

# TOTAL QUALITY MANAGEMENT (TQM) – THE PRACTICAL IMPLICATIONS FOR SMALL AND MEDIUM ENTERPRISES (SMEs)

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## ABSTRACT

When globalization is discussed, it is the big multinational brands that usually come to mind. The small and medium enterprises can also cash in on the opportunities of globalization, if they take advantage of modern management practices and information technology. The globalised industrial scenario today is such that, it is inevitable for every progressive organization to keep pace with the developments taking place within and outside their national boundaries, in order to overcome the challenges and become successful in their respective industries. With the increasing focus on quality issues worldwide, due to the explosive growth of the number of manufactured products and services, organizations have started adopting appropriate management strategies in the field of quality, to succeed in the market place and SMEs are of no exception. Total Quality Management (TQM), a concept that became popular in the 1980s among the Japanese, North Americans and Europeans has been widely practiced by industries world over, as an integrated management strategy, for continuing and cumulative gains in quality, productivity and cost reduction. Though the quality movement has gained momentum among large industries and TQM concept is increasingly practiced by large scale industries, it is receiving little attention by the small and medium scale industries. In the changed and emerging scenario, competition from domestic companies and multinational corporations, both from within and outside will be intense, and small and medium scale enterprises, comprising the most vibrant sector in many of the national economies, will have to look into this pursuit for quality, primarily to survive and to grow.

In view of their significant role in the national economies, small and medium scale enterprises require special care and efforts for sustaining them and improving their

working. Although there are several measures that can be suggested for SMEs, an effective approach for improving operational efficiency is that of Total Quality Management (TQM). In this paper, an attempt is being made by the authors to present the implications of TQM on the performance of small and medium scale enterprises and a model of TQM application.

## KEYWORDS

Total Quality Management, SMEs

## 1. Introduction

The word TQM evokes different meanings to different people. Generally speaking, it is an inclusive and comprehensive approach to the management of industrial enterprises, focusing on customers and quality. It has evolved into its present form from the concepts and practices of Quality Control (QC) and Quality Assurance (QA). It can be defined as a "Company-wide approach for effective management of a business enterprise through focus on its people and processes by customer-driven leadership". As an organization-wide philosophy, TQM aims at improving the quality of work of all people, at all levels and in all the functional areas. It is practiced to achieve excellent profitability, total productivity and competitive leadership for the products or services offered to the customers.

TQM is an integrated approach to satisfy internal and external customers, planning and managing processes. Continuously improving, managing by facts and figures, having prevention orientation, involving every employee by empowering them, having cross-functional management and by providing committed leadership. If

TQM is applied in a systematic manner to small and medium sectors, it would increase the efficiency and profitability of these units, to a significant extent.

## 2. SMEs and TQM

The term 'Small business' means different to different nations. Various criteria such as the number of employees, size of operation, investment in fixed assets, investment in plant and machinery, use of power etc. are taken by world countries to differentiate small scale industry from medium scale and large scale industries. However, the size and scale of operation are the general indicators that differentiate small and medium scale enterprises from larger ones.

Irrespective of the criteria, it is true that no firm, whether small, medium or big, can survive without quality products and/or services in the intensely competitive global economic and trade environments of today. Shrinking markets and the eroding customer base warrant firms to change the way business is managed. This is particularly true in the case of SMEs. It has been recognized by many small and medium entrepreneurs that, if they want to be successful in the industry, they have to make their enterprises more competitive in terms of promoting Total Quality in the network of their activities and the enterprise operations.

While on the one hand, the successful big companies attribute their commitment to TQM, as the major reason for their success, many small companies in the developing countries cite the following factors as reasons for their inability to practice TQM

1. Small physical size of their organizations.
2. Limited number of products.
3. Limited level of operations.
4. High rate of labor turn-over and
5. Lack of support from employees.

To many of the SMEs, the applicability and utility of TQM remains a question. However, it cannot be denied that SMEs enjoy many advantages over large scale enterprises and also, effective implementation of TQM, with commitment, can bring about noticeable improvement in product/service quality and organizational performance.

Small and medium entrepreneurs desirous of practicing TQM in their businesses could design a basic TQM model, depending upon the needs of the organization, at a specific time. A basic model of TQM to drive the wheel of continuous improvement that can be practiced by them is depicted in Figure-1. The wheel consists of (a) the

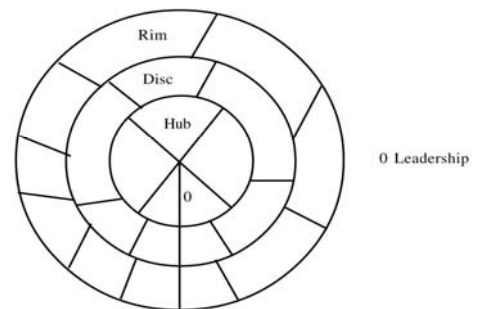
quality process (Rim), (b) the management process (Disc), and (c) the people process (Hub). However, the structure of the model may differ from company to company and from time to time.

## 3. TQM Structure: The Wheel of Progress

People/Self Development Process (body, mind and intellect)	Management/Control Process (Planning, doing, checking and acting)	Quality Process
*Self control *Honesty  *Respect for others *Commitment	-Policies and objectives -Methods to achieve The objectives -Education and training -Implementation -Checking the cause -Preventing recurrence -Appropriate action	#Consumer #Marketing Planning  #Product dev. #Design #Engineering #Production planning #Purchasing #Production #Quality control #Sales and service

\*: Hub; -: Disc; #: Rim

TQM Structure : The Wheel of Progress



**Figure 1:** TQM Structure: The Wheel of Progress

The elements of basic TQM model will reveal that leadership of the organization forms the hub of TQM activities and the entrepreneurs need to be participative leaders, with long term vision, committed to organizational values and concerned about internal and external customers.

## 4. The Entrepreneur's Role in TQM Practice

Small and medium entrepreneurs often referred to as 'future captains' of industry need to play a vital role in designing an appropriate TQM structure and implementing it successfully. They need to realize that TQM envisages integrating people with the organization, through continuous system development and a change in attitude. Bearing in mind that the leadership and the total

worker involvement are the key to TQM success, they must:

1. Establish basic attitudes required for a positive approach to quality achievement among workers.
2. Ensure their total commitment towards TQM.
3. Set goals with long-term involvement.
4. Establish procedure for meeting the individual quality goal (Quality Control).
5. Organize them for TQM.
6. Lead the TQM activities themselves.

The entrepreneur should be a symbol of justice and the embodiment of enterprise values. Visioning should be his/her forte and sharing should be his compassion. He must ensure that people in the organization share a common vision, practice enterprise values and are ever willing to accept change.

All types of business processes such as process related to marketing, product development, quality assurance, manufacturing, servicing, etc., are all inter-linked and greatly influence the business effectiveness of the organization. Choosing of a suitable process is an essential role of entrepreneurs. While choosing the processes he/she should ensure that the chosen processes would meet the organizational objectives.

## **5. What can TQM Achieve in a Small and Medium Business Enterprise?**

Whether in small or medium enterprise, Total Quality Management must be customer driven at all levels. They need to focus on cost control through continuous improvement, so as to earn adequate profits and to deliver goods and services that customers expect at a price they want to pay.

Effective practice of TQM will help SMEs to achieve

1. Improvement, development and growth of the organization from small to medium and to large.
2. Customer loyalty.
3. Improved product quality.
4. Cost reduction and waste avoidance.
5. Less error-prone operations.
6. Reduction of operating costs.
7. Building a happy and bright work-place which is worth-while to work in.
8. Improved company image.
9. Higher morale and motivation of workforce.
10. Higher productivity.

The advantages of practicing TQM for SMEs are

1. Sustainable competitive advantage for the company products.
2. Increased profitability.
3. Organizational flexibility.
4. Responsiveness.
5. Full exercise of human capabilities and drawing out infinite possibilities.

TQM results in higher operational efficiency and effectiveness of the organization. It can be seen as a total system of the organization, in meeting the changing requirements of customers and the market place through continuous improvement.

## **6. TQM Application**

The key factor in implementing TQM by SMEs is the leadership quality. Business leaders in TQM implementing organizations need to possess high degree of directing, supervising, responding and representing abilities. They need to be committed towards implementing TQM, by creating atmosphere of trust and trustworthiness in the organization. The entrepreneurs and managers in these organisations should 'walk the talk' and, 'walk the job', by keeping his/her words and involving and participating in all activities. In the course of application of TQM, the employees must be motivated, rather than punished. Regular and transparent communication by team briefing may be ensured in the organization. Recognition, praise and rewards are the other important attributes for motivating employees.

An application procedure for the implementation of TQM by the small and medium enterprises is proposed below.

### **Step-1: Planning for TQM**

In this step, the entrepreneurs and senior / key managers need to hold a workshop for understanding the customer requirements. In the beginning of the workshop, SWOT analysis of the enterprise must be carried out; identifying its major internal strengths and weaknesses and external opportunities and threats.

The outputs of this planning workshop must include:

1. A basic understanding of TQM to everyone.
2. An agreed unit's mission statement.
3. Allocation of roles and responsibilities to TQM implementing members of the team.
4. Series of management actions.

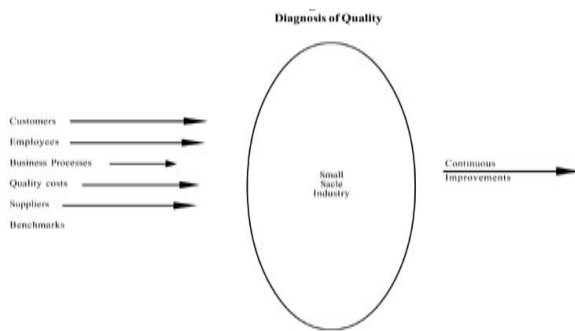
5. A TQM implementation plan.
6. Dates for review and assessment of the TQM progress.

## Step-2: Quality Diagnosis

In this step, the following six diagnostic steps need to be undertaken by the entrepreneurs to understand the current status of their enterprises.

- (i) the opinion of customers,
- (ii) the opinion of employees,
- (iii) business process currently in use,
- (iv) the cost of quality assessment,
- (v) a review of suppliers, and
- (vi) benchmarking of performance.

These stages and their impact are depicted in Figure-2.



**Figure 2:** Diagnosis of Quality

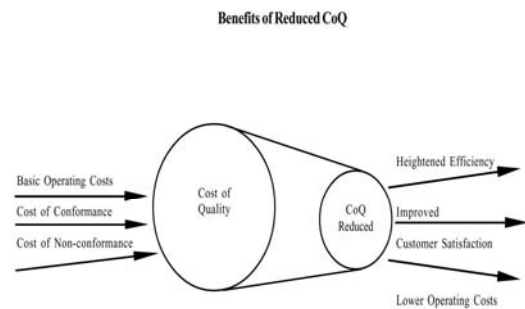
## Step-3: Cost of Quality Assessment

The cost of quality assessment is the third step in implementing TQM. The cost of quality (CoQ) is defined as the sum of the costs of everything that would not have been necessary, if everything else was done right first time. Control of the CoQ is the major benefit of TQM implementation to an industry.

The cost of quality can be separated into three categories, namely:

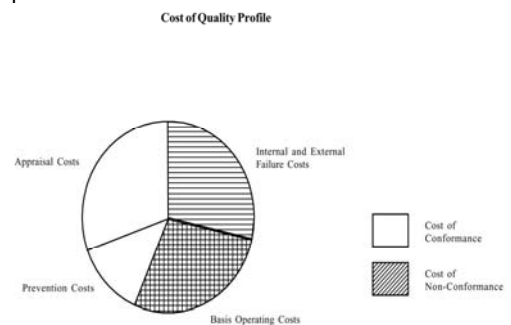
- (a) the cost of conformance to customer requirements,
- (b) the cost of non-conformance to customer requirements, and
- (c) basic operational costs.

These costs of quality and their benefits are shown in Figure-3.



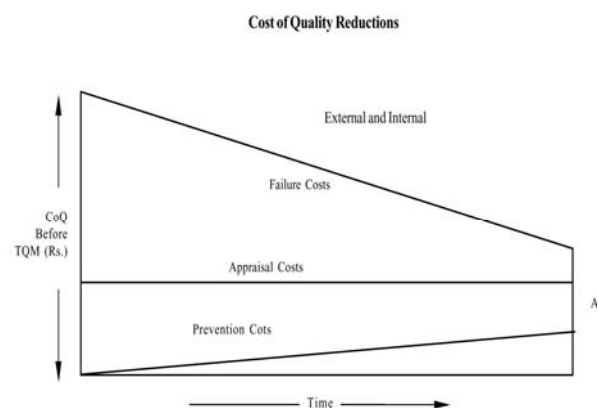
**Figure 3:** Benefits of Reduced CoQ

Costs of non-conformance may be further divided into external failure costs and internal failure costs. Prevention costs and Appraisal costs are the two elements of the cost of conformance. A typical cost profile may be as depicted in Figure-4



**Figure 4:** Cost of Quality Profile

Cost of quality reductions can be shown graphically as given in Figure-5, which shows how the total cost will reduce after implementation of TQM.



**Figure 5:** Cost of Quality Reductions

#### **Step-4: Focusing on Customer Satisfaction:**

Customer satisfaction is the key for the growth of any business. Any gap between business performance and customer expectation must be reduced by improving quality and rightly implementing TQM. Hence, the customer is to be delighted under the concept of total quality by meeting his/her price, satisfy delivery and design needs. Customer care and complaint handling are the ways to satisfy and make the customers delighted.

#### **Step-5: Promoting Team work**

People in the organizations must be encouraged to work in teams. Five team roles such as leader, team player, specialist, challenger and achiever must be encouraged amongst team members. Team work must develop through stages, viz., forming, storming, norming and performing. The entrepreneur must perform the roles of directing, coaching, facilitating and delegating. Sometimes these roles may be overlapping. Corrective action teams, continuous improvement teams, self-directed, self managing teams, project teams, task force teams, work teams, etc., may be formed so as to promote team work among all employees. Team meetings must be conducted with clear agenda, schedule and proceedings must be prepared and suggestions/ recommendations of teams must be properly implemented.

#### **Step-6: Quality measurement and solving problems**

Performance measurement is a must for any enterprise. The team, set for the task of process control and improvement should utilize the problem solving tools and techniques. The following questions should be asked by the team on data collection on a particular problem:

- What information do we need?
- Where can we obtain it?
- How can we obtain it?
- How long do we gather it for?
- How do we display it?

The entrepreneur and team members should learn the problem solving tools and practice them regularly. Problem solving process (define-analyze-correct-prevent) needs basic seven QC tools (viz., tally sheet, stratification, Pareto diagram, cause-effect diagram, histogram, control chart and scatter diagram.

#### **Step-7: Quality Certification**

In the present scenario, it has become imperative for organizations to get ISO certification. The international ISO 9000 standard was introduced in 1987. This was basically developed to avoid multiple assessments of suppliers while exporting goods. ISO 9000 has three standards: ISO 9001, ISO 9002, ISO 9003 which are taken by organizations designing and manufacturing, manufacturing only, and testing only, respectively. ISO 9004 is a non-contractual standard of this series and provides guidelines for management and use of standards.

There are nine key areas to address when considering ISO 9000 as given below:

- the organization itself;
- sales order entry;
- design management;
- process planning;
- manufacture;
- inspection, test and examination;
- packaging, storage and distribution; and
- installation and operation

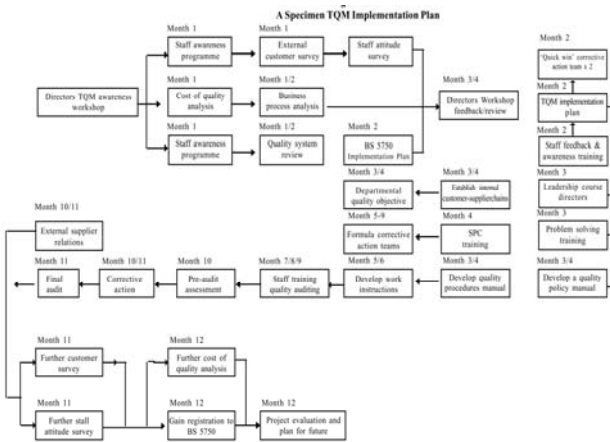
In gaining accreditation, a company has to produce and adhere to documents, viz., quality manual, procedures manual, and work instructions and related documents.

#### **Step-8: Training Personnel**

Organization desirous of implementing TQM must start investing on the educating and training its employees. The employees must be empowered and transparency in communication must be introduced to have clarity throughout. Suggestions system must be introduced to involve all employees in development/improvement activities and recognition and reward system must be installed. These measures taken together will result in the involvement of all employees of the organization in quality movement.

#### **Step-9: Implementing TQM**

Before TQM implementation can really be started, the entrepreneur must ensure that there is complete understanding of various aspects of quality and also commitment to these must be formed and employees must be assigned their role in TQM implementation. A logical sequence must be followed to finally implement TQM. A specimen implementation plan is given in Figure-6.



**Figure 6:** A Specimen TQM Implementation Plan

Although the procedure is comprehensive for SMEs, it can be successfully applied by ‘adapting’ rather than ‘adopting’ to the procedural steps. Also, it is to be remembered that the proposed nine steps can also work parallelly.

## 7. Conclusion

To conclude, the overall objective of TQM is to improve quality of life. Every organization whether small, medium or large must take efforts towards improving their quality in order to survive in the competitive global scenario. They should strive for excellence to manage the competitive environment by establishing TQM culture in their organizations. There is a need to improve the performance of small and medium enterprises, as they contribute considerably to the national economies in the world. It is to be realized that TQM is undoubtedly an important strategy, that will add value to the business operations, at all times, to meet customer expectations and a definite hinge for success in the market place.

## References:

[1] IT Bazaar, Chennai Edition, March 1-15, 1997, Vol-1, No.7.  
 [2] Mahajan, M.S., *Statistical Quality Control*, (Revised and Enlarged edition, 1996).  
 [3] Mahajan, M.S., Total Quality Management in Technician Education, *The Indian Journal of Technical Education*, Volume 19, No.4, ISTE Publication, IIT Campus, New Delhi, October-December, 96.

[4] National Seminar on SSI, “The role of SSI sector in the changing industrial and economic scenario”, 12 and 13<sup>th</sup> June, 1992, Chennai, FASII Publication.

[5] Raastogi, P.N., *Total Quality Management: Update for working professionals* sponsored by Ministry of HRD, Government of India, ISTE publication.

[6] *The Quality Imperative, A Business week guide*, the editors of Business Week with Cynthia Green, McGraw-Hill Inc., 1994.

[7] Crosby, P.B., *Quality is Free*, New American Library, New York, 1979.

[8] Crosby, P.B., *Quality without Tears*, McGraw Hill, New York, 1984.