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A Study of the Concept of Total Quality Management (TQM) and its Practice in Micro Small and Medium Enterprises (Msmes)

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Abstract

In the present-day competitive market, the concept of TQM (Total Quality Management) has gathered a lot of importance. For many years, Indian Government is making MSMEs compete with multinational companies both in domestic as well as in export market due to globalization of economy and liberalization of import regulation. But after the liberalization process, this concept has become imperative for very survival of MSMEs. The aim of the research is to study the concept of TQM and the extent MSMEs have understood and implemented TQM practices. It has been noted that the majority of MSMEs are aware of the importance of quality and have knowledge of TQM. These have implemented various quality practices to some extent. TQM philosophy has been adopted in the manufacturing sector though a large proportion of the industries are maintaining quality certifications. MSMEs are taking advantage of ISO 9001, TQM, and Six sigma to improve their system. Quality management tools are practiced in MSMEs. Among quality tools, TPM (Total Productive Maintenance), SQC (Statistical Quality Control), Flow charts, Check list, Quality circle, and Suggestion schemes are the most implemented tools.

Keywords: MSME, TQM, TPM, ISO, Quality

Introduction

With globalization taking place at a rapid pace, there is aggressive competition in the international market. Global competition has made organizations face challenges to successfully compete in today's international market. The stress of competition is being experienced with the increase of its magnitude and worldwide participation in trade and commerce after the formation of WTO (World Trade Organization). In today's scenario, there is lot of stress on manufacturing industries to regularly provide products of world class quality and that too at a price which is competitive to provide worth for money. As a result of this competition, the economic growth of a nation has taken place. After analysis of the impact of domestic competition, it was concluded that performance of trade is considerably impacted by domestic competition in terms of world export share.

Competition is an aspect which is very closely related to competitiveness. Whereas competition is an outer and situational aspect whereas competitiveness is a chief characteristic of anything which can be enhanced and improved. In the present-day viewpoint, competitiveness has turned out to be a primary driving force in economics like gravitational force in physical science. There is an attempt to increase

competitiveness in various countries and regions. It involves competitiveness of various countries, industrial sectors, and independent units. The fiscal power of a nation or business or organization in relation to its competitors in the economy of international marketplace where there is free movement of commodities, services, people, skills, and ideas across physical boundaries is described by competitiveness. In the worldwide competitiveness game, extremely competitive entities emerge as the winners.

To sustain competitiveness not only domestically but also globally is the greatest challenge for an industry these days. The enhancement of competitiveness, which is a multi-dimensional concept, can be done in many ways. Most suitable way of creating long lasting competitive advantage for business is the quality way, which is an effectual and recognized method. Many renowned instances of countries and their organizations can be given to support the fact that competitiveness has been achieved by employing the methods and concepts of quality.

Total Quality Management (TQM) happens to be the latest management gizmo in globalized and rapidly varying business environments. These days, the organizations are treating the TQM as the supernatural power to improve organizational performance, creating learning organization, alteration of both the employees and the management interaction and behavior. Various previous studies have established that TQM creates profound impact on performance of both large as well as Micro small and medium enterprise (MSME). Numerous researchers have also considered the concept of Standardization of Quality [International Standard Organization) ISO 9000 standards certification] related with the TQM.

Research Objectives:

To study of the concept of Total Quality Management (TQM)

To study its practice in Micro Small and medium Enterprises (MSMEs)

Quality

Industry consciously puts effort into improving quality to meet customer satisfaction. In theory, improved quality increases the customer demand, which leads to increased production and profits. Quality is a workmanship of various activities. In manufacturing activities, it is measured in terms of not only the product itself, but also the process of production. In the case of sales, quality is not only the quality of the product, but also that of the services provided to the customer. We do not buy a product for the product itself; we buy it for the function it performs. Its value is based on not merely appearance, but also usability.

Transitions of the Quality Concept

1950s Fitness to the standards
1960s Fitness to use.
1970s Fitness to cost
1980s Fitness to requirement (i.e., safety & reliability, customer satisfaction)
1990s Fitness to the latent requirements (Customer delight)
2000s Fitness to need of all stakeholders (e.g., environmentally friendly)

Total Quality Management

In the Global marketplace, increased levels of competition have resulted in quality, which has turned out to be of huge importance to the organizations and consequently, Total Quality Management (TQM) has become a key management issue. A considerable number of industries are applying TQM, and the topic is the subject of many books and papers these days. Today TQM appears to be a well-accepted system of management. However, two decades ago, terminology was not used. Before discussing the origin of TQM, it is necessary to understand the terminology. This is not an easy task since every writer on this subject has his own definition, by and large devising it to suit their own beliefs, prejudices and business and academic experiences. The result is a proliferation of unique definitions and confounds comparisons and it adds to the difficulties of understanding an analysis. Even with the publication of an international definition of TQM in ISO 8402 (1994) there is ample evidence that writers and researchers do not stick to this definition and create their own unique offering. Moreover, as Hackman et al. (1995), Christian et al. (995) stated many interventions not related with TQM that are being encompassed under TQM banner. Despite the divergence of views on what constitutes TQM, there are several common elements running through the various definitions. Several writers have tried to define the different dimensions that shape TQM, including Ahire (1996), Dale et al. (1999), Flynn et al. (1994), Darrell (2003) and Eaton et al. (1998).

History of TQM

The origin of TQM can be traced back to 1949, when the union of Japanese scientists and engineers formed a committee of scholars, engineers, and government officials devoted themselves to improve Japanese productivity, and enhance their post-war quality of life" and "American firms began to take serious notice of TQM around 1980". It can be argued that many of the TQM dimensions outlined were being applied by organizations before the TQM movement appeared, consequently, it is not easy to establish the exact date of birth of TQM. Ravichandran (2001), Han joo (2003) considered that in Ford and Crowther's book "My life and work", published in 1926, the origin of TQM can be found. Nevertheless, the term and the philosophy appeared around the mid 80's. Berkowitz (2004), stated that the term TQM was initially coined in 1985 by Naval Air systems Command to describe its Japanese-style management approach to quality improvement. Perhaps, the main reason for the origin of the term TQM could be a substitution in the previously used term of Total Quality Control (TQC), the word "control" by "management" with the reasoning that quality is not just a matter of control, it must be managed. This is reinforced by Deming's (1993) view that the sampling inspection should be suppressed and by Crosby (1984) who makes the point that "control" is sometimes understood as control over the workforce activities, and this is clearly not the aim of TQM (Richard et al., 1995, Monga, 2005). In USA, the development of quality management resulted from the penetration of its markets by Japanese products which started in the 70's, along with the impact of the writings of Crosby, Deming, Feigenbaum and Juran. Consequently, industries and academics studied the works of these authors and others, such as Ishikawa, and, integrating their approaches with quality management, gave rise to the concept of TQM. This movement was exported to other countries, the UK being one of the first. Dale, who started his research in quality management back in 1981, believes that the term TQM arose in the UK from the activities of the Department of Trade and Industry national Quality campaign which was launched in 1983 and the pioneering work of organizations such as IBM. He relates a discussion with John MacDonald (one of the stalwarts of the UK quality management and the first managing Director of

Crosby Associates UK Ltd.) who mentioned that around mid-1986, he was using the term TQM in his cross Atlantic communication with Philip Crosby, who responded with the retort "what is TQM?" It is also worth mentioning that in the early to mid-eighties, the use of quality related terms and acronyms was to a lesser extent pronounced today.

Definition of TQM

TQM is a set of systematic activities carried out by the entire organization to achieve company objectives effectively and efficiently to provide products and services with a level of quality that satisfies customers, at the appropriate time and price. Total quality Management is commonly expressed in conjunction with business excellence. It is a scientific management methodology that the quality of industries or organizations measures quality not only in products, but also in their processes, in their organization's quality management. According to the TQM committee, in the 21st century, a company is to seek quality by establishing respectable existence and co-delighting relationship with stakeholders. To accomplish this, the committee continues, "It is cruel that the company achieves competitiveness and praised ability, technology, speed, flexibility and vitality" and TQM has a significant role to play to meet those requirements. TQM is a management method in which quality is required in all manners to satisfy customer requirements. It involves every employee's daily commitment in the office, which differentiates TQM from other management systems. The term "everybody" implies all levels in the industry from frontline operators to middle management to executive management since everybody contributes to the problem-solving processes which strengthen the organizational capacity and management of the company. TQM is not a program. It is a strategy, a way of doing business, a way of managing, a way of looking at the organizations and the activities. Therefore, the success of TQM is measured not only by its tangible income but also by both the way in which the organizational structure is established and the processes by which corporate objective is achieved.

Stages of Total Quality Management

There are four stages in evolution of quality management (Dale et al., 1999). The details are as follows:

- Inspection
- Quality Control
- Quality Assurance
- Total Quality Management

Research Methodology

Data Collection Method

Primary data is collected by different methods:

Surveys: Surveys involve the use of questionnaires to collect data from large sections of people.

Interviews: It involves physical or virtual conversation between researcher and participant.

Secondary data is collected through journals, magazines, and newspapers.

Data analysis is done using statistical methods.

Total Quality Management Practices employed & their Implementation level in MSMEs:

The use of Quality tools and techniques can contribute towards improving the level of TQM, provided that a climate of managerial commitment is created.

This means that techniques and tools are a reliable indicator of superior level of TQM and therefore, a better performing industry in terms of quality is expected to deliver a better financial result.
The study highlights the extent of the use of quality tools and techniques in MSMEs.
Data was collected based on the Total Quality Management practices was subjected to the principal component analysis with varimax rotation and two factor results yielded 91.50% of the total variance information and the two factors were termed as scientific and behavioral quality.
The respondent MSMEs were grouped under two categories:

1. ISO certified
2. ISO uncertified.

Total Quality Management respondent data was organized based on these two classifications. Average score of implementation level of scientific and behavioral tools of both categories was calculated.

Research Hypothesis:

Null hypothesis Ho: There is no difference in implementation of TQM practices in ISO certified and ISO uncertified MSMEs.
The hypothesis was analyzed by conducting 't-test' to find whether the implementation level of both types of industry with respect to the implementation of Quality tools was same or not.

't-test' result between ISO certified & ISO uncertified MSMEs w.r.t. implementation level of scientific and behavioral quality tools.

Group Statics	Type	N	Average	Std. Deviation	t test
Scientific Quality Score	ISO Certified	32	2.0009	1.14212	15.452 P= .0001
	ISO uncertified	64	4.3390	.58869	
Behavioral Quality Score	ISO Certified	32	2.3121	1.32777	12.701 P=.0001
	ISO uncertified	64	4.4789	**.63178**	

Conclusion:

It has been clearly observed that there is a significant difference between implementation of quality tools and techniques in the MSME segment. In both cases, i.e., scientific quality tools and behavioral quality tools, average value of implementation of ISO certified industries is higher than those of ISO uncertified MSMEs. It indicates that the extent of implementation of Total Quality Management practices in ISO certified MSMEs is better than that of ISO uncertified MSMEs although there is lot of awareness of TQM practices in both ISO certified and uncertified MSMEs.

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