Quality begets Quantity: Total Quality Management in Indian Service Sector

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Abstract - *In an increasingly competitive marketplace, business with a strong continuous improvement culture and external focus are more likely to survive and prosper. Total Quality Management (TQM) is considered an important catalyst in this context. In the present study, an attempt has been made to quantify the qualitative aspects of TQM for the service sector organizations in India. It was felt that much have been written & implemented about quality management in manufacturing sector. Also, it has been understood that service sector organizations are still hesitant and apprehensive about adopting TQM as a consequence of a general misunderstanding of its practices and principles. A special emphasis given on this paper is aimed at clarifying upon these misunderstandings. Application of TQM principles in service sector of India is presently at a very nascent stage and there is a need to make organizations feel its importance by providing them with quantifiable results of benefits achieved by those organizations which are already on the path of quality improvement.*

Key Words: ***Total Quality Management, Service Sector, Continuous Improvement, Standardization, Cost reduction***

1.INTRODUCTION

Globalization of markets, growing interpenetration of economies, and increased interdependence of economic agents are reshaping the international and national competitive environment. These fundamental changes are prompting the far-sighted organizations to re-examine and modify their competitive strategies. To survive and prosper all businesses need to establish mechanisms enabling them to exert conscious and sustained effort to continuously improve all facets of their operations. The continuous improvement effort needs to be coupled with an acute awareness of changes in customers' requirements; competitive factors; and broader variations in the business environment [2].

In an increasingly competitive marketplace business with a strong continuous improvement culture and external focus are more likely to survive and prosper. Total Quality Management (TQM) is considered an important catalyst in this context. This is why the TQM concept has captured the attention of all sides of commerce and industry, as well as that of politicians and academics.

A quality edge boosts performance in two ways. In the short-term, superior quality yields increased profitability via premium pricing. In the long-term, superior or improving quality should result in increased market share. Higher volumes of output lead to improved scale economies that in turn should result in lower operating costs. Thus, the investment required to improve quality is normally off-set over a relatively short period of time [3]. Thus, we can say quality and customer satisfaction are important subjects receiving increasing attention worldwide. TQM in service sector provides a response to this awareness and seeks to encourage organizations and companies to manage the quality aspects of their service activities in a more effective manner. In general, the design of a service involves three elements:

1. The features to be offered by the service
2. The layout and décor of the facility where the service takes place &
3. The processes by which service is delivered

In the present study an attempt has been made to quantify the empirical aspects of TQM for the service sector organizations in India. It was felt that much have been written & implemented about quality management in manufacturing sector. Also, it has been already established that service sector organizations are still hesitant and apprehensive about adopting TQM as a consequence of a general misunderstanding of its practices and principles [2]. A special emphasis given on this paper is aimed at clarifying upon these misunderstandings. Application of TQM principles in service sector of India is presently at a very nascent stage and there is a need to make organizations feel its importance by providing them with quantifiable results of benefits achieved by those organizations which are already on the path of quality improvement.

1.1 Research Objectives

Based on the current TQM implementation in India service sector (ISS) organizations, this research aims at achieving the following research objectives:

1. The awareness, usage & experience of TQM in ISS
2. The extent of benefits realized & side effects by TQM in ISS
3. To obtain the reasons those motivate organizations to adopt quality systems.
4. To obtain the factors responsible for inability to start a TQM program

5. Comparison of management and customer perceptions w.r.t the above-mentioned points

Thus, new knowledge related to TQM in Indian Service sector organizations can be derived. After reviewing the existing TQM literature, it has become very clear that this research project has to systematically examine the level & knowledge of TQM and to analyze the benefits, side effects, the motivational factors and barriers in starting/implementing TQM in Indian Service sector organization

2. REVIEW OF LITERATURE

An extensive literature review was done in the following areas:

1. Literature on quality management in general including manufacturing and other service areas [1-5,9,11,12,17]
2. Literature on service sector in general [6-8,18-20]
3. Literature on service sector and quality management [10,13-17]

These were used to identify important quality management constructs in the service sector environment. In the service sectors, the internal measure of service quality is usually based on many internal standards of performance, while the external measure of service quality is usually based on the customer's perception of service quality via external measurement techniques, such as customer surveys, interviews and focus. A brief review of the above-mentioned literature is given in the following sections.

2.1 History of TQM

An extensive review of literature was carried out to identify the concept of TQM from quality gurus such as Deming (1986), Juran , Crosby (1979),Feigenbaum (1991), and Ishikawa (1985).[4]

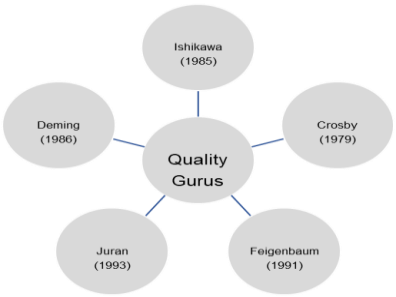

Fig. 2.1 Quality Gurus

After the approaches to TQM of the five quality gurus have been reviewed, it has become evident that each has his own distinctive approach. Although their approaches to TQM are not totally the same, they do share some common points which are summarized as follows:

1. It is management's responsibility to provide commitment, leadership, empowerment, encouragement, and the appropriate support to technical and human processes. It is top management's responsibility to determine the environment and framework of operations within a firm. It is imperative that management foster the participation of the employees in quality improvement and develops a quality culture by changing perception and attitudes toward quality.

2. The strategy, policy, and firm-wide evaluation activities are emphasized.

3. The importance of employee education and training is emphasized in changing employees' beliefs, behaviour, and attitudes; enhancing employees' abilities in carrying out their duties.

4. Employees should be recognized and rewarded for their quality improvement efforts.

5. It is very important to control the processes and improve quality system and product design. The emphasis is on prevention of product defects, not inspection after the event.

6. Quality is a systematic firm-wide activity from suppliers to customers. All functional activities, such as marketing, design, engineering, purchasing, manufacturing, inspection, shipping, accounting, installation and service, should be involved in quality improvement efforts.

2.2 Need for TQM in Service Sector

Total quality management (TQM) has received considerable attention in many manufacturing organizations. Many success stories have been described in magazine articles and at conferences. However, little has been written on how this management approach has been applied in service sector. This is a major deficiency, especially because this sector is as important for its job creation potential & as a GDP contributor [19].

It is argued that growth of the service sector is determined by several factors such as production specialization, income level and urbanization. These factors are interrelated. As an economy grows, productive activities become more specialized and urbanization accelerates due to the rising level of income. In the meantime, as a result of the increasing specialization of production, firms tend to outsource many service activities such as legal, accounting and security services. It is the main source of demand for services from the producers.

At the household level, as income rises, consumption of food and durable goods in turn becomes saturated over time and demand for services such as healthcare, travel, communications and finance increases. Growth in income also boosts demand for away-from-home consumption of food and services. Furthermore, urbanization contributes to the growth of the service sector in two ways. Unlike farmers who to some extent can provide self-services, urban consumers rely on the market for the supply of services. They are also more likely to enter the urban informal sector for employment if there are no job opportunities in the

formal sector. Services account for the lion's share of the informal sector. Thus, urban residents are both consumers and suppliers of services. It is expected that the service sector grows as the level of urbanization increases in a society. This is confirmed by preliminary analysis of India's regional data in the preceding section [16] .

In addition, the participation of women in the workforce has an impact on service demand as well. More women in the workforce could lead to an increase in demand for services, ranging from babysitting and catering to tuition and beauty treatments. Furthermore, regulatory policies also affect the development of the service sector. A good example is the rapid growth of telecommunications services after deregulation in many countries. This phenomenon can be repeated in other areas such as insurance, banking, health care and so on. Regulatory environments can also affect international trade and foreign investment in services [16].

But in the service sector there is a difference between the customer and the organization's perception about the quality. So to standardize the processes and to reduce this gap and also owing to inherent complexity of the sector there is a great need for TQM in service sector. The problem is not a lack of resources; rather, it is that service sector companies operate below their potential. If managers focused on putting the existing technologies, labour force, and capital stock to work, rapid productivity growth would follow. Although the service sector is complex, the managers would do well to apply the same tools, techniques, and policies that have been so effective in manufacturing sector. Doing so would help them keep their eye on the ball - the efficiency of basic operations. With the growing maturity of society with respect to education, culture and standards of living, the user expectations and demands for improved quality of service are increasing. This is part of the pressure causing service organizations to explore total quality management (TQM) as a means of driving quality improvement into all their activities.

3. RESEARCH METHODOLOGY

The study followed an empirical analysis based on the data collected through questionnaire survey. The authors conducted data collection in Jaipur and different parts of India which include cities like Delhi, Bombay, Bangalore, Hyderabad, and Chennai and also in parts of Andhra Pradesh and Kerala. Service Sector firms in Jaipur were selected for investigation due to the Jaipur being one of the most important industrial centers in the state, as well as for reasons of practicality and convenience perceived by the authors. In Jaipur, a total of 60 on site surveys were conducted out of which 45 surveys were fruitful yielding a success rate of 75 %. A total of 200 surveys were mailed to different parts of country, out of which only 59 responses were received, yielding a response rate of 29.5%. The top-level management, owner and in some cases middle level management & other employees were determined as the most appropriate respondents. A brief description of the respondents is given below:

Table 3.1 Questionnaire surveys method & response rate

Type	Method	No. surveys	Response	Response rate
Surveyed in Jaipur	On site	60	45	75 %
Surveyed Outside Jaipur	Mailed	200	59	29.5 %
Total		260	104	40 %

Table 3.2 No. of surveys for different sectors

Type of sector	No. of surveys
Banking	20
Education	22
HealthCare	20
Hotels/Resorts	20
Misc.	23
Total	104

4. ANALYSIS

The responses for the set of questions are tabulated as shown below. The mean score for each sub sector is calculated for each question. Then, the mean score for the total service sector is calculated on a scale of 5. The data sheets for the different sub sectors are given below.

Table 4.1 Health care sector responses

Hospitals	Rungta	Get Well	Apex 1	Apollo 1	Apex 2	Yashoda	Lalitha	RCC	MOSC	x1	K.I.M.S	y	x2	a	b1	KGH	Apollo 2	Fortis	b2	SMS	Avg.
To what extent do you agree with the below statements?																					
Customer satisfaction	5	5	5	5	5	4	4	5	5	5	4	4	5	5	5	4	5	5	5	5	4.8
Awareness of mission	3	5	5	5	4	5	4	4	4	4	4	4	4	4	5	5	4	5	5	4	4.4
Documentation	4	4	5	4	4	4	5	5	4	5	5	5	5	5	5	5	5	5	5	5	4.7
Objectives review	3	4	5	5	4	5	4	4	4	4	4	4	4	5	5	5	4	4	5	4	4.3
Performance evaluation	4	5	5	4	5	5	5	4	4	5	4	5	5	5	5	5	5	5	5	4	4.7
Proper feedback	5	5	5	5	4	4	5	4	4	5	5	5	5	5	4	4	5	5	5	4	4.7
Quality service (Infra)	3	5	5	4	3	4	4	4	5	4	4	5	4	5	5	4	5	4	5	4	4.3
Reasons that motivate an organisation to adopt a quality system:																					
New business oppor.	3	4	4	4	4	4	5	4	5	5	4	4	5	5	5	5	5	5	5	4	4.5
Inc. satisfaction	5	4	4	4	3	5	4	4	4	4	4	3	4	5	5	4	5	5	5	5	4.3
Performance Improved	5	3	4	5	4	5	5	5	5	5	5	4	3	5	5	4	5	5	5	4	4.6
Standardisation	4	3	3	5	4	5	4	4	5	5	5	4	4	5	5	5	5	5	5	5	4.5
Cost reduction	4	3	5	5	4	4	5	5	4	5	5	5	5	5	5	4	5	5	5	4	4.6
Internal Efficiency inc.	4	5	5	4	3	4	4	4	5	4	4	4	4	5	5	5	5	5	5	4	4.4
Mgmt. Initiative	4	5	5	4	3	5	4	5	4	4	4	5	4	5	5	5	5	5	5	4	4.5
Improved mkt. image	5	5	5	4	4	5	5	4	5	5	5	4	5	5	5	5	4	5	5	4	4.7
Reduce Liability risk		5	5	5	5	4	4	4	4	4	4	4	3	3		3	4	4		4	4.1
Quality adoption Barriers																					
High cost of QS	3	2	2	2	1	2	1	2	2	4	3	3	4	3	3	4	2	2	3	3	2.6
Lack of knowledge	3	4	4	2	4	4	4	3	4	3	4	4	3	4	4	4	2	4	4	5	3.7
Uncelar vision	1	2	2	3	3	1	2	2	2	2	2	2	3	3	2	3	1	2	2	3	2.2
High cost of consultation	2	2	2	2	2	3	3	2	3	3	2	3	3	3	3	2	2	2	3	3	2.5
Amount of work	2	2	2	2	2	3	3	4	2	2	3	3	3	2	2	3	3	3	3	3	2.6
Poor commitment of mgmt	1	2	2	2	1	1	2	2	2	1	1	1	2	3	1	2	1	1	1	2	1.6

Table 4.2 Banking sector responses

Banks	ICICI 1	ICICI 2	AXIS	Indus Ind	ING Insu.	ING 1	ICICI 3	ING 2	HDFC	SBI 1	Canara	SBI 2	Raj.	SBBJ	Indian	SBT	PNB	Central	Federal	S.B.Indore	Avg.
To what extent do you agree with the below statements?																					
Customer satisfaction	5	5	5	4	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4.9
Awareness of mission	4	5	5	4	4	4	5	4	5	5	4	4	5	5	4	4	4	5	5	5	4.5
Documentation	5	4	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4.9
Objectives review	4	5	5	4	5	4	4	4	5	4	5	5	5	5	4	5	4	5	5	4	4.55
Performance evaluation	4	5	5	5	4	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85
Proper feedback	5	5	4	5	4	4	5	5	5	4	4	5	4	5	5	5	4	5	5	5	4.65
Quality service (Infra)	3	4	4	5	5	5	4	5	5	4	4	5	4	5	4	4	4	5	5	4	4.4
Reasons that motivate an organisation to adopt a quality system:																					
New business oppor.	4	5	4	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4.8
Inc. satisfaction	4	4	5	4	5	5	5	4	5	5	5	5	4	4	5	5	5	5	5	5	4.7
Performance Improved	5	4	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4.9
Standardisation	5	5	5	5	5	4	4	5	5	4	5	5	5	5	5	5	5	5	4	5	4.8
Cost reduction	4	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4.9
Internal Efficiency inc.	4	4	4	5	5	5	4	5	5	5	4	5	5	5	5	5	4	5	5	5	4.7
Mgmt. Initiative	4	4	4	4	5	5	4	5	5	5	4	4	4	5	5	5	5	5	5	5	4.6
Improved mkt. image	5	5	4	4	5	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5	4.8
Reduce Liability risk	4	4	5	3	4	4	3	4	3	4	3	4	3		3	4	3	4	4	4	3.68
Quality adoption Barriers																					
High cost of QS	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2.3
Lack of knowledge	3	3	3	4	4	4	4	3	4	4	4	4	4	5	4	4	4	4	4	4	3.85
Uncelar vision	2	3	2	1	2	2	3	2	3	3	3	3	3	2	2	2	3	2	2	2	2.35
High cost of consultation	2	3	3	4	2	2	2	2	2	3	3	2	3	3	3	3	3	3	3	3	2.7
Amount of work	2	4	3	2	2	3	2	2	2	2	3	2	3	3	3	2	3	2	3	2	2.5
Poor commitment of mgmt.		1	2	1	1	1	1	1	1	2	2	1	2	2	2	2	1	1	2	1	1.42

Table 4.4 Hotel/ Resort sector responses

Hotels/Resorts	KK Royal	Maharani	Maurya	Pink Pearl	Jales	Las Vegas	Polo	Sunrise	Shubham	Jaipur	Sunrise	Golden	Chowki	Angel	Wall Street	Oberoi	Park Plaza	Clarks	Rambagh	Neelam	Avg.
To what extent do you agree with the below statements?																					
Customer satisfaction	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	4.9	
Awareness of mission	5	5	4	5	5	5	4	5	5	5	5	5	4	4	5	5	5	5	5	4.8	
Documentation	5	5	5	5	5	5	4	5	5	5	5	5	4	4	5	5	5	5	5	4.85	
Objectives review	5	4	5	5	5	4	5	5	5	5	5	5	4	4	5	5	5	5	4	4.75	
Performance evaluation	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Proper feedback	5	4	5	5	5	5	4	5	5	5	5	5	4	4	5	5	5	5	5	4.8	
Quality service (Infra)	4	5	5	5	5	5	4	5	5	5	5	5	4	4	5	5	5	5	4	4.75	
Reasons that motivate an organisation to adopt a quality system:																					
New business oppor.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Inc. satisfaction	5	4	4	5	5	4	4	5	5	5	5	5	4	4	5	5	5	5	5	4.7	
Performance Improved	5	5	5	4	5	5	4	5	5	5	5	5	4	4	5	5	5	5	4	4.75	
Standardisation	4	5	5	4	5	5	4	5	5	5	5	5	3	3	5	5	5	5	4	4.6	
Cost reduction	5	5	5	5	5	5	5	5	5	5	5	5	4	3	5	5	5	5	5	4.85	
Internal Efficiency inc.	5	5	5	5	5	5	4	5	5	5	5	5	3	3	5	5	5	5	4	4.7	
Mgmt. Initiative	5	5	5	4	5	5	3	5	5	5	5	5	3	4	5	5	5	5	3	4.6	
Improved mkt. image	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Reduce Liability risk	4	5	5	4	5	4	3	5	5	5	5	5	2	3	5	5	5	5	4	4.45	
Quality adoption Barriers																					
High cost of QS	3	2	3	2	2	3	4	2	2	1	2	1	1	4	4	2	2	1	1	2	2.2
Lack of knowledge	3	4	4	3	3	4	4	3	3	4	4	3	2	5	4	2	2	2	2	3	3.2
Uncelar vision	2	2	2	2	2	3	3	2	1	1	2	1	1	3	3	1	2	1	1	2	1.85
High cost of consultation	3	3	2	2	3	3	3	2	2	2	2	1	1	3	4	2	2	1	1	3	2.25
Amount of work	2	2	2	2	2	3	3	2	2	1	2	1	1	4	3	2	2	2	2	3	2.15
Poor commitment of mgmt.	1	1	2	1	2	3	3	2	2	1	2	1	1	3	3	1	1	1	1	2	1.7

Table 4.3 Educational sector responses

Edu. Institutes	Guj. Uni	IMS	IIT B 1	IIT B 2	Hello World	Vikas	IIT Madras	K.V.	VIT	C.B.I.T	PSG Tech	Andhra Uni.	B.I.M.S	Gyan vihar	J.E.C.R.C. 1	P.I.E.T.	B.M.I.T	G.I.T	J.E.C.R.C 2	Apex	Avg.
To what extent do you agree with the below statements?																					
Customer satisfaction	4	4	2	3	5	5	5	5	4	5	4	5	4	5	4	4	4	4	5	5	4.3
Awareness of mission	4	3	3	3	4	4	4	5	5	5	5	5	4	4	5	5	3	4	5	4	4.2
Documentation	5	4	3	4	4	4	5	5	5	4	5	5	4	5	4	5	4	5	4	5	4.45
Objectives review	4	3	4	4	4	4	4	5	4	4	5	5	4	4	4	5	3	4	4	4	4.1
Performance evaluation	4	4	2	2	4	5	5	5	4	5	5	5	4	4	5	5	4	4	5	5	4.3
Proper feedback	4	5	4	4	4	4	4	5	5	5	5	5	4	4	5	5	5	4	4	5	4.5
Quality service (Infra)	4	3	4	4	5	5	5	4	4	5	4	5	5	5	5	4	3	4	5	4	4.35
Reasons that motivate an organisation to adopt a quality system:																					
New business oppor.	3	5	3	3	4	5	5	4	4	5	5	5	4	5	3	4	5	3	5	5	4.25
Inc. satisfaction	4	4	4	4	4	5	5	5	5	5	5	5	5	5	4	5	4	4	4	5	4.55
Performance Improved	4	4	4	4	5	5	5	5	4	5	5	5	5	5	4	5	4	4	5	5	4.6
Standardisation	4	4	4	4	4	5	5	5	5	4	4	4	5	1	4	5	4	4	4	4	4.15
Cost reduction	3	5	3	3	3	5	5		3	5	5	5	5	1	4	5	5	3	5	5	4.11
Internal Efficiency inc.	3	5	4	3	4	4	5	4	3	5	5	5	5	1	3	5	5	3	4	3	3.95
Mgmt. Initiative	4	3	2	2	4	4	4	5	4	5	4	4	5	1	3	5	3	4	4	4	3.7
Improved mkt. image	3	4	4	4	4	5	5		4	5	5	5	4	1	3	5	4	3	4	5	4.05
Reduce Liability risk	4		4	3	4	4	3	4	4	4	3	4	4		2	5		4		3	3.69
Quality adoption Barriers																					
High cost of QS	3	2	2	2	1	3	3	4	3	3	2	2	3	1	3	3	2	3	2	3	2.5
Lack of knowledge	4	4	4	4	3	4	3	4	4	2	4	4	4	5	2	2	4	4	4	4	3.65
Uncelar vision	2	3	3	3	2	3	2	4	2	2	2	2	3	1	2	1	3	2	2	2	2.3
High cost of consultation	4	3	3	3	2	3	3	5	4	2	4	3	4	1	2	4	3	4	2	3	3.1
Amount of work	2	3	2	3	2	3	2	5	2	3	4	3	4	5	3	4	3	2	3	3	3.05
Poor commitment of mgmt.	2	1	2	2	2	1	1	3	1	2	1	1	4	1	4	2	1	2	2	2	1.85

Table 4.5 Miscellaneous companies' responses

Miscellaneous	Int. Edu Cons.	Adroiter	ST Infosys	Virinchi	Adobe	Velankini	Perception	L & T	SAHARA	BSNL	Tata Indicom	TIMES	E-nook	Havells	VRL	Arvind	Postal	PWD	FCI	CWC	Avg.
To what extent do you agree with the below statements?																					
Customer satisfaction	5	5	5	5	5	5	5	5	2	5	5	4	5	5	5	5	5	5	5	4.8	
Awareness of mission	4	4	5	4	5	4	4	4	2	5	5	3	5	5	4	4	5	5	5	4.35	
Documentation	3	4	5	4	5	5	5	5	3	5	5	4	4	5	5	5	5	5	5	4.6	
Objectives review	3	3	5	4	4	5	5	4	2	5	5	4	5	4	5	5	5	5	5	4.4	
Performance evaluation	4	4	5	5	5	5	5	5	4	5	5	4	4	4	4	5	5	5	5	4.65	
Proper feedback	2	2	5	4	5	5	4	5	4	5	5	2	4	5	5	5	5	5	5	4.35	
Quality service (Infra)	3	4	5	5	5	4	5	4	3	5	4	4	5	4	4	5	5	5	5	4.42	
Reasons that motivate an organisation to adopt a quality system:																					
New business oppor.	5	4	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	3	5	4.75
Inc. satisfaction	4	4	5	5	4	4	5	4	4	5	5	4	5	5	5	5	5	5	5	5	4.65
Performance Improved	4	5	5	5	5	5	5	5	4	5	5	4	5	5	5	5	5	4	5	5	4.8
Standardisation	5	5	5	4	5	5	5	5	5	4	4	5	4	4	4	5	5	5	5	5	4.7
Cost reduction	4	3	4	4	5	5	5	5	4	5	5	5	3	5	5	5	5	5	5	3	4.5
Internal Efficiency inc.	4	4	5	5	5	5	4	5	4	5	5	4	4	5	5	4	5	5		4	4.58
Mgmt. Initiative	3	4	5	4	5	5	5	4	4	5	5	5	5	3	4	5	5	5	5	3	4.45
Improved mkt. image	4	4	5	5	5	5	4	5	5	5	5	5	5	2	5	5	5	5	5	5	4.7
Reduce Liability risk	4	4	5	4	4	3	4	4		5	4		4		4	4	5	3	3	4	4
Quality adoption Barriers																					
High cost of QS	1	1	1	1	2	3	1	3	3	2	2	1	4	5	3	3	3	3	1	2	2.25
Lack of knowledge	4	4	5	3	4	4	3	5	3	3	4	2	4	5	4	4	4	5	3	2	3.75
Uncelar vision	1	2	5	1	2	2	2	3	1	2	2	1	4	5	2	2	5	2	1	3	2.4
High cost of consultation	4	1	1	3	3	3	2	4	2	1	2	3	4	5	3	2	4	3	1	3	2.7
Amount of work	2	2	4	2	2	2	2	3	2	3	2	3	5	5	2	2	3	2	2	3	2.65
Poor commitment of mgmt.	1	1	5	1	1	1	1	1	1	2	1	1	3		2	2	5	1		3	1.83

Table 4.6 Mean scores of the Total service sector organizations

Service sector	Health care	Banking	Education	Hotels	Misc.	Avg.
To what extent do you agree with the below statements?						
Customer satisfaction	4.75	4.9	4.3	4.9	4.8	4.7
Awareness of mission	4.35	4.5	4.2	4.8	4.35	4.4
Documentation	4.7	4.9	4.45	4.85	4.6	4.7
Objectives review	4.3	4.55	4.1	4.75	4.4	4.4
Performance evaluation	4.7	4.85	4.3	5	4.65	4.7
Proper feedback	4.65	4.65	4.5	4.8	4.35	4.6
Quality service (Infra)	4.3	4.4	4.35	4.75	4.43	4.4
Reasons that motivate an organisation to adopt a quality system:						
New business oppor.	4.45	4.8	4.25	5	4.75	4.7
Inc. satisfaction	4.3	4.7	4.55	4.7	4.65	4.6
Performance Improved	4.55	4.9	4.6	4.75	4.8	4.7
Standardisation	4.5	4.8	4.15	4.6	4.7	4.6
Cost reduction	4.6	4.9	4.10526	4.85	4.5	4.6
Internal Efficiency inc.	4.4	4.7	3.95	4.7	4.58	4.5
Mgmt. Initiative	4.5	4.6	3.7	4.6	4.45	4.4
Improved mkt. image	4.7	4.8	4.05263	5	4.7	4.7
Reduce Liability risk	4.058824	3.6842	3.6875	4.45	4	4
Quality adoption Barriers						
High cost of QS	2.55	2.3	2.5	2.2	2.25	2.4
Lack of knowledge	3.65	3.85	3.65	3.2	3.75	3.6
Uncelar vision	2.15	2.35	2.3	1.85	2.4	2.2
High cost of consultation	2.5	2.7	3.1	2.25	2.7	2.7
Amount of work	2.6	2.5	3.05	2.15	2.65	2.6
Poor commitment of mgmt.	1.55	1.4211	1.85	1.7	1.83	1.7

The surveys gave a clear understanding about the quality adoption barriers which act as a major hindrance in implementation of TQM in any service sector organization. The main quality adoption barriers turned out as a result of our study which are in accordance with cause effect analysis are High cost of quality system, Lack of knowledge about the quality practices, Unclear vision within the high management, High cost of consultation, Amount of work required for QS implementation and Poor commitment of top management.

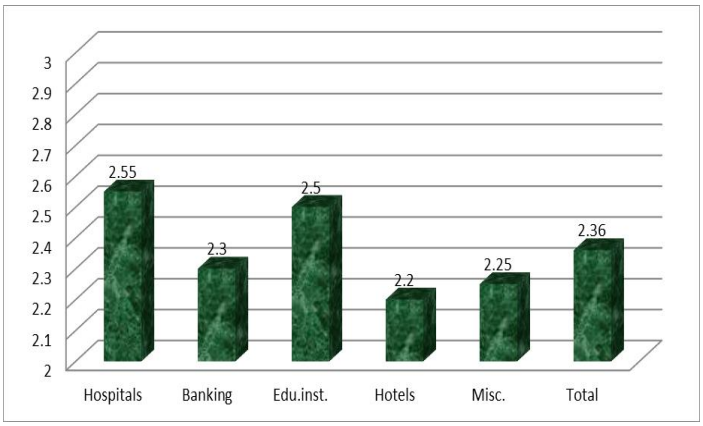

Fig. 4.1 High Cost of Quality system

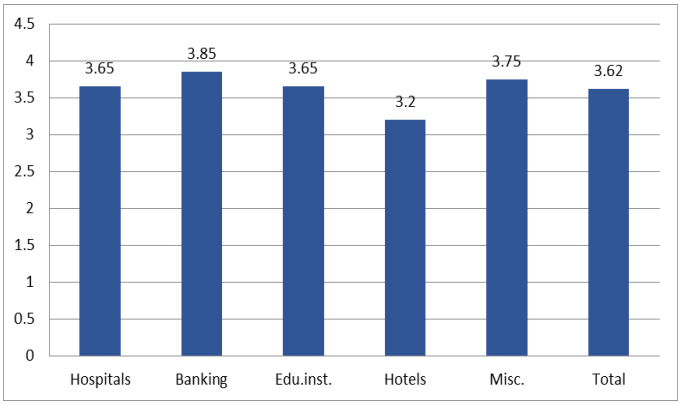

Fig. 4.2 Lack of Knowledge of Quality practices

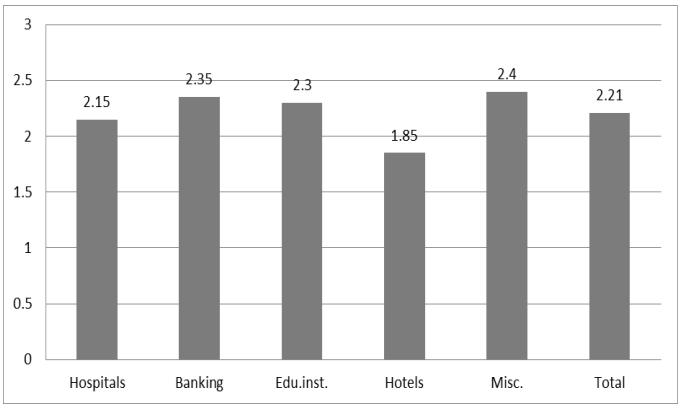

Fig. 4.3 Unclear Vision within top management

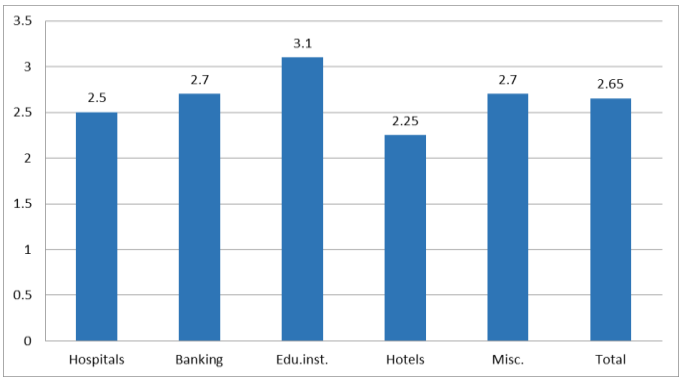

Fig. 4.4 High Cost of Consultation

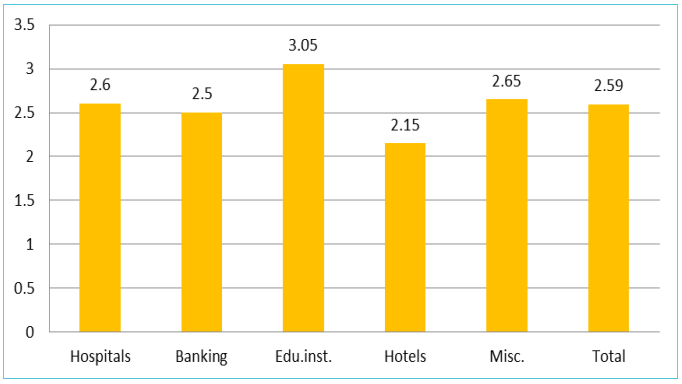

Fig. 4.5 Amount of work required

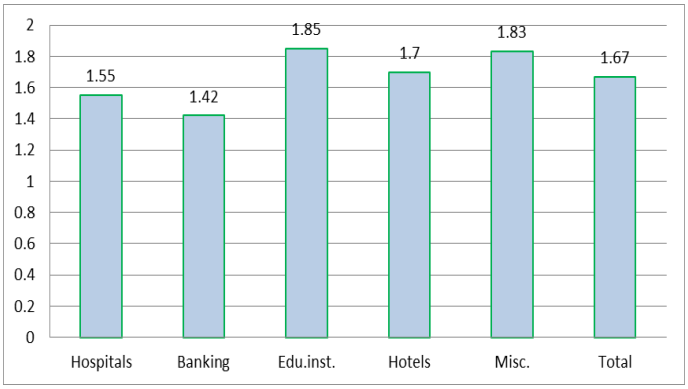

Fig. 4.6 Poor commitment of management

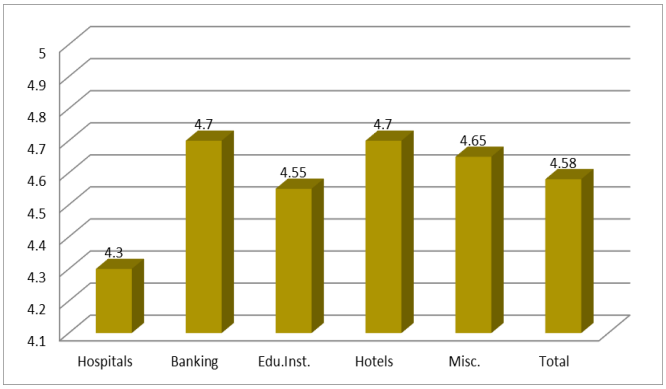

Fig. 4.8 Increased Satisfaction

Detailed comparison of the quality adoption barriers with respect to the individual service sectors under consideration is shown in the above Figures. Here, we observe a differentiating trend, especially the hotel industry, has the least hindrance for implementation of TQM. We observe a greater concern for high cost of quality especially in hospital and education sector whereas lack of knowledge about quality practices like TQM is a kingpin hindrance factor for almost all the sectors. Miscellaneous service sector companies are more worried about the unclear vision of the top management. Similar trend is followed for educational institutions in amount of work required for implementation of TQM. But, it was quite surprising even from the management point of view, poor commitment of management was a considerable adoption barrier, educational sector topping in the same. Critical examining of the above obtained data reveals that Lack of knowledge is the main adoption barrier in implementation of TQM in service sector.

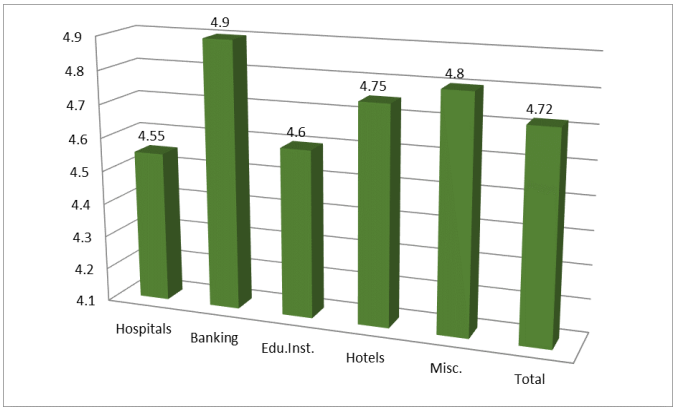

Fig. 4.9 Improved Performance

4.1 Analysis based on Motivating Reasons for adoption of TQM

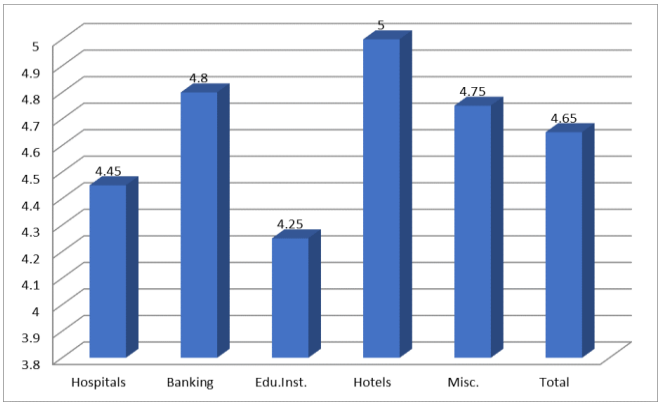

Fig. 4.7 New Business Opportunities

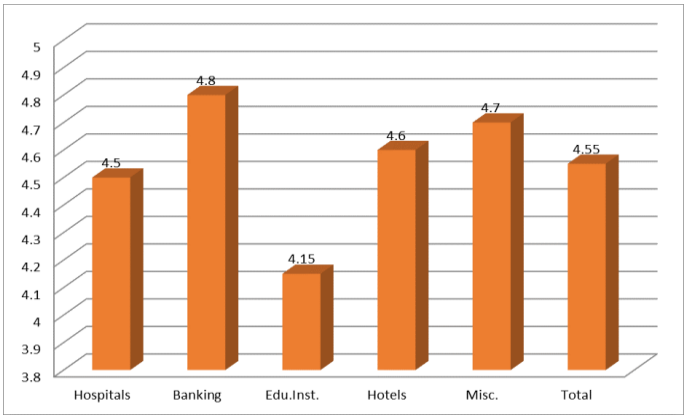

Fig. 4.10 Standardization

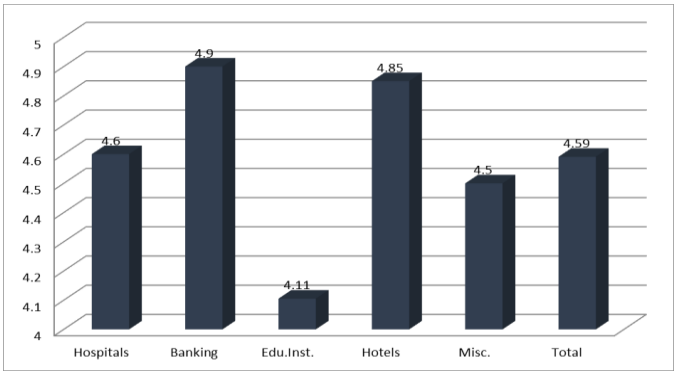

Fig. 4.11 Cost reduction

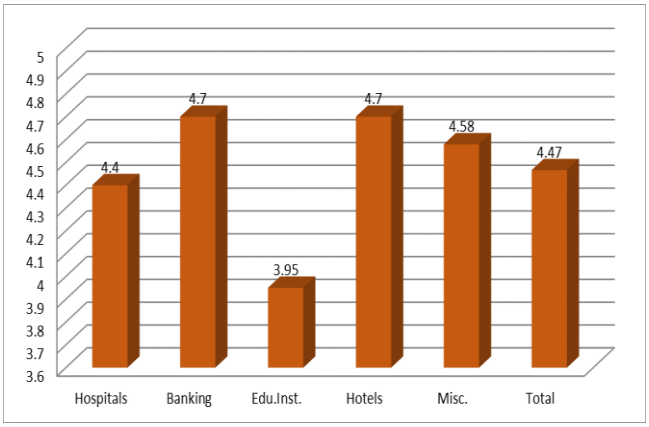

Fig. 4.12 Internal Efficiency increase

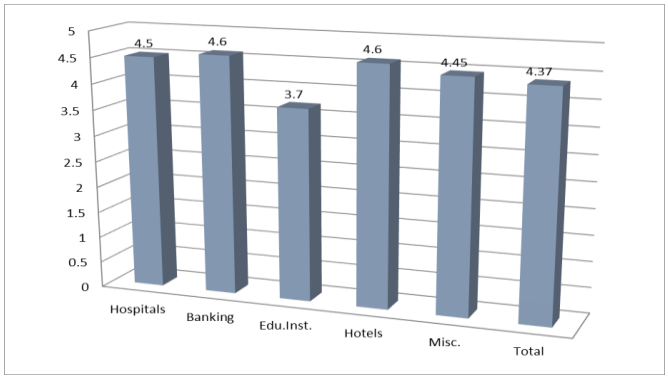

Fig. 4.13 Management initiative

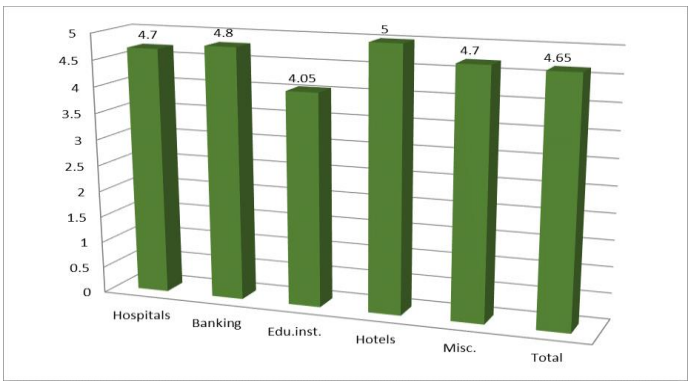

Fig. 4.14 Improved market image

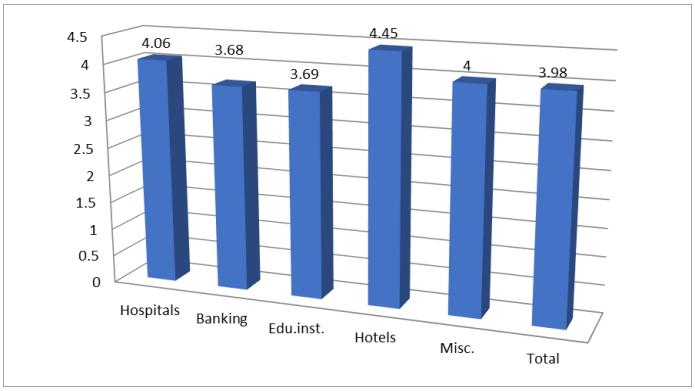

Fig. 4.15 Reduce Liability risk

From the management point of view, we observe quite surprising things because most of the motivating factors obtain a greater high. As the survey is filled mainly from top and middle levels of management we observe that they are more polished towards their objectives. As a result, hotels and banking industry shows a high note for increase in business opportunity as a main motivating factor for implementation of TQM. The same is true for most of the factors including increase in customer satisfaction, standardization, increase in efficiency, etc.

Even though the survey is filled fully from the management point of view, education sector fails to get a high in any of the factors suggesting that this is the field where TQM practices are followed the least and there is a heavy need of the same.

4.2 Analysis based on Salient Features of High Quality System

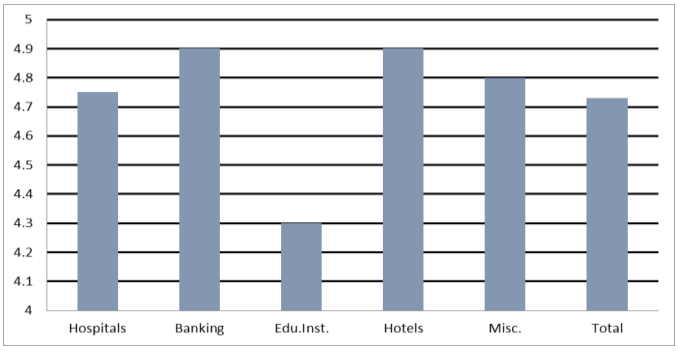

Fig. 4.16 Customer responses to the needs

Fig. 4.17 Awareness of mission in the company

Fig. 4.18 Documentation

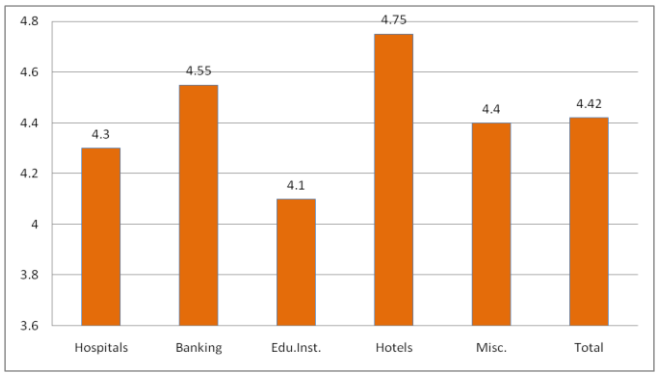

Fig. 4.19 Objectives review

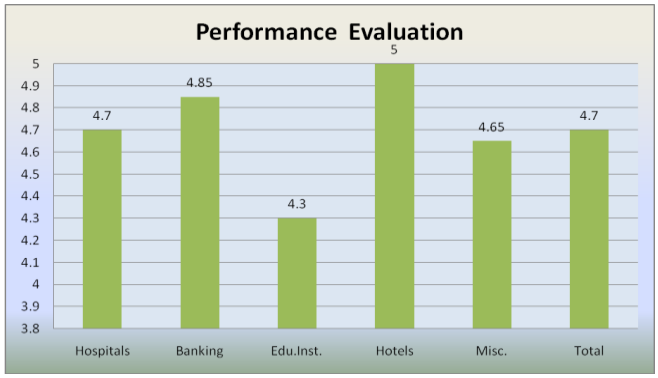

Fig. 4.20 Performance Evaluation

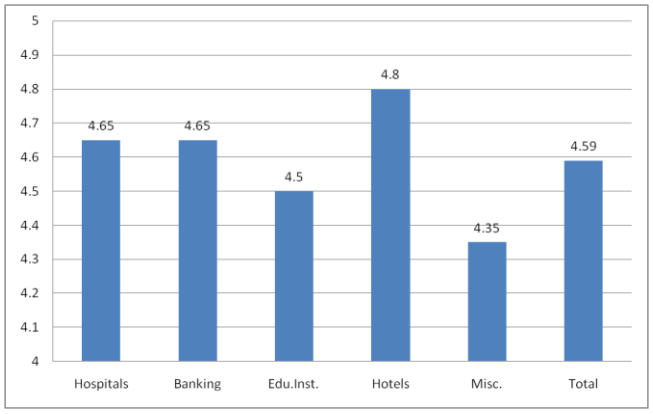

Fig. 4.21 Proper Feedback

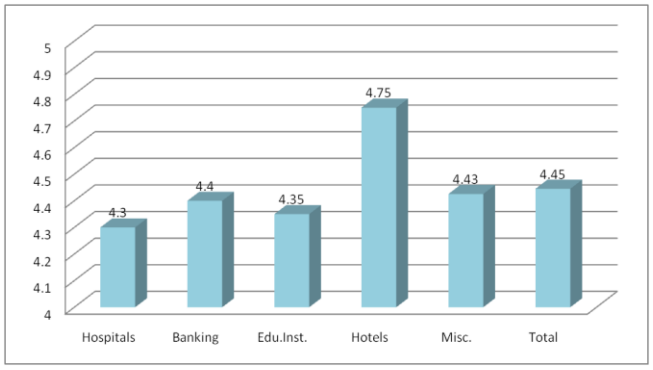

Fig. 4.22 Quality service with the existing infrastructure

4.3 Customer perspective

This study was carried out for different sectors with respect to different parameters related to TQM implementation in a similar fashion as conducted above, the only difference being it was from the customer's point of view. This data was obtained as a part of our literature survey from the recent dissertation reports of post graduate students. A plot of the below data is also made to give a better understanding of the data.

Table 4.7 Customer survey data

Service Sector	Hotels	Health care	Edu. Inst.	Banking	Misc.	Total
Customer satisfaction	3.47	1.83	1.67	2.56	3.24	2.6
Transparency in the orgn.	2.86	1.43	1.95	3.09	3.39	2.5
Documentation	3.24	3.83	2.69	4.27	3.44	3.5
Objectives compliance	4.08	2.8	2.44	3.65	3.82	3.4
Proper feedback	3.26	2.67	2.52	3.48	3.69	3.1
Quality service (Infra)	3.45	2.83	2.12	3.62	2.92	3
New business oppor.	3.32	2.22	1.93	2.34	2.76	2.5
Inc. satisfaction	3.12	1.92	1.63	2.42	2.62	2.3
Performance Improved	3.32	2.02	1.87	2.67	2.82	2.5
Standardisation	2.84	2.24	1.98	3.67	3.42	2.8
Cost reduction	2.43	2.85	2.27	2.68	2.62	2.6
Efficiency improval	3.28	1.68	1.94	3.24	2.66	2.6
Improved mkt. image	4.28	2.89	2.21	4.12	3.98	3.5
High cost of QS	4.08	2.84	2.48	4.26	3.94	3.5
Lack of knowledge	3.62	1.82	1.65	3.97	2.92	2.8

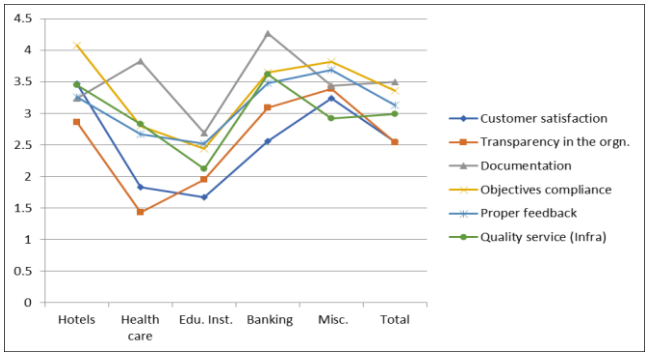

Fig. 4.23 Quality Parameters

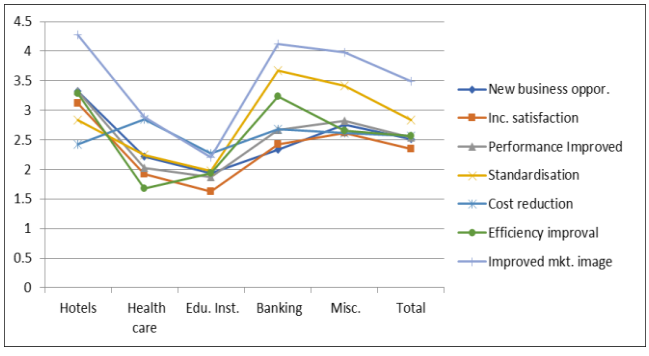

Fig. 4.24 Motivating factors for the implementation of Quality system

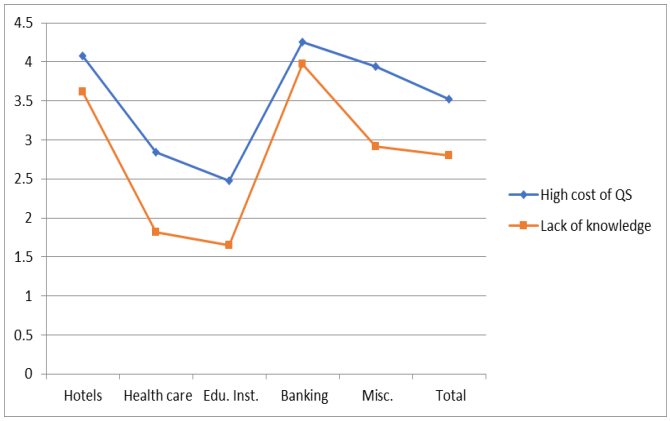

Fig. 4.25 Quality Adoption barriers

4.4 Management vs. Customer

The study was carried out in management as well as customer point of view. We observe that there is a wide perception difference relating to quality within management and customer. The table below shows the detailed comparison of the factors that are in agreement for both customer as well as management.

Table 4.8 Management vs. Customer

	Customer Perspective						Management perspective					
	Hotels	Health care	Edu. Inst.	Banking	Misc.	Total	Health care	Banking	Education	Hotels	Misc.	Total
Customer satisfaction	3.47	1.83	1.67	2.56	3.24	**2.6**	4.75	4.9	4.3	4.9	4.8	**4.73**
Transparency in the orgn.	2.86	1.43	1.95	3.09	3.39	**2.5**	4.35	4.5	4.2	4.8	4.35	**4.44**
Documentation	3.24	3.83	2.69	4.27	3.44	**3.5**	4.7	4.9	4.45	4.85	4.6	**4.7**
Objectives compliance	4.08	2.8	2.44	3.65	3.82	**3.4**	4.3	4.55	4.1	4.75	4.4	**4.42**
Proper feedback	3.26	2.67	2.52	3.48	3.69	**3.1**	4.65	4.65	4.5	4.8	4.35	**4.59**
Quality service (Infra)	3.45	2.83	2.12	3.62	2.92	**3**	4.3	4.4	4.35	4.75	4.43	**4.45**
New business oppor.	3.32	2.22	1.93	2.34	2.76	**2.5**	4.45	4.8	4.25	5	4.75	**4.65**
Inc. satisfaction	3.12	1.92	1.63	2.42	2.62	**2.3**	4.3	4.7	4.55	4.7	4.65	**4.58**
Performance Improved	3.32	2.02	1.87	2.67	2.82	**2.5**	4.55	4.9	4.6	4.75	4.8	**4.72**
Standardisation	2.84	2.24	1.98	3.67	3.42	**2.8**	4.5	4.8	4.15	4.6	4.7	**4.55**
Cost reduction	2.43	2.85	2.27	2.68	2.62	**2.6**	4.6	4.9	4.11	4.85	4.5	**4.59**
Efficiency improval	3.28	1.68	1.94	3.24	2.66	**2.6**	4.4	4.7	3.95	4.7	4.58	**4.47**
Improved mkt. image	4.28	2.89	2.21	4.12	3.98	**3.5**	4.7	4.8	4.05	5	4.7	**4.65**
High cost of QS	4.08	2.84	2.48	4.26	3.94	**3.5**	2.55	2.3	2.5	2.2	2.25	**2.36**
Lack of knowledge	3.62	1.82	1.65	3.97	2.92	**2.8**	3.65	3.85	3.65	3.2	3.75	**3.62**

5. DISCUSSION

An elaborate analysis between customer and management perception is made to get a better and unbiased insight towards the various parameters affecting TQM implementation. The main learning points include:

1. Lack of Knowledge of Quality systems is the fundamental quality adoption barrier from both the perceptions. Hence, improved quality system or successful TQM implementation is only possible by imparting greater awareness on the same by awareness camps and training to the employees.
2. High cost of consultation, Amount of work involved unclear vision and poor commitment of management are the other important adoption barriers. More insight on the same is obtained from the transparent review of customer on the survey.
3. Improved market image or higher business opportunities is the kingpin motivating factors for implementation of TQM.
4. Standardization of the processes, cost reduction, increase in efficiency of the organization are the other important reasons that motivate most of the service sector organizations including education sector and banking for adoption of TQM.
5. Further we come to know that the systematic implementation of TQM provides increased customer satisfaction, increases the morale of the employees leading to effective employee empowerment.
6. Better teamwork, Lower staff turnover and increased market share are the other benefits which TQM implemented companies enjoy.
7. Also, we observe that companies which employ TQM have a systematic way of performance measurement, outstanding feedback system and we find that lion share of employees are aware of the mission and vision of the organization.

6. CONCLUSION

On the basis of the study results we might state that TQM for ISS organizations is catching up fast amongst Indian organizations because lion share of respondents had heard of TQM. Also, a good percentage of the sample was familiar with TQM and were convinced that it has a good impact for ISS organizations. Further detailed quest reveals that organizations in India are adopting TQM or at least ISO readily. Hence, we put forward a new TQM implementation model, which is shown below:

We may argue based on this finding that in future more and more companies will subscribe to the philosophies of TQM. This readiness may be attributed to the benefits of TQM realized by ISS organizations. Thus, the conclusions obtained are:

1. Most of the service sector in the present scenario are aware about TQM/ISO and other related quality principles and policies. But, this fact is contradicted to some extent when the comparison is carried out between the management and customer perceptions. Increasing need for betterment of the organization and to stay along with the competitive trend has forced the service sector companies to switch over to quality improvement processes like TQM.

2. As mentioned above 'Quality improvement' is the word in service sector nowadays. This is true mainly because of the benefits obtained as shown by the study conducted by the authors. The benefits obtained as a result of TQM implementation are: increased customer satisfaction, improved morale, increased market share, better team work, awareness about mission and vision of the company, etc. But, some of the service sector firms are quite worried about side effects of the same, which according to them are: higher staff requirement, decrease in market share and increase in the expenditure.

3. But, our study was quite fruitful because most of the companies were in the path of TQM implementation. The motivating reasons that were observed form the study of the authors are:

   i. Increased customer satisfaction.
   ii. Improved market image/Business opportunity.
   iii. Standardization of processes.
   iv. Improvement in efficiency.
   v. Cost reduction
   vi. Management initiative

4. There were a couple of quality adoption barriers which came as a result of the study which mainly are:

   i. Lack of knowledge about the quality system and methodologies,
   ii.Unclear vision within the management
   iii.High cost of quality consultation and training
   iv. poor commitment of top level management and amount of work required to achieve quality.

5. Comparison of the above-mentioned factors are more clearly stated when the detailed analysis is obtained from both the dimension, i.e, from management point of view as well as from the customer perspective. This study emphasizes the fact that the above-mentioned factors are the real motivating factors as well as the quality adoption barriers w.r.t Indian service sector.

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