences in the scores of customers has been done through spilt half reliability, by dividing the respondents into equal halves. The data has been proved reliable both before and after purification; as such both the groups have accorded similar mean vales. (Before factor analysis group-1: 3.835, group-II: 3.765 and after factor analysis group-I : 3.608 and group-II: 3.944) (Table 5). Further, Cronbach's Alpha value have been computed before factor analysis as 0.961 and after factor analysis as 0.959 (Table 5).

8. Limitations

The subjectivity of the data cannot be ruled out because the respondents furnished the information on the basis of their own perception. Furthermore the study was limited to selected customers for assessing their perception level towards the organization.

9. Major Findings

The major findings of the study of the perception of customers about TQM implementation in banking sector with respect to six dimensions are as under:-

1. Managers commitment and visionary leadership

Overall degree of customers perception towards Manager's commitment and visionary leadership is found to be moderate (MS=3.68, Table 2). It is note worthy that under this dimension, customers seem to be highly satisfied with Manager's dedication towards implementation of TQM (4.01), their endeavour to improve services for customers (MS=4.05), their problem solving attitude (MS= 3.83), their struggle for improving working condition of the bank (MS=3.91) and their cooperative treatment towards their customers (3.85). Their means scores are above average level on the other hand the customers of the banks covered under study have low perception with respect to commanding behaviour of managers (MS= 3.50), lack of innovative / dynamic approach of managers (MS=3.30) their mean scores are close to average level.

2. Technical System

Table 2 shows that overall mean score of 3.775 suggests above average level of customer's perception about technical system

Table 1: Summary of Results from scale purification for Factor Loading, Variance, Explained, Mean, KMO values customer's about TQM in Banking Sector.

	Dimensions	Factors	Mean	Factor Loading	KMO Values	% of V.E
1.	Manager's commitment & visionary leadership	(F_1) Managers Commitment			0.844	51.069
		Endeavour's to improve services	4.0546	0.806		
		Treatment towards customers	3.8579	0.765		
		Problem solving	3.8306	0.739		
		Dedication towards TQM	4.0109	0.733		
		Implementation of TQM	3.9344	0.724		
		Working condition	3.9126	0.589		
		Total mean of (F_1)	3.9335			
		(F_2) Managers visionary leader-ship				13.676
		Managers command	3.5082	0.795		
		Managers adaptability	2.7814	0.793		
		Dynamic managers	3.3060	0.640		
		Total mean of (F_2)	3.20			
		Total mean of (F_1 & F_2)	3.6885			
		Total V.E of Dimension I				64.74
2.	Technical System	(F_3) Design Quality Management			0.793	48.88
		Standardized Services	3.8634	0.890		
		Design Process	3.8907	0.883		
	Dimensions	Factors	Mean	Factor Loading	KMO Values	% of V.E
		Overall service delivery time	3.9016	0.777		
		Technical orientation	3.5464	0.752		
		Maintenance of records	3.8743	0.713		
		Total mean of (F_3)	3.81528			
		(F_4) Web-site Design				15.977
		Quick and easy to complete transactions	3.7322	0.848		
		Full protection	3.5246	0.848		
		Save time	3.8743	0.798		
		Total mean of (F_4)	3.7010			
		Total mean of (F_3 & F_4) of II Dimension	3.7759			
		Total V.E of II Dimension				64.863
3.	Customer Focus	(F_5) Intensity of Bank's Performance			0.814	41.377
		Length of the service	4.3115	0.737		
		Effectiveness of service	3.8197	0.699		
		Range of financial service	4.2350	0.694		
		Attention towards customers	3.8634	0.591		
		Needs & expectations of customers	3.8525	0.505		
		Total mean of (F_5)	4.0164			
		(F_6) Customer Satisfaction				12.837
		Customers safety	3.9945	0.842		
	Dimensions	Factors	Mean	Factor Loading	KMO Values	% of V.E

		Convenient operating hours	4.0273	0.727		
		Confidence & faith	4.0328	0.655		
		Total mean of (F_6)	4.0182			
		(F_7) Customer Feedback				11.420
		Customers guidance	3.1475	0.791		
		Information to customers	3.2623	0.710		
		Total mean of (F_7)	3.2049			
		Total mean of III Dimension	3.8547			
		Total V.E of III Dimension				65.634
4.	Social Ability	(F_8) Ethical Conduct			0.773	47.014
		Realization of customers needs	3.5574	0.844		
		Banks cooperation	3.8415	0.842		
		Promotion of conduct	3.7705	0.818		
		Treatment to all customers	2.9617	0.514		
		Total mean of (F_8)	3.5328			
		(F_9) Convenience of Customers				17.300
		Location of the branches	4.0109	0.915		
		Reasonability of services	3.8361	0.605		
		Total mean of (F_9)	3.9235			
		Total mean of IV Dimension	3.728			
		Total V.E of IV Dimension				64.314
	Dimensions	Factors	Mean	Factor Loading	KMO Values	% of V.E
5.	Service Quality Management	(F_{10}) Reliability				48.24
		Courteouy	3.8033		0.855	
		Customers are served conveniently	3.8962			
		Discipline	3.9071			
		Understanding of customers needs	3.9126			
		Respond to customers	3.7268			
		Customers best interest	3.6721	0.751		
		Care for customers	3.8033	0.684		
		Error free records	3.8852	0.664		
		Total mean of (F_{10})	3.8258			
		(F_{11}) Tangibility				9.543
		Modern equipment	3.7213	0.889		
		Visually appealing facilities	3.5956	0.888		
		Total mean of (F_{11})	3.6584			
		(F_{12}) Responsiveness				8.781
		Knowledge about services	3.3989	0.866		
		Willingness to help customers	3.4863	0.755		
		Total mean of (F_{12})	3.4426			
		(F_{13}) Assurance				7.208
		Assured valuables	4.0765	0.871		
		Secure customers	3.9945	0.627		
		Total mean of (F_{13})	4.0355			
		Total mean of V Dimension	3.777			
		Total V.E of V Dimension				73.77
	Dimensions	Factors	Mean	Factor Loading	KMO Values	% of V.E

6.	Continuous Improvement	(F_{14}) Continuous Improvement for Competitive Advantage			0.833	68.61
		Globlisation	3.8634	0.877		
		Professional growth	3.8798	0.859		
		Customers loyalty	3.8798	0.848		
		Latest techniques	3.9180	0.829		
		Training of employees	4.0546	0.723		
		Total mean of (F_{14})	3.9191			
		Total mean of VI Dimension	3.9191			
		Total V.E of VI Dimension				68.61
		Overall mean of all Dimensions	3.7805			

prevailing in the bank. Customers are satisfied with regard to 'standardized services' (MS = 3.863), 'design process' (MS=3.890), 'Overall service delivery time' (MS=3.901), 'maintenance of records' (MS = 3.874), 'quick and easy to complete transactions' (MS=3.732) and 'save time (MS = 3.874). Findings reveal low level of customers perception towards 'technical orientation' (MS = 3.546). This shows that employees are less devoted to 'result orientation and 'full protection which means safety of customers accounts in banks premises and at website.

3. Customer Focus

Table 1 shows that the activities and responsibilities of banks are well coordinated as is depicted by overall satisfaction score of 'customer focus' (MS = 3.854), 'length of the service', range of financial services', 'convenient operating hours', and 'confidence and faith' with mean score values 4.3115, 4.235, 4.027 and 4.032. These respectively contribute much towards the satisfaction of customers and raising their perception level. Statements viz. 'effectiveness of service', 'attention towards customers', 'needs and expectations of customers and 'customers safety' also showing above average level of perception of customers. Their mean scores are 3.819, 3.863, 3.852 & 3.994 respectively. Customers feel low about 'customer guidance' and information to customers their mean scores are 3.147 and 3.262 which means timely and required feedback is not provided to the customers (Table 2).

4. Social Ability

Table depicts that the main contribution towards the above average level of mean score of dimension Social ability (3.728) comes from 'Realization of customers needs', 'Bank's Cooperation', 'Promotion of conduct', 'Location of branches' and 'Reasonability of services' with their mean values 3.5574, 3.8415, 3.7705, 4.10109 and 3.8361 respectively. Findings reveal low level of perception among customers is towards 'treatment to all customers'. Its means value is 2.9617. It reveals that the employees treatment towards all customers is not same as favouratism prevails in the bank (Table 2).

5. Service Quality Management

The overall mean score of service quality management (MS = 3.777) elicit above average level of perception of customers. 'Courteousy', 'customers are served conveniently', 'discipline', 'understanding of customers needs' 'respond to customers', 'customers best interest', 'care for customers', 'error free records', 'modern equipment', 'assured valuable', 'secure customers with their mean values 3.803, 3.896, 3.907, 3.912, 3.726, 3.672, 3.803, 3.88, 3.721, 4.0765 contributes more towards overall mean score value of service quality management except customers best interest, using modern equipments and response toward customer. But the results depict that customers want more improvement with regard to 'visually appealing facilities (MS=3.486), 'knowledge about services' (MS=3.398), & Willingness to help customers' (MS = 3.486) (Table 2).

6. Continuous Improvement

Customers comparatively show high degree of perception regarding 'continuous improvement' (MS = 3.9191). Customers perception is above average with regard to 'movement towards globalization (MS = 3.863), 'Professional growth (MS = 3.879), 'customers loyalty' (MS = 3.879) and 'latest techniques' (MS = 3.91). But customers are delighted with regard to 'training of employees' (MS = 4.0546) (Table 2). From the point of view of perception of customers, it is revealed that banks should increase their efforts to continuously improve and utilize latest techniques for their professional growth, and use innovative methods to achieve competitive advantage.

10. Relationship Between TQM Implementation and its Variables

Regression analysis is a powerful and flexible procedure for analyzing associative relationship between metric dependent variable and one or more independent variables. (Malhotra 2007).

Table2: Mean and Standard deviation of all the dimensions of TQM's Implementation in Banking Sector.

Dimensions	Statements	Mean	S.D.
Manager's Commitment and Visionary Leadership	• Dedication towards TQM.	4.0109	0.66748
	• Endeavour's to improve services.	4.0546	0.65712
	• Treatment towards customers	3.8579	0.56292
	• Dynamic managers	3.3060	0.90549
	• Problem solving	3.8306	0.65004
	• Implementation of TQM	3.9344	0.61332
	• Working conditions	3.9126	0.67001
	• Manager's adaptation	2.7814	0.85101
	• Manager's Command	3.5082	0.77928
	Overall	3.6885	0.70629

Dimensions	Statements	Mean	S.D.
Technical System	• Technical orientation	3.5464	0.73483
	• Design process	3.80907	0.66682
	• Standardization of services	3.8634	0.67399
	• Maintenance of records	3.8743	0.68409
	• Overall service delivery time	3.9016	0.54289
	• Save time	3.8743	0.53953
	• Quick and easy completion of transaction.	3.7322	0.80041
	• Full protection of the customers	3.5246	0.72846
	Overall	3.7628	0.7963
Customer focus	• Length of service	4.3115	0.53794
	• Need and expectations of customers	3.8525	0.65531
	• Effectiveness of service	3.8197	0.67987
	• Customer guidance	3.1475	0.87544
	• Information to customers	3.2623	0.89506
	• Range of financial services	4.2350	0.67121
	• Customers safety	3.9945	0.59433
	• Convenient operating hours	4.0273	0.39606
	• Confidence and faith	4.0328	0.44112
	• Attention towards customers	3.8634	0.66588
	Overall	3.8546	0.6412
Social ability	• Banks cooperation	3.8415	0.60074
	• Promotion of conduct	3.7705	0.5534
	• Realisation of customers needs	3.5574	0.73406
	• Treatment to all customers	2.9617	0.91703
	• Reasonability of services	3.8361	0.49499
	• Location of branches	4.0109	0.40364
	Overall	3.728	0.6173

Dimensions	Statements	Mean	S.D.
Service quality management	• Error free records	3.8852	0.58324
	• Knowledge about services	3.3989	0.77977
	• Willingly help or inform customer	3.4363	0.72874
	• Respond to customers	3.7268	0.73846
	• Courteousy	3.8033	0.69516
	• Secure customers	3.9945	0.50538
	• Discipline	3.9071	0.53882
	• Assured Valuables	4.0765	0.54638
	• Care for customers	3.8033	0.70249
	• Understanding needs of customer	3.9126	0.64522
	• Customers served conveniently	3.8962	0.60356
	• Customers best interest	3.6721	0.77434
	• Modern equipments	3.7213	0.80348
	• Visually appealing facilities	3.5956	0.81453
	Overall	3.7777	0.6756
Continuous Improvement	• Globalisation	3.8634	0.70551
	• Latest techniques	3.9180	0.80004
	• Training of employees	4.0546	0.64880
	• Professional growth	3.8798	0.53849
	• Customer loyalty	3.8798	0.74219
	Overall	3.9191	0.687006
	Total mean of all Dimensions	3.78	0.6365

The association between TQM implementation and six dimensions viz. Managers commitment, Technical System, customer focus, social ability, service quality management and continuous improvement has been calculated by multiple regression. The result revealed R at 0.826 and adjusted R^2 at 0.672 (Table 6). The relationship between TQM's implementation and six dimensions in the construct has been established with the help of multiple regression, the equation of which is as under TQM's implementation = 2.18 + 0.615 + 0.207 +0.130 – 0.16 – 0.30-0.008. The regression equation indicates that TQM is both positively and negatively associated with six dimensions. While dimension wise exploration of regression revealed that all dimensions do not influence TQM implementation equally. The most influencing dimensions are managers commitment (B = 0.651, t = 12.137, sig, <.05) (Table 7), Technical aspect (B = 0.207, t = 3.331, Sib. <.05), and customer focus (B = 0.130, t= 2.495 sig <.05). But social ability, service quality management and continuous improvement (Table 7) are not significantly influencing TQM implementation.

It reflects that three dimensions Managers commitment, Technical and customers focus contribute most towards TQM's implementation. Hence, hypothesis is partially accepted.

There is difference observed in customer's perception regarding TQM service rendered by Public and Private sector banks.

Second hypothesis has been calculated by using independent sample test.

Dimension I i.e. managers commitment and visionary leadership's means value for Public banks is 3.4170 and Private Banks is 3.9456, dimension II i.e. Technical system's mean value for Public banks is 3.5983 and Private banks is 3.9441. Dimension III i.e. customer focus's mean value for Public banks is 3.7202 and private banks is 3.9819. Dimension IV social abilities mean value for public banks is 3.5618 and private bank is 3.7589. Dimension V service quality management's mean value for public banks is 3.6236 and private banks is 4.0723 (Table 9).

When we compare all the mean values of public and private banks, low level of difference is observed between public and private sector banks.

T-test shows t-values for dimension I is (t = 8.366 sig < 0.05), dimension II (t= - 4.439, sig < 0.05) dimension III (t

Table3: Convergent Validity

Factors	Below average		Average		Above Average	
	N	Mean	N	Mean	N	Mean
Managers' commitment (F_1)	3	2.5333	28	3.1571	152	4.0855
Managers' visionary leadership (F_2)	3	2.0000	28	2.5357	152	3.3443
Design Quality management (F_3)	3	3.0000	28	3.1000	152	3.9632
Web – site design (F_4)	3	3.0000	28	3.2976	152	3.8004
Intensity of Banks' performance (F_5)	3	3.2000	28	3.5714	152	4.1145
Customers' satisfaction (F_6)	3	3.0000	28	3.7381	152	4.0899
Customers' feedback (F_8)	3	2.5000	28	2.7679	152	3.2993
Ethical conduct (F_8)	3	2.7500	28	2.8839	152	3.6678
Convenience of customers (F_9)	3	3.0000	28	3.2679	152	4.0329
Reliability (F_{10})	3	3.0000	28	3.0580	152	3.9836
Tangibility (F_{11})	3	3.0000	28	3.1071	152	3.7730
Responsiveness (F_{12})	3	2.0000	28	3.1607	152	3.5230
Assurance (F_{13})	3	3.5000	28	3.8750	152	4.0757
Continuous Improvement (F_{14})	3	3.000	28	3.4571	152	4.0224
Overall %	1.63%		15.3%		83%	
Overall mean		2.8202		3.2126		3.8411

Table4: Factor wise mean.

Factors	Mean
Managers' commitment (F_1)	3.933
Managers' visionary leadership (F_2)	3.2083
Design Quality management (F_3)	3.8152
Web – site design (F_4)	3.7010
Intensity of Banks' performance (F_5)	4.0164
Customers' satisfaction (F_6)	4.0182
Customers' feedback (F_8)	3.2049
Ethical conduct (F_8)	3.5328
Convenience of customers (F_9)	3.9235
Reliability (F_{10})	3.8258
Tangibility (F_{11})	3.6584
Responsiveness (F_{12})	3.4426
Assurance (F_{13})	4.0355
Continuous Improvement (F_{14})	3.9191
Overall mean	3.7883

= - 4.493, sig < 0.05), dimension IV (t= - 3.117, sig < 0.05), dimension V (t = - 4.561, sig < 0.05) and (table 4.4) for dimension VI (t = - .3841, sig < 0.05) (Table 4.10). All the dimensions are showing significant difference. So, low level of difference is observed in customer's perception regarding TQM services rendered by Public and Private sector banks. Hence, hypothesis is accepted.

Hypothesis 3: Customers have high perception about TQM implementation in banking sector.

The hypothesis regarding the degree of perception of customers about TQM in banking sector has been tested by using the overall mean which is depicting the perception of customers about TQM and by using one sample t-test at 0.05 level of significance. The mean values of all dimensions which were showing perception of customers about TQM came to 3.78. This value is above average in our scale.

Further, the hypothesis have been tested by using t-test at 0.05 level of significance 't' test statistics obtained for the customer's perception indicated significant difference in hypothesized value and observed value (Table 4). Hence, this hypothesis that customers have high perception about TQM in banking sector stands accepted.

Table 5 : Cronbach's Alpha value, split half values and KMO Values

	Cronbach's Alpha Value			Validity
Component	**Overall**	**Split half reliability**		**Construct**
		Sample I	**Sample II**	**KMO**
After factor analysis	.959	3.608	3.944	0.773 to
Before factor analysis	.961	3.835	3.765	0.855

Table 6: Model summary of multiple regression of TQM Implementation and their different dimensions on which TQM is dependents.

Model	R	R. square	Adjusted R square	Std. error of the estimation	F	Sig.
1	.826 (a)	.683	.672	.38425	3.208	-000

Table 7: Influence of various dimensions of TQM on TQM Implementation.

	Unstandarised Coefficients		Standardized coefficients		Sig.
	B	Std. error	Beta	t	
(Constant)	**.218**	**.232**		**.940**	**.348**
Managers commitment	.661	.054	.651	12.137	.000
Technical system	.208	.062	.207	3.331	.001
Customer focus	.127	.051	.130	2.495	.014
Social ability	-.014	.048	-.016	-3.303	.762
Service quality management	-.028	.048	-.030	-.576	565
Continuous Improvement	-.008	.057	-.008	-.146	.884
(4) Dependent variable: TQM Implementation. Predictors: constant, Managers Commitment, Technical system, customers focus, social ability, SQM, C.I)					

Hypothesis 4 : 'Continuous upgradation' in TQM practices are needed to maintain customers loyalty.

The hypothesis regarding 'continuous upgradation' in TQM practices are needed to maintain customer loyalty has been calculated with the help of t-test at 0.05 level of significance. The 't' test statistics obtained from customers perception indicated significant difference in hypothesized value and observed value. (Table 4), hence, this hypothesis 'continuous upgradation' in TQM practices is needed to maintain customer loyalty stands accepted.

11. Comparative Analysis of Public Sector Bank and Private Sector Banks

Total quality management's implementation in Public sector as well as Private sector banks has been calculated through mean values. Different dimensions are also taken into account for exploring the perception level of customers through their mean values.

Two Private sector banks i.e. 1) SBI and 2) PNB has taken into consideration for knowing the endowment of Public sector banks towards TQM's implementation.

Two Private sector banks i.e. 1) HDFC 2) ICICI have been taken into consideration among Private sector banks.

Overall mean score of Public sector banks come 3.6130 which falls in 'above-average' category and on the other hand overall mean of Private sector banks come to 3.9375 which is also 'above average' but quite little bit higher from Public sector banks. It means customers' perception level is higher regarding Private sector banks which is evident from mean values. Public sector banks have been constantly taking TQM's initiatives and trying to provide quality to their customers even then difference has been observed in effective implementation of Total quality management programmes.

Table 8: Showing bank wise mean, S.D. by applying independent t-test.

Dimension	Category of Bank	N	Mean	S.D.	Std. Error mean
Managers' Commitment and Visionary leadership	Public Bank	89	3.4170	.48092	.05098
	Private Bank	94	3.9456	.36206	.03734
Technical System	Public Bank	89	3.5983	.58977	.06252
	Private Bank	94	3.9441	.45074	.04649
Customer Focus	Public Bank	89	3.7202	.46323	.04910
	Private Bank	94	3.9819	.30373	.03133
Social Ability	Public Bank	89	3.5618	.50838	.05389
	Private Bank	94	3.7589	.29796	.03073
Service Quality Management	Public Bank	89	3.6236	.53536	.05675
	Private Bank	94	3.9225	.31783	.03278
Continuous Improvement	Public Bank	89	3.7573	.61161	.06483
	Private Bank	94	4.0723	.48713	.05024

Table 9: Dimension wise mean value of Public sector and Private sector banks.

S. No.	Dimensions	Public sector banks (mean value)	Private sector banks (mean value)
	Managers' commitment and visionary leadership	3.4170	3.9456
	Technical System	3.5983	3.9441
	Customer Focus	3.7202	3.9819
	Social Ability	3.5618	3.7589
	Service Quality Management	3.6236	3.9225
	Continuous Improvement	3.7573	4.0723

While comparing bank wise mean values, it has been observed that SBI is showing mean score of 3.903, Mean score of PNB is 3.32 (table 9). It means customers' perception level towards TQM is higher in SBI bank and lower with PNB (Depicted in graph).

When we move towards Private sector banks, HDFC avail mean score of 3.981 and ICICI's mean score is 3.894 (table 9). Thus minor difference has been observed between HDFC and ICICI, still it can be mentioned HDFC is quite ahead in quality race (depicted in graph). While comparing the mean score of Public sector and Private sector banks as per six dimensions used in the study, it is observed that-

Managers' Commitment and Visionary Leadership: Public sector banks mean score has been estimated 3.4170 (table 9) and Private sector banks' mean score comes to 3.9456. Difference has been seen in their mean scores which depict that managers of Private sector banks are more committed towards TQM and their visionary leadership helps in guiding the behaviour of employees in Private sector banks as compared to Public sector banks.

Technical system: As depicted 3.5983 mean score in case of Public sector banks and 3.9441 mean score in case of Private sector banks it can be analysed that Private sector banks are quite ahead in technical sphere. Private banks are much endowed towards quality design management and process development.

Customer focus: Table 9 shows that Public sector banks mean value comes to 3.7202 and Private sector banks mean value has been observed at 3.9819. This shows that Private sector banks give much focus towards customers', satisfaction and feedback of the customers are taken into account while making policies and guiding the behaviour of employees.

Social ability: As depicted by Table 9 - the mean value of Public sector bank is 3.5618 and Private sector banks is 3.7589. Again Private sector bank is ahead in meeting the social and community obligations thereby satisfying customers.

Service Quality Management: This dimension shows mean values of Public sector banks at 3.9225 (Table 9). This is obvious from the mean scores that Private sector banks give much emphasis towards service quality and make efforts in meeting the needs and expectations of the customers.

Continuous Improvement: Table 9 – depicts the difference in the mean values of Public sector banks and Private sector banks. The mean value of Public sector banks comes to

3.7573 and Private sector banks 4.0723 (table 9). Continuous Improvement is special feature of quality improvement programme. Public sector banks are following this concept but still far behind from Private sector banks. Private sector banks have scored highly on continuous improvement, which implies that there is definitely a passion as they believe that customer is the king for quality improvement. They are quite ahead in implementing TQM. Reason may be that they are privately owned and they are structurally more flexible. Moreover, they also have the advantage of starting with a clean slate.

The Public sector banks are state-owned, and union is a dominant force in any government organization of India (Banks are no exceptions). These banks are constantly taking quality improvement initiatives, but they seem to have been little bit lacking on effective quality management programme because of non-cooperation from union, Government rules and regulations, direct and indirect impact of monetary policies, International and national market, RBI's governance thereby resulting in low customers' perception regarding TQM implementation of these banks as depicted by mean values in Table -. In order to increase the mean score of Public sector banks, there is immediate need to infuse thinking in the minds of the top management and employees of Public sector banks on the salience of quality management strategies, if they have to meet the challenges of Private sector banks and maintain customer loyalty in future.

12. Conclusion

Managers commitment and visionary leadership (3.68) About his, dimension, customers perception level is high towards Banks endeavours to continuous improvement, equal treatment towards customers, they have low perception towards Managers' adaptability to different situations, customers feel that managers lack dynamism and they show less respect towards their seniors. So far as dimension technical system is concerned, customers have high degree of perception, towards Bank's standardized services, design process, overall service delivery time, maintenance of records quick and easy completion of transaction by website on the other hand customers feel that employees of the banks are not forthcoming in enriching themselves with technical aspects of operations. Moreover, they feel that their accounts records are not fully protected on website, pertaining to customer focus, customers have full faith regarding safe and secure transactions. The bank and they feel very convenient working hours while operating their accounts in the banks. Customers get personal attention from employees of the bank. Customers are not timely informed about the T.Q. Mellitus being taken up by the bank. Furthermore, they are not guided properly about the latest information.

Pertaining to social ability, dimension, customers are high perception level towards Banks as they feel that Banks are providing good services at reasonable price. Banks conduct ethically while dealing with customers. Customers feel that bank branches are conveniently located as they are easily approachable with less wastage of time. On the other hand customers are not given equal treatment to all as favouritism prevails at times. At times customers don't get cooperation from bank employees.

Customers feel that employees of the banks are very disciplined and courteous while dealing with them. Valuables of the customers are very safe and banking records are found error free. On the other hand customers feel handicapped when they don't set willing help in updating their information about bank's services. There is less usage of modern equipments on the part of banks personnel, customers are highly satisfied pertaining to continuous improvement employees of the bank as well trained and professionally sound while dealing with customers and updating future to find and moving towards globailisation. Bank believes in continuous improvement and result in customers loyalty. This dimension is highest mean score i.e. 3.91.

Perception level of customers about TQM is higher in private sector banks and lower in public sector banks. Among private sector bank HDFC bank is having an edge over ICICI bank as per the perception of customers on the other hand. Customers have high perception level towards State Bank of India as compared to Punjab National Bank. In order to increase the perception level of customers towards the banks, where it is lacking, measures should be taken to establish the standards of quality levels, timely delivery of services, use of proper validation tools, proper allocation of resources to combat the weak-spots and evaluation of performance on regular basis.

13. Future Research

There are four major issues which direct attention at future research, mentioned below

(1) Present study has taken into account customer's perception by observing their view about TQM's implementation in banking sector. In order to extract more accuracy and validity, employee's perception would be measured by analyzing the impact of Employees satisfaction on the perception of customers.

(2) Future research could pursue more comprehensive approach by making a comparative analysis of Public Sector Banks, Private Sector Banks, and foreign banks thereby taking into consideration the same construct of TQM's implementation in banks.

(3) Small size of sample does not depict accuracy in result 183 sample size of present study in too small. Moreover, it is interesting to measure the perception of customers and employees of north India to have more accuracy in results.

(4) Convenience sampling technique has been used in present study which is less representative of the population. Since it may be biased and unsatisfactory. Thus for full representation of the whole population it will be more appropriate to use some other sampling technique in future research.

13.1. Managerial Implications

Present empirical study makes a comparative analysis of degree of perception of customers about TQM's implementations in Public Sector Banks on one hand and Private Sector Banks on the other hand. The study provides valuable guidelines for successful TQM implementation in banking sector.

Total quality management when implemented in banking sector would surely improve banks' performance thereby retaining their customer base by rendering quality service in banking operation by virtue of improved managers commitment and their visionary leadership, better technical system, improved customer focus, social ability, service quality improvement and continuous improvement in banking operation thereby satisfying customer and elevating their perception level.

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